Sustainable WASH Systems Learning Partnership

Analyzing and Improving Collaboration Among WASH Stakeholders in Ethiopia

March 2018

Introduction

The Sustainable WASH Systems Learning Partnership (SWS) team in Ethiopia – led by IRC, working with TetraTech and LINC – employed Organizational Network Analysis (ONA) to assess the relationships among organizations providing WASH services. This analysis will be used to support and evaluate SWS efforts to improve local water and sanitation service sustainability. SWS is currently working in three WASH systems in Ethiopia: the rural water systems in the *woredas* (districts) of South Ari (South Omo zone) and Mille (Afar region), and the urban sanitation system of Woliso (a small town in the Oromia region). In each of these locales, SWS identified organizations (NGOs, public institutions, academic institutions, and private sector) actively contributing to the provision of WASH services to participate in a Learning Alliance. The goal of each Learning Alliance is to increase collaboration and knowledge sharing among stakeholders for improved efficiency, effectiveness, and sustainability of local WASH services. SWS selected and trained a local community member, referred to as a "local facilitator," to guide the Learning Alliance through a process to design and implement a strategy to achieve the Learning Alliance's goals.

Improving the underlying structure of the network of relationships among Learning Alliance participants is a critical part of the Learning Alliance approach. LINC carried out an ONA of local WASH stakeholder organizations selected for participation in each Learning Alliance. The objective of this analysis was to understand the current network of relationships among these organizations to inform Learning Alliance goals, activities, and structures, and to provide a baseline for tracking changes in the network over time.

Table 1. Learning Alliance Composition

Learning Alliance	Participants
Mille (Woreda, Rural Water)	• 7 Mille woreda government offices • 5 Afar region government offices • 6 NGOs • 1 town public organization • 1 academic institution **Total: 20 organizations**
South Ari (Woreda, Rural Water)	• 7 woreda government offices • 7 South Omo zone government offices • 5 NGOs • 2 town public organizations • 1 academic institution **Total: 22 organizations**
Woliso (Small Town, Urban Sanitation)	• 13 town government offices • 2 private organizations **Total: 15 organizations**

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Methodology

To maximize the utility of the ONA results for the Learning Alliance, the ONA was planned using an iterative process based on input from SWS Ethiopia partner organizations, local facilitators, and local stakeholders. The design process included determining types of relationships (e.g., information sharing) and assessing attributes or features of relationships (e.g., receiving or sharing information, frequency) that were noted as important for local water or sanitation sustainability.

The survey was administered in-person to representatives from all organizations selected for participation in the local Learning Alliance; these organizations made up the network for the analysis. For each of the selected relationship types, each respondent was asked to identify whether their organization had interacted with any other organization in the network. Respondents were also asked to list the other organizations in the network that they perceived to be most influential, most connected, and most disconnected from others.

Table 2. Relationship Types

Relationship Type	Attributes
Problem solving request (made and received)	• Types of requests • Reliability in addressing request
Information sharing (shared or received)	• Frequency • Use of information
Formal reporting	• Timeliness and adequacy of reports
Direct coordination of activity planning or implementation	• None

Following an initial analysis of the data, LINC shared a broad set of results with the Learning Alliance facilitators to understand which results would be most useful to share back with the Learning Alliance participants. Specifically, the facilitators were asked to assess, based on their previous engagement with these organizations, which results would likely stimulate actionable discussions and decisions regarding the structure and objectives of the Learning Alliance. The local facilitators then presented these selected results back to the respondents during the Learning Alliance kick-off meetings for feedback and to guide the group discussions on structuring the Learning Alliance to consider existing relationship dynamics and critical relationship gaps. These discussions further informed the research team's interpretation of the results and helped the SWS team understand how the ONA can be adapted for future iterations to maximize its usefulness to the Learning Alliance participants and facilitators.

Findings

Although the specific ONA findings differed between the locations, three themes emerged from the analysis and feedback discussions with implications across the Learning Alliances.

