

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

*A joint event organized by the COHESA consortium*

## Validated Workshop Report



*Photo credit: Dr. Margaret Karembu\_ISAAA AfriCenter*

9<sup>th</sup> – 10<sup>th</sup> June and 6<sup>th</sup> October 2022

## **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.

The National One Health Steering Committee in Ethiopia coordinates the OH activities in the country [3]. The NOHSC constitutes an MOU signed in 2016 between the Ministries responsible for health, agriculture, environment, and culture and tourism. The NOHSC has technical working groups that tackle specific one health issues with a primary focus

on priority zoonotic diseases in the country such as rabies, anthrax, brucellosis, Emerging infections, Antimicrobial Resistance (AMR) and a communication task force that ensures all activities are well coordinated.

## **Methodology**

We used the net-mapping tool to understand, visualize and discuss the One Health network in Ethiopia, 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. [4] 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 Kenya. According to Palinkas *et al.* (2015) [5], 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 9<sup>th</sup> and 10<sup>th</sup> June 2022 at ILRI campus, Addis Ababa. 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<sup>1</sup> based at Addis Ababa University. To enable effective discussions and engagements, a total of 16 (1 female and 15 males) participants attended the net mapping workshop in Ethiopia. 5 participants came from the academia, 4 from the ministry responsible for wildlife, 1 from ministry responsible for agriculture, 1 from government research institute, 2 from non-governmental organizations, 3 from the ministry responsible for public health and 1 from a regional one health organization. They comprised of public health experts, food safety experts, epidemiologist, social scientists, botanists, environmentalists

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 Ethiopia OH as integration and effective implementation of the existing OH-related policies. The guiding question for the net-mapping exercise was agreed upon as **“Who will influence the institutionalization of National OH platform in Ethiopia?”**

ii. Identification of OH actors in Ethiopia

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)

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<sup>1</sup> 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.

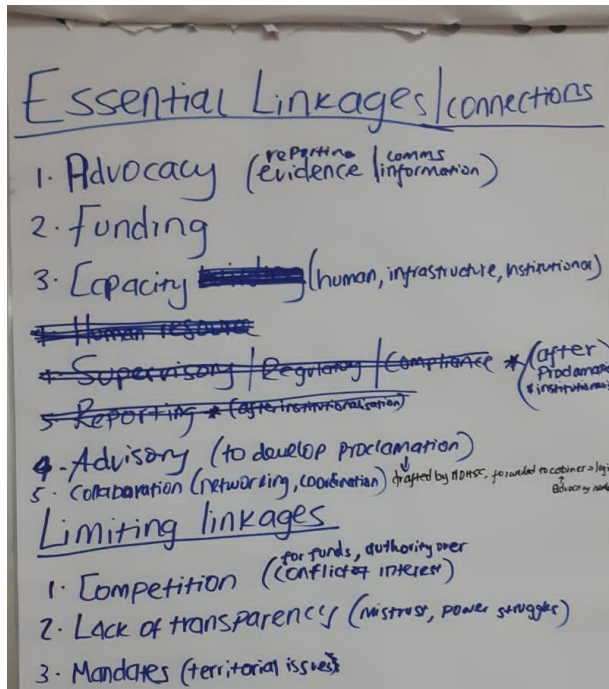


HP: High power  
 LP: Low power  
 HI: High Interest  
 LI: Low Interest  
**NB: Influence was labeled as power to avoid duplication for the acronyms used**

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 funding, capacity building, advocacy, and collaboration 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

Advocacy: 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 advocacy 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 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 [6]. The colored lines

represent essential linkages that were identified as fundamental to achieving the desired goal.

