How Food Systems Stakeholders in Malawi Conceptualize and Utilize the Concept of "Food Systems for One Health" (FS4OH)

2025 October – EFAD conference

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Food systems transformation in Southern Africa for One Health

Co-funded by the European Union

UKRI Innovate UK

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15-minute overview

1. Intro – FS4OH & Malawi
2. Rationale & Aims
3. FS4OH Literature Review
4. Methodology
5. Results
6. Discussions & Conclusion

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From Concept to Action:

Malawian Stakeholder Voices on Food Systems for One Health (FS4OH)

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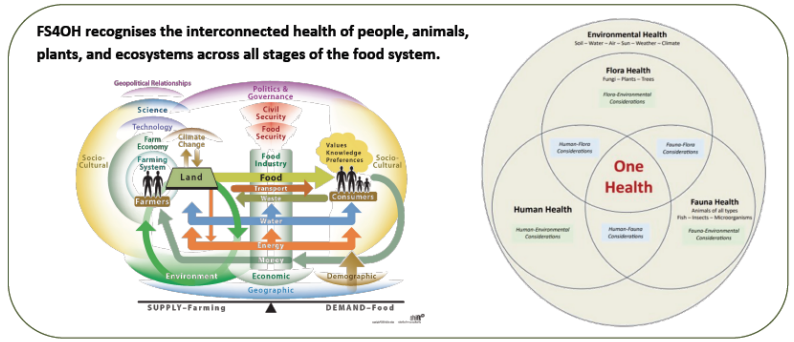
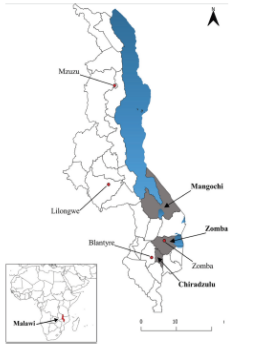
- Malawi faces high rates of poverty, food insecurity, malnutrition, and environmental degradation, making integrated food system solutions crucial.
- This qualitative research explores how stakeholders at different governance levels in Malawi understand and apply FS4OH concepts, aiming to inform better, more holistic policies and practices for human and environmental health.

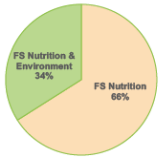
FS4OH recognises the interconnected health of people, animals, plants, and ecosystems across all stages of the food system.





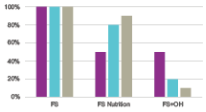
Research Q1: How do FS stakeholders in Malawi conceptualize "FS4OH"?

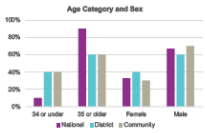
1. **66% viewed FS4OH as focusing on human health and nutrition, with little mention of environmental links.**
   - Many stakeholders—despite working in related fields and having tertiary education—struggled to articulate all components of FS4OH, possibly due to the interview format and short duration.
2. **34% described FS4OH connecting environmental health (soil, water, flora/fauna) with human health.**
   - 50% of those who fully articulated FS4OH were younger, at the district/community level, and in diverse sectors beyond agriculture (e.g., community development, environment, human rights).
   - Remaining participants had strong backgrounds and degrees in agriculture, combined with environment or nutrition experience.
3. **Post-interview discussions with handouts appeared to improve mutual understanding.**



Research Q2: How do FS stakeholders utilize the FS4OH concept in their work?

1. **Respondents mainly focus on ensuring the food system delivers adequate nutrition.**
   - Some hesitancy to adopt FS4OH exists due to sectoral misalignment and perceived mismatch with organizational mandates.
2. **Others explained how they use FS4OH, but not using the term FS4OH.**
   - Many initially underestimated the extent of FS4OH integration in their roles, and additional connections emerged among those in environmental roles (soil, water, forestry) and sectors like trade, governance, and law enforcement.
3. **Many emphasized collaborative, multisectoral efforts leveraging diverse strengths rather than all stakeholders acting comprehensively alone.**
   - FS4OH is most effective as part of a collaborative ecosystem, transcending strict sectoral boundaries.
   - Existing documents and practices help expand cross-sector engagement, with regular stakeholder interaction key to wider FS4OH dissemination.





Research Q3: Possibilities and Limitations of FS4OH for Advancing Initiatives

1. **Clear advantages of FS4OH, including improved human and environmental health, increased food security, and enhanced learning outcomes.**
   - FS4OH fosters multi-sectoral coordination, promoting synergies, resource sharing, and reduced costs (although others felt it would increase costs).
2. **Challenges: lack of understanding of FS complexity, resistance to systems thinking, and oversimplification of FS as agriculture/consumption.**
   - Political preferences for simple solutions (e.g., fertilizer subsidies) hinder sustainable systemic change; politicians were described as "gatekeepers" resisting deeper reforms.
   - Well-resourced groups were perceived as prioritizing cheap, high-quantity food and profits over quality and sustainability.
   - Coordinating stakeholders is difficult, requiring patience and significant resources; funding often targets single issues rather than integrated solutions.

