Capacitating One Health in Eastern and Southern Africa (COHESA) Stakeholder Net-mapping-Zimbabwe

A joint event organized by the COHESA consortium

Validated Workshop Report

Photo credit: Alex Caron, CIRAD

June 2022 (Net-mapping workshop) and November 2022 (Validation meeting)

Introduction

One Health (OH) is a collaborative multisectoral and transdisciplinary approach that aims to sustainably balance and optimize the health of humans, domestic and wild animals, plants, and the wider environment, which are closely linked and interdependent [1]. In Africa, OH faces a number of challenges in its implementation, some of which revolve around capacity both at the technical and societal level, leading to unsustainable and scattered One Health efforts. Other key issues such as lack of cross-departmental collaboration; inability to adapt health solutions to the national context and effectively cascade solutions down to final beneficiaries; inadequate research infrastructure, limited funding, as well as weak integration of efforts, are significantly contributing toward ineffective implementation of the OH approach.

Given its multi-faceted nature, the One Health approach operates in a complex network with many interacting elements. Therefore, understanding relationships and interactions within the OH ecosystem is important in addressing some of the fundamental and practical challenges limiting key aspects that are integral to a successful OH approach.

The Capacitating One Health in Eastern and Southern Africa (COHESA) project will attempt to address some of these limitations by equipping countries in Eastern and Southern Africa with the ability to identify and assess OH threats, and to rapidly develop, adapt, adopt and deliver solutions. To begin with, COHESA will conduct a detailed baseline assessment of the OH landscape in focus countries. This assessment will help in assessing sectoral performance, identifying capacity gaps and bottlenecks in the systems-wide management of OH issues, as well as relationships among actors [2]. One of the baseline assessment tools applied under this action is net-mapping, a reflective exercise that helps to understand, visualize and discuss situations that involve several actors within a complex ecosystem.

One Health practice in Zimbabwe started with the formulation of various committees at the National, provincial and district levels in 2009. These committees are mainly issue-based and hold regular meetings to tackle public health issues such as zoonoses, and food safety. Most One Health projects in Zimbabwe are donor-driven, and the local awareness of the One Health concept is growing. Tangible collaborations in One Health

mainly exist between the Ministry of Health and Childcare and the Ministry of Agriculture where most of the OH committees are hosted with a developed MOU. This report highlights outcomes from a net-mapping conducted in Zimbabwe, aimed at identifying and mapping out key stakeholders that will influence the integration and effective implementation of OH-related policies, as well as defining their relationships within the ecosystem.

Methodology

We used the net-mapping tool to understand, visualize and discuss the One Health network in Zimbabwe, which is influenced by several actors. The tool was developed by International Food Policy and Research Institute (IFPRI) and is facilitated by certified net mappers. It is a reflective, interview-based mapping tool that can help individuals and groups within a network clarify their own view of a situation, foster discussion and develop a strategic approach to their networking activities. The process helps to determine what actors are involved in a given network, how they are linked, as well as how influential they are [3]. Determining such fundamental issues within a complex multidisciplinary network such as OH paves way for strategic engagement and action.

The net-mapping exercise relies heavily on a thorough understanding of the network being analyzed. As a result, purposive sampling was used to recruit participants since their selection determines the quality of the net map. This sampling technique enabled us to identify and select respondents that are experienced and knowledgeable about the One Health landscape in Zimbabwe. According to Palinkas *et al.* (2015) [4], the importance of respondents' availability and willingness to participate, and the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner should also be factored. Other considerations, to ensure multisectoral and multidisciplinary participation, were taken into account, as well as gender and level of involvement in the OH sector.

The workshop was held on 16 and 17 June 2022 at the Bronte Hotel, Harare. The participants are key players in the country's One Health related entities and have a good

grasp of the OH concept. They were drawn from government key-line Ministries, Universities, National Research Institutes, and International Research Institutions with the help of a local multiplier[1] based at the University of Zimbabwe. To enable effective discussions and engagements, a total of 19 (7 female and 12 males) participants attended the net mapping workshop in Harare. 12 participants came from various faculties of the University of Zimbabwe, 3 from the directorate of veterinary services, 2 from the Ministry of Health and Childcare, 1 from the Division of Field Veterinary Services, and 1 from the Environment Management Authority. They comprised of animal health experts, food safety experts, environment and human health experts

The net-mapping exercise was guided by an agenda that introduced participants to the COHESA project as well as provided a status update on the country's OH landscape. The subsequent steps involved include setting a specific country goal, identifying key OH actors, defining and creating the linkages between the OH actors and finally setting up the influence towers from the created linkages. Prior to the creation of linkages, perceived influence for the identified key actors was plotted in a stakeholder grid which was later compared to the real influence towers determined by the net map.

