KENYA ONE HEALTH

THE 1ST KENYA ONE HEALTH CONFERENCE CELEBRATIONS

6th – 7th NOVEMBER 2025

BOOK OF ABSTRACTS

Theme: *"By protecting one, we help protect all"*

Venue: Ole Sereni Hotel, Nairobi (Hybrid Conference)

THE KENYA MEDICAL ASSOCIATION (KMA)
&
THE KENYA VETERINARY ASSOCIATION (KVA)

@KOH 2025

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From the Chairman Kenya Veterinary Association

I am honored to welcome all delegates to the 2025 Kenya One Health Conference, a vital platform that brings together professionals across human, animal, and environmental health. This conference underscores the urgency and importance of collaboration in addressing emerging and re-emerging health challenges that transcend species and borders. This collaborative partnership between the Kenya Veterinary Association and the Kenya Medical Association exemplifies the spirit of interdisciplinary cooperation needed to build resilient health systems and safeguard the wellbeing of our communities. Together, we reaffirm our shared commitment to advancing the One Health agenda through knowledge exchange, research, and joint action for a healthier, sustainable future for all. We also want to invite other partners to be part of the Kenya One Health Collaborative, an initiative of the two associations aimed at creating synergy through the One Health Approach.

Dr. Kelvin Osore – Chairman Kenya Veterinary Association

From the President Kenya Medical Association

It gives me great pleasure to welcome you all to the 2025 One Health Conference jointly convened by the Kenya Medical Association and the Kenya Veterinary Association and themed *"One Health for a Healthier, Safer Future"*. The conference is a call to action to strengthen our understanding, collaboration, and commitment to the One Health approach — an approach that recognizes that the health of people, animals, and our environment are interconnected. The world have witnessed an increasing number of health challenges that do not respect species or borders, reminding us that human health cannot be safeguarded in isolation from animal and environmental health. Environmental degradation, climate change, antimicrobial resistance, and food safety concerns are all pressing realities. These are not veterinary problems, not medical problems, and not environmental problems alone — they are shared challenges requiring shared solutions. It is my prayer that the conference will increase awareness of One Health across sectors, promote inter-professional collaboration among doctors, veterinarians, environmental scientists, and policymakers, strengthen preparedness and response systems for zoonotic diseases and public health threats and build partnerships that sustain action.

Dr Simon Mucara Kigondu - President Kenya Medical Association

From the CEO Kenya Medical Association

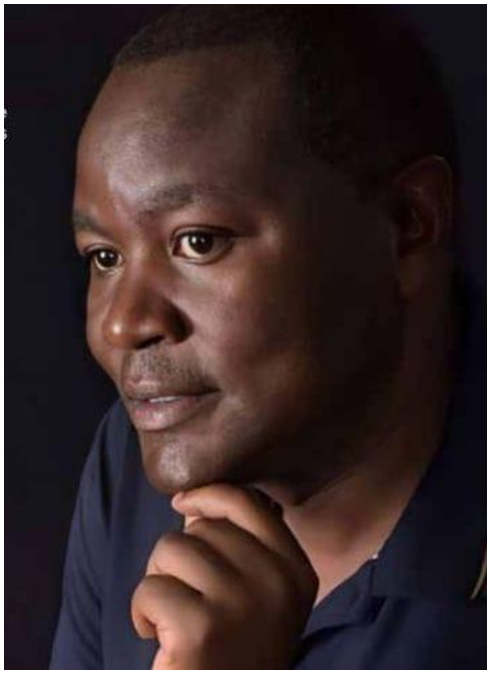
I am honored to welcome all delegates, partners, and contributors to the Kenya One Health Conference.

The Kenya Medical Association remains steadfast in its commitment to advancing inclusive healthcare — where human, animal, and environmental health are addressed together for a safer, healthier future. Over the years, we have witnessed the growing challenges of emerging infectious diseases, antimicrobial resistance, and the effects of climate change. This makes conversations like today's not only timely but essential.

We are proud to champion initiatives that encourage evidence-based dialogue, innovation, and cross-sector collaboration. I call upon each of us to play our part in advancing the One Health agenda. Let the conversation continue, and may we keep working together — for the health of all

Dr. Brenda Obondo - CEO KMA

From the CEO Kenya Veterinary Association



Distinguished guests, colleagues and friends, On behalf of the Kenya Veterinary Association (KVA), I warmly welcome you to the inaugural One Health Conference, co-hosted with our esteemed partner, Kenya Medical Association (KMA). We are honored to have you join us. This year's conference theme, *By Protecting One, We Help Protect All*, underscores the interconnection of human, animal and environmental health, and the shared responsibility we all bear in safeguarding them. This conference will therefore not only be a platform for exchange of knowledge but also a call to action to strengthen partnerships and reaffirm our commitment to a healthier and sustainable future.

I extend my deepest appreciation to our partners, speakers, and participants for making this milestone possible. Your dedication and presence here affirm that when we unite for a common cause, meaningful change is not only possible — it is inevitable. Welcome once again to the One Health Conference 2025. Thank you.

Dr. Samson Muchelule - CEO KVA

Kenya Medical Association National Executive Council

1. Dr. Simon Kigondu	Hon. President
2. Dr. Ibrahim Matende	Hon. Vice-President
3. Dr. Diana Marion	Hon. Secretary General
4. Dr. Elizabeth Gitau	Hon. Assistant Secretary General
5. Dr. Lyndah Kemunto	Hon. Treasurer General
6. Dr. Brenda Obondo	Chief Executive Officer

Kenya Veterinary Association National Executive Committee

1. Dr. Kelvin Osore	National Chairman
2. Dr. Flookie Owino	Vice Chairman
3. Dr. Ambrose Kipyegon	Honorary Secretary
4. Dr. Agnes Maina	Assistant Secretary
5. Dr. Godfrey Wamai	Treasurer
6. Dr. Carol Khaemba	Assistant Treasurer
7. Prof. Charles Kimwele	Committee member
8. Dr. Daniel Muasya	Committee member
9. Dr. Nick Lang'at	Committee member
10. Dr. Joel Ruto	Committee member
11. Dr. Samantha Opere	Committee member
12. Dr. Kamama Edgar Sakwa	Committee member
13. Dr. Samsom Muchelule	Chief Executive Officer

Conference Planning & Organizing Committees

Finance, Administration & Resource Mobilization (Farm) Team

It is my pleasure to welcome you to the Kenya One Health Conference 2025. This event is part of the Global One Health Initiative, which recognizes that human, animal, and environmental health are deeply interconnected and mutually dependent for a sustainable and healthy future. As we come together to share ideas, experiences, and innovations, let us reaffirm our commitment to this vital interconnection.

There can be no true health without One Health.

Dr. Victor Yamo
Chairman KOH Planning Committee

FARM Committee Members

Dr Victor Yamo, Executive Director GOHAA
Dr. Cynthia Chemonges, Consultant Pathologist & Secretary, KOH Conference Planning Committee
Dr. Samson Muchelule, CEO KVA
Dr. Ambrose Kipyegon, Hon Secretary KVA
Dr. Godfrey Wamai, Hon Treasurer KVA
Dr. Agnes Maina, Assistant Secretary KVA
Dr. Carol Khaemba, Assistant Treasurer KVA
Dr. Brenda Obondo, CEO KMA
Dr. Diana Marion, Secretary General KMA

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Dr. Martin Nyamweya, Farmvet Africa Ltd, Consultant & Committee Chairman
Dr. Sylvia Vosevwa, CEO Circadia Integrated Health Solutions & Committee Secretary
Dr. Daniel Muasya. Lecturer. Faculty of Vet Medicine, UoN and KVA NEC Member
Dr. Khadija Chepkorir, Veterinary epidemiologist, Zoonotic Disease Unit; KVA One Health TWG
Dr. Tabitha Gathecha, County Director Veterinary Services (CDVS), Kiambu County
Dr. Lineth Chepkorir Sigei. Medical Officer
Dr. Teresia Wangare, Sub-County Veterinary Officer, Nandi County; KVA One Health TWG
Mr. Sam Wanjohi, Country Manager AFROHUN Kenya
Dr. Machoka Brenda. Lecturer, AHITI Kabete
Dr. Gillian Nyambura Muiruri, KVA Project Assistant. One Health TWG
Dr. Kezia Maina, Sub-county Veterinary Officer Thika, Kiambu County
Dr. Nelly Wangui, Sub-county Veterinary Officer, Kiambu Sub-county, Kiambu County
Dr. Reinhard Bonnke - Social Responsibility and Welfare Convener at Kenya Medical Association
Dr. Valentine Ochar, Project Coordinator, Kenya Veterinary Association

Marketing, Publicity and Communications Committee

- Dr. Nick Langat – KVA and Committee Chairman
- Dr. Jacquline Mwanu – KMA and Committee Secretary
- Dr. Sakwa Kamama – KVA
- Dr. Cohen Onsoti – KVA
- Ms. Julie Ndungu – Media Consultant

Conference Program

Day 1: Thursday, November 6, 2025

Focus: Zoonotic Diseases, Antimicrobial Resistance & Stewardship, Sustainable Food Systems & Ecosystems

Time	Activity / Presentation	Presenter(s)
7:30 – 8:30	Registration & Networking	
8:30 – 9:00	**Welcoming Remarks**	KMA & KVA CEOs
Session 1: Zoonotic Diseases		
	Session Chairman: Dr. Khadija Chepkorir (ZDU)	
9:00 – 9:30	Leveraging One Health Approach to Strengthen Pandemic Preparedness in Kenya	Dr. Mark Nanyingi (CGH&PI)
9:30 – 9:45	Ngari Virus in humans and livestock in Arid and Semi-Arid Regions in Kenya	Dr. Margaret Wambui Wahome (ICIPE)
9:45 – 10:00	Prevalence and Risk Factors of Q-Fever among Slaughterhouse Workers in Kikuyu Sub-County, Kiambu County, Kenya	Christine Mutisya (ILRI)
10:00 – 10:15	Assessing the Timeliness of the Rift Valley Fever Laboratory Surveillance System in Kenya, 2024 –	Dr. Alexina K. Morang'a (DVS)
10:15 – 10:30	**Q&A (15 min)**	**All Presenters**
10:30 – 10:40	**Partners Presentation** – East African Medical Journal (EAMJ)	
10:40 – 11:00	**Tea / Coffee Break**	
Official Opening Ceremony		
	Session Chairman: Dr. Victor Yamo	
11:00 – 11:30	Official opening remarks	• KVA Chairman - Dr. Kelvin Osore • KMA President - Dr. Simon Kigondu • Guest: DVS – Dr. Allan Azegele • Chief Guest: DG Health – Dr. Patrick Amoth
Session 2: Antimicrobial Resistance & Stewardship		
	Session Chairman: Dr. Elizabeth Gitau	
11:30 – 12:00	One Health Approaches to tackling Antimicrobial Resistance in Kenya: Challenges and Opportunities	Prof. Samuel Kariuki (DNDi)
12:00 – 12:15	Knowledge on Antimicrobial Resistance: A Survey among Community Health Promoters and Community Health Extension Workers in Western Kenya	Ruth Bonareri (AMPATH)
12:15 – 12:30	Exploring the Landscape of Antimicrobial Use; A Point Prevalence Survey in Three Major Health Facilities in Kilifi County – Kenya	Dr. Aisha Mongi (Kilifi County)
12:30 – 12:45	Spatiotemporal Patterns of Antimicrobial Resistance in Shared Human-Animal Waterpoints in the Maasai Mara Ecosystem, Kenya	Brian Marvis Waswala-Olewe (MM University)
12:45 – 13:00	Assessment of Knowledge, Attitudes and Practices of Poultry Farmers on Antimicrobial use and resistance within Njoro ward, Nakuru, Kenya	Naomi Kendi Mungathia
13:00 – 13:15	**Q&A (15 min)**	**All Presenters**
13:15 – 14:00	**Lunch Break**	
Session 3: Sustainable Food Systems and Ecosystems		
	Session Chairman: Dr. Patrick Muinde (World Animal Protection)	
14:00 – 14:30	Agriculture at a Crossroads: Which Path do we take – Industrial or Sustainable	

