



Making progress on One Health policies and programmes: Perspectives on community engagement and gender equity in four West African countries[☆]

Susannah H Mayhew^{a,*}, Robyn Alders^b, Neil Spicer^a, Monya Konneh^c,
Yolaine Kate Waka-Metzger^d, Philip Thulla^e, Magassouba N'Faly^f, Eniola Cadmus^g,
Yéro-Boye Camara^f, Funmilayo Olaleye^g, Mozan Mohammed^a, Julius Gilayeneh^d,
Simeon Cadmus^{h,i,j}, Manuela Colombini^{a,1}, Rashid Ansumana^{k,1}

^a Department of Global Health and Development, London School of Hygiene & Tropical Medicine, London, UK

^b Development Policy Centre, Crawford School of Public Policy, Australian National University, Australia

^c School of Community Health Sciences, Njala University, Bo, Sierra Leone

^d National Public Health Institute of Liberia, Monrovia, Liberia

^e School of Basic Education, Njala University, Bo, Sierra Leone

^f Department of Medicine, Gamal Abdel Nasser University, Conakry, Guinea

^g Department of Community Medicine College of Medicine, University of Ibadan, Ibadan, Nigeria

^h Damien Foundation Centre for Genomics and Global Health, University of Ibadan, Ibadan, Nigeria

ⁱ Department of Veterinary Public Health & Preventive Medicine and Centre for Control and Prevention of Zoonoses, University of Ibadan, Ibadan, Nigeria

^j Centre for Control and Prevention of Zoonoses, University of Ibadan, Ibadan, Nigeria

^k School of Medicine, College of Medical Sciences, Njala University, Bo, Sierra Leone

ARTICLE INFO

Keywords:

West Africa
Community engagement
Gender
Equity
One Health
Policy
Implementation

ABSTRACT

Introduction: Gender equity and community engagement are increasingly recognised as important for the implementation of equitable One Health (OH) actions, yet no published studies examine how these are operationalised in policies and programmes. We analyse policy content and stakeholder perspectives on community engagement and gender equity in OH policies and programmes in Guinea, Liberia, Nigeria and Sierra Leone.

Methods: Mixed methods encompassed: content analysis of OH documents (7 core and 9 supporting); key informant interviews (KIIs) with policy stakeholders ($n = 47$) and focus group discussions (FGDs) with community members ($n = 34$ FGDs) to examine perspectives on gender and engagement. Inductive and deductive analyses were conducted, and interpretation of findings were discussed at all-team meetings to enhance validity.

Results: All countries have national OH strategic plans. All except Liberia contain substantive mention of community engagement, but only Sierra Leone provides any operational details. No country operationalises gender equity in their OH policies, although Sierra Leone has taken steps towards this and has a Gender Equality Act. Across all countries, policy stakeholders highlighted community engagement as indispensable to OH implementation but showed little urgency in tackling challenges and completely overlooked gender equity, which highlights a critical gap.

Community members revealed how community engagement in OH is gendered across all contexts. Cultural norms often limited women's full participation, though this improved over time, while women's lower literacy limited their leadership roles and ability to report disease cases, with Nigeria an exception.

Trust emerged as fragile but foundational to OH engagement. In all countries, community trust was mediated by chiefs, elders, and religious leaders, but trust in surveillance activities could be lost when government response or action to OH reporting was lacking.

Conclusions: Gender-equitable community engagement is a structural necessity for effective One Health programmes. Our research has shown that there is potential for OH actions to be transformed at the community level through strong, inclusive engagement with women as equal partners.

[☆] This article is part of a Special issue entitled: 'COHRIE' published in One Health.

* Corresponding author.

E-mail address: Susannah.Mayhew@lshtm.ac.uk (S.H. Mayhew).

¹ Joint last author.

1. Introduction

The concept of interlinking human, animal and environmental health has been practised for thousands of years. In recent decades, it has been framed in a variety of ways, by different sectors, prominently as One Health (OH), EcoHealth and most recently as Planetary Health. OH focusses primarily on interactions of human and animal health, which EcoHealth sought to rebalance with a strong biodiversity focus and a concern for all living organisms, while Planetary Health is concerned primarily with human health in its broader context, interfacing with animals and the natural environment [1]. The policies and programmes examined in this paper use the One Health framing. The One Health High-Level Expert Panel (OHHLEP) was mandated to provide a clear definition of OH to guide its global implementation only in 2021. It delineated five fundamental principles of OH: equity between sectors and disciplines; sociopolitical and multicultural parity; socioecological equilibrium; stewardship; and trans-disciplinarity [2].

West Africa is of interest for OH because of its multiple zoonotic disease outbreaks and fragile health systems [3]. The 2013–2016 Ebola outbreak in Sierra Leone, Liberia and Guinea highlighted the urgent need for a coordinated, multisectoral approach, as embodied by the OH concept [3]. Indeed, the region has faced other zoonotic disease outbreaks, including Lassa fever, Mpox and Covid-19. Yet, a systematic review of OH initiatives across Sub-Saharan Africa revealed that West Africa has the lowest number of OH policies, initiatives or programmes of any African region [3]. This disparity underscores the need for increased attention to OH policies and programmes.

Lessons from previous zoonotic outbreaks highlight the importance of both community engagement and gender awareness within policies and programmes [4,5]. The devastating Ebola outbreaks in West Africa and the Democratic Republic of Congo exposed how planning and implementing the response without genuine community participation undermined its effectiveness, creating tension in communities and hostility towards health workers [6–8]. It also revealed the extent to which local communities could shape positive outcomes, underscoring the importance of engaging with key actors at the local level to negotiate acceptable response strategies ([9]; [8]). Ebola, Zika, and COVID-19 reflect and exacerbate gender inequities by reinforcing existing decision-making and power hierarchies that marginalise women, thereby adding to women's vulnerabilities [5,10,11]. Community engagement approaches (for example, participatory surveillance and co-production of knowledge) and gender-equity measures (for example, women's leadership in livestock production) are critical in addressing the human–animal–environment interface and preventing disease outbreaks [12,13]. Despite this, state responses in West Africa and elsewhere largely neglect these elements [14,15].

The OHHLEP principles capture community engagement and gender equity only indirectly. Although “equity” is mentioned, it relates to equity between sectors and disciplines, not people. “Parity” in the wording of the Panel's principles implies gender inclusion in the statement ‘all people are equal and deserve equal rights and opportunities’, while communities are mentioned under ‘inclusion and engagement of communities’ ([2], p. 3). In recent years, there have been some promising attempts to mobilise community engagement, including women as equal participants in OH actions [16]. However, OH policy and programmes still neglect gendered dimensions [17], despite women facing a greater burden from OH-related disease outbreaks than men [18,19]. This gap is striking given that the African Union's Strategy for Gender Equality and Women's Empowerment explicitly calls for “full gender equality in all spheres of life” [20]. Gender, community, equity and ethics are also core tenets of the *Lancet's* One Health Commission [21], yet no published analyses examine how these dimensions are operationalised in West African OH policies and programmes.