Study Design:

Guiding questions and prompts for interviews designed to be brief and conducted near to homes/work for convenience.

Post-interview FS+OH discussions with handouts for district & community level.

Anonymised records transcribed verbatim using Otter.ai and manually checked.

Integrated inductive and deductive codes and grouped into themes in MaxQDA.

Analysed considering reflexivity/researcher bias, with second opinion on codes.

41 diverse stakeholders interviewed

National (20), district (10) & community extension (10) levels.

- ☐ National-level via Zoom in Lilongwe, Zomba, and Blantyre.
- ☐ District & community face-to-face in Mangochi and Zomba, where the FoSTA-Health project is active through CARE Malawi.
  - ○ District offices at the "Boma", the governance centre.
  - ○ Community in Traditional Authorities (TAs):
    - TA Lungwena in Mangochi, TA Nkhagula in Zomba.
    - TAs selected to avoid previous FS4OH interactions.
- ☐ 17 sectors were represented, with 8-9 sectors at each level of governance.
- ☐ More males & adults (see table to the left), achieved
  - ○ 40% youth at the district and extension level.
  - ○ 40% females at district level.
- ☐ The national level had more degrees and experience, as highlighted in green in the table below.

Tertiary	National	District	Extension
None	0%	0%	10%
Diploma	0%	10%	70%
Bachelor's	19%	70%	20%
Master's	81%	20%	0%
PhD	19%	0%	0%
Experience	**National**	**District**	**Extension**
01 to 10 yr	33%	70%	40%
11 to 20 yr	52%	20%	20%
21+ years	14%	10%	30%

Historical evolution of "FS" & "OH"

Year	OH	FS	FS+OH
Ancient	Indigenous Knowledge	Indigenous Knowledge	Indigenous Knowledge
300	Hippocrates		
1800	Zoonosis		
1900	Soil Health One Medicine		
1930		Supply chains	
1970		Limits to growth	Permaculture Design
1990		FS	
2000			IFOAM (organics) ILRI (livestock
2004	OH		
2010			Universities
2020			UK, EU, UN

Conclusion & Key Take-Home Messages:

The study underscores FS4OH's value despite varying terms used to describe food systems that are healthy for people and the planet.

1. **Embrace Diverse Perspectives:** Stay open to a variety of ways of understanding what it means to be healthy for both people and the planet. Diversity is a powerful asset, and every stakeholder brings unique expertise and lived experience to the table.
2. **Engage in Ongoing Dialogue:** Actively participate in regular conversations with a wide range of stakeholders. Collaborative dialogue is essential for building stronger, more resilient food systems together.
3. **Respect Different Approaches:** Be mindful not to impose your own views or solutions on others. Instead, listen, learn, and support approaches that honour the needs and perspectives of all involved, while also sharing your own experiences.