	Dr. Peter Stevenson (CiWF)	
14:30 – 14:45	Veterinary Pharmacovigilance and Food Safety: Strengthening One Health Safeguards in Kenya Dr. Owada Rose (VMD)	
14:45 – 15:00	Integrating Animal Welfare into One Health Food Systems: Pathways Toward Equitable, Humane, and Sustainable Transformation Dr. Beryl Okumu (World Animal Protection)	
15:00 – 15:15	Association between Physicochemical parameters and Heavy Metal levels in Lake Victoria, Kenya – Implications on Nile Tilapia Ecological requirements Tobias Owiti Odhiambo (Egerton)	
15:15 – 15:30	Climate Doom Loop: Factory farming's toll on animals, farmers, and food – an African perspective Dr Christopher Browne (CiWF)	
15:30 – 15:40	**Partners Presentations** – KUBICO and KIPRE Presentations	
15:40 – 16:00	**Q&A (15 min)**	**All Presenters**
Session 4: Parallel Sessions Antimicrobial Resistance & Stewardship and Zoonosis		
	Session 4 A: Antimicrobial Resistance & Stewardship	**Session 4B: Zoonotic Diseases**
	Session Chair: Dr. Jacquiline Mwanu	**Session Chair: Mathew Mutiria (ZDU)**
16:00 – 16:15	Leveraging Partnership to Strengthen Molecular Diagnostic Innovation for AMR response: Insights from Kabarak–UTMB Collaboration Dr. Josephat Tonui (Kabarak University)	Response to zoonotic disease outbreaks along wild meat value chains in Sub-Saharan Africa (SSA): A systematic literature review Dr. Sherril P. Masudi (ILRI)
16:15 – 16:30	Digital Sentinels – Leveraging Technology for Nutri-WASH and Public Health Emergencies in Migori County, Kenya. Josephine Moindi (Migori County)	Empowering communities through One Health: A Training of Trainers approach Dr. Shauna Richards (ILRI)
16:30 – 16:45	Hand Hygiene Practice Compliance Among Health Care Workers at Migori County Referral Hospital, Kenya. Dr. Phaustine Onyango (Migori County)	The Cultural Ecology of Emerging Zoonoses: Exploring Traditional Belief Systems and Livestock Management in Kenyan Pastoralist Communities Emmanuel Busera (AAI Strategic Studies)
17:00 – 17:15	**Q&A (15 min)**	**All Presenters**
17:15 – 17:30	Partner Presentations and recognition	Corporate Partners
17:45 – 18:30	**Coffee / Networking**	

Day 2: Friday, November 7, 2025

Focus: Climate Change, Environmental Health, Risk Communication, Gender & Community Engagement, One Health Policy and Governance

Time	Activity / Presentation	Presenter(s)
7:30 – 8:30	Registration & Networking	–
8:30 – 9:00	**Partner Presentation:** Moove ValiDATAthon introduction session Dr. Wendy Essuman, MOOVE Project Coordinator (Laboratory for intelligent Global Health and Humanitarian Technologies [LiGHT])	
Session 5: Climate Change & Environmental Health		
	Session Chairman: Leon Lidigu (Nation Media)	
9:00 – 9:30	Leveraging the existing Environment – Health Linkages to strengthen the Operationalization of One Health Dr. Bernard Bett (ILRI)	
9:30 – 9:45	Integrating Environment and Ecosystem Health actors in Kenya's One Health landscape: The Case for Stakeholder Net-mapping Edna Wanjiru (ISAAA Africenter)	

9:45 – 10:00	Unlocking the untapped potential of Agroforestry Systems as a Pathway to One Health: A case Study of Samburu County, Kenya D.K. Momanyi (ICRAF)	
10:00 – 10:15	Assessment of Environmental Contamination and Nitrate-Induced Livestock Mortality in Kang'ing'olemong'in Village, Turkana County: A One Health Approach Daniel Echakan (Turkana County)	
10:15 – 10:30	**Q&A (15 min)**	**All Presenters**
10:30 – 11:00	**Tea / Coffee Break**	
Session 6: Risk communication, Gender & Community Engagement		
	Session Chairman: Dr. Leon Ogoti (KMA Public Health Committee)	
11:00 – 11:30	Strengthening Risk Communication through Gender Equity and Community Engagement: A One Health Cornerstone Prof. Salome Bukachi (UoN)	
11:30 – 11:45	Promoting Behavior Change on Antimicrobial Resistance through a One Health Approach in Kapseret Sub-County, Uasin Gishu County, Kenya Purity Kosgei (Kenya Red Cross)	
11:45 – 12:00	Integrating Gender into One Health for Inclusive Environmental Governance: Insights from Isiolo County, Kenya Hellen Wanjiku Ageng'a (UoN)	
12:00 – 12:15	Risk Communication and Community Engagement in One Health Community Outreaches: A case of Saving Lives and Livelihoods (SLL-2) Project, Kitui County. Jeffrey Musya (Kitui County)	
12:15 – 12:30	Collaborating for Behaviour Change on One Health at the Community Level – Experiences from the Gender-Responsive One Health (GROH) Project in Meru County, Kenya Dr. Missi Mutungi (Meru County)	
12:30 – 12:45	Kimormor Outreach: A One Health Model for the Mobile Pastoral Community in Turkana County, Kenya. Rotich Kipkorir (Turkana County)	
12:45 – 13:00	**Q&A (15 min)**	**All Presenters**
13:00 – 14:00	**Lunch Break**	
Session 7: One Health in Policy & Governance and		
	Session Chairman: Judy Mureithi (LAPA)	
14:00 – 14:30	Opportunities, Approaches and Imperatives of Digitalizing One Health in the era of Artificial Intelligence Dr. Jacob Odhiambo (Palladium Group)	
14:30 – 15:00	Moving from Silos to Systems Thinking: Integrating Policy and Practice for One Health Governance in Kenya Dr. Diana Onyango (Farm Africa)	**MOOVE ValiDATAthon Break-out session** Dr. Wendy Essuman MOOVE Project Cordinator (Laboratory for intelligent Global Health and Humanitarian Technologies [LiGHT])
15:00 – 15:15	Operationalizing One Health governance at County Level: Insights from ZDU-COHESA Training in Kenya Dr. Joshua Onono (UoN)	
15:15 – 15:30	Operationalizing One Health Governance at Sub-County Level: Lessons from Coordinating Multi-Sectoral Partners in Bunyala, Busia County, Kenya Dennis Langat (Busia County)	
15:30 – 15:45	Evidence to Action: COHESA Kenya's Model for Making One Health Work Prof Salome Bukachi (UoN)	
15:45 – 16:00	One Health in Practice: Experiences from Kitui County, Kenya Juliet Omondi (Amref)	
16:00 – 16:15	**Q&A (15 min)**	**All Presenters**

Session 8: One Health Panel Discussion & Closing		
	Session Chairman: Dr. Lydia Atambo	
16:15 – 17:15	**Panel Discussion Topic:** Subtopics	**Panelists** - Human Health - Animal Health - Environment
17:15 – 17:30	**Closing Ceremony & Partner Recognitions**	
	Session Chairman: Dr. Cynthia Chemonges	
	Official closing remarks	• **KVA CEO - Dr. Samson Muchelule** • **KMA CEO - Dr. Brenda Obondo** • **Chief Guest – Director of Vet Services**

Keynote Speakers

Dr. Mark Nanyingi is a Public Health and Infectious Diseases Epidemiologist. He is a Veterinary Surgeon with masters and doctoral trainings in Pharmacology &Toxicology, Epidemiology, Public Health and Infectious Diseases Modelling from University of Nairobi, Colorado State, Johns Hopkins School of Public Health and the London School of Hygiene and Tropical Medicine. He is currently an adjunct professor of Epidemiology and Global Public Health at University of Nairobi, Moi University, and the American University (USA), where he provides mentorship in infectious diseases epidemiology, mathematical modelling, Global Health advocacy and public health. He was the Soulsby One Health Postdoctoral Fellow in Epidemiology and Population Health at the University of Liverpool (UK) and a visiting scientist at ILRI's Animal and Human Health program. He has been the ambassador for the Royal Society of Tropical Medicine and Hygiene in Kenya. He has been the Public Health Epidemiologist and One Health Lead at the World Health Organization – Emergency Preparedness and Response (EPR) Kenya, where he worked with the Ministry of Health in strengthening integrated surveillance, One Health, Digital Health and emergency preparedness and response. He was also the One Health Specialist at the United Nations Food and Agriculture Organization's (ECTAD) programme (Kenya) under the Global Health Security Agenda (GHSA), where he collaborated with Zoonotic Diseases Unit (ZDU) on the implementation and Operationalization of One Health in Kenya. He has also been an epidemiologist at KEMRI Wellcome Trust, World Bank, Global Fund and US CDC. He is currently the Technical Director for Global Health Security at the Center for Global Health and Pandemic Intelligence where he supports Kenya's National Public Health Institute (KNPHI) and Ministry of Health (MOH) on Global Health Security, Pandemic Preparedness, Surveillance and Outbreak Response.

Topic : *Advancing One Health and Zoonotic Disease Systems for Pandemic Preparedness in Kenya Dr. Mark Nanyingi (CGH&PI) Zoonotic Diseases*

Dr. Jacob Odhiambo is a Medical Doctor with advanced training in field epidemiology and laboratory management and a recognized public-health leader with 20 years of experience spanning clinical medicine, epidemiology, and health-informatics. As Program Director of the PEPFAR-funded Kenya HMIS project (implemented by Palladium), he has automated service-delivery reporting for 2,500 clinics, integrating routine care with the Integrated Disease Surveillance and Response (IDSR) system. Dr. Jacob spearheads data-innovation initiatives, deploying AI-driven decision-support tools that empower frontline workers to improve care and surveillance. He also led the development of Kenya's National Data Warehouse, unlocking individual-level data that now underpins HIV and IDSR program monitoring, real-time analytics, surveillance and response initiatives. In his keynote, Dr. Jacob will map the current digital-health landscape, highlight AI opportunities, and outline concrete actions the sector must take to translate technology into measurable health impact

Topic : *Opportunities, Approaches and Imperatives of Digitalizing One Health in the era of Artificial Intelligence*

Prof Salome Bukachi is a Professor of Anthropology at the University of Nairobi's Institute of Anthropology, Gender, and African Studies, and a honorary Fellow at Durham University. She holds a PhD in Anthropology, specializing in Medical Anthropology. Author of over 70 publications and supervisor of over 50 graduate students. Her research areas of focus include community participation, gender, health systems and the socio-economic and cultural/behavioural aspects of infectious diseases and other development issues including water security, food security and agriculture. She works with various stakeholders both local and international, in undertaking research and development on anthropological issues. She is a member of several regional and global initiatives including the Africa One Health Network, One Health High Level Expert Panel, LANCET- PPATS Commission on Prevention of Viral Spillover at Source, among others. Salome has mentored many African Anthropologists and has created a niche for herself in the emerging field of Anthropology of infectious diseases and nutritional anthropology.