Current framings do not go far enough, and both gender equity and community engagement need to be made explicit and actionable in OH principles, policies and programmes. Gender equity is integral to

community engagement, yet gendered cultural norms and unequal power relations frequently mean women cannot participate meaningfully. To examine these issues in OH policies and programmes across four West African countries, we draw on community engagement frameworks and gender-transformative theory. Community engagement is best understood as a continuum of five levels in relation to programme design and implementation: inform (merely conveying information); consult (asking people for their views); involve (enabling people to participate in activities); collaborate (jointly designing and implementing activities); empower (building skills to enable people to make their own decisions and take action) [22]. To achieve equitable engagement, gender must be considered explicitly within each of these levels. The social relations framework [23] can usefully be applied to assess policies and programmes since it pragmatically identifies three relational aspects that need to be in place for meaningful women's empowerment: resources (current and future); agency (particularly, processes of decision-making); and achievement (outcomes). Further, gender transformation theory highlights three core concepts from human rights agreements which are necessary to achieve gender equity: accountability (holding patriarchy, privilege and power to account to attain equity); inclusion (which goes beyond the mere inclusion of women to actually creating conditions of mutual respect in which women's voices are heard); non-discrimination (in structures and processes) [24].

This paper provides an analysis of policy content and stakeholder perspectives on community engagement and gender equity in OH policies and programmes in West Africa. We contribute to furthering our understanding of whether and how gender equitable community engagement is achieved and consider the implications of our findings for a re-framing of the OHHLEP principles.

2. Methods

2.1. Study setting

Launched in 2022, West Africa One Health (WAOH) is a consortium of seven universities from West Africa, the UK and Australia studying the implementation of OH policies and aiming to prevent outbreaks of zoonotic diseases in four West African countries: Guinea, Liberia, Nigeria and Sierra Leone. In all countries, a key intervention was the establishment of Community Action Network or CAN groups as a model for implementing OH policies at the community level. These groups included local community health workers, community animal health workers, and environmental health workers, as well as a range of community leaders (elders, religious leaders, women's leaders, etc.) and volunteers. They needed access to Android phones and were tasked with 1) education and awareness raising about OH issues, 2) reporting animal and human disease and death and environmental concerns (refuse, pests, flooding, etc.) through a WhatsApp platform (see [25]).

The different country policy contexts are summarised in Table 1.

In this paper, we focus specifically on our findings relating to community engagement and gender equity in the four countries.

2.2. Methods, sampling and analysis

We used mixed methods across the four countries: document analysis; key informant interviews (KIIs) with policy stakeholders; and focus group discussions (FGDs) with community members. Analysis and interpretation of findings were discussed with all teams at joint meetings.

Content analyses were undertaken of key national OH strategy documents as well as regional and global guidance documents. Each was examined for its coverage of community engagement, and gender equity. To be included, documents had to specify OH concepts and/or actions and be currently in use (regardless of publication date). Initially, 23 documents were identified, and each was assessed by at least three

Table 1

Country study settings on gender and community engagement.

Country	Gender policy	Community engagement in health (guidelines/policies)	Gendered access (health care, literacy, digital tech)
Guinea	Guinea's policies still fail to embed gender systematically, leaving women with weak rights protection, limited justice and GBV safeguards, and low representation in governance, peace-building, and non-agricultural jobs. Educational gaps persist beyond primary school (girls-to-boys ratio: 0.84 in 2011), and women lack equal access to health services, land, credit, and other resources. <i>References: One Health National strategic plan, 2018–2023, Governance Manuel, National operational action plan (2023), New Guinean constitution</i>	Guinea's 2018 Community Health Strategy mobilizes Community Mobilizers and Health Workers to bridge formal services and communities through outreach, education, and referrals—rebuilding trust after crises. It strengthens engagement via five actions: re-engaging health authorities at all levels; briefing and training community leaders; developing tailored training modules and Terms of Reference; informing every tier of the health administration; and empowering volunteers to deliver sessions directly to residents <i>References: One Health National strategic plan, 2018–2023, Governance manual, National operational action plan (2023),</i>	Women face entrenched barriers across economic, political, educational, health, and resource domains: they make up just 27.1% of non-agricultural workers and 26% of civil servants (mainly in junior roles), hold 20.6% of National Transitional Council seats, 17.6% of Supreme Court positions, 11% of police roles, and 5.9% of senior military ranks. Educational parity stalls beyond primary school (girls-to-boys ratio 0.84 in 2011), and women lack equal access to health services, ICT, land, credit, and other assets. In response, policymakers have ramped up advocacy on women's rights and GBV prevention, introduced quotas and mentorship schemes, promoted education parity at all levels, expanded health outreach (including reproductive services), and piloted microfinance and land-rights programmes. <i>References: ECOWAS Assessment, 2012; Biometric Census Report, 2012.</i> While Liberia's gender policy and community health programming aim to reduce disparities in access, important gaps remain. Adult female literacy lags behind male rates (e.g., historically around 41% vs. 55%), and women continue to be underrepresented as
Liberia	Liberia's National Gender Policy mandates gender mainstreaming across government planning and budgeting. It specifically requires gender-responsive budgeting and the inclusion of women in decision-making and leadership roles at national and decentralized levels.	The National Community Health Services Policy 2023–2032 (and also the previous one, 2016–2021) - institutionalises paid community health assistants (CHAs), community health volunteers (CHVs), and supervisors who work with local stakeholders, women's	

Table 1 (continued)

Country	Gender policy	Community engagement in health (guidelines/policies)	Gendered access (health care, literacy, digital tech)
	Also, Liberia's Ministry of Justice, through its Gender and Social Inclusion Unit (GSIU), launched its first-ever Gender Policy along with a five-year strategic action plan (2024–2029) aimed at rectifying internal gender imbalances (e. g. underrepresentation of women in senior roles), mainstreaming gender in justice sector operations, and building institutional accountability <i>References: Liberia National Gender Policy (adopted in 2009, updated through 2010s—gender mainstreaming and responsive budgeting). Ministry of Justice Gender Policy and Strategic Action Plan (2024–2029), launched Oct 16, 2024</i>	groups, traditional leaders, and community committees, to plan, deliver, and monitor a standardized package of primary healthcare services. The policy emphasises sustained community engagement as the key to rebuilding trust and extending care to remote areas. <i>References: Ministry of Health, Liberia National Community Health Services Policy 2016–2021, plus the revised 2023–2032 National Community Health Program Policy</i>	community health workers (less than 20% male-dominated CHA cadre). Access to digital technologies by women remains limited due to affordability, low literacy, and lack of targeted gender-responsive digital policies, even as some initiatives (e. g. mobile platforms in rural women's farming cooperatives) begin to address this. <i>References: Ministry of Health, Liberia National Policy and Strategic Plan on Health Promotion (2016–2021)</i>
Nigeria	The country has a Nigerian National Gender Policy (2021–2026), which champions mainstreaming gender perspectives across government and private sector policies, encouraging gender-sensitive governance, resource allocation, and sectoral collaboration. The policy mandates monitoring by a multi-sectoral council and highlights the central role of women's empowerment in achieving sustainable national development <i>References: Federal Ministry of Women Affairs, 2021</i>	Nigeria's approach to community engagement in health is expressed through several frameworks such as the Sustainable Community Engagement Strategy and the National Risk Communication and Community Engagement Strategy. These documents mandate wider community involvement in health program design and implementation, stressing the value of utilising local associations, peer networks, traditional leaders, and community health workers <i>References: NACA, 2017; NCDC, 2019</i>	Women face lower literacy rates than men, employment gaps that undermine their financial independence, and restrictive social norms, particularly in the North, where women often require a male escort to travel. Digital exclusion compounds these challenges: only 35% of women own a smartphone or use the internet, compared to 50% of men. To address this, the government has rolled out its National Gender Policy alongside education frameworks that include scholarships and free learning materials for girls. Advocacy campaigns target early marriage, while digital-inclusion initiatives promote women's