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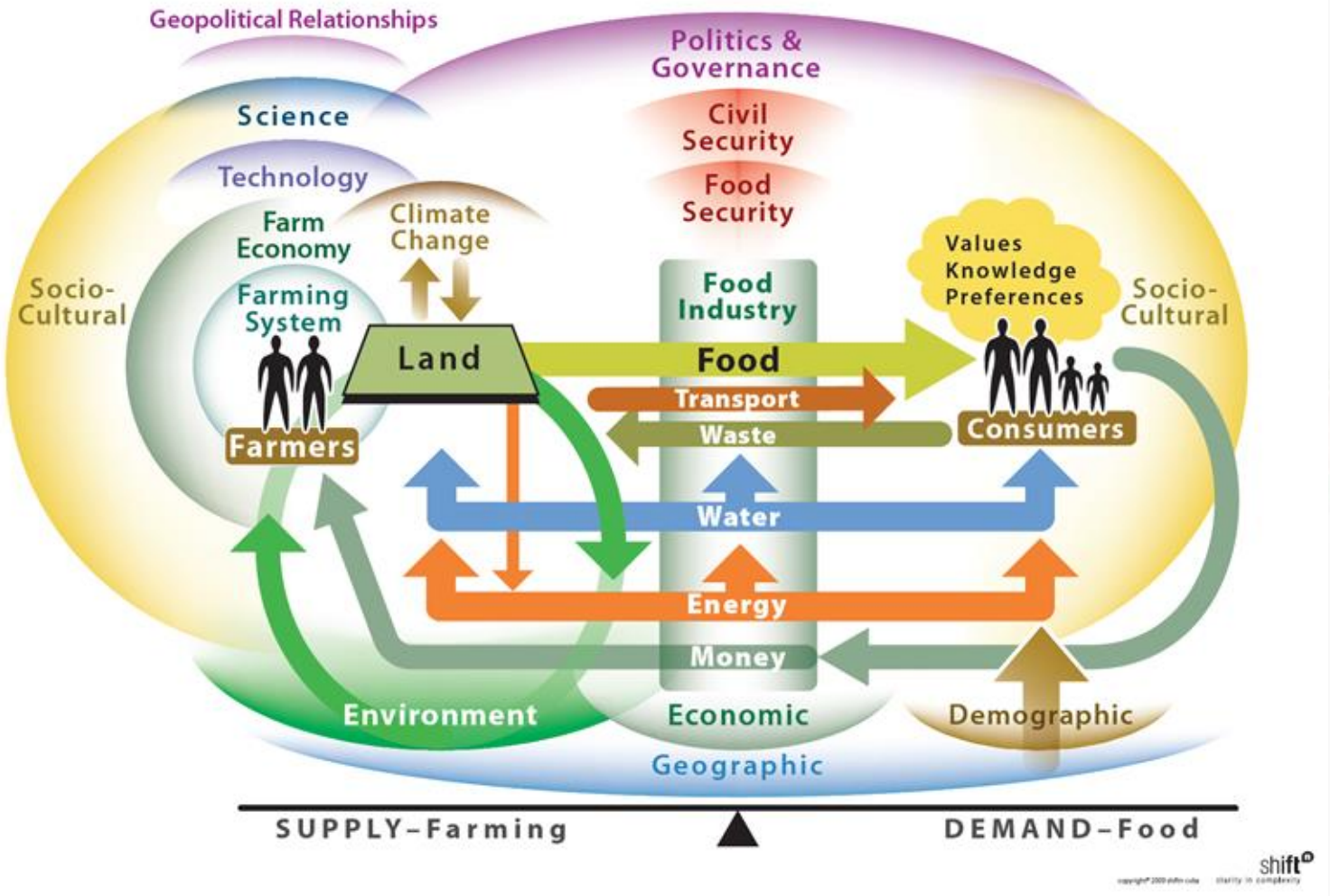
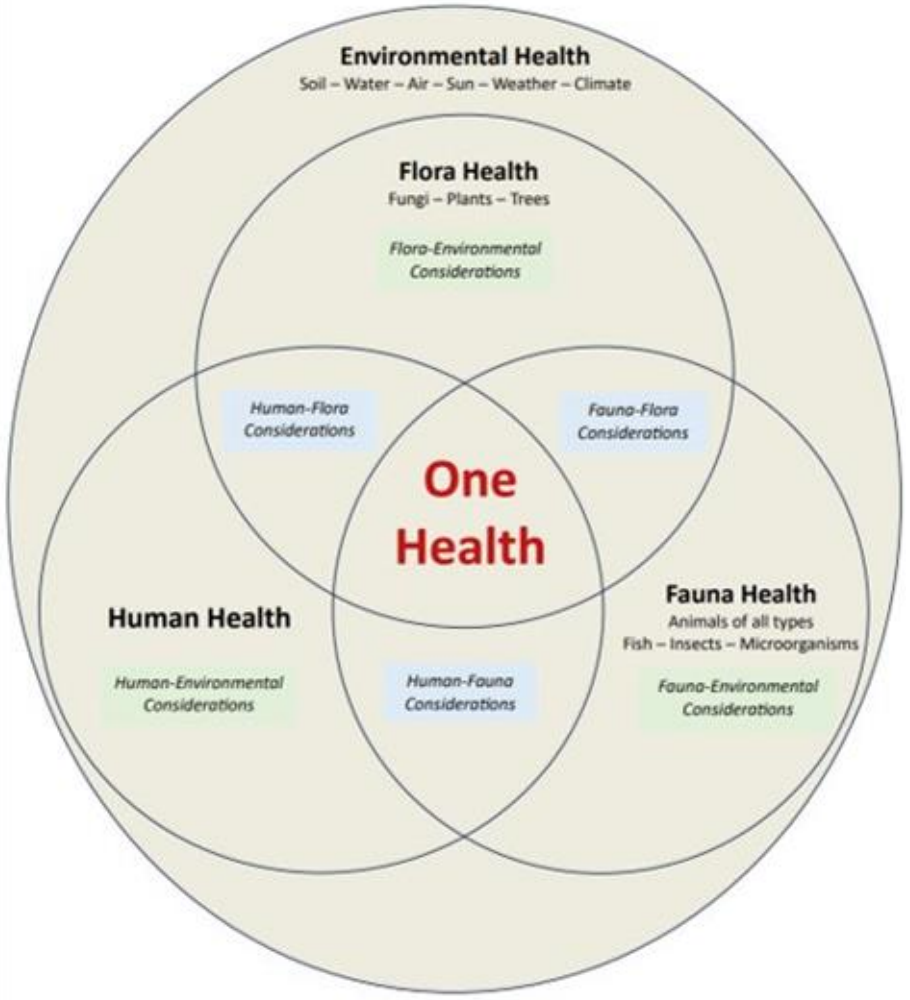
1. Introduction to FS4OH & Malawi

Food Systems for One Health (FS4OH) approach

The FS4OH approach recognizes the interconnected health

of people, animals, plants, and ecosystems across all stages of the food system.