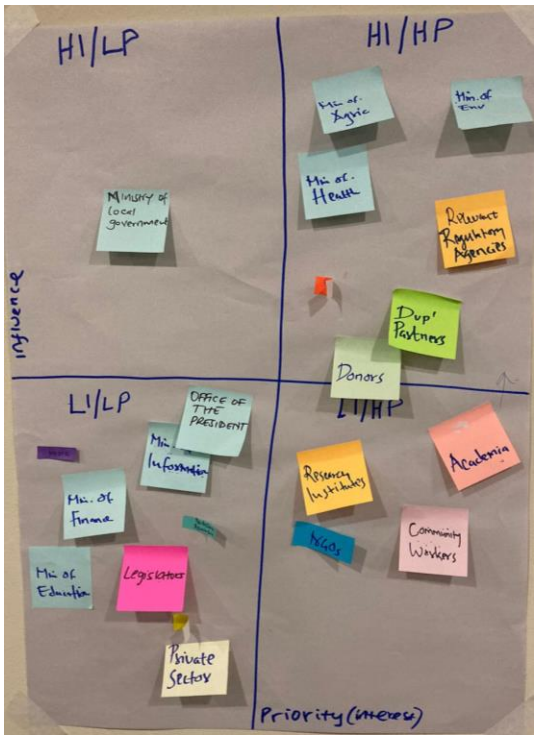
i. OH goal

Participants set the goal for Zimbabwe OH as development of an operational OH council. The guiding question for the net-mapping exercise was agreed upon as **"Who will influence the development of an operational One Health council in Zimbabwe?"**

ii. Identification of OH actors in Zimbabwe

Specific key actors were identified, grouped into sectors, color coded and plotted on a stakeholder grid based on participants' perception of the actors' interest and influence on One Health in the country (shown in Figure 1)

[1] Multipliers in the COHESA project have the legal status of university and are, in most cases, the longest established, and highest reputation university working at the agriculture, ecosystem and health interface in their respective countries.



HP: High power

LP: Low power

HI: High Interest

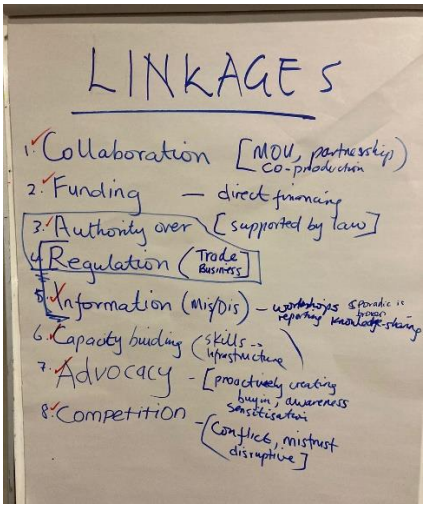
LI: Low Interest

NB: Influence was labeled as power to avoid duplication for the acronyms used

Figure 1 Stakeholder grid showing interest and influence in OH

iii. Defining relationships between stakeholders

Types of interactions or links that exists among the actors relevant to the goal were discussed, synthesized and color coded. To focus the discussion, essential and limiting linkages towards the goal were deliberated upon. Essential linkages were well defined and plotted on the net-map, while the limiting ones were noted and mentioned in the discussion section of this report. After an extensive brainstorming session, participants settled on collaboration, funding, information and capacity building as the essential linkages needed to achieve our goal, of advancing to the next step of the net-mapping process.