(continued on next page)

Table 1 (continued)

Country	Gender policy	Community engagement in health (guidelines/policies)	Gendered access (health care, literacy, digital tech)
			tech skills and affordable access. Legal protections against online gender-based violence have also been strengthened under CBN guidelines and NITDA regulations.
			<i>References: CBN, 2020; NITDA, 2024; Federal Ministry of Women Affairs, 2021</i>
Sierra Leone	Sierra Leone's 2020 Gender Equality and Women's Empowerment Policy and its 2022 GEWE Act mandate gender mainstreaming across government and a minimum 30% women's representation in public and private leadership, empowering the Ministry of Gender and Children's Affairs to enforce women's participation in governance, economic empowerment, and anti-discrimination. The National Health Sector Strategic Plan (2021–2025), the NPHA Strategic Plan (2023–2026), and the 2024 One Health Policy embed equity, equality, and inclusion as core values across public health interventions.	Sierra Leone embeds community engagement throughout its health and One Health frameworks: the CHW Policy 2021–2025 formalises community health workers as the bridge between facilities and households, prioritising female recruitment; the One Health Governance Manual (2018) and Risk Communication Strategic Plan (2019) mandate multisector coordination with district and community actors; the One Health Policy (2024) makes advocacy, communication, and community engagement one of six priority interventions with a dedicated RCCE strategy; and the NPHA Strategic Plan (2023–2026) places behaviour change and community engagement at the heart of its 19 public health functions.	Women and girls in Sierra Leone face entrenched inequities in health, education, and digital access: female literacy (36–48% vs. ~65%) limits their role in health governance; maternal (1360/100,000) and child (111/1000) mortality remain high despite the Free Health Care Initiative; cost, mobility, and household obligations hinder uptake of reproductive and zoonotic disease services; and only ~30% internet penetration—with a clear gender gap—means many miss out on digital health tools.
	However, the 2023 Joint External Evaluation reports weak operationalization: Sierra Leone lacks robust sex-disaggregated health data systems, does not systematically apply gender-responsive budgeting, and its One Health workforce policies have no measurable gender indicators.	<i>References: CHW Policy 2021–2025; NOHP Governance Manual 2018; One Health Risk Communication Strategic Plan 2019; One Health Policy 2024; NPHA Strategic Plan 2023–2026; JEE Report Sierra Leone 2023.</i>	Although the GEWE Act (2022), Digital Health Strategy (2018–2023), and One Health Policy (2024) espouse inclusiveness and equity, they lack concrete actions such as sex-disaggregated data systems, gender-sensitive service design, and targeted digital inclusion programs.
	<i>References: GEWE Policy (2020); GEWE Act (2022); MoHS National Health Sector Strategic Plan 2021–2025; NPHA Strategic Plan</i>		<i>References: UNESCO Institute for Statistics (literacy rates); DataReportal 2024; GEWE Act 2022; MoHS Digital Health Strategy 2018–2023; NPHA Strategic Plan 2023–2026; One</i>

Table 1 (continued)

Country	Gender policy	Community engagement in health (guidelines/policies)	Gendered access (health care, literacy, digital tech)
	2023–2026; One Health Policy 2024; JEE Report Sierra Leone 2023.		Health Policy 2024; JEE Report Sierra Leone 2023

researchers for their relevance e to OH. 10 were excluded because they contained no explicit references to OH (e.g. public health strategies for zoonotic infections which contained no reference to the broader concept of OH). Six others were “supporting documents”, i.e. reports of operational workshops, governance plans, and plans for specific areas of OH activity. Four national OH Strategic Plans, one regional OH strategy and two global Interagency documents (a Plan of Action and a Guide) were included for primary analysis. These documents were scored independently by at least two researchers, and results were discussed in team meetings when a final decision on the score was agreed. Scoring was in two domains –community engagement and gender equity– as follows: 1 = no substantive mention; 2 = mention as a guiding principle but no details; 3 = multiple mentions but few operationalisation details (i.e. implementation plans, indicators); 4 = full operationalisation, referencing detailed implementation/ action plans setting out targets, indicators and where accountability lies.

Teams conducted qualitative group interviews (GIS) with 47 representatives of sector ministries using snowballing sampling (Table 2). Interviews with small groups covered challenges and opportunities for implementing OH policies and programmes. They lasted 30–60 min, were conducted in a mix of local languages and English and were recorded and then transcribed by the interviewers into English. In Guinea, the team incorporated open-ended questions within a survey interview.

Finally, to gather experiences and perspectives on OH activities from grassroots communities, 34 FGDs were conducted with 143 members of Community Action Networks (CANs) (Table 2) established by WAOH. FGDs had 3–8 participants, lasted about one hour, were conducted in local languages, and were recorded and then transcribed into English or French.

In Liberia, Nigeria and Sierra Leone, data transcription and thematic analysis of qualitative data took place in English, while in Guinea, analysis took place first in French, then key quotes and findings were translated into English.

Table 2

Interviews and FGDs conducted, by country.

Data collection method	Guinea	Liberia	Nigeria	Sierra Leone	Total by type
Health Sector Ministry KIIs/ Group interviews	4	5	4	6	19
Agriculture Sector Ministry KIIs/Group interviews	4	3	2	5	14
Environment Sector Ministry KIIs/Group interviews	4	4	1	5	14
Community FGDs with CAN group members	36 (8 FGDs: 4 men, 4 women)	32 (8 FGDs: 4 men, 4 women)	35 (10 FGDs: 5 men, 5 women)	40 (8 FGDs: 4 men, 4 women)	143
Total participants	48	44	42	56	190

Qualitative data analysis involved inductive free-coding by country, then agreement of a broad set of common codes relevant across the four countries (capturing our focus on equity and gender; community engagement; community trust; empowerment; perceptions of OH and others). Data in these broad codes were then extracted to Excel sheets, where inductive in-code analysis was conducted to identify key emerging themes around OH engagement (mainly relating to activities including disease surveillance, communication and reporting), and gender equity (gendered OH leadership; gendered decision making; gendered role division (domestic/community); gender norms (cultural); gendered participation in OH actions; gendered capacities e.g. literacy). We used the social relations framework (resources, agency and achievement) [23] to analyse the gendered nature of community engagement in our data. We reflect on the gender transformation theory concepts in our Discussion.

It should be noted that “community engagement” is the prevailing term used in the OH policy and programme documents we examined. In the coding of qualitative data, however, different nomenclature was used in practice. Respondents talked about “participation”, meaning active involvement in a OH activity, including disease surveillance or reporting) and of “empowerment”, meaning acquiring appropriate skills, and/or being allowed to actively contribute to OH activities). We discuss the meanings of these terms, their differences and the implications for OH principles in our Discussion section.

3. Results

3.1. Do OH policy documents incorporate commitments to community engagement and gender equity?

Four national OH documents were reviewed together with three regional and global documents. Each was scored for the degree to which they captured commitments to community participation and gender equity. Table 3 summarises our assessment of available documents.