MW Malawi MW

Interacting with participants at the

2024 World Food Day &

African Day for Food & Nutrition Security.

Typical site in Rural Malawi.

This was on our way to WFD-ADFNS.

Clearing, burning & ready for chemical monocropping.

Our home in the middle of the dry season.

Visitors daily, mulching, indigenous diversity.

Hubby in middle.

www.NeverEndingFood.org

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2. Rationale & Aims

Agriculture & Diets in Malawi

1. Maize Dominance (70%), food insecurity (~30%)
2. History – slavery, missionaries, colonialism, donors, HIV
3. Population – high birth rates & youth (~50%)
4. Low education, high poverty, import dependency
5. High agricultural employment, input dependency
6. Environmental degradation, diversity decline
7. Health & Nutrition - under & over nourished

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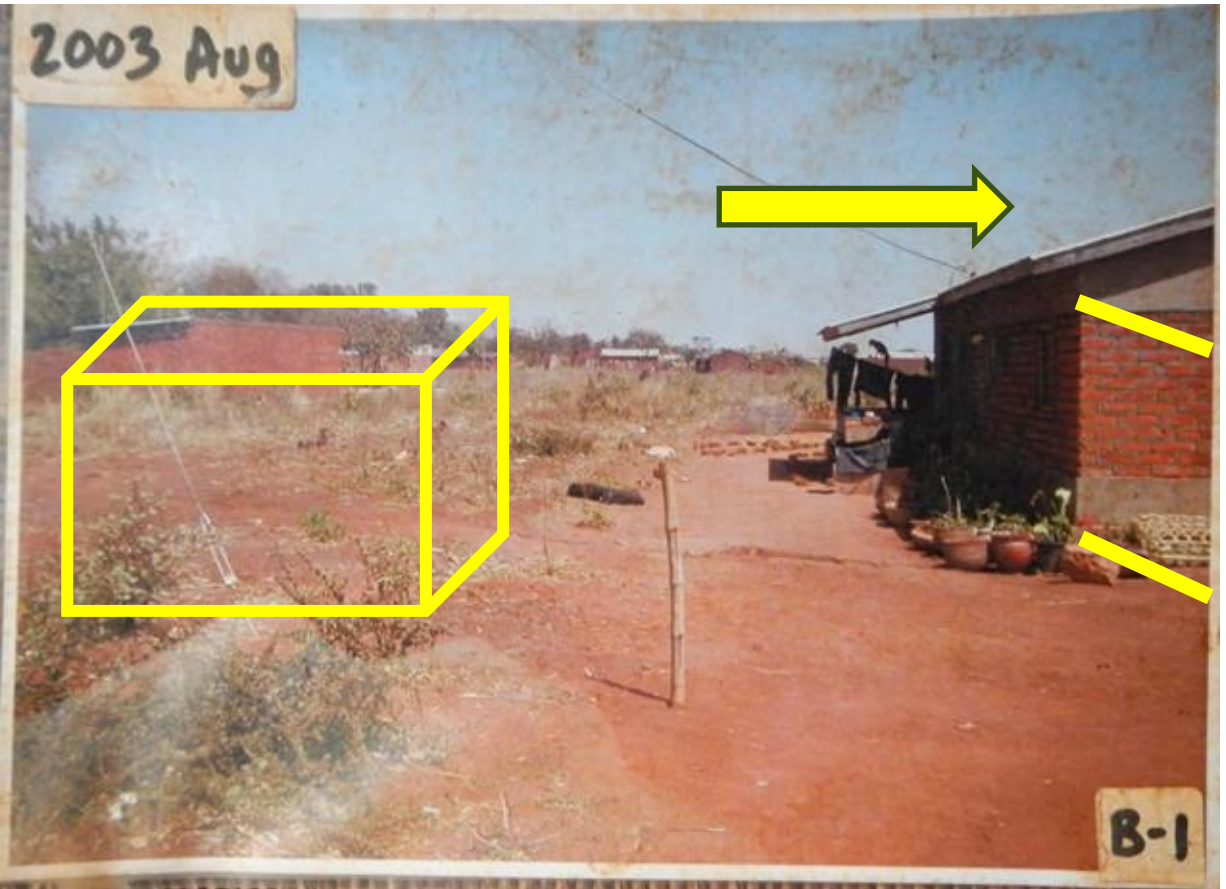
FS4OH solutions abound

2003 NeverEndingFood Permaculture

(Nordin's home)



2019

Same place

Research Aims & Questions

To explore how stakeholders at different governance levels in Malawi understand & apply FS4OH concepts, aiming to inform better, more holistic policies & practices for human & environmental health.