Collaboration: Formal partnership with an MOU and co-production

Funding: Provision of funds (salary, grants, budgetary allocation) for OH activities

Capacity building: Development of skills and infrastructure to support One Health

Information: Reporting and knowledge sharing, workshops Proactive creation of buy-in, awareness and sensitization

Figure 2 Identified linkages (left image) and the discussed linkages (right)

iv. Drawing the linkages and influence towers

Collaboration, funding, capacity building and information were color coded and the linkages drawn using connecting lines and arrows with predefined color codes typifying the types of interactions between key actors previously plotted on the stakeholder grid. Arrows point to where the interaction is being applied e.g an arrow from actor A towards actor B in capacity building implies that actor A builds the capacity of actor B. Two-way interactions were represented using double-sided arrows, while weak linkages were represented by broken arrow-lines as shown in Figure 3. Collaboration being a mutual linkage automatically has a two-sided arrow. The number of connections in and out of each actor was computed based on the arrow directions, and a factorial allocation of influence towers was agreed upon, based on the number of connections. Actor(s) with the highest number of towers were defined as the most influential stakeholders. A comparative analysis of these levels of influence was done with the participants' perceived levels of influence plotted on the stakeholder grid. These findings were then translated into a digital map using the visualizer application software [5]. The colored lines represent essential linkages that were identified as fundamental to achieving the desired goal.

Figure 3 Connection between key OH actors in Zimbabwe and their influence towers on the right

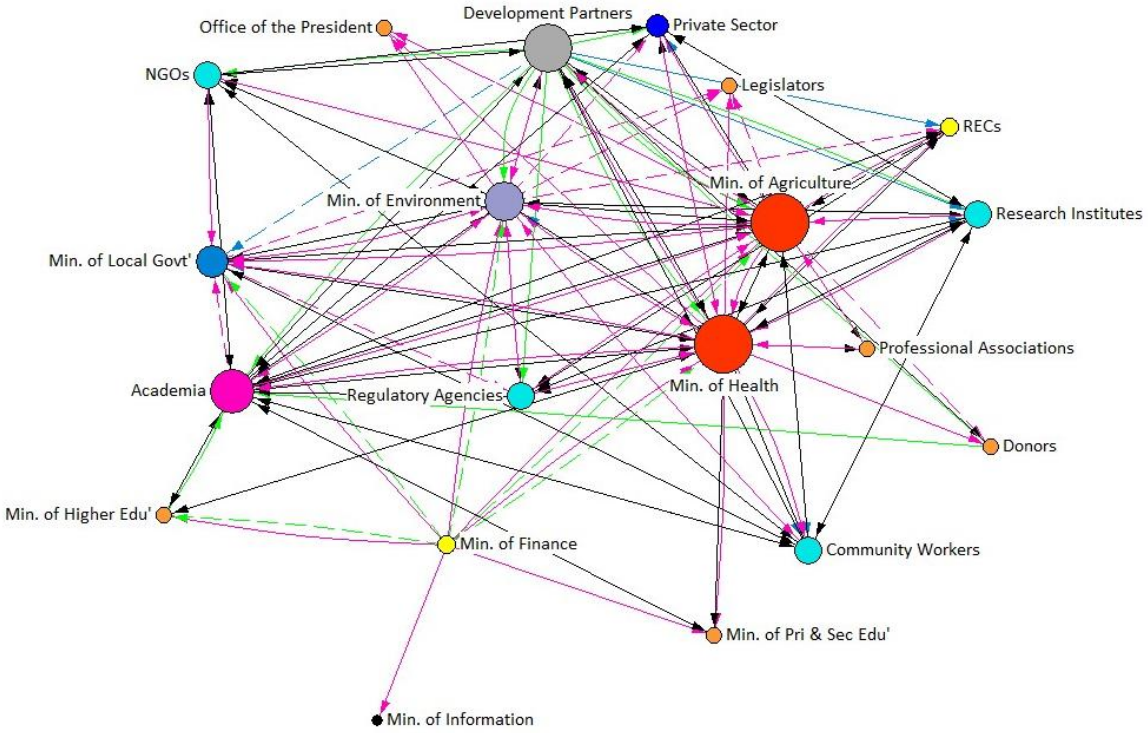
Net Mapping Results

i. Key stakeholders and their linkages

Actors	Links
1. Professional Associations – Commodity associations 2. Private Sector (Formal and informal) – Small, Medium Enterprises 3. Parastatals 4. Donors/partners 5. Government ministries 6. Academia 7. Donors 8. Quadripartite 9. Development partners 10. Research institutions	1. Collaboration (Structured and formal partnership with co-production or a MOU) 2. Funding (Direct injection of funds) 3. Regulation (Trade and business) 4. Information (Mis/Dis-information) 5. Capacity building (Development of skills and infrastructure) 6. Advocacy (Pro-actively creating buy-in, awareness and sensitization) 7. Competition (Conflict, mistrust)