All four countries have a national One Health Strategic Plan ([26–28]; [29]). All countries except Liberia contain substantive mention of community engagement, but only Sierra Leone provides any operational details. Sierra Leone's strategy highlights strong community participation as a guiding principle. Importantly, activities and evaluation indicators then embed CE, notably under the Strategic Communications & Advocacy pillar and the detailed plans for Risk Communication and Community Engagement (RCCE). CE does not appear in plans for surveillance, despite the lack of CE in this pillar being identified as a weakness. The supporting documents (reviewed but not scored) of all countries provide some details on how to embed CE within OH structures and implementation activities.

No country operationalises gender equity in implementation plans, goals or indicators. Again, Sierra Leone scores best. Its OH Strategic Plan promotes gender as a guiding principle and contains two specific sections on gender roles and gender legislation, which recognise the challenges of achieving gender equity. While there is commitment and legislative support, implementation mechanisms are not well elaborated. In the supporting documents, gender is only mentioned in Sierra Leone. In particular, it's One Health Governance Manual [30] includes a provision for a Gender Technical Working Group, which underscores the commitment of the Sierra Leonean government to integrate gender considerations into OH governance.

Regional and global OH documents score moderately well, but none operationalise CE or gender equity. The African Union Strategy, though focused narrowly on zoonotic disease, aligns with the African Union's long-term strategy, *AU Agenda 2063* [31], to embed community engagement in governance, communication and implementation activities. It is weaker on operationalising gender equity within OH, although it appears as a guiding principle and is specified across multiple objectives.

Globally, two guiding strategies exist. The [32] Joint Plan of Action [32] is quite strong on promoting CE and gender equity across all areas of the plan and its accompanying implementation guidelines for national levels [33]. The FAO et al.'s 2019 strategic guidance document [34] is also quite strong on community engagement but much weaker on gender equity, which, though acknowledged as important, is not detailed.

3.2. Awareness among policy stakeholders about community engagement and gender

Across all countries, policy stakeholders highlighted community engagement as indispensable to OH implementation but showed little urgency in tackling challenges and completely overlooked gender equity, which highlights a critical gap.

Liberian stakeholders associated limited community awareness and engagement with poor grassroots-level compliance and even resistance, for example, against controlling the free roaming of domestic animals. They explained this was because of mistrust – that communities perceived OH as a top-down surveillance effort. Consequently, they urged genuine inclusion of community-based organisations and local leaders “because they are the ones that interface with the wildlife and also the community” (Liberia_GI3_MoA).

Similarly, Guinean respondents stressed the importance of community and religious leaders, noting that “everything we do for them without their involvement is against them.” One noted “Community engagement is the key to surveillance and health promotion” but offered no concrete strategies to achieve this.

While in Nigeria CE was described as a strategic pillar for OH, with structures in place for community informants to report to health and environment ministries, respondents mainly cited top-down activities such as sensitisation or “enlightenment” programmes, rather than genuine community participation.

In Sierra Leone, respondents spoke much more extensively about CE, shaped by experiences of Ebola. They described multiple OH awareness-raising activities and highlighted the value of involving communities in OH implementation. Respondents also noted persistent challenges, including lack of resources and capacity: “we are unable to sustain [Community Animal Health Workers].” (SierraLeone_R1-GI2); “we sometimes respond, and sometimes we don't because of lack of capacity...” (SierraLeone_R4-GI2). These are further compounded by sector-silos “When resources are attached to a specific activity and come from the headquarters, we can't engage the community properly (SierraLeone_R2-GI2).

3.3. Perspectives of community action network group members

Here, we present our findings on gendered community engagement according to the three dimensions of the social relations framework: resources, agency and achievement.

3.3.1. Resources: lack of material resources and gendered access to literacy and learning

Our data showed that the lack of access to material resources and basic infrastructure, especially mobile phones and electricity, which hampered OH activities, was experienced consistently by both men and women. Liberians lamented, “if you tell people to wash hands and don't provide the materials, they will not do it” (Liberia_NG_FGD_Women). Respondents in Guinea noted, “I couldn't report anything because I don't have a device—I don't have a phone” (Guinea_N_FGD_Women). In Nigeria, those without phones had to “report verbally or through text messages that could sometimes not contain all the information needed” (Nigeria_EW_FGD_Women). Sierra Leonean communities added that “we don't have electricity all the time, so the phone is not always charged” (SierraLeone_M_FGD_Women).

Poor infrastructure, including health services and roads, could also impede the expected response from OH authorities. For example, a

Table 3

Gaps and progress scores on attention to community engagement and gender equity within national, regional and global One Health policy documents.

One Health national strategic documents	Main partner organisations	Community engagement	Gender equity	Supporting Documents (operational and implementation plans)
		Scores	Scores	
Guinée Plan Stratégique National Une Seule Santé (One Health) 2019-2023 (launched 2018)	Ministry of Health; Ministry of Agriculture and Livestock; Ministry of Environment, Water and Forests, FAO, WHO, WOA, USAID	3	2	Manuel sur la Gouvernance de la Plateforme Nationale "One Health" (Une Seule Santé) 2018
Liberia National One Health Strategic Plan (2019-2023) 2023 (launched 2019)	Ministry of Health; Ministry of Agriculture; National Public Health Institute of Liberia (NPHIL); Environmental Protection Agency; Forestry Development Authority	1	1	One Health Coordination Platform Governance Manual Second Edition (launched 2023, last update 2025) 1976 Nat PH Law updated in 2019 to include chapter on OH
Nigeria One Health Strategic Plan 2019-2023 (launched 2019) And annual implementation plans	Federal Ministry of Health; Federal Ministry of Agriculture and Rural Development; Federal Ministry of Environment; Nigeria Centre for Disease Control (NCDC); University of Ibadan; WHO, WOA	3	1	OH AMR Strategic Plan
Sierre Leone One Health Strategic Plan 2024–28 (MOHS-GoSL) (revision of the previous 2019-2023 plan)	Ministry of Health and Sanitation, Ministry of Agriculture and Forestry, Environment Protection Agency, Office of National Security	4	3	One Health National Emergency Risk Communication Strategic Plan 2019 – 2023 Report on One Health Technical and Ministerial meeting (USAID, ECOWAS countries World Bank, WHO, FAO, OIE, CRSA) One Health Governance Manual (2024-28) (MOHS, MAF, EPA, and ONS- GoSL)
				One Health Zoonotic Disease Prioritisation (2019) (CDC, ONE HEALTH) Global Alignment IHR (2005), One Health Joint Plan of Action (2022–26) (WHO IDSR)

Regional and global policy OH documents				
African Union Zoonotic Disease Prevention and Control Strategy 2025–2029: One Health Approach (launched 2025)	Africa CDC; African Union Inter-African Bureau for Animal Resources	3	3	
FAO et al. One Health Joint Plan of Action 2022 – 2026 (launched 2022)	FAO; UNEP; WHO; WOAHA	3	3	
FAO et al. Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries (launched 2019)	FAO; WOAHA; WHO	2/3	2	

Key

No substantive mention	1
Mention as a guiding principle/core activity; no detail	2
Multiple mentions but limited operational detail	3
Full operationalisation of concept, with detailed plans	4

Sierra Leonean woman explained: “we are trained to report diseases... but sometimes there are no veterinary officers, medicines, or vaccines available when we need them” (SierraLeone_J_FGD_Women). Similarly, in Liberia, a man noted that “sometimes during the rainy season, the bad road conditions have been a challenge” (Liberia_GCM_FGD_Men).