Research questions:

1. How do food systems stakeholders working at multiple levels in Malawi conceptualize "Food Systems for One Health"?
2. How do they utilize this concept, if at all, within the context of their work?
3. What do they see as the possibilities and limitations of this concept regarding the advancement of their initiatives?

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3. FS4OH Literature Review

FS4OH is Ancient.

The integration of FS with OH gained traction recently,

recognizing the link between environmental, animal, and human health.

The two terms developed separately, then crossed paths… again.

Historical evolution of "FS" & "OH"

Year	OH	FS	FS+OH
Ancient	Indigenous Knowledge		
300	Hippocrates		
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Respecting and Listening to Diverse Ways of Knowing

For effective progress,

the literature suggests to:

- ✓ avoid top-down approaches;
- ✓ integrate local knowledge;
- ✓ foster two-way communication; and
- ✓ Avoid rhetoric in policy and implementation, such as unfamiliar terms.

Participants may not use terms like "Food System" or "One Health",

but may still recognize their relevance to *health* and environmental issues.

Our study aimed to include a broad range of stakeholders,

actively listening to diverse interpretations of FS4OH,

while documenting social, policy, & institutional contexts affecting perspectives.

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FS+OH in Malawi

Uptake of FS+OH is slow, with different terminologies used by experts.

1. **1990/s "Food Security" more than "Food Systems", increasing since 2021 UN Food Systems Summit.**

2. **2020's OH has started for health of humans & animals (veterinarians/wildlife), not comprehensive**

3. **Capacitating One Health in Eastern and Southern Africa (COHESA) project 2021-2025 Nov.**
   - COHESA conducted assessments to understand OH in Malawi, identifying gaps and capacities.
     - Food Systems were minimal among the participants involved, and in the results of the assessment
   - Malawi OH symposium had Food Safety topics, but only FoSTA-Health covered "Food Systems."

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4. Methodology

Study Design:

- ✓ **41 Diverse FS stakeholders** from different organization types and sectors, aiming for diversity, including age and sex. Avoided those who were part of previous FoSTA-Health activities
- ✓ **Guiding questions and prompts** for interviews were designed to be brief and conducted near homes/work for convenience.
- ✓ **Post-interview FS+OH discussions** with printed handouts for the district & community level.
- ✓ **Anonymised transcriptions** verbatim using Otter.ai and manually checked.
- ✓ **Integrated inductive and deductive codes** and grouped into themes in MaxQDA.
- ✓ **Analysed** considering reflexivity/researcher bias, with a second opinion on codes.