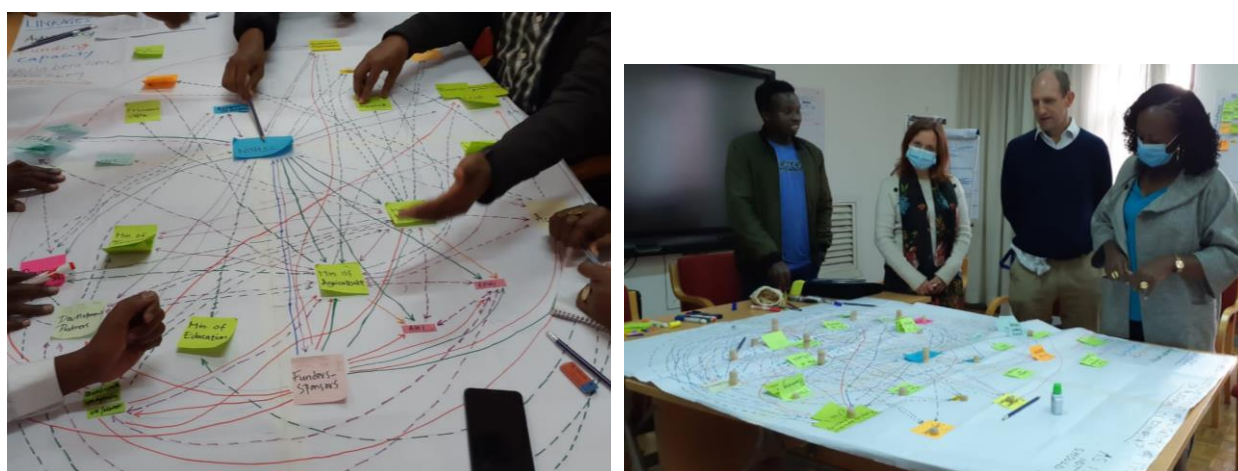


Figure 3 Connection between key OH actors in Ethiopia and their influence towers on the right