Access to literacy and learning, in contrast to material resources, was highly gendered and emerged as a key resource that shaped engagement in OH leadership and decision-making. In Liberia, men's groups emphasised that “more men can read and write than the women. So only few women can read and write so we choose them to be CHV [Community Health Volunteers]” (Liberia_NG_FGD_Men). In Sierra Leone, women admitted, “we do not know how to use [the smartphone]... we will explain what we saw at the field to the chairman for him to write” (SierraLeone_Gb_FGD_Women).

Nonetheless, OH training initiatives were important interventions that helped redistribute knowledge and skills. In Guinea, women described learning new capacities: “they taught us how to take photos and how to send them” (Guinea_K_FGD_Women). Training and engagement were also inclusive, not just of women but also young people, which was recognised as important, and hence valued: “they [OH leaders] met with us and our youth groups. They didn't just talk to the old people” (Liberia_BG_FGD_Men). Finally, in all contexts, the existence of local trusted, predominantly male leadership (commonly, chiefs, elders and religious leaders), was a dominant facilitator of OH engagement and mediator of access to resources, especially knowledge. In Guinea, one woman explained: “we have chiefs who own phones. They're the ones who provide us with information” (Guinea_N_FGD_Women). Nigerian respondents told how “the village head sent the town crier to create awareness” (Nigeria_Eb_FGD_Women). Sierra Leoneans stressed that “the imam is someone who speaks with authority, so we involve them” (Sierra Leone_Gb_FGD_Men). Liberians noted the need to work with trusted elders: “the way the team came and worked with our chiefs and elders made us trust them. That's why people listened” (Liberia_BG_FGD_Men); while in Sierra Leone respondents noted it was the elders who could motivate and enforce action: “when the

chief banned eating dead animals, compliance soared. Trust matters more than posters” (SierraLeone_S_FGD_Men). In this sense, access to information and reporting channels was itself structured by gendered authority, with men more often positioned as intermediaries between communities and OH systems.

3.3.2. Agency: gender norms shape engagement in OH activities

In our data, agency was primarily manifest in the OH activities that women and men were able to engage in. Across all contexts, these were strongly shaped by cultural and gender norms, with men generally dominating decision making and women's roles and responsibilities often being limited to domestic and local community spheres. Mobility was also gendered; women's ability to travel was circumscribed by cultural expectations and gendered roles, including childcare and domestic roles.

In Guinea, respondents observed that “men have the advantage and always take the best of everything” (Guinea_K_FGD_Women). While some noted task parity in daily OH work, “a man can take a photo of a sick person and send it to the chief, and a woman can do the same” (Guinea_K_FGD_Women), others emphasised barriers to women's mobility and therefore participation: “where men can go, women cannot. In terms of travel, if it's more than five kilometres, women can't go to investigate a disease” (Guinea_N_FGD_Men). These limits constrained women's agency, consequently, leadership remained heavily gendered: “no woman was in charge” (Guinea_K_FGD_Women).

In Liberia, women's voices in decision making were historically constrained: “in our place, women don't talk in town meetings” (Liberia_BG_FGD_Men), and some women were initially excluded entirely from OH meetings, although this progressively improved: “some women were not allowed to go to the meetings at first because the men said it's not their business” (Liberia_BG_FGD_Men).

In Nigeria, despite maternal responsibilities requiring women to stay close to home, women did assume leadership roles in some communities, challenging local norms: “in our local government, the DSN

[Disease Surveillance Notification Officer] is a woman and she leads well" (Nigeria_Et_FGD_Men). The importance of women being involved to ensure gender-matched communication was also highlighted: "community women are more comfortable when discussing with our female colleagues" (Nigeria_EW_FGD_Men).

3.3.3. Achievement: shifts to gender transformation and the importance of trust

Over time, the CAN model did produce tangible gender transformation in two primary ways: OH training enabled greater empowerment and autonomy of women (as well as men); the CAN groups were expected to involve women in activities and over time men came to realise that women's more equitable engagement was beneficial.

Liberian men reflected that training (for men and women) enabled autonomy: "they empowered us to know what to do. We are not waiting for Monrovia to act first" (Liberia_BG_FGD_Men). This empowerment extended to women whose confidence and proactive engagement increased, even if the sphere of action was domestic, as a woman in Guinea noted: "thanks to this training, we now know how to protect our families and our animals" (Guinea_K_FGD_Women).

Since women were proactively included in the programme's OH training, their involvement in activities was then expected. Quotes from Liberia and Sierra Leone in the previous section showed that at the start of the programme, women's agency was highly constrained according to cultural norms that prevented women from voicing their ideas and concerns. Women's continuing involvement in OH activities seem to have fostered shifts in gender relations over time: "at first, women were not allowed to participate in meetings or decision-making... However, later they realised that our interaction was not enough for the population, so they started including women" (Sierra Leone_J_FGD_Women). This shift allowed women to take on visible roles – albeit gendered – in public health education and environmental management: "men patrol borders; we [women] teach families to boil water. Together, we cover all fronts" (Sierra Leone_G_FGD_Women). Men in Liberia also noted more equitable relations: "before men would just leave their children if the children were sick and leave the responsibility to the women. But with the awareness given, men and women are both working together" (Liberia_GCM_FGD_Men).

Active engagement by community women and men in OH surveillance and reporting relies on the maintenance of trust. One negative outcome reported was that this trust can easily be broken if there is not commensurate action by the authorities to whom people report, and this undermined the motivation to perform OH actions within some communities.

Respondents from all countries spoke of their frustration when communities received no response or action to their OH reporting: "community members get angry when we come ask questions or report these things two or three times with no action taken" (Liberia_BC_FGD_Men); "when someone works hard to report something, and no action is taken, people think we are betraying them" (Liberia_Gb_FGD_Men). In Guinea, even the OH volunteers themselves said they were no longer willing: "we send the photos, but we see nothing. This year I'm not reporting any cases" (Guinea_A_FGD_Women).

Lack of visible response could also fuel fear and suspicion, particularly of surveillance activities (photos and reporting), as noted in Guinea and Liberia, where people feared interference by authorities. In Guinea, women noted "if you send a photo of certain sick people, you can have problems with their families" (Guinea_N_FGD_Women). In Liberia, people spoke of fear, "the government would come and shame them" (Liberia_BG_FGD_Men) or would "take our land or our animals" (Liberia_BG_FGD_Men).

These accounts reveal that sustained trust is necessary for effective OH action and it depends on visible responses to convince people of legitimate motives. As one Sierra Leonean woman put it, "One Health works when communities own it, governments back it, and everyone—men, women, chiefs—plays their part" (Sierra Leone_Gb_FGD_Women).

4. Discussion

Our study reveals critical gaps in the community engagement and gender equity content of national OH policy documents across all four West African countries.

All countries possess formal, national OH strategic plans supported by regional and global commitments. National OH plans and accompanying documents generally recognise the importance of community engagement, though it is often described as consulting, awareness raising and "risk communication and community engagement" (RCCE), rather than full, genuine engagement and is rarely operationalised. On the WHO community engagement continuum, they primarily reflect the first two levels: they inform (through risk communication and awareness raising) and consult.