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Locations & Participants

41 Stakeholders interviewed at national, district & community levels.

- 21 National-level via Zoom in Lilongwe, Zomba, and Blantyre.
- 20 District & community level face-to-face in Mangochi and Zomba, where the FoSTA-Health project is active through CARE Malawi.
  - District offices at the “Boma”, the district’s governance centre
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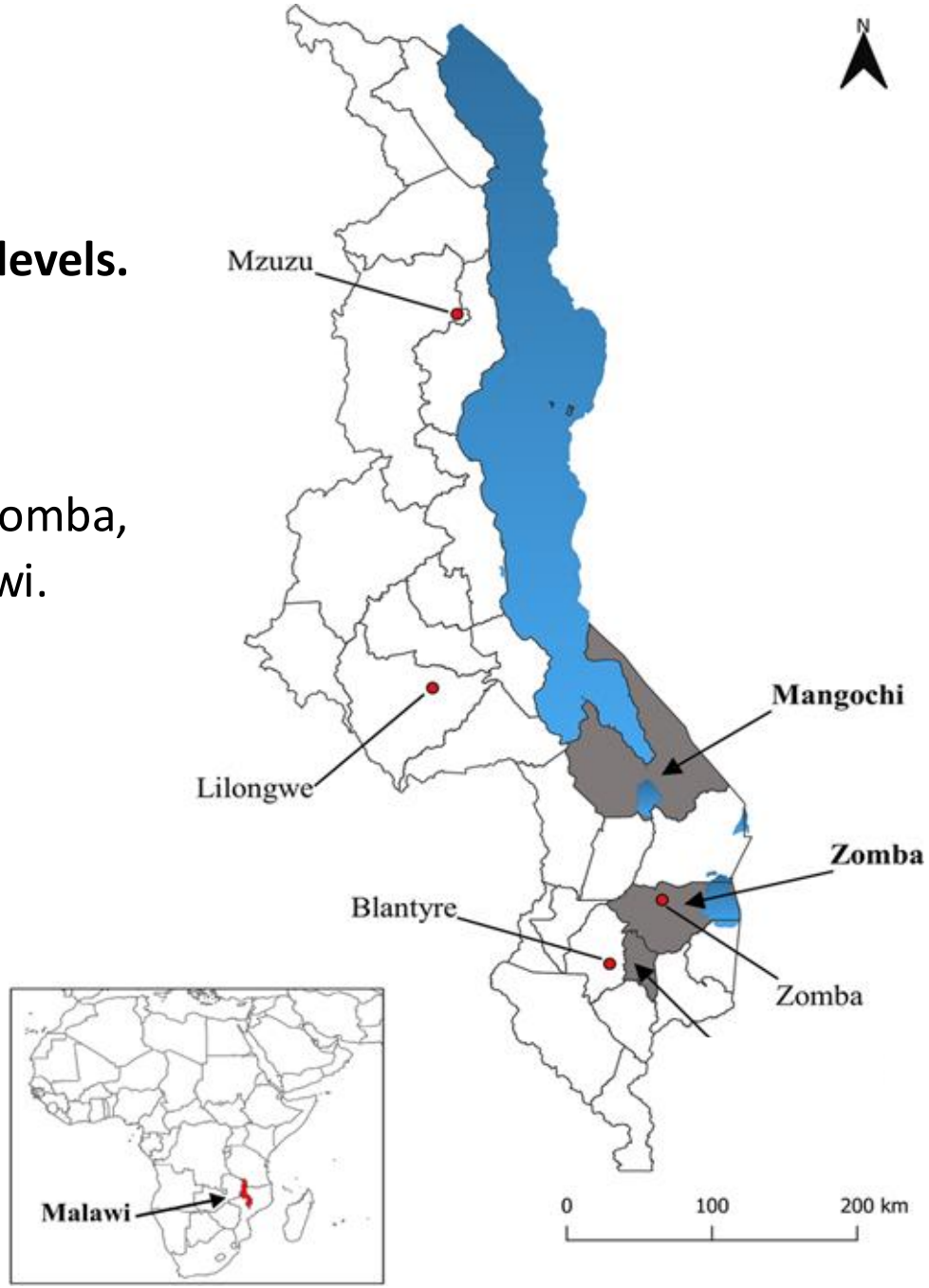

Map from:
Chisala, B. L., Bwanali, R. J., Mamba, K. C., Maseko, S. D., & Kalindekafe, L. (2024). Mass drug administration campaigns: Comparing two approaches for schistosomiasis and soil-transmitted helminths prevention and control in selected Southern Malawi districts. *BMC Health Services Research, 24*(1), Article 10489. https://doi.org/10.1186/s12913-023-10489-5

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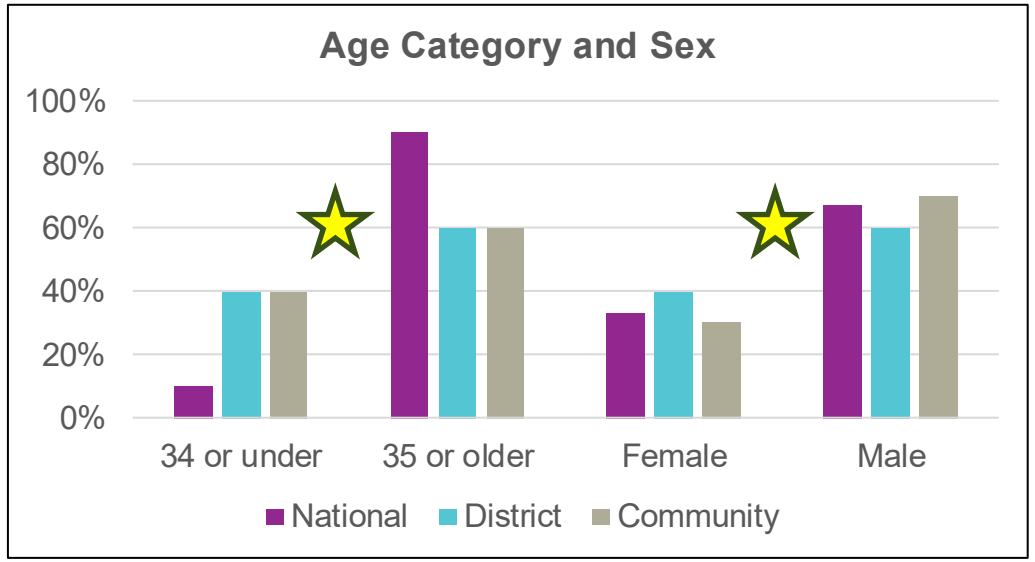
5. Results

Participants

- **17 sectors were represented**
  - 8-9 sectors at each level of governance
- **More adults & males**
  - 40% youth at the district & extension levels
  - 40% females at the district level
- **National level had more degrees & experience**
  - as highlighted in green in the table



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Master's	62%	20%	0%
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How do FS stakeholders in Malawi conceptualize "FS4OH"?