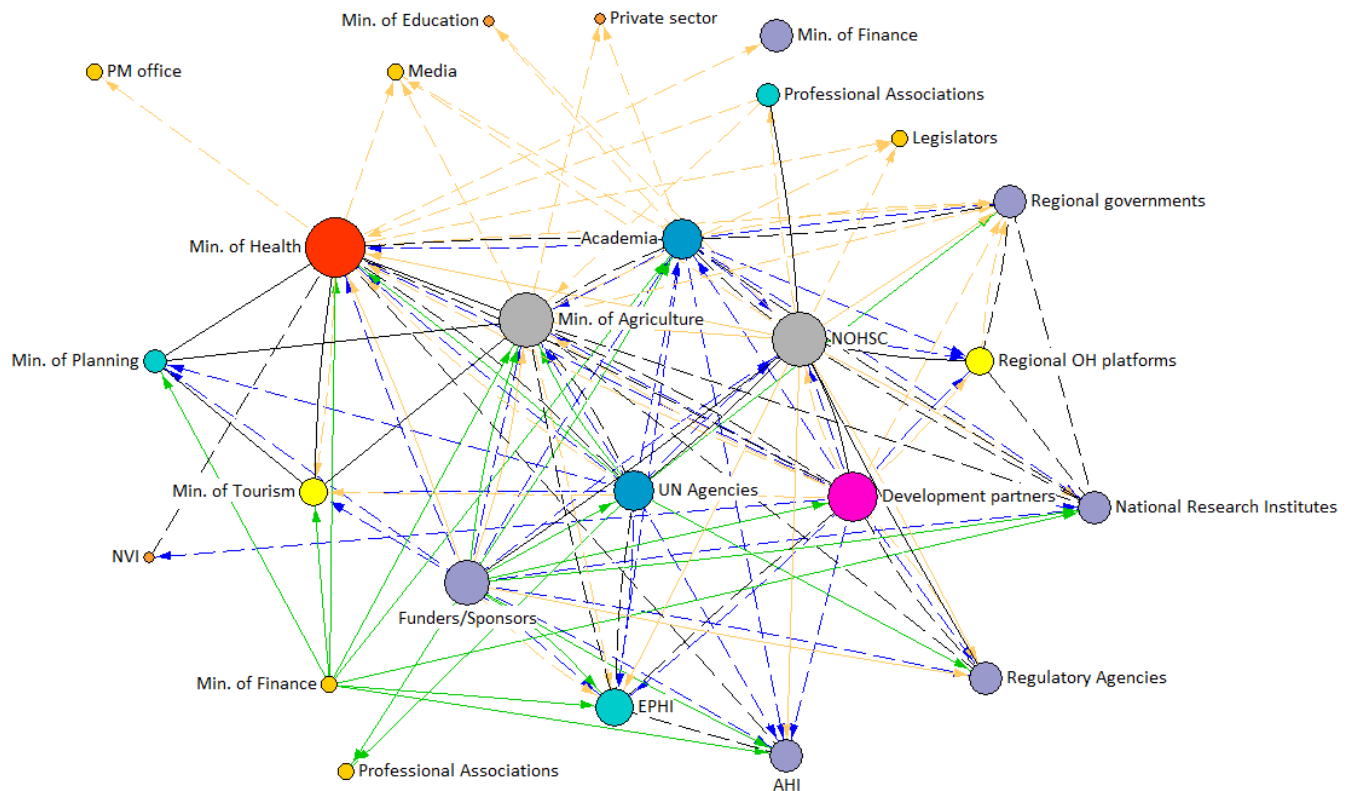
## Net Mapping Results

### i. Key stakeholders and their linkages

| Actors                                 | Links   |
|--|---|
| 1. Government key-line ministries      | 1. Funding (direct injection of funds)  |
| 2. Government departments of research  | 2. Collaboration (Structured and formal partnership with co-production or an MOU) |
| 3. County Government                   | 3. Capacity-building (Development of skills or infrastructure)                    |
| 4. Regulatory agencies                 | 4. Advocacy (Proactive creation of buy-in, awareness, and sensitization)          |
| 5. International research Institutions | 5. Advisory (guidance on development of proclamation)                             |