Inclusion of gender equity in all countries' policies and programmes was absent or at best very limited, reflecting broader limitations in gender equity which affect women's access to educational opportunities and resources [35]. Sierra Leone's policies and programmes were the only ones that expressed any gender awareness, but while recognising its importance, actions were limited to the establishment of a national-level gender working group to look at OH governance. The policies of all other countries were gender blind. This is a direct reflection of the gender blindness of the Quadripartite+ OHHLEP's guiding principles, which do not specify gender equity, – it is concerned with equity between the sectors, not between people. This absence contradicts the emphasis on equity and inclusion evident in regional and global OH frameworks ([32]) as well as wider regional policies including the African Union's legally binding Protocol To The African Charter On Human And Peoples' Rights On The Rights Of Women In Africa (the "Maputo Protocol") which entered into force in 2005 [36] which enshrines women's equal rights to (among others things) education, technology, participation and creates obligations on governments to monitor the realisation of these rights. All countries except Guinea have also adopted national gender policies that mandate mainstreaming gender into planning, budgeting, and governance [37–39], with Sierra Leone further securing gender equality in an Act [40].

The recently published *Gender-Responsive and Inclusive Implementation Guide for National One Health Action Plans* (GeRIGOH), developed by the Network for EcoHealth and One Health (NEOH) Gender Working Group is an important step to enabling countries to develop equitable and resilient national (and sub-national) OH action plans [41]. This must be realised urgently because current gaps in gender equitable engagement in OH policies at all levels undermine their potential to achieve inclusive and sustainable health outcomes. Moreover, they reflect continuing colonisation of the OH agenda, which reflects a global North (donor-funded) framing, concerned predominantly with (Western) human health security interests. Decolonisation, a discourse growing in emphasis particularly in global public health having been highlighted by social scientists since Paul Farmer [42] and more recently championed by the journal *BMJ Global Health*, requires a radical pivot in our thinking [43], particularly if OH is to enable a proper balance between environment and human/animal health [44,45]. Embedding genuine, equitable community engagement into OH policies and programmes could move a step closer to localised decision-making and sustainable, locally owned action.

5. Community engagement: a gendered reality

In the WHO's community engagement spectrum, the CAN groups align with the 'involvement' level, with some aspects of 'empowerment' – they were not co-designed ('collaboration') but did enable active involvement in their implementation and sought to build skills through training to empower local actions and decision making relating to monitoring, surveillance and reporting. While this did include women – and their involvement appeared to grow over time – the picture for gender equity was very different.

In all four countries, entrenched barriers to gender equity persist, from the national policy level (where women remain under-represented in senior government and gender-responsive budgeting or data disaggregation remains underdeveloped) through to economic, educational, health, and digital disparities that reinforce gender inequity (see Table 1). Reflecting this context, our focus group discussions underscored the gendered nature of community engagement in OH activities.

In all countries, traditional gender roles tended to constrain women's access to resources – particularly education and digital technologies (including mobile phones) – and limited their agency to be involved in OH activities and decision-making spaces. Nevertheless, over time, as men allowed greater space for women they were recognised as contributing key roles in OH implementation in all countries, particularly in liaising with other women and promoting household-level behaviour change. The provision of training in surveillance and reporting skills to both men and women helped to empower both.

The CAN model appears to show promise in catalysing changes in line with the three principles of gender transformation theory. Inclusion – enhancing women's involvement over time – particularly improved, both in terms of their participation in activities, but also in enabling women's voices to be heard more in decision-making spaces. Beyond gender per se, inclusion of diverse community members, particularly in outreach and education, was shown to be key, including traditional and community leaders, women's groups, youth groups and local committees. Participatory epidemiology calls for communities to be actively involved in problem identification and solution development [46], but participation must be gender equitable. On the second principle, the CAN model promoted non-discrimination in its training and group composition, which helped to empower women (and other neglected groups including young people) with knowledge and skills to enable them to equitably participate in surveillance and reporting (though this was limited by gendered access to resources). The third principle, accountability for gender equity, was not explicitly discussed by respondents, rather the accountability that concerned them was that of the authorities to whom they reported their local OH data. The lack of accountability in formal structures meant people were frustrated by the lack of response, which undermined future trust and sustained commitment to conducting local surveillance and reporting. Truly accountable OH programmes would listen to and act on the concerns of communities. This requires a more adaptive approach to management that can build trust and collaborative relationships with communities over time, as called for by OH scholars applying the principles of participatory epidemiology [47].

It is clear, from our data, that gender equitable community engagement is a structural necessity for successful OH policies and programmes, not just an ethical imperative. In future, OH policies and programmes must explicitly incorporate gender-transformative approaches, taking into account how cultural and gender norms affect participation in OH activities and decision making. In this way, gender-equitable community engagement in OH will be enhanced, leading to impact and positive changes in social and gender norms.

6. Policy recommendations

To bridge the gap between policy and practice, we present a series of recommendations for policymakers in Table 4.

7. Limitations and future directions

We did not consider non-OH specific documents, although many countries have other relevant policies, particularly in the health sector (e.g. zoonotic outbreak plans). Further research could usefully map alignment between OH and other sector-ministry documents and whether and how these promote gender equity and CE.

Sustainability of community engagement models such as CAN remains uncertain, particularly in contexts lacking resources, incentives or

Table 4

Recommendations for embedding community engagement and gender equity in OH policies and plans.

Recommendation	Rationale	Alignment with global, regional and national policies
Revise OHLEP principles to explicitly include gender equity and community engagement as governing principles	The OH vision will only be achieved if OH policies and programs embed gender equity and community engagement	SDG 5 (Gender Equality) African Union's Strategy for Gender Equality and Women's Empowerment, 2018 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) Article 10 of the Beijing Platform for Action
Include gender and community equity metrics in global OH policy tools (including WHO-FAO Joint Plan monitoring frameworks)	The OH vision will only be achieved if OH policies and programs embed gender equity and community engagement	SDG 5 (Gender Equality) African Union's Strategy for Gender Equality and Women's Empowerment, 2018 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) Article 10 of the Beijing Platform for Action
Integrate gender equity into OH policies and implementation plans	Without explicit inclusion, OH risks reinforcing existing gender disparities	SDG 5 (Gender Equality), OHLEP equity principle African Union's Strategy for Gender Equality and Women's Empowerment, 2018 Liberia National Gender Policy and Strategic Action Plan (2024–2029), Nigerian National Gender Policy (2021–2026) Sierra Leone's 2020 Gender Equality and Women's Empowerment Policy and 2022 Gender Equality and Women's Empowerment Act Gender-Responsive and Inclusive Implementation Guide for National One Health Action Plans (GeRIGOH), NEOH Gender Working Group, 2025
Embed measurable gender and CE indicators and operational targets into OH policies to monitor gendered and community impacts of OH interventions	Provides evidence for adaptive policy and programming to enhance both gender equity and CE	National health strategies, donor accountability requirements African Union's Strategy for Gender Equality and Women's Empowerment, 2018 National Gender Policies (as above)
Ensure women's access to digital technologies and training	Enhances participation in surveillance, reporting, and decision-making	SDG 9 (Industry, Innovation), SDG 5 African Union's Strategy for Gender Equality and Women's Empowerment, 2018 National Gender Policies (as above)
Redesign CE models (e.g., CAN) to be gender-transformative and youth-inclusive	Strengthens community ownership and sustainability	SDG 16 (Peace, Justice), SDG 17 (Partnerships), SDG 5 (Gender Equality) African Union's Strategy for Gender Equality and Women's Empowerment, 2018 Guinea's 2018 Community