66% viewed FS4OH as focusing on human health and nutrition, with little mention of environmental links.

34% described FS4OH connecting environmental health (soil, water, flora/fauna) with human health.

- 50% of these were younger, at the district/community level, and in diverse sectors beyond agriculture (e.g., community development, environment, human rights)
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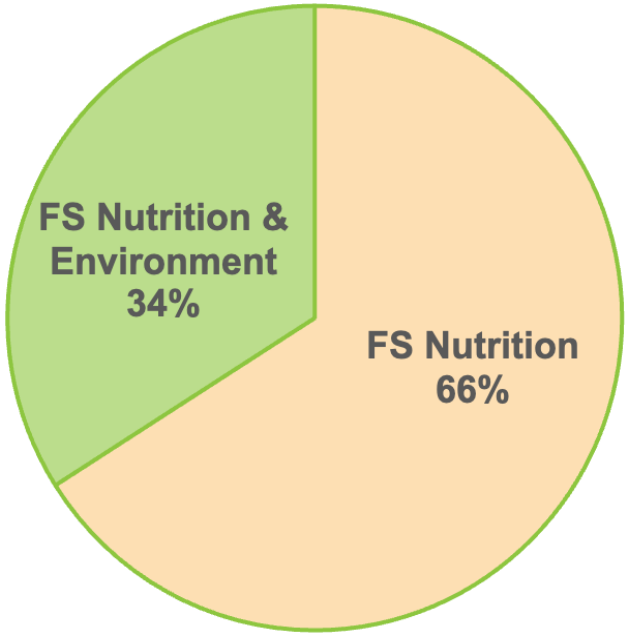

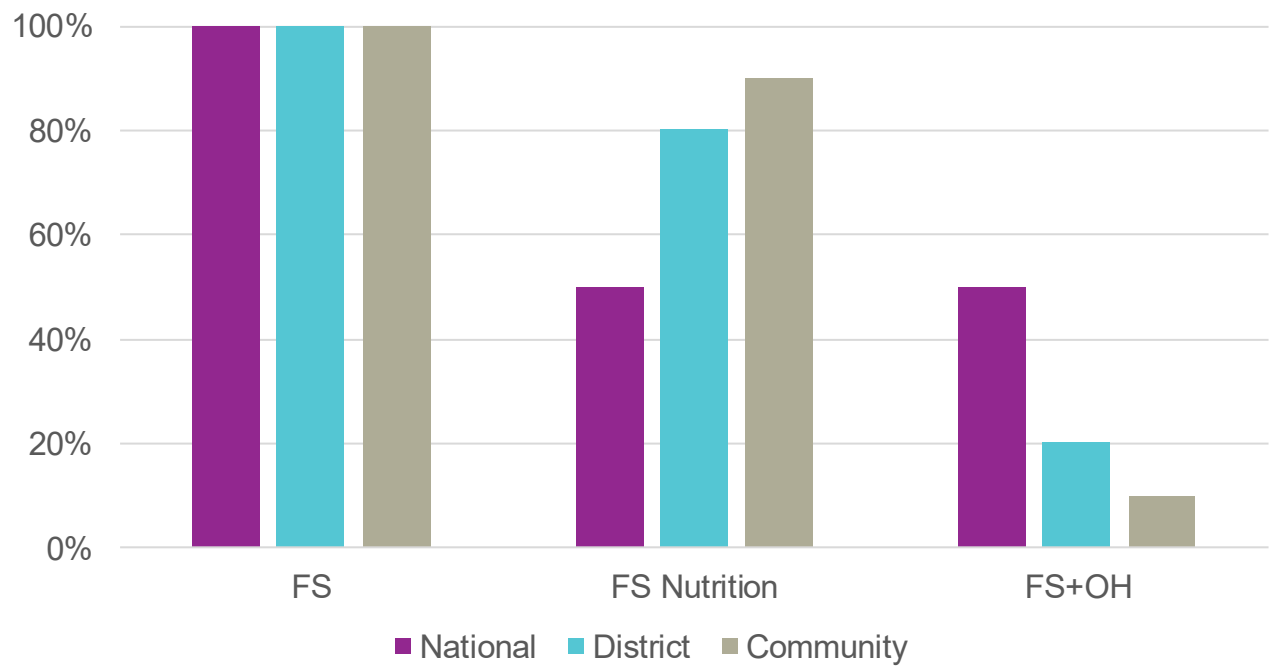

Which FS stakeholders (if any) in your country embrace the FS4OH approach?

"One Health" is rarely used explicitly, but many organizations apply a One Health approach in practice.