| 6. International standard bodies       |   |
| 7. Donors                              |   |
| 8. Academia                            |   |
| 9. Media                               |   |
| 10. Grassroots groups                  |   |
| 11. Civil societies                    |   |
| 12. Private sector                     |   |



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



### Legend:

- Funding
- Capacity Building
- Advocacy
- Collaboration

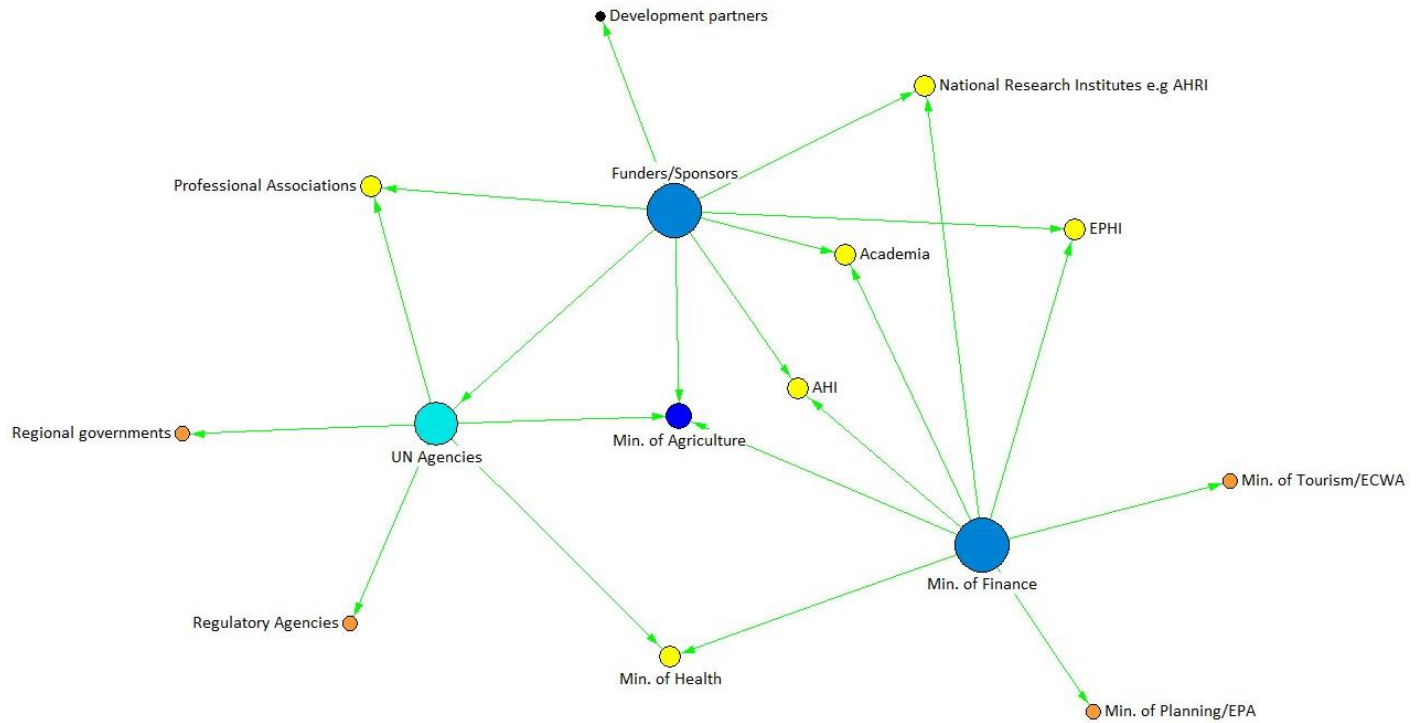
Note: The size of the nodes represents the number of influence towers assigned based on the number of linkages with other stakeholders (the bigger the node, the more influential the actor is).