11. Policy makers – legislators, ministers 12. Non- Governmental organizations (International, local and civil society) 13. Grassroot groups – Community Health Workers 14. Civil societies	

ii. Overall Net-map of Zimbabwe OH linkages among key actors



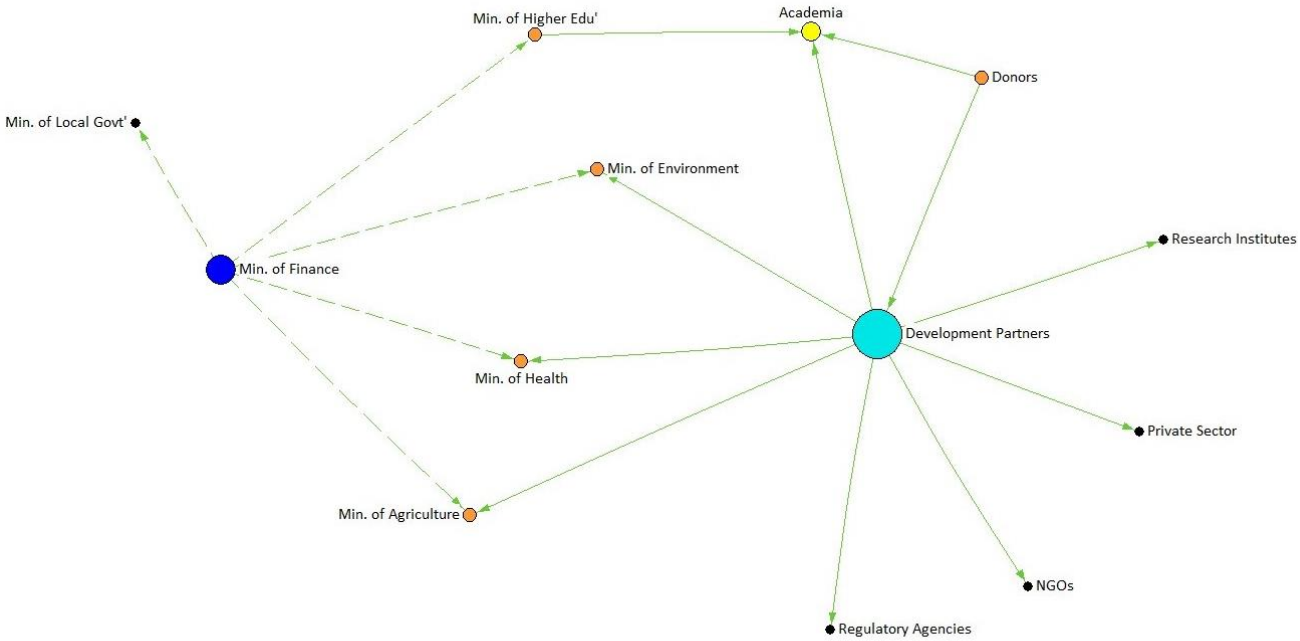
Legend:

- Funding
- Information
- Capacity building
- Collaboration

Note: The size of the nodes represents the number of influence towers assigned based on the number of linkages with other stakeholders (the bigger the node, the more influential the actor is).