1. NGOs play important but distinct roles in the different systems

In South Ari, the ONA revealed significant engagement points between NGOs and both zone and woreda government offices, but very few engagement points among the different NGOs. This result was validated during follow-up interviews with NGO representatives, who stated that there is currently no standing forum for WASH engagement among local NGOs, and that they often share the same information separately with woreda government offices and zone government offices. This finding has two implications: 1) NGOs appear to serve as important information "bridges" between zone and woreda government offices, a role that can be capitalized on during Learning Alliance activities that require coordination between geographic levels; and 2) there is a need to improve information flows between NGOs in the network.
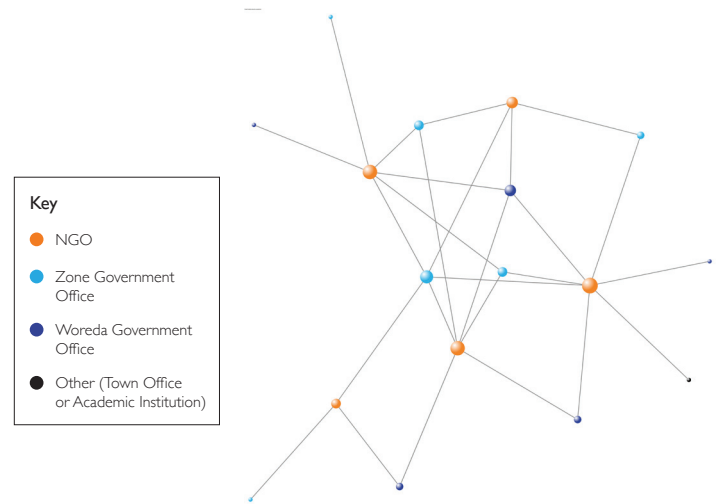

Key

● NGO
● Zone Government Office
● Woreda Government Office
● Other (Town Office or Academic Institution)

Figure 1. NGO Information Sharing Network in South Ari

In Mille, NGOs occupy a different place in the network: although there is engagement among NGOs, there is a lack of engagement between NGOs and woreda government offices. Discussion of this finding during the Learning Alliance kick-off meeting indicated that water infrastructure developed by NGOs is often abandoned due to a lack of information sharing and coordination with woreda government offices that might otherwise enable these offices to provide ongoing maintenance. In addition, problem-solving requests from woreda government offices were less reliably addressed than

requests from either NGOs or regional government offices. This suggests that in Mille, one way the Learning Alliance can improve water sustainability is by focusing specifically on information and problem-solving relationships between NGOs and woreda government offices.

2. Learning Alliance membership structures can build on existing organizational clusters

The three networks exhibited different patterns of "clustering," or ways in which organizations tend to form densely-connected sub-groups within the overall network. In South Ari, there is strong clustering of government office relationships by geographic level; in other words, woreda offices tend to engage with other woreda offices, and zone offices similarly tend to engage with other zone offices, while NGOs, as discussed above, serve as a "bridge" between these clusters. In both Woliso and Mille, on the other hand, the networks have one core cluster of densely-connected organizations, with other organizations less connected to this cluster and almost completely disconnected from one another.[1]

The specific nature of clustering in each network was discussed during the kick-off meetings to inform the way the Learning Alliance could be structured. In South Ari, participants suggested that the clusters reflect the reality that many day-to-day issues around water sustainability must be dealt with among a broad set of stakeholders within each geographic level, with less frequent but more targeted engagement between organizations at different geographic levels. The Learning Alliance could therefore have separate overall engagement points for all organizations working at the zone and woreda levels, with a smaller group also coordinating between these levels. In Woliso, the discussion of the presence of an existing "core" set of organizational relationships led to two suggestions. First, the Learning Alliance could build on the strong existing relationships with tiered levels of engagements for participants, because this core group has the most political capital to affect change in the sanitation system, and so more regular engagement among this group to specifically engage on sustainability issues will yield the most results. Second, the Learning Alliance

1   Detection of these structures was done using two methods. Detecting different clusters in the network was done using the Clauset-Newman-Moore algorithm (see Clauset et. al., "Finding community structure in very large networks"), with these clusters then compared to organization geographic levels to determine the extent to which clustering seems to occur within geographic levels. Detecting a core/periphery structure was done with the Core/Periphery algorithm in the UCINET software package developed by Stephen Borgatti (see Borgatti, "Models of Core/Periphery Structures").

should deliberately try to increase engagement between this core group and specific organizations that are currently not highly engaged with the rest of the network, as these organizations have a deep understanding of sustainability issues on the ground.
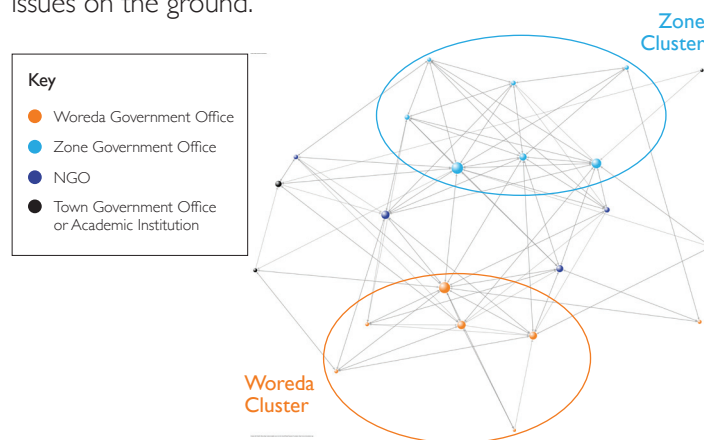