**NOHSC, Ministry of Agriculture and The Ministry of Health were identified as the most influential with 33 (13 in;20 out), 33 (20 in;13 out) and 32 (19 in;13 out) linkages respectively.**

**Prime minister's office, private sector, Ministry of Education, legislators and NVI were the least influential with 1(1 in;0 out), 2(2 in;0 out),2(2 in;0 out), 3(3 in;0 out), and 3(2 in;1 out) linkages respectively.**



## a. Funding

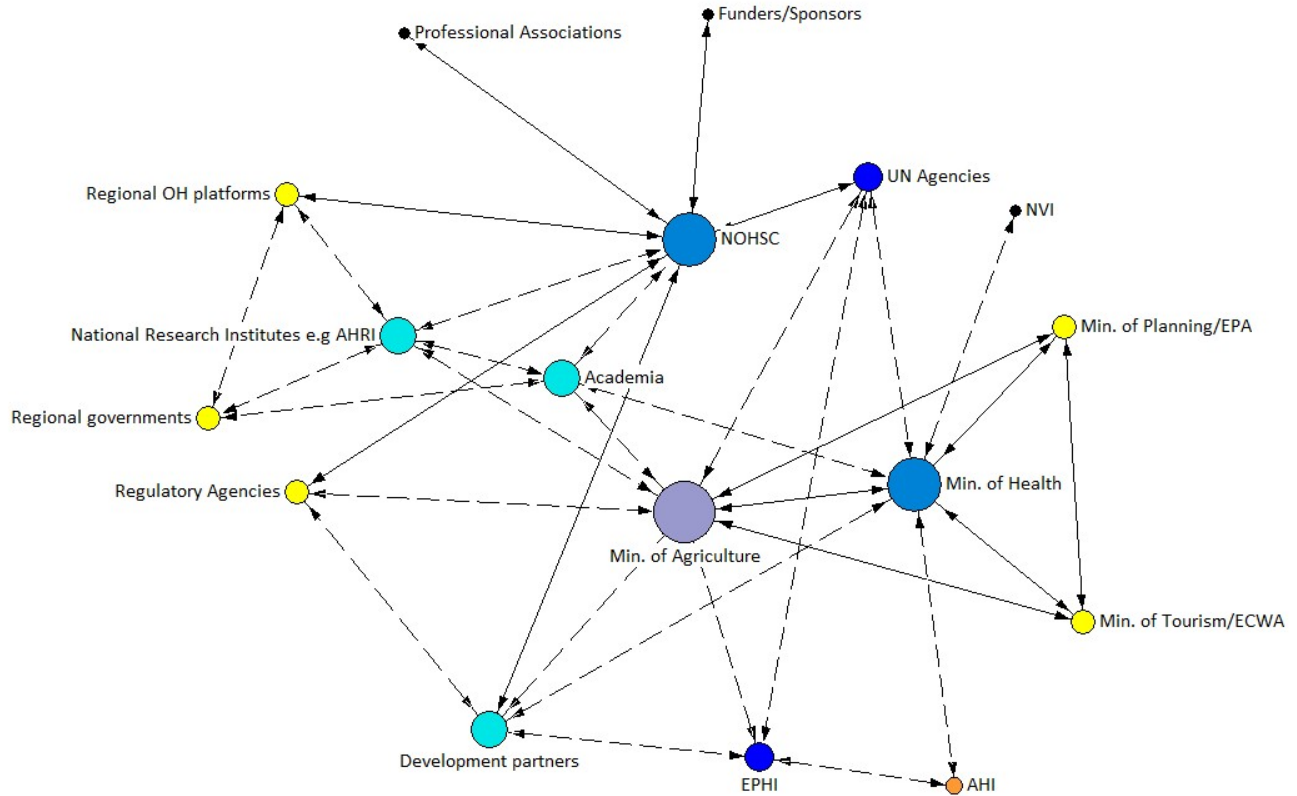