Topic : *Strengthening Risk Communication through Gender Equity and Community Engagement: A One Health Cornerstone*

Prof Samuel Kariuki is currently the Director of Drugs for Neglected Diseases initiative (DNDi) in Eastern Africa and a visiting Professor in Tropical Microbiology at University of Oxford, the Ohio State University One-Health Initiative, and Honorary Fellow, Wellcome Trust Sanger Institute, Cambridge, the United Kingdom.

Over the last 20 years he has carried out research on epidemiologic characterization of enteric infections outbreaks, utilizing whole genome sequencing to better understand ecology, and transmission dynamics of bacteria and antimicrobial resistance. He led the initiative to develop the National Action Plan for reduction and control of Antimicrobial Resistance and sits on the National Antimicrobial Stewardship Advisory Committee that advises Ministries of Health and Agriculture on policy on prudent use of Antimicrobials in human and veterinary medicine. In addition, he has published on the local epidemiology of antimicrobial resistance especially relating to the human-animal interface and contributed extensively to policy change in treatment and management of foodborne infections locally and have helped in the understanding of zoonotic infections epidemiology locally and globally. He was principal author of *Situation Analysis: Antibiotic Use and Resistance in Kenya*, under the Global Antibiotic Resistance Partnership (GARP) and currently a member of the WHO Strategic Advisory Group (SAG-AMR) on AMR.

He is a fellow of the African Academy of Sciences, a member of the American Society for Tropical Medicine and Hygiene and the American Society for Microbiology. He was recently elected as an International Member of the U.S. National Academy of Medicine (NAM) which is one of the world's highest honours in health and medical science.

Topic : *One Health Approaches to tackling Antimicrobial Resistance in Kenya: Challenges and Opportunities - Prof. Samuel Kariuki (DNDi)*

Dr. Bernard Bett is a senior scientist at the International Livestock Research Institute. He leads the One Health Centre in Africa (OHRECA) which implements applied research and capacity building activities on One Health in Africa. Bernard's research interests focus on the epidemiology of neglected, emerging, and re-emerging infectious diseases especially those transmitted by arthropod vectors. His expertise includes statistical and mathematical modelling and participatory epidemiology. He is passionate about generating tools and knowledge that can guide infectious disease control in the public and animal health sectors in developing countries.

Topic : *Leveraging the existing Environment – Health Linkages to strengthen the Operationalization of One Health*

Dr Diana Onyango is a seasoned animal health and rural development specialist with over 20 years' experience in multi-sector programs in one health, food security, rural livelihoods and environmental sustainability across East Africa. She holds a Bachelor in Veterinary Medicine degree, Master's in Veterinary Epidemiology and Public Health and Post-graduate Diplomas in Project Management, Leadership and Management. She is currently pursuing a PhD in Agricultural Resource Management at the University of Nairobi, focusing on the integration of carbon offsetting in smallholder farming agroforestry systems.

Dr Onyango is currently the Head of Technical Team for Farm Africa, leading on designing and delivering climate-smart, market-driven driven and One Health responsive interventions in livestock and rangeland systems across East Africa. Her work focuses on enhancing the resilience of smallholders and pastoral communities through regenerative agriculture, rangeland rehabilitation, and sustainable livestock production systems. She has been instrumental in advancing integrated approaches that combine one health, environmental management, and climate adaptation. Dr Onyango is a 2024–2025 Hubert H. Humphrey Fellow at Cornell University, where she completed the fellowship program focused on agriculture and rural development with emphasis on food policy, carbon offsetting, and sustainable food systems. She is passionate about translating science and field evidence into practical policy frameworks that enhance One Health governance, climate resilience, and equitable food systems.

Topic : *Moving from Silos to Systems Thinking: Integrating Policy and Practice for One Health Governance in Kenya Dr. Diana Onyango (Farm Africa)*

Dr Peter Stevenson is Chief Policy Advisor of Compassion in World Farming and is a qualified UK lawyer. He received an Order of the British Empire (OBE) in 2020 from the Queen for "services to farm animal welfare". He studied economics and law at Trinity College, University of Cambridge. He played a leading role in winning the European Union (EU) bans on veal crates, battery cages and sow stalls as well as a new status for animals in EU law as sentient beings. Peter has written well-received reports on the detrimental impact of industrial farming on human health, biodiversity loss, deforestation, soils and water. Peter is one of the Co-Editors-in Chief of the journal *Animal Research and One Health*.

Topic : *Agriculture at a Crossroads: Which Path do we take – Industrial or Sustainable*

2025 Conference Presenters

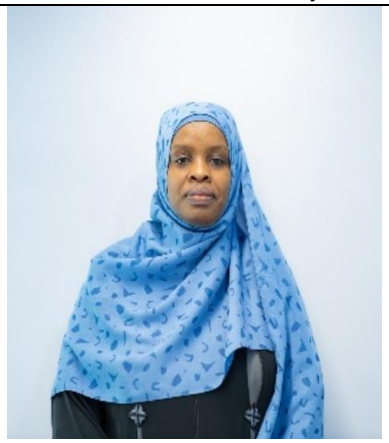
Ms. Hellen Wanjiku Ageng'a
University of Nairobi

Dr. Jeffrey Musya
County Government of Kitui

Ms. Juliet Akinyi Omondi
Amref Health Africa, Kenya

Ms. Dorah Momanyi
CIFOR-ICRAF

Dr. Julius Kajume
Independent Consultant



Dr. Aisha Mongi
Malindi Sub-County Hospital

Ms. Christine Mutisya
ILRI, Kenya

Ms. Ruth Bonareri
AMPATH–MTRH,

Ms.Naomi Kendi
Egerton University

Mr. Emmanuel Busera
Afro Asia Institute

Dr. Phaustine Adhiambo
Migori County

Mr. Brian Waswala-Olewe
Maasai Mara University

Dr Tobius Owiti
Veterinarian

Dr. Rose Owada
Veterinary Medicines Directorate

Dr. Missi Mutungi
County Government of Meru

Josephine Nyanchama
MOH- Migori County

Mr. Dennis C. Langat
County Government of Busia

Ms. Purity Kosgei
Kenya Red Cross Society

 **Dr. Beryl Okumu** World Animal Protection, Kenya	 **Ms. Edna Wanjiru** ISAAA AfriCenter, Kenya	 **Mr. Rotich Kipkorir Robert** Turkana County Government
 **Dr. Josephat Tonui** Kabarak University	 **Dr. Margaret Wambui Wahome - ICIPE**, Kenya	

SCIENTIFIC ABSTRACTS AND PRESENTATIONS
Day 1: Thu 6th November 2025
Session 1: Zoonotic Diseases

Ngari Virus in humans and livestock in Arid and Semi-Arid Regions in Kenya

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Abstract
Background: Ngari virus (NRIV) is an emerging, mosquito-borne, zoonotic reassortant *orthobunyavirus.* It has been associated with severe hemorrhagic fever in humans and domestic ruminants. NRIV represents a critical but undocumented burden to human and animal health in Africa, where limited diagnostic and surveillance tools are available. The disease's burden is underreported and occasionally identified during Rift Valley Fever virus (RVF) outbreaks. There is also limited understanding of how the virus persists between outbreaks and its epidemiology in Kenya.
Objective: This study sought to determine NRIV circulation in humans and livestock in selected pastoral arid and semi-arid ecosystems in Kenya where RVF outbreaks are often reported.
Methods: A cross-sectional study was conducted from 2022 to 2025 in pastoralist-dominated arid and semi-arid areas of Marigat in Baringo County and Nguruman in Kajiado County. Symptomatic and apparently healthy cattle, sheep, goats and human patients in hospitals were recruited and sampled. Serum from the blood samples was used for viral isolation using cell culture, antibody detection by plaque reduction neutralization test and molecular detection using reverse transcriptase polymerase chain reaction.
Results: NRIV was detected in two febrile human patients and in an apparently healthy cow. Further, it was isolated in one lethargic bull with pale mucous membrane and body temperature of 39.8^{0}C. Phylogenetic analysis showed a 98% similarity to NRIV detected in a study in 2022 with samples from similar areas. NRIV neutralizing antibody were detected in 26.68% (119/446), 13.71% (51/372), 17.37% (41/236) and 12.83% (49/382) humans, cattle, sheep and goats, respectively.
Conclusion: This study shows that NRIV is circulating in humans and livestock, indicating potential zoonosis in arid and semi-arid areas. The key findings are crucial for characterizing virus epidemiology, case definition, guidance and implementation of One Health control and preventive measures for NRIV outbreaks.
Key words: Ngari virus, hemorrhagic fever, human, livestock, Kenya

Prevalence and Risk Factors Of Q-Fever Among Slaughterhouse Workers in Kikuyu Sub-County, Kenya

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Abstract

Background: Q-Fever is a zoonotic disease caused by *Coxiella burnetii*. It is considered a prevalent infection in Africa, however; there is limited knowledge about the epidemiology. Slaughterhouse workers are a high-risk group for Q fever due to their frequent contact with animals and animal products, and transmission through inhalation of contaminated dust and aerosols. This study sought to examine the prevalence of antibodies to *C. burnetii* and the risk factors for seropositivity among slaughterhouse workers in Kikuyu Subcounty, Kiambu County, Kenya.

Methods: This cross-sectional study included 312 slaughterhouse workers in 2023. A questionnaire was administered to consenting slaughterhouse workers and a serum sample collected. The serum samples were tested with Virion Serion Phase I and II IgG ELISA kits to detect the presence *of C. burnetii* antibodies. Multivariable logistic regression models were created using R software to identify risk factors associated with seropositivity.

Results: The prevalence of *C. burnetii* Phase II antibodies among slaughterhouse workers in Kikuyu Sub-County was 43.6% (95% CI 38.4 – 49.6). In the multivariate analysis Q fever seropositivity was associated with smoking OR 2.24 (95% CI 1.13 – 4.42; P=0.02), contact with sheep 2.04 (95% CI 1.04 – 4.02, P=0.04), and longer periods of working in the abattoir OR 1.93 (95% CI: 1.14, 3.27, P=0.02). The prevalence of *C. burnetii* Phase I antibodies was 10.6% (95% CI 7.9 – 15.2) which may indicate workers with chronic Q fever.