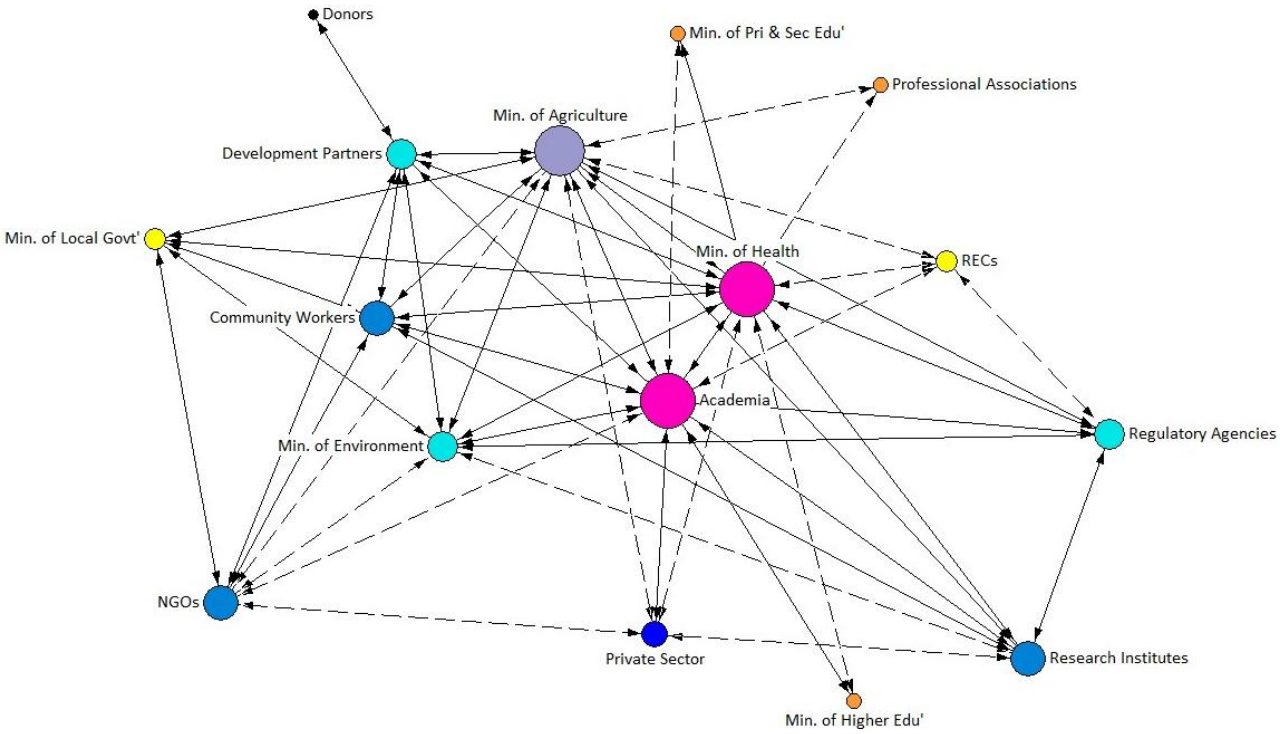
The Ministry of Health and Childcare, the Ministry of Agriculture and Development partners were identified as the most influential with 56 (27 in;29 out), 54 (27 in;27 out) and 36 (11 in;25 out) linkages respectively. The predominant linkages among these players were information and collaboration.

a. Funding



Our findings indicate that Development partners are the main funders of the OH agenda with 8 linkages out. Academia are the main recipients of funds for OH in Zimbabwe with 3 linkages going in. Academia and Development partners receive funds for OH directly from the donors. The Ministry of Finance also funds OH through key line ministries. Treasury allocates funds to key-line ministries to perform their mandates and those funds are then channeled to address isolated OH issues based on the ministries' priorities. There is no direct budget-line for OH from Treasury.