**Ministry of Finance and sponsors are the main funders of the OH agenda in Ethiopia with 8 linkages going out from each. Ministry of Agriculture are the main recipients of OH funds with 3 linkages coming in.**

**There is no direct budget-line for OH from Treasury**

**NOHSC doesn't have any linkage of funding**

## b. Collaboration



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

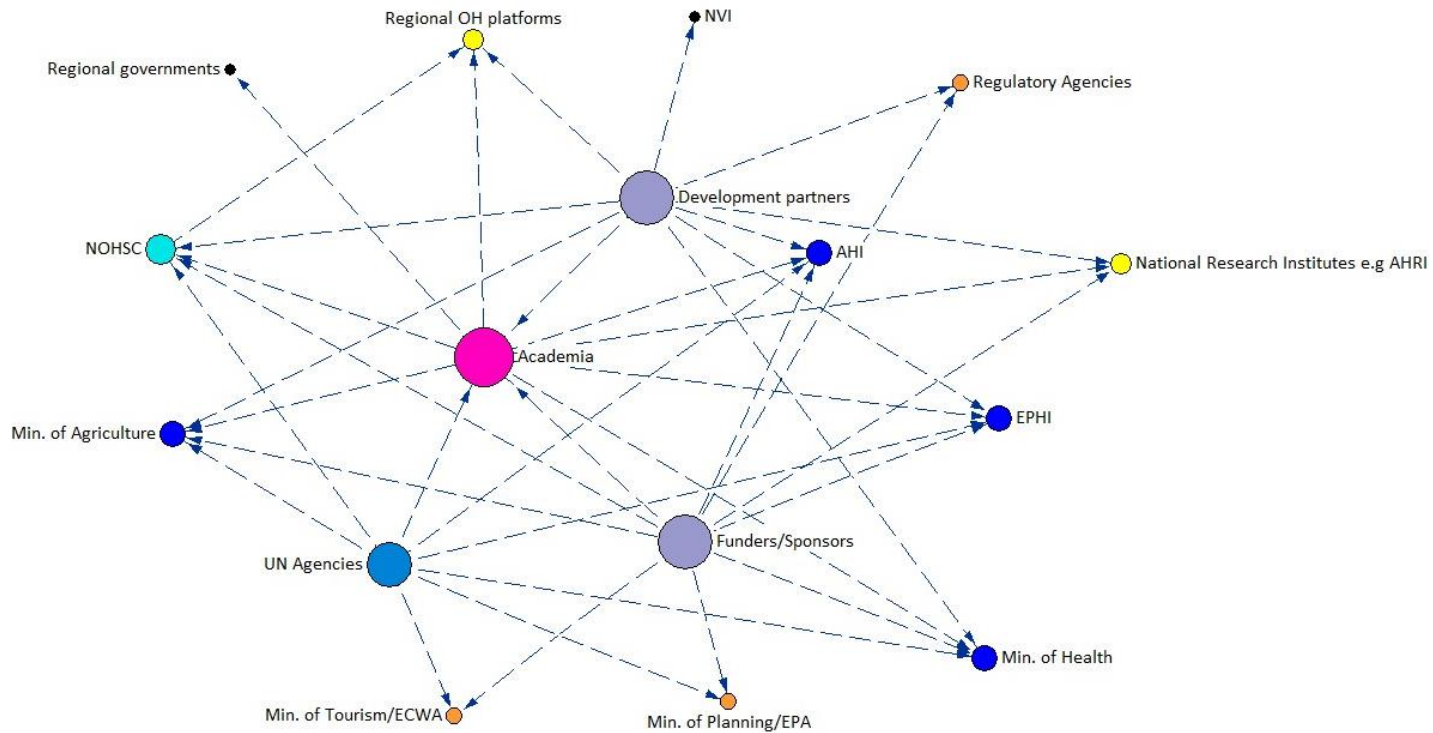
**MoAgriculture, NOHSC, and MoH have the most collaboration on OH with 9, 8 and 8 linkages respectively. MoAgriculture however, has the weakest collaboration linkages**