Conclusion and Recommendations: Creating awareness about Q fever and factors associated with its exposure among high-risk groups such as slaughterhouse workers is crucial in reducing exposure and infection among these groups.

Keywords: *Coxiella burnetii*, Q fever, Zoonoses, slaughterhouse workers, Kenya.

Assessing the Timeliness of the Rift Valley Fever Laboratory Surveillance System in Kenya, 2024

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Abstract

Background: Rift Valley Fever (RVF) is a zoonotic disease with cyclic outbreaks linked to heavy rainfall and flooding. Assessing RVF timeliness is essential for early warning, reducing public health and economic impact and enhancing Kenya's outbreak preparedness and response.

Objectives: The study aimed to evaluate the timeliness and diagnostic performance of RVF surveillance in Kenya, 2024.

Methods: A cross-sectional study using 2024 laboratory surveillance data was conducted with approval from the Director of Veterinary Services. Samples submitted within 48 hours and processed within 5 days were considered timely. Data were analyzed using EpiInfo and MS Excel.

Results: Out of 2,767 samples, ovine 895 (32.35%) and caprine 876 (31.66%) recorded the highest submissions. More than half of the samples 1,429 (51.64%) were received < 48 hours (median 2days, range 0–44 days), while all samples from Isiolo, Mandera, Marsabit, Wajir, and West Pokot arrived > 48 hours after collection. Turnaround time for 1,164 (42.07%) samples was <5 days; however, turnaround time for all samples from eleven counties was >5 days. Most samples 2,060 (74.44%) were tested using the Competitive ELISA method, while the remaining samples were analyzed using the ELISA-Capture RVF

IgM assay. Of these, 470 (16.99%) tested positive in both diagnostic methods. Twenty-eight RVF-positive cases were detected across seven counties, with Isiolo and Kajiado each recording highest positivity rates of 5 (17.89%). Bovine samples had the highest positivity rates, 14 (50%), while camels had the lowest, 2 (7.14%). January recorded the highest positivity rate, 15 (53.57%), whereas no cases were reported in March, May, October, November, and December.

Conclusion: The review highlights delays in turnaround time and reported RVF cases with higher positivity rates observed in cattle and during January. There is need to strengthen sample transport systems, enhance laboratory capacity, and intensify active surveillance in high-risk areas to improve timely detection and response.

Keywords: Rift Valley Fever, laboratory surveillance, disease detection, outbreak monitoring, Kenya

Session 2: Antimicrobial Resistance & Stewardship

Knowledge on Antimicrobial Resistance: A Survey among Community Health Promoters and Community Health Extension Workers in Western Kenya

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Abstract
Background: Antimicrobial resistance (AMR) is a growing global health threat, responsible for an estimated 4.95 million deaths annually. In low- and middle-income countries (LMICs), the irrational use of antimicrobials—often through over-the-counter sales, self-medication, and inadequate diagnostics—accelerates the development of resistance. AMR is also a social and behavioural challenge, making community engagement a critical component of control strategies. This study aimed to assess the knowledge and practices related to AMR among Community Health Promoters (CHPs) and Community Health Extension Workers (CHEWs) in Western Kenya.
Methodology: A cross-sectional survey was conducted among CHPs and CHEWs in Uasin Gishu, Bungoma, and Elgeyo Marakwet counties using a convenience sampling approach. Data were collected via a structured questionnaire administered through KoboToolbox, covering antibiotic use, awareness of AMR, causes, outcomes, and mitigation strategies. Data were analyzed using descriptive statistics.
Results: Preliminary findings from 249 participants are presented. The majority were female (83%), with a median age of 44 years. Most participants (69.6%) had heard about AMR, and 64% identified lack of awareness as a key driver. Regarding antibiotic use, 46% believed antibiotics could be stopped once one felt better, 18% approved of sharing antibiotics, and 67.4% thought antibiotics could treat colds and flu. Within the past 12 months, 52.8% reported using antibiotics without a prescription. Awareness of antibiotics was high (90%), with amoxicillin being the most commonly known, and healthcare providers were cited as the main source of information. Participants perceived death (54.4%), prolonged hospital stays, and high costs (50% each) as major consequences of AMR. All respondents emphasized awareness creation, proper sanitation and public education as key mitigation strategies.
Conclusion: Most CHPs and CHEWs demonstrated general awareness of AMR, yet misconceptions about appropriate antibiotic use persist—particularly concerning the treatment of viral infections. Strengthening community-level education and mentorship programs focused on antimicrobial stewardship, rational antibiotic use, and reliable information dissemination is essential to curb AMR at the grassroots level.
Keywords: Antimicrobial resistance, Community Health Promoters (CHPs), Community Health Extension Workers (CHEWs), Antibiotic use, Community engagement

Exploring the Landscape of Antimicrobial Use; A Point Prevalence Survey in Three Major Health Facilities in Kilifi County – Kenya.

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Abstract

Background: Optimizing antimicrobial use (AMU) is a critical pillar in the containment antimicrobial resistance (AMR). Health facilities are high-risk environments for inappropriate antibiotic use. The World Health Organization (WHO) recommends Point Prevalence Surveys (PPS) as effective tools for evaluating AMU in inpatient settings and identifying opportunities for targeted interventions**.**

Objectives: To explore antimicrobial prescribing practices in three secondary healthcare facilities (HCFs) in Kilifi County and establish a baseline for antimicrobial stewardship (AMS) interventions.

Methods: A PPS was conducted across three secondary HCFs in Kilifi County: Kilifi County Referral Hospital (KCRH), Malindi Sub-County Hospital (MSCH), and Mariakani Sub-County Hospital (MrSCH). Records of all inpatients admitted at 8:00 AM were reviewed on the day of the survey. Data collected included patient demographics, antibiotic indication, antibiotic prescribed, and laboratory micorbiological testings. Descriptive analysis was performed using IBM SPSS v20. Antibiotics were classified using the WHO AWaRe system (Access, Watch, and Reserve). Chi-square tests assessed differences in antibiotic use and indications across facilities ($p<0.05$).

Results: Data from 478 patients were included: 198 (41.4%) from KCRH, 173 (36.2%) from MSCH, and 107 (22.4%) from MrSCH. The overall antibiotic prescription prevalence was 68.1% (326/478), with the highest prevalence observed at MSCH (133/173; 76.9%), followed by KCRH (139/198; 70.2%) and MrSCH (53/107; 49.5%). Ceftriaxone was the most frequently prescribed antibiotic (111/326; 34.0%), primarily for respiratory infections. Most antibiotics were from the Watch group, while only 33.6% were Access agents, which is well below the WHO target of at least 60%. Only 28 (8.6%) of patients on antibiotics had culture requests, with 6 (21.4%) showing bacterial growth.

Conclusion: This PPS highlights high inpatient antibiotic use in Kilifi County, with Ceftriaxone (Watch group antibiotic) being the most frequently prescribed agent. Low use of Access antibiotics and limited microbiology testing point to the need for strengthened antimicrobial and diagnostic stewardship.

Keywords: Point Prevalence Survey; Antimicrobial Stewardship, Antimicrobial Use, WHO AWaRe classification, Ceftriaxone

Spatiotemporal Patterns of Antimicrobial Resistance in Shared Human-Animal Waterpoints in the Maasai Mara Ecosystem, Kenya

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Abstract

Background: Antimicrobial resistance (AMR) poses an existential One-Health threat, particularly in arid and semi-arid landscapes where close human, livestock, and wildlife interaction promote pathogen exchange. Endemic livestock diseases, antibiotic misuse, sociocultural practices, and poor sanitation further accelerate AMR spread.

Objectives: This cross-sectional study sought to characterize prevalence, resistance patterns, and spatial-seasonal variations of AMR *Escherichia coli* isolates in surface water points within the Maasai Mara Ecosystem (MME) and evaluate spatial distribution of resistance.

Methods: From April 2024 and May 2025, seasonal water samples were collected from 28 water points across MME. *E. coli* isolates were cultured and tested for susceptibility to eight commonly used antibiotics following Clinical and Laboratory Standards Institute guidelines. AMR prevalence was expressed as proportions, seasonal and site-based differences evaluated using chi-square tests. Spatial clustering of resistant isolates was analysed with multinomial spatial model, and cost-distance analysis estimated the share of the MME population lacking access to potable water.
Results: *E. coli* was detected in 92.9% of samples, and all isolates were resistant to at least one antibiotic. High resistance occurred to penicillin (100%), amoxicillin (92.6%), nitrofurantoin (78.6%), and ceftazidime (52.9%). River samples exhibited higher resistance (51.4%) than open water pans (40.4%). AMR peaked during short-wet and short-dry seasons (51.3% and 51.5%), with over 55% of sites showing Antibiotic Resistance Index scores ≥0.2. Multi-drug-resistant isolates (≥3 antibiotic classes) were detected across all seasons, peaking during the short-wet season. Significant variation was observed across sites and seasons ($p<0.05$). Spatial analysis identified two clusters: Cluster 1 near dense human areas (RR = 0.78) while Cluster 2 in human-livestock-wildlife zones (RR = 1.26). Cost-distance analysis revealed one-third residents face elevated ARM exposure due to limited access to potable water.
Conclusion: Widespread AMR isolates in shared waterpoints within MME pose significant public health risks, necessitating urgent targeted One-Health interventions.
Keywords: AMR; *Escherichia coli*; Kenya; One-Health; SaTScan

Assessment of Knowledge, Attitudes, and Practices of Poultry Farmers on Antimicrobial Use and Resistance within Njoro Ward, Nakuru, Kenya

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Abstract
Background: Antimicrobial resistance (AMR) is a significant global public health threat with substantial impacts on both the animal production and human health sectors. In previous studies, poultry bacterial isolates showed significantly higher levels of multidrug resistance compared to those from other farm animals. There is limited literature on the Knowledge, Attitudes and Practices (KAP) related to AMR among Poultry farmers in the Njoro Sub-County.
Objectives: The goal of this study was to investigate poultry farmers' knowledge, attitudes, and practices regarding antimicrobial use and level of awareness of AMR and AMR risk factors.
Methods: A cross-sectional questionnaire survey was used to collect data from 103 poultry farmers in Njoro Ward. The data was entered in Excel worksheets, cleaned and analysed. Descriptive statistics were used to summarize the KAP levels and AMR awareness. Thereafter, a metric scoring sheet was generated to categorize the KAP levels.
Results: The study revealed **moderate knowledge (67.9%)** and **low awareness levels (16.5%)** of AMU and AMR among poultry farmers respectively, with 97% showing negative attitudes and widespread misconceptions, such as believing antibiotics treat all diseases (60.1%) or can be reused for similar signs (56.3%). Approximately **80% used antibiotics imprudently**, mainly for prophylaxis, metaphylaxis, self-treatment, and without observing withdrawal periods. Despite three quarters (77.6%) agreeing that good biosecurity measures minimize antibiotic use, only 29.1% implement it. Among those aware of AMR, most (92%) could not identify its risk factors, and only 6% recognized it as a threat to human and animal health.
Conclusion: In conclusion, the study revealed generally moderate levels of knowledge, low awareness, negative attitudes and biosecurity gaps among poultry farmers, coupled with widespread imprudent antimicrobial use practices, highlighting an urgent need for targeted interventions to promote responsible antibiotic use and improve farm biosecurity.