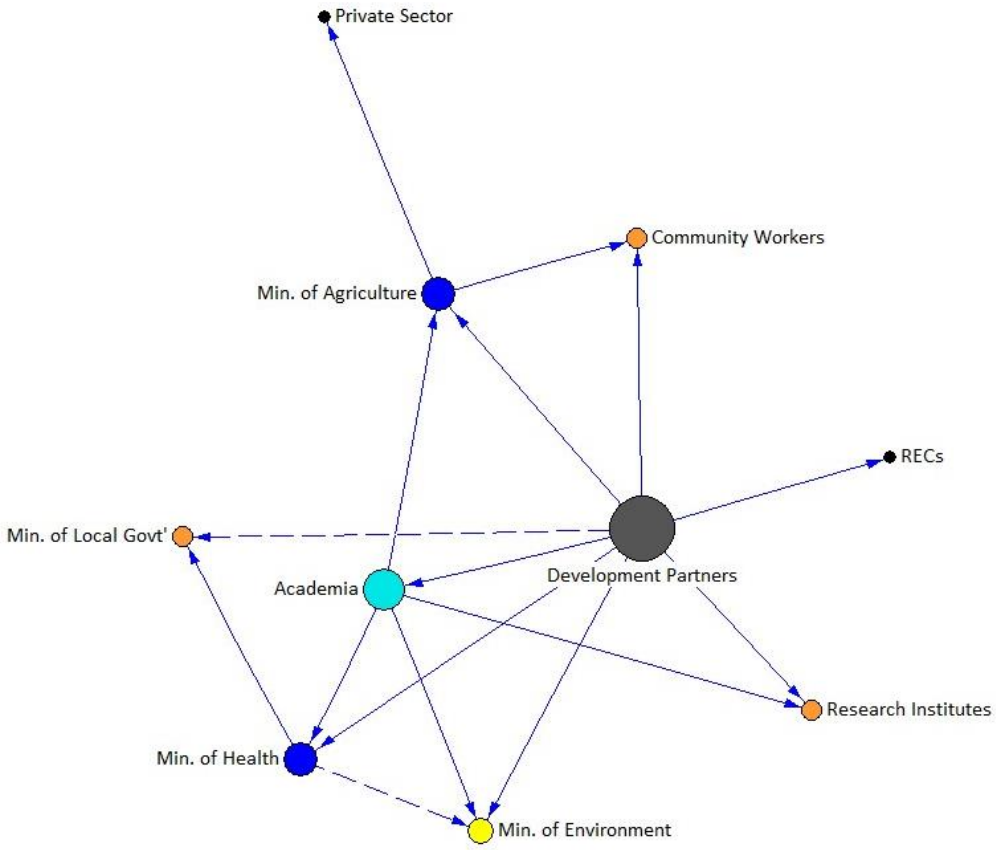
b. Collaboration



NOTE: Collaboration linkage was taken to be mutual thus arrows are bi-directional.

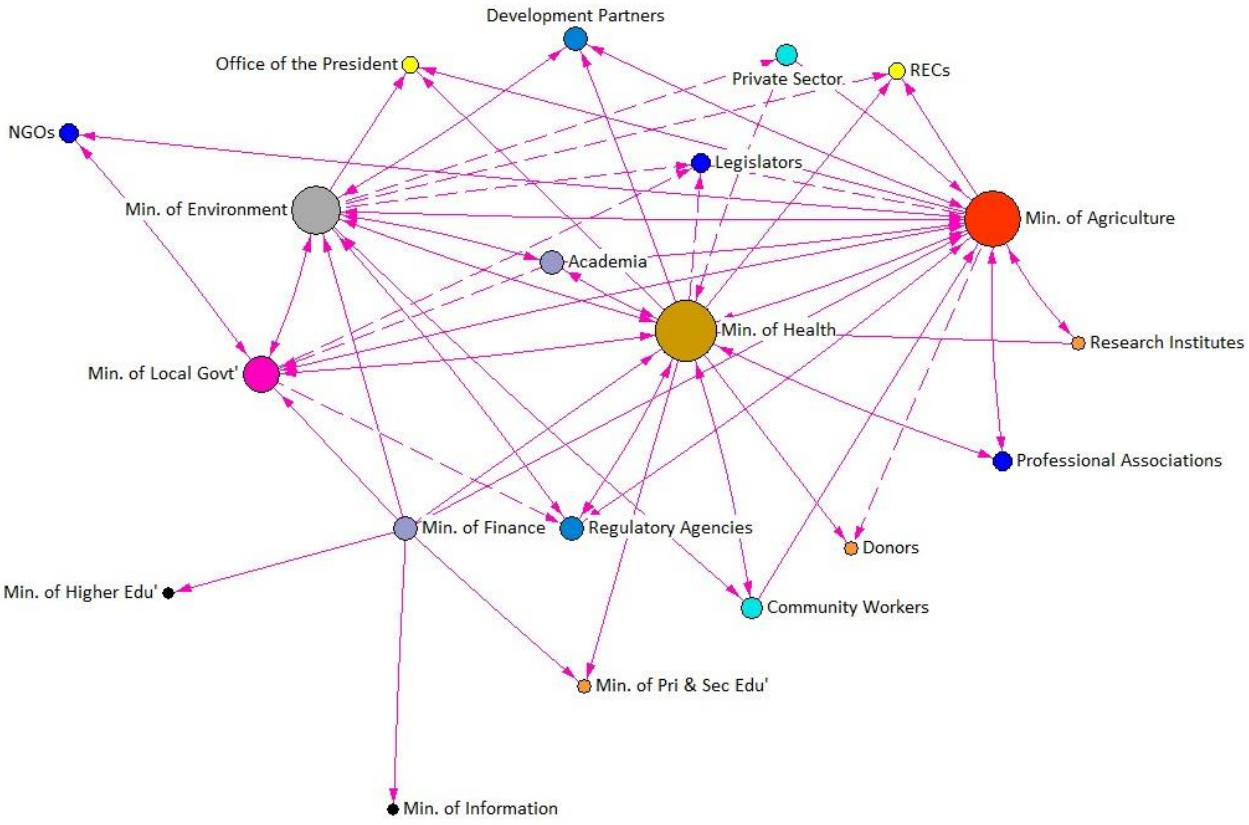
The Ministry of Health and childcare, Ministry of Agriculture, and Academia were shown to have the most collaboration on OH with 13, 12 and 12 linkages respectively. All collaborations with professional associations and Regional Economic Communities were weak and presented by a dotted line. Private sector has weak collaborations with Ministry of Agriculture, Ministry of Health, Non-Governmental Organizations and Research Institutes.