**All collaborations with academia, Ethiopian Public Health Institute (EPHI), Animal Health Institute (AHI), National Veterinary Institute (NVI) and regional governments are weak and presented by a dotted line.**

**NVI, funders, and professional association have the least linkages of collaboration with 1 linkage for each**

**Collaboration on OH is strong among key-line ministries (MoH, MoAgriculture and MoPlanning)**

### c. Capacity building

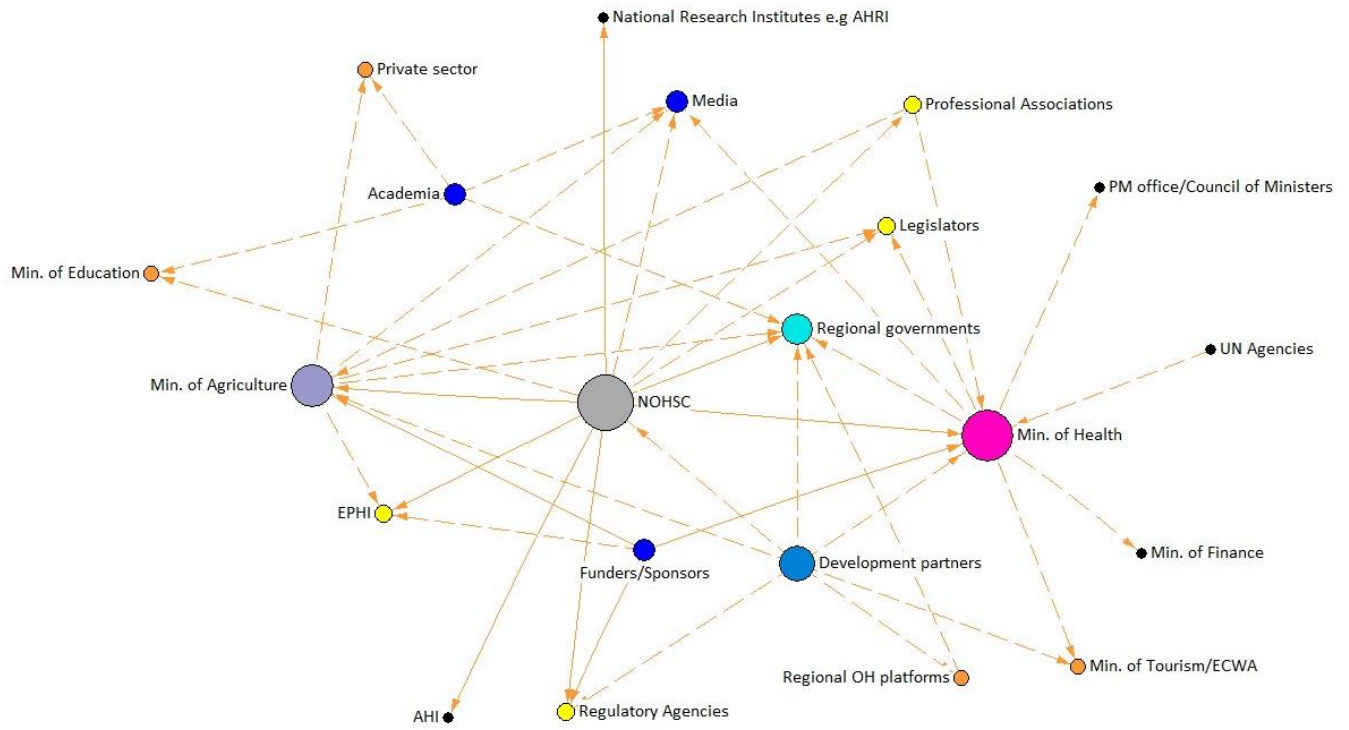


All linkages of capacity are weak (represented by dotted lines) showing the need to strengthen capacity across the network

Academia has the most (10) linkages of capacity with 2 linkages coming in and 8 going out

Missing key players include the Ministry of Education, Ministry of Environment, and the Ministry of Tourism and Wildlife.

#### d. Advocacy



**M. O. A, M. O. H, EPHI and AHI receive the most advocacy for OH with 4 linkages going in to each of them. However, most of this advocacy is for sectoral OH issues, thus represented by broken lines showing the need to strengthen overarching, multisectoral and multidisciplinary OH approach**

**NVI and regional governments receive the least advocacy for OH with 1 linkage each**

**Generally, advocacy across the OH actors is weak as shown in the multiple broken lines for the linkages**

## **Discussions**

Collaboration to implement OH is extensive between key-line ministries under the NOHSC in Ethiopia. The supporting institutions in academia, public health, animal health and regional governments mainly collaborate to tackle specific one health issues and on a need basis without consciously targeting one health solutions. As expected, the NOHSC and especially the Ministry of health and the Ministry of Livestock and agriculture are the main drivers for collaborative OH efforts in Ethiopia.

Funders, development partners and academia offer the most capacity for OH solutions in Ethiopia. However, the extended capacity is on specific OH issues as opposed to the broad OH agenda. As expected academia is leading in the capacity building of OH which is their key mandate. However, for grassroot reach other OH stakeholders should also take up the capacity building role.

Ministry of finance and sponsors are the main funders for OH projects in Ethiopia. However, funds from the ministry of finance are transferred to health-mandated ministries without clear indication of the budget line for OH issues. NOHSC does not receive a direct budget for OH despite being the main OH body in Ethiopia.

NOHSC are the advocates for OH in Ethiopia and they are also supported by the Ministry of Health. The constituent ministries responsible for health, agriculture, environment, culture and tourism are already part of NOHSC under the signed MOU. Advocacy towards the media is weak yet they would be the best actors to make OH palatable to the grassroot groups.

## **Study Limitations**

Participants from some key-line ministries such as the Ministry of Environment were not represented in the discussions. Additionally, heavy representation by academia may have introduced some bias. These were addressed through the validation of the report by a wider audience.

## **Conclusion**

One health in Ethiopia is greatly steered by the NOHSC which has representation from the ministries mandated with health of humans, animals, environment and wildlife. The NOHSC provides a structure for OH implementation yet it lacks budgetary support and authority over other institutions that are within the one health landscape in Ethiopia. Institutionalization of NOHSC would help to lobby for a direct budget line from the government budget in addition to authority over the mandates of OH-related government ministries and agencies. An analysis of the Strength, Weakness, Opportunities and Threats of the NOHSC is necessary to establish areas that can be improved to achieve a holistic OH in Ethiopia.

## **Acknowledgment**

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|----------------------|---|
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