Key Words: Antimicrobial Use, Antimicrobial Resistance, Poultry Farmers, Knowledge and Practices

Session 3: Sustainable Food systems and ecosystems

Veterinary Pharmacovigilance and Food Safety: Strengthening One Health Safeguards in Kenya

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Abstract
Background: Veterinary pharmacovigilance (PV), as defined by the World Organisation for Animal Health (WOAH), involves detecting, assessing, understanding, and preventing adverse events or risks associated with veterinary medicines to ensure their safe and effective use. PV is vital in addressing antimicrobial resistance (AMR), reducing drug residues in food of animal origin, and addressing broader One Health challenges. In Kenya, PV guidelines primarily focus on Marketing Authorization Holders (MAHs) but provide limited engagement with frontline actors such as agrovet operators, veterinary practitioners, and farmers, restricting early detection of misuse or substandard medicines that may threaten food safety and public health.
Objectives: To assess PV awareness, reporting practices, and barriers among MAHs, agrovets, veterinary practitioners, and farmers in Kenya, and to identify opportunities for integrating PV data into national food safety and One Health frameworks.
Methods: A cross-sectional qualitative survey was conducted between July and September 2025 among MAHs (n≈10), agrovet operators (n≈25), and veterinary practitioners (n≈20). Data were collected through semi-structured interviews and questionnaires assessing PV awareness, reporting practices, and understanding of food safety implications. Responses were analyzed descriptively and thematically.
Results: PV awareness was low among field-level actors; over 80 percent of agrovets and most practitioners were unaware of PV or Veterinary Medicines Directorate (VMD) reporting requirements. While MAHs understood their PV obligations, they mainly reported counterfeit products rather than safety and efficacy issues. Major barriers included dependence on paper-based systems, limited access to digital reporting tools, and lack of feedback mechanisms.
Conclusion: Kenya's PV system has limited reach and low awareness among frontline actors, undermining food safety safeguards. Strengthening PV through inclusive training, simplified digital reporting tools, and integration with AMR and residue monitoring programs under the One Health strategy will enhance early risk detection and reinforce the principle that "by protecting one, we help protect all."
Keywords: Veterinary pharmacovigilance, Food safety, Antimicrobial resistance, One Health, Drug residues

Integrating Animal Welfare into One Health Food Systems: Pathways Toward Equitable, Humane, and Sustainable Transformation

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Abstract

Background: The urgency of achieving the Sustainable Development Goals (SDGs) and staying within the 1.5 °C limit underscores the interdependence between human, animal, and environmental health. Industrial animal agriculture drives climate change, biodiversity loss, and zoonotic risks, while animal welfare remains a neglected dimension in sustainable development. Within the One Health paradigm, transforming food systems requires integrated approaches linking welfare, sustainability, and equity.

Objectives: Under the Equitable, Humane, and Sustainable (EHS) Business Cases, this study examined how integrating ecosystem health, animal welfare, and the social dimension of farming fosters resilient and economically viable food systems that support people, animals, and the planet. Using Kenya as a case study, it explored animal welfare as an entry point for aligning human nutrition, ecosystem sustainability, and climate action within a One Health framework.

Methods: World Animal Protection, with partner organizations, developed a comprehensive tool with 100 indicators across three dimensions: agroecology, animal good life, and farm economics. It assesses resource efficiency, ecosystem resilience, social equity, animal health and behavior, and farm profitability. Data were collected from ten mixed farms in Kiambu and Murang'a Counties, breeding native chickens, layers, goats, pigs, and cows.

Results: Integrating welfare and agroecological criteria improved soil health, reduced input dependency, and enhanced animal well-being and farmer livelihoods. Kenya's experience highlights challenges of improving welfare in low protein, developing agrarian economies but also reveals opportunities for resilience and climate adaptation.

Conclusion: Embedding animal welfare within agroecological and governance frameworks strengthens One Health outcomes. A welfare-centered transition fosters ecological balance, food security, and community resilience, offering a holistic pathway toward sustainable, climate-responsible, and health-promoting food systems for humans, animals, and the planet.

Keywords: One Health; Animal Welfare; Equitable, Humane and Sustainable Food Systems; Agroecology; Just Transition

Livestock Emergency Guidelines and Standards (LEGS), An Opportunity to Improve Livestock-Related Emergency Interventions Towards Sustainable Food Systems and Ecosystems

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Abstract

Background: Livestock-related emergency interventions - livestock feed, provision of water, veterinary support, livestock offtake, provision of livestock and shelter & settlement - are quite often poorly implemented with limited impact. However, application of LEGS approach offers an opportunity to redeem the situation and move towards sustainable food systems and ecosystems.

Objective: This paper shows how applying the LEGS approach in the delivery of livestock-related emergency interventions can improve the quality and accountability of humanitarian responses, thus protecting and / or rebuilding livestock assets.

Methods: Review of the LEGS handbook, training materials and reports since 2011 was undertaken. LEGS Trainings were also conducted as part of methodology.

Results: LEGS approach includes a practical planning process consisting of *participation* and *initial assessment, response identification, analysis of interventions and options, and response plan,* underpinned by

monitoring, evaluation, accountability and learning (MEAL). Additionally, LEGS approach provides standards and key actions that need to be taken to achieve the objectives of protecting and rebuilding livestock assets in emergencies. LEGS community of practice are increasingly using LEGS approach in implementing livestock-related emergency interventions, helping to protect and rebuild livestock assets more effectively and efficiently. Consequently, communities' resilience to climate change-related shocks is strengthened and their livelihood and food systems supported and maintained. Evaluations from LEGS trainings by over 1,000 participants in Kenya shows that LEGS approach is highly relevant and a valuable tool in the delivery of livestock-based emergency interventions.

Conclusion: LEGS approach ensures livestock emergency responses are selected, designed and implemented effectively using the most appropriate, feasible and timely livestock-based livelihood interventions. Implementing livestock-related emergency interventions using LEGS approach therefore offers an opportunity for re-orientation towards sustainable food systems and ecosystems with livestock playing a major role.

Key words: LEGS approach, Emergencies, Interventions, Communities, Livelihood,

Association Between Physicochemical Parameters and Heavy Metal Levels in Lake Victoria, Kenya - Implications on Nile Tilapia Ecological Requirements

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Abstract

Background: Lake Victoria is increasingly threatened by anthropogenic pollution, with implications for water quality, fisheries, and public health. This study examined the relationship between physicochemical parameters and heavy metal concentrations (Pb, Cd, Zn, Cu, Fe, Cr) in the Kenyan portion of the lake.

Objectives: To investigate the association between physicochemical parameters and heavy metal levels in Lake Victoria, Kenya, with emphasis on their effects on Nile tilapia's physiology.

Methodology: A cross-sectional study was conducted in which six composite water samples were collected from six sites in Siaya County, and physicochemical parameters were measured *in situ*. Heavy metals were analyzed using Atomic Absorption Spectrophotometry, and data were subjected to Kruskal–Wallis tests, Dunn's post hoc analysis, and Spearman's rank correlations in R.

Results: Most physicochemical parameters were within WHO limits, although conductivity ($p = 0.035$) and salinity ($p = 0.019$) varied significantly across sites. Among metals, Fe ($p = 0.0447$) and Cr ($p = 0.0463$) showed significant spatial variation, with Kokach and Wichlum recording higher Fe and Kokach showing lower Cr levels. Correlation analysis revealed positive associations between Fe and both temperature ($r = 0.77$, $p = 0.0449$) and dissolved solids ($r = 0.77$, $p = 0.0449$), while Cd was negatively correlated with conductivity ($r = –0.97$, $p < 0.001$). Other associations were weak and not statistically significant.

Conclusion: These findings demonstrate that physicochemical conditions influence heavy metal dynamics in Lake Victoria. While water quality parameters remained within ranges favorable for Nile tilapia, elevated Fe and Cr in some sites may pose potential ecological threat to their physiological functions. Regular monitoring and catchment management are recommended to safeguard the lake's ecological integrity and fisheries productivity. There is also a need to conduct a detailed study across all seasons.

Keywords: Lake Victoria, Nile Tilapia, Heavy Metals, physicochemical parameters, ecology

Climate Doom Loop: Factory farming's toll on animals, farmers, and food – an African perspective

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Abstract

Time is running out to meet the Paris climate agreement of 1.5˚C – resulting in more severe and frequent climate disasters impacting every country globally.

Africa is already experiencing climate disasters with Ethiopia, Kenya, Somalia experiencing prolonged droughts (2020-2023), whilst Niger, Mali, Burkina Faso are exposed to reoccurring droughts. This directly causes animal welfare issues with increases livestock mortality, reduced productivity, dehydration, and starvation – which then have significant impacts on livelihoods causing displacements, conflicts, food insecurity, migration, loss of income.

But the situation in Africa (and globally) is expected to get much worse. For example, it is estimated that by 2030, that 118 million people in Africa will be exposed to extreme heat, floods and draught – especially if no adaption measures are put in place.

Here we build on from our recent report and present several cases studies exploring the impact that climate change has on communities in Africa. We will explore agroecological farming practices and how these can make communities more resilient to the impacts of climate change. We will also highlight that any strategy to meet the impacts of climate change, to remain within planetary boundaries, to reduce GHG emissions, and to ensure food security and livelihood protection, should consider a One Health approach.

We will continue to advocate for agroecological practices to be implemented and to ensure that animals, people and the planet do not continue to experience the worsening impacts of climate change.

***Key words**:* climate change, one health, adaptation, animal welfare, climate disasters

Session 4A: Antimicrobial Resistance & Stewardship

Leveraging Partnership to Strengthen Molecular Diagnostics Innovation for AMR response: Insights from Kabarak–UTMB Collaboration

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Abstract

Background: Antimicrobial resistance (AMR) is a rapidly escalating global health challenge, projected to cause 10 million annual deaths by 2050 if unaddressed. In Sub-Saharan Africa, and particularly in Kenya, the problem is compounded by inadequate access to affordable and accurate diagnostics, as well as culture and antimicrobial susceptibility testing (AST). Through a collaborative initiative between Kabarak University and the University of Texas Medical Branch (UTMB) we aimed to determine the microbiology diagnostic capacity in select public and faith based hospitals in Kenya to inform development of low cost molecular diagnostics for bacterial infections.

Methods: We conducted a pilot study with multi-site survey in ten (10) public and faith-based hospitals with varying capacities across Kenya. Data collection combined structured interviews and focus group discussions with clinicians, nurses, and laboratory personnel. The survey explored diagnostic availability and cost, turnaround times, prescribing practices and healthcare worker knowledge attitudes and practices. Ethical approval for the study was obtained from Kabarak University Scientific & Ethics Review Committee, Tenwek and Kijabe Hospital.