c. Capacity building



Our net map findings show that capacity building is largely driven by development partners with 8 linkages out. Ministry of Environment are the biggest beneficiaries of capacity with 3 linkages in.

d. Information



Information was found to be the most dominant linkage. All actors had a linkage of information, and the key ministries of Health and Childcare, Agriculture, Environment and Local government were shown to have a solid network of information linkages. Information on OH to the private sector who are in touch with the communities, and the legislators who are key for policy development were largely weak and represented by dotted lines

Discussions

One Health efforts exist with collaboration among three ministries, Ministry of Health and Child Care, Ministry of Agriculture, Mechanization and Irrigation Development and the Ministry of Environment, Climate and Water. The efforts are informal and issue-based with limited financial and functional capabilities, hence the need to identify actors who will make it operational and sustainable probably by anchoring it to the office of the president. Policymakers need to conceptualize One Health to enable it to facilitate easy receivership of funds from the national government and the donors.

There is a lot of collaboration and information sharing between the identified actors in One Health. However, these are issue-based and constitute projects/response teams that operate in silos. Structured collaboration is only seen between the Ministry of Health and Childcare and the Ministry of Agriculture, Mechanization and Irrigation Development, especially on Zoonotic Diseases.

As expected, capacity building emanates from academia to most actors in One Health. Research institutions are also actively involved through training and Proposals. Development partners support Academia, Ministry of Agriculture, Ministry of Health, Ministry of Environment, research institutes, community workers and Local Government by offering technical or infrastructural support. In Harare, for example, Development Partners capacitate administration of Health Services.

Donors don't give grants to One Health Projects directly under line ministries because of government sanctions, instead, they use the development partners to fund One Health projects. This makes the One Health agenda in Zimbabwe donor-driven with funds channeled for specified One Health projects. However, there is a National Research Fund set aside by the Ministry of Higher and Tertiary Education, Science and Technology Development which can be leveraged towards a locally dictated and sustainable One Health approach.

There is no competition existing between/among the actors identified and thus there was no potential disruptive linkage that was identified during the discussion. Weak linkages come from lack of awareness, insufficient funding and poor coordination of One Health activities in Zimbabwe. The Zimbabwean media is also under-utilized in the operationalization of the One Health concept. As it is, the Ministry of Child and Healthcare,

the Ministry of Agriculture, development partners, academia, and the Ministry of Environment seemed to be the main key actors in One Health and there is a need to establish linkages with the other actors.

The operationalization of the National One Health is highly dependent on the linkages identified during the discussions by the participants, and the influence associated with the identified key actors. It was determined that the Ministries of Health and Child Care, Agriculture and Environment have the greatest potential to influence the development of an operational One Health council in Zimbabwe. There is a need for the key influential ministries to advocate the One Health Concept, to the Office of the President and cabinet to see the operationalization of the national One Health Council in the Country. However, political goodwill for the allocation of resources towards One Health is needed. This council has to focus on establishing linkages between the relevant line ministries, non-governmental organizations, development partners, regional economic communities and the local media in Zimbabwe for a multisectoral and coordinated One Health approach to issues.

Study Limitations

Heavy representation by academia may have introduced some bias. However, participants from the University came from different departments that correspond to different line ministries. Limitations were addressed through validation of the report by a wider audience.

Conclusion

The formation of a National One Health council would push the One Health agenda in Zimbabwe. However, this council needs to be operational and have authority. Therefore, anchoring the council to the office of the president would make it authoritative enough to cut across all sectors relevant to One Health regardless of their primary mandate, and ensure the sustainability of the One Health approach to issues. The National One Health Council will ideally be supported by Ministers in other ministries that sit at the office of the president and cabinet in line with the mission and vision of the office. There is need to

identify a fully functional OH platform that would suit the Zimbabwean landscape. Moreover, there are gaps in capacity and awareness of OH in Zimbabwe which needs to be addressed first especially in communicating science to non-technical audience to enhance uptake of OH solutions and create an advocacy lifeline in non-mandated sectors for health.

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