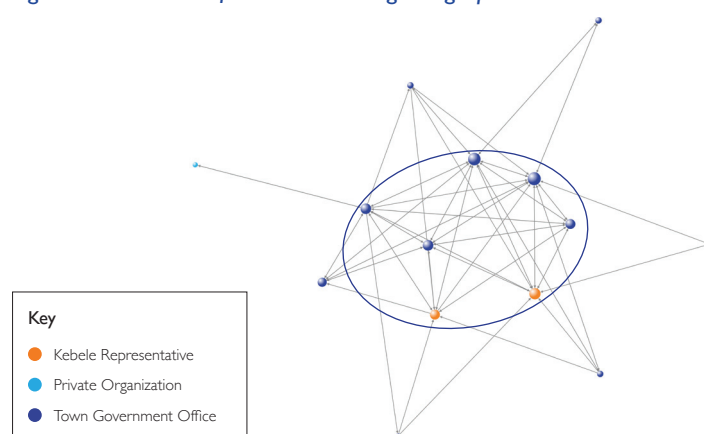*Figure 2. South Ari Information Sharing Geographic Clusters*

Figure 3. Woliso Information Sharing Core and Peripheral Clusters

3. Local stakeholder perception of organizational influence aligns with the ONA results

The ONA produced quantitative influence measures for each organization based on the extent to which a given organization's relationships indicate a position to exert influence on the rest of the network. There are various measures of influence: for example, one measures how many overall relationships a given organization has, while another measures the extent to which organization serves as a "bridge" between other organizations. LINC compared these influence measures with perceptions of influence from survey questions that asked respondents to directly indicate which organizations they perceived to be most influential, connected, and disconnected. With few exceptions, derived organizational influence levels aligned closely with the perceptions of organizational influence indicated by the

respondents in all three locations. This indicates that local stakeholders already have a reasonably strong understanding of the local organizations that have the most and least influence on WASH issues. The Learning Alliances will not, therefore, achieve impact simply by informing participants of which local organizations tend to be more or less influential; rather, the Learning Alliances can build on this extensive existing local knowledge base to provide a structure and process to help participants understand how relationships within the network could shift in a way that improves water and sanitation sustainability.

Lessons Learned

In addition to these findings, the analysis allowed the SWS team to reflect on and uncover important lessons to consider for future network analyses both in Ethiopia and in the WASH sector more broadly.

Participatory engagement in design and analysis improves the usefulness of results

The way in which network analysis research is designed and implemented determines the extent to which the results are applicable to the network members. In order to develop appropriate surveys and derive useful results, LINC began by engaging various Learning Alliance members and facilitators in Ethiopia to better identify areas of interest. By doing this, LINC was able to generate and communicate findings with actionable implications. Despite this process, there were certain parts of the survey and analysis that proved less useful and took considerable time to collect and analyze. For instance, the survey and analysis included a detailed breakdown of the specific types of problem solving requests being made in the network; however, the nature of these requests was largely a function of each organization's mandate (e.g. finance requests tend to go to the finance office). Because these mandates are generally not something that can be changed, the local facilitators and stakeholders considered these findings less actionable than those around information sharing and coordination. An up-front engagement process that included more in-depth discussions of potential results and their implications with a broader set of the Learning Alliance members may have allowed for more targeted analysis.

Focus on fewer relationship types with greater depth

Stakeholders noted that that although the overall quantity of engagement for some relationship types appears to indicate a high degree of network connectivity, these connections are not actually indicative of meaningful collaboration. In follow-up analyses, it will be beneficial to dive more deeply into the strength of relationships, in particular around information sharing and coordination relationships, with regards to how these relationships impact WASH sustainability. For example, for coordination, it will be helpful to analyze not only whether coordination happened, but whether that coordination contributed to some perceived improvement in WASH sustainability. For information sharing, in addition to asking whether the information was used, it will be useful to understand if and how this information related specifically to one of the factors identified by the Learning Alliance as a key driver of WASH sustainability.

Conclusion

This baseline ONA provided Learning Alliance facilitators and participants with insights to help structure and strengthen Learning Alliance activities. Future iterations of the ONA will continue to support the knowledge based for these activities, as well as allow SWS to assess the extent to which Learning Alliances contribute to changes in relationships to address gaps in sustainable water and sanitation service delivery.

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