Results: Findings revealed disparities in microbiology diagnostics capacity in the hospitals surveyed with lower level facilities having limited (22%) capacity. Existing culture and AST capacity was not optimal, with significant bottlenecks in specimen processing, clinician-laboratory interface, and lack of antibiograms to guide prescribing. Over 50% of antimicrobial prescriptions were empirical, with limited stewardship oversight. Along with the pilot study we established the *Kabarak University & University of Texas Medical Branch Synergistic Alliance for Innovative Low Cost Diagnostics for Infections in Africa' (KUSAIDIA)* consortium. The consortium focuses on driving innovation in microbial diagnostics tailored to a low- and middle-income country (LMIC) contexts with an emphasis on affordability.

Conclusion: The study demonstrates significant gaps in microbiology diagnostics for invasive bacterial infections. The results are expected to inform further development of a fit for purpose low-cost molecular diagnostic test for bacterial infections. The Kabarak–UTMB collaboration is a valuable cross-institutional partnerships aimed at tackling AMR through diagnostic innovation and provides a scalable model for LMICs to reduce empirical prescribing, strengthen evidence based treatment, and enhance patient outcomes.

Key words: Antimicrobial Resistance, Stewardship, Collaboration, LMICs.

Digital Sentinels – Leveraging Technology for Nutri-WASH and Public Health Emergencies in Migori County, Kenya.

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Abstract
Background: Nutrition and WASH-related threats remain major public health challenges in low-resource settings, where manual surveillance systems limit early detection and coordinated response. This study presents the development and pilot of *Digital Sentinels*, a mobile-based digital surveillance tool designed to enhance early warning and emergency response capacity in Migori County.
Objectives: To design, develop, and pilot a digital platform enabling real-time reporting, automated alerts, and improved coordination for nutrition and WASH-related emergencies.
Methods: An iterative co-design approach was applied involving stakeholder consultations, system architecture design, prototype development, and pilot testing. The platform integrates geospatial mapping, community-based reporting, and automated analytics to identify public Health emergencies trends in WASH and nutrition indicators. Usability testing and simulated emergency scenarios were conducted to evaluate functionality, response time, and user experience.
Results: Pilot testing demonstrated a 50% reduction in data reporting time and improved coordination among community health volunteers and county surveillance officers. Users reported high system usability and relevance for field-level emergency response. The platform's automated alert function successfully generated early warnings within 24 hours of simulated threats.
Conclusion: *Digital Sentinels* demonstrates the potential of mobile-based technology in strengthening public health surveillance and community-level response. Its integration into county surveillance systems can improve outbreak preparedness, promote accountability, and enhance resilience in resource-limited environments.
Keywords: Digitization, Nutrition Surveillance, WASH, Early Warning Systems, Public Health

Hand Hygiene Practice Compliance Among Health Care Workers at Migori County Referral Hospital, Kenya.

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Abstract
Background: Hand hygiene is universally recognized as the most effective and low-cost measure for preventing healthcare-associated infections and combating antimicrobial resistance. Despite global initiatives such as the WHO "My Five Moments for Hand Hygiene", compliance among health care workers in low- and middle-income countries remains low.
Study objectives: To assess compliance with the WHO five moments of hand hygiene at Migori County Referral Hospital, Western Kenya.
Methods: A descriptive cross-sectional study was conducted to determine hand hygiene compliance using the WHO five moments for hand hygiene tool. A nonidentified observer was used to monitor compliance with hand hygiene. Data was collected over a period of 30-days, August 2025 to September 2025. Descriptive analysis was conducted to summarize the findings.

Results: A total of 216 hand hygiene opportunities were observed, with an overall compliance rate of 22% (48 of 216 observations). Compliance was highest after touching body fluids (44%) but lowest after touching patient surroundings (23.5%). Doctors exhibited higher compliance, in medical and surgical wards at 45% and 50% respectively, whereas nurses and interns showed lower adherence of 15% and 25% respectively. The medical ward recorded the highest compliance. Pediatric and maternity wards showed the lowest compliance. Alcohol-based hand sanitizer use was predominant (78.4%), followed by soap and water (12%) and water only (9.6%). Lack of hygiene materials, forgetfulness and high workload were the commonly reported barriers to hand hygiene.

Conclusion: Compliance with hand-hygiene practices among healthcare workers at Migori County Referral Hospital was low, influenced by both resource and behavioral factors. Given these findings, providing hand hygiene supplies, continuous infection prevention mentorship and hand hygiene reminders are essential for sustainable improvement.

Key Words: Hand hygiene, compliance, infection prevention and control, healthcare workers, Migori County Referral Hospital.

Session 4 B: Zoonotic diseases

Response to zoonotic disease outbreaks along wild meat value chains in Sub-Saharan Africa (SSA): A systematic literature review

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Abstract

Background: Human interactions with wild meat during harvesting, trade or consumption are a major cause of infectious pathogen spillovers and disease outbreaks within human populations. This eminent health risk highlights the urgent need to consolidate existing outbreak response data to inform future outbreak response frameworks.

Objective: The aim of this study was to summarize outbreak response measures that have been implemented during suspected wild meat-borne disease outbreaks in Sub-Saharan Africa from 2004 to 2024.

Method: We conducted a systematic literature review of peer reviewed articles and the World Health Organization-Disease Outbreak News database (WHO-DONs) to summarize outbreak response measures that have been implemented during wild meat-borne disease outbreaks in Sub-Saharan Africa from 2004 to 2024.

Results: Over the 20-year period, there were 81 disease outbreak events associated with wild meat and resulting from four zoonotic viruses: Ebola (n=29), Marburg (n=11), Lassa (n=19), Mpox (n=20) and one bacterium: *Bacillus anthracis* (n=2). These events were observed across 24 countries with the highest outbreaks reported in the DRC (n=20). At the national level, response involved human surveillance via contact tracing, case management and mitigation of the disease spread through public education on infection prevention and control, bans on wild meat use, amongst others. Implementation of response measures was dependent on collaboration with international communities. At a personal level, communities either stopped, reduced or continued harvesting, sale and consumption of wild meat depending on their knowledge of the outbreak, and the directives issued by the health authorities.

Conclusion: Response to wild meat-borne outbreaks at the personal level appeared to be inter-connected to the national response measures with public health, food security and conservation trade-offs from wild meat use playing a major role in community response. Therefore, there is a need for holistic one approaches that not only consider the public health needs during outbreaks as demonstrated by this study but also consider the ecological and community social needs during outbreak response.

Key words: *Bushmeat, zoonoses, spillovers, disease, outbreak response*

Empowering communities through One Health: A Training of Trainers approach

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Abstract

Background: In Meru County, Kenya, One Health (OH) challenges such as zoonotic diseases, sanitation, and hygiene pose public health risks and there is limited knowledge on prevention. Children and community members are key demographics at risk for OH challenges, and interventions within these demographics can enact change through a community centered approach. Training of Trainers (ToT) approaches to education contribute to sustainability.

Objectives: To train teachers and community members through a ToT approach to cascade key OH messages to students and community members.

Methods: A single-day ToT program was implemented with purposively selected teachers and community leaders to enhance OH awareness and promote safer human-animal-environment interactions through the *Safety Around Animals* lesson plan. It introduced case-based learning to teachers, and integration of OH topics into school curriculums. The program was designed to empower community leaders to serve as OH champions by identifying priority zoonotic diseases, engaging their communities in OH initiatives, and fostering local OH leadership. A pre and post questionnaire was used to assess changes in knowledge..

Results: A total of 45 teachers and 24 community leaders were trained. Post-training assessments showed a significant improvement in OH awareness, with teachers' knowledge scores increasing from 57% to 91%. Teachers successfully developed case studies integrating OH principles and expressed confidence in incorporating these into their teaching. Community leaders identified priority zoonotic diseases and explored ways to engage their communities in OH initiatives. Both groups contributed to forming local OH awareness groups and integrating OH concepts into community and school education.

Conclusions: The ToT approach proved effective in fostering OH awareness and community engagement. The program's success highlights the impact of participatory and case-based learning in driving OH integration and behavior change. Expanding similar initiatives can further strengthen community resilience against OH challenges, enhancing public health outcomes and promoting proactive disease prevention.

Keywords: Training of Trainers (ToT), zoonotic disease prevention, case-based learning, community engagement, curriculum integration

The Cultural Ecology of Emerging Zoonoses: Exploring Traditional Belief Systems and Livestock Management in Kenyan Pastoralist Communities

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Abstract

Background: Zoonotic disease emergence in pastoral communities is shaped by complex interactions between traditional livestock management practices, cultural belief systems, and ecological factors. Kenyan pastoralist communities face disproportionate risks from emerging zoonoses, yet existing interventions often overlook the cultural dimensions Of disease prevention and control,

Objectives: To examine how traditional belief systems and livestock management practices influence zoonotic disease risk in Kenyan pastoralist communities, and to develop culturally-informed One Health policy recommendations for disease surveillance and prevention.

Methods: A mixed-methods cross-sectional study was conducted across four pastoral counties in Kenya (Turkana, Samburu, Marsabit, and Isiolo) from January to August 2023. Purposive sampling identified 420 pastoralist households and 32 key informants (community leaders, traditional healers, veterinary officers), Data collection included structured household surveys (n=120), in-depth interviews (n=32), and direct observation of livestock management practices (60 household observations). Qualitative data were analyzed using thematic analysis with NVivo 12, while quantitative data were analyzed using descriptive statistics and logistic regression to identify associations between cultural practices and zoonotic exposure risk.

Results: Seventy-three percent (307/420) of households reported relying on traditional healers for initial disease diagnosis in livestock. Households practicing ritual animal slaughter without biosafety measures showed 2.8 times higher odds of zoonotic exposure (OR=2.8, 95% CI: 1.9-4.1). However, 81% (340/420) of respondents expressed willingness to adopt disease prevention measures if culturally adapted. Traditional grazing practices reduced herd disease transmission by 34% compared to confined systems. Five major cultural themes emerged: spiritual protection beliefs (48%), community-based disease management (52%), and integration of modern and traditional knowledge (67%).

Conclusion. Traditional belief systems and cultural practices significantly influence zoonotic disease risk in pastoral communities. Rather than replacement, integrating traditional knowledge with modern veterinary science through culturally-adapted One Health interventions offers promising pathways for disease control. Policy recommendations include: (1) establishing community-based surveillance Systems that incorporate traditional healers; (2) developing culturally sensitive biosafety training programs; (3) recognizing pastoral knowledge systems in national disease prevention strategies; and (4) creating multi-sectoral governance frameworks that bridge veterinary, health, and cultural authorities. These findings underscore the necessity of embedding cultural ecology perspectives in One Health policy implementation and governance structures to achieve sustainable zoonotic disease prevention in pastoral contexts.

Keywords: One Health, zoonotie diseases, pastoralist communities, cultural belief systems, livestock management, policy governance, Kenya, community-based surveillance, traditional knowledge integration, disease prevention

Day 2: Fri 7th November 2025th
Session 5: Climate Change & Environmental Health

Integrating Environment and Ecosystem Health Actors in Kenya's One Health Landscape: *The Case for Stakeholder Net-mapping*

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Abstract

Background: One Health (OH) has gained momentum across Africa, with increasing investment in technical capacity to identify, monitor, and respond to OH issues. However, the limited involvement of environmental health actors remains a weak link in Kenya and other countries. To address this gap, COHESA Kenya applied stakeholder net-mapping to analyze Kenya's Environment and Ecosystem Health (EEH) network and inform strategies for integrating environmental actors into the OH framework.