(continued on next page)

Table 4 (continued)

Recommendation	Rationale	Alignment with global, regional and national policies
Ensure OH actions are implemented in partnership with respected local leaders	Strengthens community trust and compliance	Health Strategy Liberia National Community Health Program Policy 2023–2032 Nigeria's Sustainable Community Engagement Strategy, 2017, and the National Risk Communication and Community Engagement Strategy, 2019. Sierra Leone One Health Governance Manual (2018) and Risk Communication Strategic Plan (2019) OHHLEP principles on equity and participation Guinea's 2018 Community Health Strategy Liberia National Community Health Program Policy 2023–2032 Nigeria's Sustainable Community Engagement Strategy, 2017, and the National Risk Communication and Community Engagement Strategy, 2019. Sierra Leone One Health Governance Manual (2018) and Risk Communication Strategic Plan (2019)

support. Further research is needed to understand the conditions under which OH interventions translate into tangible health outcomes, such as the impacts of early responses in livestock management, and how these outcomes are shaped by gender dynamics.

Finally, while donor-driven diversity, equity, and inclusion agendas, particularly from actors such as the U.S., may influence policy discourse in some LMICs, their impact on OH-specific gender integration remains underexplored. This warrants careful consideration in future policy analyses. We did not systematically examine how gender intersected with age, class or other social differences, and this remains an important area for future research.

Our research revealed many gaps and challenges that urgently need to be addressed. One Health principles and frameworks must be reshaped to become inclusive of gender-equitable community engagement. This will promote what our research has shown is possible: that OH actions can be transformed at the community level through strong, inclusive engagement with women as equal partners.

CRediT authorship contribution statement

Susannah H Mayhew: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **Robyn Alders:** Writing – review & editing, Writing – original draft, Validation, Methodology, Investigation, Formal analysis, Conceptualization. **Neil Spicer:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Methodology, Formal analysis, Conceptualization. **Monya Konneh:** Writing – review & editing, Validation, Project administration, Investigation, Formal analysis, Data curation. **Yolaine Kate Waka-Metzger:** Writing – review & editing, Validation,

Investigation, Formal analysis, Data curation. **Philip Thulla:** Writing – review & editing, Validation, Investigation, Formal analysis, Data curation. **Magassouba N'Faly:** Writing – review & editing, Validation, Supervision, Investigation, Formal analysis, Data curation. **Eniola Cadmus:** Writing – review & editing, Validation, Supervision, Investigation, Formal analysis, Data curation. **Yéro-Boye Camara:** Writing – review & editing, Validation, Supervision, Investigation, Formal analysis, Data curation. **Funmilayo Olaleye:** Writing – review & editing, Investigation, Formal analysis. **Mozan Mohammed:** Writing – review & editing, Investigation, Formal analysis. **Julius Gilayeneh:** Writing – review & editing, Conceptualization. **Simeon Cadmus:** Writing – review & editing, Supervision, Conceptualization. **Manuela Colombini:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Methodology, Investigation, Formal analysis, Conceptualization. **Rashid Ansumana:** Writing – review & editing, Supervision, Conceptualization.

Declaration of competing interest

All authors declare that they have no conflicts of interest regarding this manuscript or any work undertaken on the project from which this paper arises.

Acknowledgements

West Africa One Health consortium, including the data collection teams. We are grateful to IDRC for providing the funding for the West Africa One Health project.

Data availability

The authors do not have permission to share data.

References

- [1] H. Lerner, C. Berg, A comparison of three holistic approaches to health: one health, ecohealth, and planetary health, *Front. Vet. Sci.* 4 (2017) 163.
- [2] W.B. Adisasmito, S. Almuhaire, C.B. Behraves, P. Biliogui, S.A. Bukachi, N. Casas, L. Zhou, One Health: a new definition for a sustainable and healthy future, *PLoS Pathog.* 18 (6) (2022) e1010537.
- [3] F.O. Fasina, O.G. Fasanmi, Y.J. Makonnen, C. Bebay, B. Bett, K. Roesel, The one health landscape in Sub-Saharan African countries, *One Health* 13 (2021) 100325.
- [4] P. Henley, G. Igihozo, L. Wotton, One Health approaches require community engagement, education, and international collaborations—a lesson from Rwanda, *Nat. Med.* 27 (2021) 947–948, <https://doi.org/10.1038/s41591-021-01350-5>.
- [5] M. Meinhardt, L. Vahedi, S.E. Carter, C. Poulton, P. Mwanze Palaku, L. Stark, Gender-based violence and infectious disease in humanitarian settings: lessons learned from Ebola, Zika, and COVID-19 to inform syndemic policy making, *Confl. Heal.* 15 (1) (2021) 84, <https://doi.org/10.1186/s13031-021-00419-9> (PMID: 34801062; PMID: PMC8605893).
- [6] Ebola Gbalo Research Group, Responding to the Ebola virus disease outbreak in DR Congo: when will we learn from Sierra Leone? *Lancet* 393 (2019) 2647–2650.
- [7] S.H. Mayhew, P.M. Kyamusugulwa, K. Kihangi Bindu, P. Richards, C. Kiyungu, D. Balabanova, Responding to the 2018–2020 Ebola virus outbreak in the Democratic Republic of the Congo: rethinking humanitarian approaches, *Risk Manag. Healthcare Policy* (2021) 1731–1747.
- [8] S.H. Mayhew, D. Balabanova, A. Vandi, G.A. Mokuwa, T. Hanson, M. Parker, P. Richards, (Re)arranging “systems of care” in the early Ebola response in Sierra Leone: an interdisciplinary analysis, *Soc. Sci. Med.* 300 (2021) 114209, <https://doi.org/10.1016/j.socscimed.2021.114209>.
- [9] L.S. Babawo, F.M. Kamara, E.Y. Mokuwa, G.A. Mokuwa, M.B.M. Nyakoi, P. Richards, Ebola in Sierra Leone: leveraging community assets to strengthen preparedness and response, in: *Communication and Community Engagement in Disease Outbreaks: Dealing with Rights, Culture, Complexity and Context*, 2022, pp. 111–128.
- [10] A.N. Fisher, M.K. Ryan, Gender inequalities during COVID-19, *Group Process. Intergroup Relat.* 24 (2) (2021) 237–245.
- [11] A. Kalbarczyk, N.L. Aberman, B.S. van Asperen, R. Morgan, Z. Bhutta, B. Carducci, C. Fabrizio, COVID-19, nutrition, and gender: an evidence-informed approach to gender-responsive policies and programs, *Soc. Sci. Med.* 312 (2022) 115364.
- [12] C. Robbiati, A.M. Andriamandroso, H. Auerswald, et al., Diversity, Equity and Inclusion in One Health Could Crucially Support Prevention of Health Threats, but a Change in Mindset Is Needed, *Women for One Health Network*, 2024.
- [13] K.L. Weiszar, P. Henley, N. Zeau, H. Auerswald, One Health for all: why gender inclusion matters, *The Lancet* 406 (10502) (2025) 424–426.