"It isn't a One Health label, but it is a One Health approach." - participant

153 organizations mentioned by participants

- 94 (**green**) FS4OH: NGOs, UN, Community Structures, Universities, Research institutions highest reported
- 47 (**orange**) not engaged in FS4OH (Q8) **: Government and private sectors have highest reported**
- 12 (**blue**) organizations reported as both doing and not doing FS4OH: General Sectors, Donors, and a specifically names. – Likely different departments/projects

Organization Type	doing	not doing	both	Organizations listed under both
NGOs	53	13	6	CISANET, CWW, Eagles, FUM, NASFAM, TLC
UN Agencies	6	4	1	FAO
Community Structures	5	3	0	
Universities, Research	5	2	1	LUANAR
Regional/Global	3	0	0	
General Sectors	5	5	0	
Donors	3	3	0	
Government Ministries	9	11	4	Agriculture, Education, Gender, Nutrition
Private Sector	4	6	0	
Total	94	47	12	

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6. Discussion & Conclusions

Conclusion & Key Take-Home Messages:

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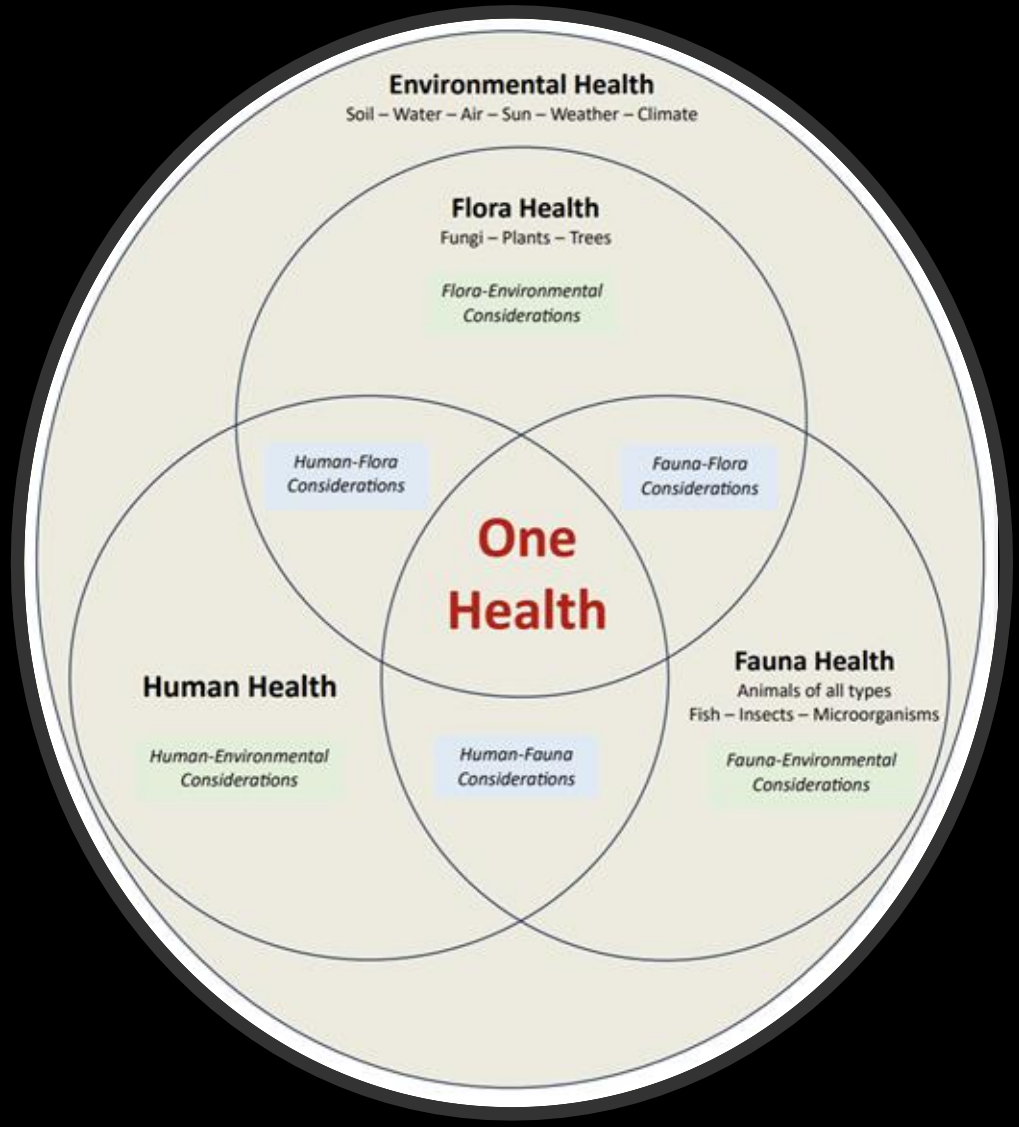
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