Objective: To identify key Environment and Ecosystem Health actors in Kenya and develop strategies to enhance their integration within the national One Health landscape.

Methods: A stakeholder net-mapping exercise was conducted in Machakos, Kenya, from 16–18 July 2024, engaging 38 stakeholders representing government key-line ministries, research, academia, NGOs, and international organizations. Purposive sampling was used to recruit participants since their selection determines the quality of the net map. Participants identified actors, linkages, and influence levels in Kenya's EEH network. Relationships were mapped for five linkage types: funding, collaboration, capacity building, coordination, and advocacy/communication. Data were digitized and analyzed using VisuaLyzer v2.0

Results: The Zoonotic Disease Unit (ZDU) emerged as the most influential actor with 23 linkages, while the National Environment Management Authority and Kenya's Water Resources Management Authority were key environmental connectors. The network showed moderate connectivity but high centralization, indicating dependency on a few dominant nodes, lower than optimal for a balanced One Health network. Collaboration and advocacy were fragmented, and data-sharing links were ad hoc, with limited engagement of subnational actors.

Conclusion: Strengthening structured data-sharing mechanisms, diversifying funding, and establishing an EEH coordination platform within ZDU at the office of the president can enhance collaboration and align Kenya's OH efforts with global network integration standards.

Key words: One Health (OH) approach, Environmental and ecosystem health integration, Stakeholder net-mapping, Multisectoral collaboration and coordination, Kenya

Unlocking the Untapped Potential of Agroforestry Systems as a Pathway to One Health: A Case Study of Samburu County, Kenya

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Abstract

Background: Pastoralist in Samburu County disproportionately face the triple burden of poor human and animal health, impacts of climate change and poverty. A one health approach that integrates nature-based solutions such as agroforestry systems if well exploited could diversify and sustain smallholder production for increased economic, human and animal health and environmental benefits.

Objectives: This study aimed to document gaps in the exploitation of agroforestry and provide evidence on its potential in achieving the interlinked one health outcomes.

Methodology: A cross-sectional survey was conducted between June and August 2025 in three wards in Samburu East Sub-County. HHs were sampled randomly from a sampling frame of 1761 obtained from a house listing exercise. Structured questionnaires were administered to 484 participants who consented to participate in the study. The data was cleaned and analyzed using descriptive statistical techniques in R software.

Results: In Samburu County where 92% of the study population still grapple with food scarcity, about 36% collect 47 wild food species as a natural safety net and resilience mechanism. Despite the potential of agroforestry systems to address food scarcity, only 5.8% practise—agrosilviculture (29%), agrosilvopastoral (32%) and silvopastoral (39%). Yet, respondents in both agroforestry and non-agroforestry systems recognized the contribution of agroforestry systems to food availability (88%), medicinal value (31.8%) promoting health and wellbeing of human and livestock, improved household incomes (79%), improved biodiversity (81%), carbon sequestration (76%), soil fertility (79%) and regulating water in soils (79%).

Conclusion: This first local case study contributing to the available evidence on the link between agroforestry and one health in the ASAL County of Samburu forms a key baseline for research, policy and academia to prioritize and amplify the role of agroforestry in the one health nexus.

Keyword: Agroforestry systems, One health nexus, Livestock, Nature-based solution, Trees

Assessment of Environmental Contamination and Nitrate-Induced Livestock Mortality in Kang'ing'olemong'in Village, Turkana County: A One Health Approach

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Abstract

Background: Environmental contamination occurs when harmful physical, chemical, biological, or radiological substances are introduced into air, soil, or water beyond natural or legal limits, threatening human, animal, and ecosystem health. In Kang'ing'olemong'in village, Turkana South Sub-County, recurrent livestock deaths suspected from water contamination near an oil exploration site indicated potential environmental and public health risks. This study aimed to identify water contaminants and assess associated risks.

Objective: To investigate suspected environmental contamination in Kang'ing'olemong'in village by identifying potential water pollutants, determining their sources, and assessing associated risks to livestock, human health, and the surrounding ecosystem.

Methods: A descriptive cross-sectional study was conducted in Kang'ing'olemong'in village. Participants included residents exposed to the carcass, and environmental samples. Data were collected through interviews, clinical assessments, biological sampling and postmortem examinations. were done using descriptive statistics by use of Epiinfo.
Results: Among 25 respondents (mean age 28 years; 72% female), only one (4%) reported mild illness after consuming carcass meat. Blood parameters were normal, three urine samples contained calcium oxalate crystals, pus cells, and yeast cells. Postmortem examination of two goats showed pulmonary hemorrhage and emphysema, Water from the hand-dug shallow well had high alkalinity (pH 8.5) and total dissolved solids (2,405 mg/L), exceeding NEMA limits, nitrate levels (18.4 mg/L) were above acceptable thresholds, while sulphur (48.9 mg/L) and silica (11.5 mg/L) were elevated. Heavy metals, hydrocarbons, and polycyclic aromatic hydrocarbons (PAHs) were below detection limits.
Conclusion: The findings linked the livestock deaths from acute nitrate poisoning after consuming contaminated water. The elevated nitrate levels, total dissolved solids, and alkalinity were indicative of chemical pollution. Mitigation through water quality monitoring, source protection, and community awareness in Turkana County is recommended to prevent recurrence and safeguard health within a One Health framework.
Key Words: One Health, Environmental contamination, Nitrate Poisoning, Water Quality, Livestock Health

Session 6: Risk Communication, Gender and Community engagement

Promoting Behavior Change on Antimicrobial Resistance through a One Health Approach in Kapseret Sub-County, Uasin Gishu County, Kenya.

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Background: Antimicrobial Resistance (AMR) is among the top ten global public health threats. The World Health Organization (WHO) reported that bacterial AMR directly caused 1.27 million deaths in 2019 and contributed to 4.95 million deaths globally. Despite the rising threat, limited community initiatives address behavioral drivers of AMR in Kenya.
Objectives: To promote behavior change and raise public awareness on AMR using a One Health approach that integrates human, animal, and environmental health strategies.
Methods: The Kenya Red Cross Society implemented community centered interventions under the AMR Project in Kapseret Sub-County. Key activities included home visits, community sensitization sessions, and review meetings for evidence based engagement. These platforms fostered trust, translated technical AMR messages into actionable practices, and mobilized local leaders and practitioners for collective accountability.
Results: Between October 2024 and October 2025, the interventions achieved the following outcomes:

- 78% increase in medication adherence
- 65% reduction in the use of human antibiotics in livestock and poultry
- 58% improvement in health seeking behaviors
- 50% improvement in antimicrobial handling in plants and the environment.

Additionally, AMR content was integrated into Community Health Strategy modules, with plans for inclusion in the electronic Community Health Information System (eCHIS).

Conclusion: Cross-sector collaboration through a One Health approach effectively drives sustainable behavior change. Integrating AMR awareness into existing health systems enhances community ownership and long-term impact.
Keywords: Antimicrobial Resistance, One Health, Behavior Change, Community Health, Kenya

Integrating Gender into One Health for Inclusive Environmental Governance: Insights from Isiolo County, Kenya

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Abstract
Background: The One Health (OH) approach integrating human, animal, and environmental health has emerged as a critical multidisciplinary framework for addressing complex ecological and public health challenges. In Kenya, Isiolo County serves as a flagship site for OH implementation under the Kenya One Health Strategic Plan (2021–2025). However, despite the county's active participation, gender integration

within OH frameworks remains inadequate, limiting equity and sustainability in health and environmental outcomes.
Objectives: This study assessed the effectiveness of gender integration in the One Health framework for enhanced environmental governance in Isiolo County. It specifically aimed to evaluate the degree of gender integration, assess the effectiveness of gender-responsive OH interventions, and identify barriers and enablers to gender inclusion at policy and practice levels.
Methods: Anchored on Feminist Political Ecology (FPE), the study adopted a grounded qualitative approach using Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) with 35 purposively selected respondents, including women from pastoralist communities, healthcare and veterinary officers, local leaders, and civil society actors in Bula Pesa and Ngaremara wards. Thematic analysis was used to identify patterns in gender roles, participation, and institutional challenges in OH programming.
Results: Findings revealed that gender considerations in Isiolo's OH programs were sporadic and superficial, with limited awareness and participation of women in OH governance. Only 6 of 35 respondents were familiar with the OH concept. Cultural norms, weak policy enforcement, male-dominated institutions, and restricted access to resources emerged as key barriers.
Conclusion: The current OH framework in Isiolo lacks deliberate mechanisms for gender inclusion, undermining its transformative potential. Institutionalizing gender-responsive policies guided by FPE principles, promoting women's leadership, and strengthening local-level awareness are critical to achieving inclusive and sustainable One Health outcomes.
Keywords: One Health, Gender Integration, Feminist Political Ecology, Environmental Governance.

Risk Communication and Community Engagement in One Health Community Outreaches: A case of Saving Lives and Livelihoods (SLL-2) Project, Kitui County.

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Abstract
Background: The One Health approach emphasizes the interconnectedness of human, animal, and environmental health, promoting collaborative strategies to address zoonotic diseases and other emerging health threats. In Kitui County, Kenya, limited access to health services and low awareness of disease prevention measures remain major challenges. The *Saving Lives and Livelihoods (SLL-2) Project* applied Risk Communication and Community Engagement (RCCE) to operationalize the One Health approach through multi-sectoral community outreaches targeting underserved populations.
Objectives: The study aimed to assess the role and impact of RCCE in promoting the One Health approach during the SLL-2 Project outreaches in Kitui County. Specifically, it sought to describe the implementation of the One Health outreaches and evaluate community participation in outreach activities and rabies outbreak response efforts.
Methods: In 2025, twenty-two (22) One Health outreaches were conducted across eight sub-counties of Kitui County through collaboration among the Ministries of Health, Agriculture, Livestock, and Environment. Activities included non-communicable disease (NCD) screening, livestock vaccination, immunization, health education, and outbreak response. Community mobilization was carried out through health promoters and local administrators. Data were collected from outreach reports and stakeholder feedback forms.