- [14] N. Fortier, COVID-19, gender inequality, and the responsibility of the state, *Int. J. Wellbeing* 10 (3) (2020).
- [15] P. Profeta, Gender equality and public policy during COVID-19, *CESifo Econ. Stud.* 66 (4) (2020) 365–375.
- [16] S. Cadmus, V. Akinseye, S. Ayanwale, E. Cadmus, R. Ansumana, et al., Beyond vaccine: expanding the frontiers of community action network in mitigating Mpox outbreaks in Africa, *J. Commun. Med. Public Health* 8 (2024) 479, <https://doi.org/10.29011/2577-2228.100479>.
- [17] J. Garnier, S. Savić, N. Cediël, P. Barato, E. Boriani, B. Bagnol, R.A. Kock, Mainstreaming gender-responsive one health: now is the time, *Front. Public Health* 10 (2022) 845866.
- [18] B. Bagnol, R. Alders, R. McConchie, Gender issues in human, animal and plant health using an ecohealth perspective, *Environ. Nat. Resour. Res.* 5 (1) (2015) 62–76, <https://www.ccsenet.org/journal/index.php/enrr/article/view/45646>.
- [19] P. Oruganti, E. Root, V. Ndlovu, P. Mbhungele, I. Van Wyk, A.M. Berrian, Gender and zoonotic pathogen exposure pathways in a resource-limited community, Mpumalanga, South Africa: a qualitative analysis, *PLoS Glob. Public Health* 3 (6) (2023) e0001167, <https://doi.org/10.1371/journal.pgph.0001167>. PMID: 37276220; PMCID: PMC10241411.
- [20] African Union, AU strategy for gender equality & women's empowerment 2018–2028, https://au.int/sites/default/files/documents/36195-docau_strategy_for_gender_equality_womens_empowerment_2018-2028_report.pdf, 2018.
- [21] J.H. Amuasi, T. Lucas, R. Horton, A.S. Winkler, Reconnecting for our future: the lancet one Health commission, *Lancet* 395 (10235) (2020) 1469–1471.
- [22] World Health Organisation (WHO), Community Engagement: A Health Promotion Guide for Universal Health Coverage in the Hands of the People, World Health Organization, Geneva, 2020.
- [23] N. Kabeer, Resources, agency, achievements: reflections on the measurement of women's empowerment, *Dev. Chang.* 30 (3) (1999) 435–464, <https://doi.org/10.1111/1467-7660.00125>.
- [24] A. Cornwall, A.M. Rivas, From 'gender equality and 'women's empowerment' to global justice: reclaiming a transformative agenda for gender and development, *Third World Q.* 36 (2) (2015) 396–415, <https://doi.org/10.1080/01436597.2015.1013341>.
- [25] A. Wingett, E. Cadmus, J. Matos Freschi, M.M. Vale, S.I. Cadmus, S. Sutherland, R. G. Alders, Community and indigenous concepts of and involvement with 'health' and how they contribute to achieving the SDGs, in: S.H. Mayhew, M. Hammer (Eds.), *The Elgar Companion to Health and the Sustainable Development Goals*, Edward Elgar Publishing, Cheltenham, 2025.
- [26] Liberia Ministry of Health, Ministry of Agriculture, Forestry Development Authority, et al., National One Health Strategic Plan 2019–2023, 2018.
- [27] Nigerian Federal Ministry of Health, Federal Ministry of Agriculture and Rural Development, Federal Ministry of Environment, et al., One Health Strategic Plan 2019–2023, 2019.
- [28] Republic of Guinea National One Health Platform, MSHP, MEPA, MEEF, et al., *Plan Stratégique National Une Seule Sante (One Health)* 2019–2023, 2018.
- [29] Sierra Leone National One Health Platform, Sierra Leone National One Health Strategic Plan 2019–2023, 2019.
- [30] Sierra Leone Ministry of Health and Sanitation (MOHS), et al., *One Health Governance Manual (2024–28)*, MOHS, MAF, EPA, and ONS- GoSL, 2024.
- [31] African Union, Agenda 2063: The Africa We Want, <https://au.int/en/agenda2063/overview>, 2013.
- [32] FAO, UNEP, WHO, WOA, One Health Joint Plan of Action (2022–2026). Working together for the health of humans, animals, plants and the environment, Rome, 2022, <https://doi.org/10.4060/cc2289en>.
- [33] World Health Organisation, Food and Agriculture Organization of the United Nations, United Nations Environment Programme, World Organisation for Animal Health, A Guide to Implementing the One Health Joint Plan of Action at National Level, World Health Organization, Geneva, 2023, <https://www.woah.org/app/uploads/2023/12/guide-to-implement-the-oh-jpa-v19-web.pdf>.
- [34] Food and Agriculture Organization of the United Nations (FAO), World Organisation for Animal Health (OIE), World Health Organization (WHO), Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries, https://www.woah.org/fileadmin/Home/eng/Media_Center/docs/EN_TripartiteZoonosesGuide_webversion.pdf, 2019.
- [35] UNESCO, 2024 Gender Report: Technology on her Terms. Global Education Monitoring Report, GEM Team, Paris, 2024, <https://doi.org/10.54676/WVCF2762>.
- [36] African Union, Protocol To The African Charter On Human And Peoples' Rights On The Rights Of Women In Africa, https://au.int/sites/default/files/treaties/37077-treaty-charter_on_rights_of_women_in_africa.pdf, 2023.
- [37] Liberia Ministry of Justice, Ministry of Justice Gender Policy and Strategic Action Plan (2024–2029), 2024.
- [38] Nigerian Federal Ministry of Women's Affairs, Nigerian National Gender Policy (2021–2026), 2021.
- [39] Sierra Leone National Government, Gender Equality and Women's Empowerment Policy, 2020.
- [40] Sierra Leone National Government, Gender Equality and Women's Empowerment Act, 2022.
- [41] J. Garnier, et al., Toward more equitable one Health: a gender responsive and inclusive implementation guide for National One Health Action Plans (GeRIGOH), CABI One Health (2025), <https://doi.org/10.1079/cabionehealth.2025.0037>.
- [42] P. Farmer, *Infections and Inequalities: The Modern Plagues*, U. of California Press, 2001.
- [43] S. Abimbola, M. Pai, Will global health survive its decolonisation? *Lancet* 396 (10263) (2020) 1627–1628, [https://doi.org/10.1016/S0140-6736\(20\)32417-X](https://doi.org/10.1016/S0140-6736(20)32417-X).
- [44] O.S. Baquero, M.N. Benavidez Fernández, M. Acero Aguilar, From modern planetary health to decolonial promotion of one health of peripheries, *Front. Public Health* 9 (2021) 637897.
- [45] S. Hindmarch, S. Hillier, Reimagining global health: from decolonisation to indigenization, *Glob. Public Health* 18 (1) (2023) 2092183.
- [46] A. Catley, R.G. Alders, J.L. Wood, Participatory epidemiology: approaches, methods, experiences, *Vet. J.* 191 (2012) 151–160, <https://doi.org/10.1016/j.tvjl.2011.03.010>.
- [47] R.G. Alders, S.N. Ali, A.A. Ameri, B. Bagnol, T.L. Cooper, A. Gozali, M.M. Hidayat, E. Rukambile, J.T. Wong, A. Catley, Participatory epidemiology: principles, practice, utility, and lessons learnt, *Front. Vet. Sci.* 7 (2020) 532763, <https://doi.org/10.3389/fvets.2020.532763>.