Results: The outreaches reached 5,668 people, offering screening for hypertension (1,557), diabetes (1,005), Breast cancer (1,178), prostate cancer (81), and cervical cancer (1,005). Additionally, 842 children and mothers received immunizations. Livestock vaccination covered 3,377 goats, 1,671 cattle, and 383 dogs. During World Rabies Day 2025, a total of 2,948 animals were vaccinated. Community narratives highlighted improved awareness, better health-seeking behaviors, and increased reporting of animal bites.
Conclusion: The SLL-2 Project demonstrated the effectiveness of RCCE in enhancing awareness, fostering cross-sectoral collaboration, and strengthening the One Health framework. By bringing integrated services closer to communities, the project promoted preventive health practices and improved resilience against both zoonotic and non-communicable diseases.
Keywords: One Health, Risk Communication, Community Engagement, Rabies Prevention, Kitui County

Collaborating for Behaviour Change on One Health at the Community Level – Experiences from the Gender-Responsive One Health (GROH) Project in Meru County, Kenya

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Background: The Gender-Responsive One Health project (GROH) is a four-year development project in Meru County, Kenya implemented as a collaboration between the County One Health Unit , the NGO Farmers Helping Farmers, and Alinea International. The project is funded by Global Affairs Canada.
Objectives: The GROH project aims to raise community awareness and interest in One Health (OH), to build the skills of local human health, animal health and environmental health actors and community members, and to reduce barriers affecting people's ability to adopt protective behaviours and reduce risks related to endemic zoonotic disease (EZD) transmission.
Methods: The project collected baseline data on community awareness of EZDs and prevalence of risk and protective behaviours. Training and demonstrations are being implemented to improve farmer's, especially women's, livestock knowledge and skills and reduce financial barriers to adoption of OH behaviours. To enable a systematic approach to behaviour change, a OH Social and Behaviour Change Strategy was developed via collaborative workshops that included community leaders, women's group leaders, farmers, teachers, dairy cooperative leaders, community health promoters, paravets, and officials from the sub-county, county and national government. The project is supporting implementation of the Strategy starting with communication and vaccination campaigns related to rabies control and anthrax prevention.
Results: Improvements in dairy and poultry productivity and OH behaviours at the farm level have been demonstrated. The Meru OH SBC Strategy is being presented to and adopted by the Meru County Assembly, and the County Government and GROH project have collaborated on specific communications efforts related to rabies and anthrax prevention and control, that are supporting community-level access and behaviour change.
Conclusion: Public-private-NGO-community collaboration around barrier reduction and risk communication can support behaviour change and operationalization of One Health at the community level in Kenya.
Key Words: risk communication, social and behaviour change, community engagement, gender-responsive One Health, project success stories

Kimormor Outreach: A One Health Model for the Mobile Pastoral Community in Turkana County, Kenya.

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Abstract

Background: Turkana County in northwestern Kenya is predominantly inhabited by pastoralists who migrate with their livestock in search of pasture and water. The *Kimormor* outreach model—derived from the Turkana word meaning "putting together"—applies a multisectoral One Health approach tailored to nomadic communities. It integrates human and animal health services, environmental conservation, integrated farming, water management, and social services such as birth registration and issuance of national identity and health insurance cards.

Objective: This study aimed to evaluate the effectiveness of the model interventions encompassing human health services—treatment, vaccination, nutrition, antenatal care, health insurance enrollment, and civil registration—alongside livestock health and integrated farming initiatives for its potential scale-up among pastoral communities in Kenya.

Methods: A community-based participatory design was employed to assess the integrated interventions. Marginalized, hard-to-reach, and underserved pastoral populations were identified (2017-2024) as the target group through community engagement. Service delivery was conducted at communal water points where both people and livestock congregate. Data were collected using routine outreach registers, livestock line listing forms, and birth notification forms. Data analysis was performed using Epi Info, Microsoft Excel, and QGIS software.

Results: A total of 21,185 (46.8%) people accessed health services, 2,176 (8.4%) obtained health insurance cards, and 803 (70.3%) birth certificates were processed. Additionally, 4,270 (16.6%) individuals received national identity cards, 173,776 (8.9%) livestock were treated and vaccinated, 14,000 (30.9%) people accessed water services, and 91 (0.3%) trees were planted.

Conclusion: The model, designed for pastoral populations, significantly enhanced the efficiency and effectiveness of service delivery. Sustained support through pooled resource allocation by the government and One Health partners is essential to ensure its sustainability and scale-up among pastoral communities, thereby addressing the interconnected environmental, human, and animal health needs comprehensively.

Key Words: One Health, Kimormor Model, Pastoralism, Pooled resource allocation, Service delivery

Session 7: One Health in Policy & Governance

Operationalizing One Health governance at County Level: Insights from ZDU-COHESA Training in Kenya

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Background: The One Health approach is complex, requiring collaboration across human, animal, and environmental health sectors, and drawing on disciplines such as medicine, veterinary science, ecology, and public health. Moving from theory to practice demands a well-coordinated governance system that enables shared decision-making, resource allocation, and accountability. Without such systems, One Health risks remaining a national-level concept rather than a practical tool for addressing health threats at the county level.

Objectives: Through a partnership between Kenya's Zoonotic Disease Unit (ZDU) and the project on Capacitating One Health in Eastern and Southern Africa (COHESA) Kenya, this initiative aimed to strengthen County One Health interdepartmental platforms to promote collaboration and governance. The training specifically sought to operationalize County One Health Units (COHUs).

Methods: Workshops were conducted in seven counties with a high burden of zoonotic diseases: Murang'a, Kiambu, Meru, Kitui, Makueni, Busia, and Siaya. Using didactic sessions, group work, and hands-on exercises, the training built multisectoral capacity and supported the development of governance structures, strategic plans, and priority zoonotic disease lists. Participants were drawn from human, animal, environmental, agricultural, legal, and wildlife sectors. Modules covered surveillance, outbreak investigation, laboratory sample management, and risk communication.

Results: A total of 160 personnel were trained. Each county developed a prioritized list of zoonotic diseases, drafted terms of reference for COHUs, and initiated county-specific One Health strategic plans. Key diseases included anthrax, rabies, Rift Valley fever, and brucellosis. Governance structures were tailored to local contexts, and action plans were proposed to embed One Health into county development agendas.

Conclusion: The training demonstrated that targeted, multisectoral engagement can catalyze the operationalization of One Health at the county level. Sustained support, legal frameworks, and peer-learning networks are critical for long-term impact. This demonstrates an effective way of incorporating one health into governance structures in Kenya and can be replicated in other countries.

Key words/phrases: One Health, Zoonotic Diseases, Multisectoral Collaboration, Capacity Building, Governance, Kenya

Operationalizing One Health Governance at Sub-County Level: Lessons from Coordinating Multi-Sectoral Partners in Bunyala, Busia County, Kenya

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Abstract

Background: The One Health approach emphasizes collaborative action among human, animal, and

environmental health sectors to address interconnected health risks. However, its operationalization at the sub-national level remains limited. In Bunyala Sub-County, Busia County, a structured One Health coordination framework was introduced to strengthen governance, align partner activities, and enhance health security through joint action.

Objectives: To document the process, achievements, and lessons learned from establishing and operationalizing a functional One Health coordination mechanism at the sub-county level.

Methods: A descriptive cross-sectoral approach was adopted, using data from stakeholder engagement meetings, partner activity mapping, and quarterly coordination reports between January 2023 and June 2025. Key sectors, such as health, livestock, agriculture, water, and environment, were assessed based on the frequency of joint planning sessions, integrated interventions implemented, and policy actions influenced.

Results: The establishment of the Bunyala One Health Coordination Platform improved intersectoral collaboration, minimized duplication of interventions, and enhanced collective response to cholera and zoonotic disease alerts. Integrated field outreaches combining WASH, immunization, and vector control activities demonstrated efficiency and improved community trust. Regular coordination meetings also fostered transparency, resource sharing, and evidence-based decision-making among partners.

Conclusion: The Bunyala experience illustrates that One Health governance can be effectively operationalized at the sub-county level through structured coordination, participatory leadership, and accountability mechanisms. This model provides a scalable pathway for counties to translate national One Health policies into practical, community-level outcomes, affirming that by protecting one, we indeed help protect all.

Keywords: One Health governance, multi-sectoral coordination, zoonotic disease prevention, community resilience, policy implementation

Evidence to Action: COHESA Kenya's Model for Making One Health Work

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Abstract

Background: Despite growing recognition of the One Health approach in Kenya, its implementation remains fragmented. Under the Capacitating One Health in Eastern and Southern Africa (COHESA) project, a 2022 baseline survey revealed that while One Health has supported disease outbreak detection, progress is constrained by donor dependency, weak county-level structures, and limited integration of environmental health.

Objectives: This initiative aimed to strengthen the institutionalization and operationalization of One Health by enhancing governance, education, collaboration, and innovation across national and sub-national levels.

Methods: COHESA Kenya applied a multi-pronged strategy involving various activities. which were organized around four workstreams: (1) baseline assessment and dissemination, (2) promotion of collaboration and governance, (3) integration of One Health into education systems, and (4) adoption of innovative solutions.

Results: Achievements include training over 200 county-level staff in seven counties, integrating One Health into university curricula, and developing a training guide for government personnel. A sandpit

innovation challenge led to the funding of a point-of-care diagnostic tool for tick-borne diseases and a poultry biosecurity intervention. Public engagement was strengthened through seminars, journalist fellowships, and social media outreach. Strategic partnerships were built across government, academia, private sector, and communities.

Conclusion: COHESA Kenya illustrates how localized, multisectoral engagement can translate One Health from national policy into community-level impact. By embedding One Health into education, governance, and innovation ecosystems, and fostering sustained public engagement, the model offers a scalable framework for Eastern and Southern Africa.

Key words/phrases: One Health, Governance, Capacity Building, Multisectoral Engagement, Kenya

One Health in Practice: Experiences from Kitui County, Kenya

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Abstract

Introduction and Background: Climate change increasingly threatens ecosystems, livelihoods, and public health in Kitui County's arid and semi-arid (ASAL) regions. Data from the National Drought Management Authority (2020–2025) indicate a declining rainfall trend—from a high of 389.9 mm to as low as 2.3 mm annually—alongside a temperature rise from 32.3°C in 2017 to 38.2°C in 2024. Water scarcity and food insecurity have worsened malnutrition, especially among children, while women endure long treks for water. Scarcity also drives domestic and wild animals into human settlements, heightening zoonotic disease risks such as rabies and anthrax. Between January and June 2025, Kitui County recorded 2,276 dog bite cases, with rabies posing fatal health and economic impacts through high treatment costs and reduced productivity.

Objectives: This abstract demonstrates the intersection of environment, climate, and health, showing their combined effects on human wellbeing and livelihoods amid climate change.

Methods: The Africa CDC Saving Lives and Livelihoods (SLL) project applies an integrated **One Health** approach to deliver joint human, animal, and environmental health services to 214 remote communities. Anchored in four pillars—Communication, Coordination, Collaboration, and Capacity Building—the model integrates immunizations, NCD screenings, treatment, lab tests, waste management, weather advisories, and livestock vaccinations in a single setting.

Results: Through One Health outreaches, 11,540 people have been reached, 2,844 children immunized, and 2,077 domestic animals vaccinated. Integrating meteorological data with indigenous knowledge has improved community preparedness for climatic shocks and emerging public health events. The approach has enhanced environmental stewardship, strengthened veterinary services, and improved early detection of zoonotic diseases.

Conclusion: Integrated One Health interventions effectively mitigate climate-related health risks and strengthen resilience in underserved communities. Scaling up this approach could further improve health outcomes and livelihoods across similar regions.

Key words: Climate, Resilience, Zoonotic, One Health, Kitui

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