

**Developing indicators for monitoring and evaluation of social cohesion for the
Development in Gardening (DIG) program**

By

LYDIAH M MARANGA
CAPSTONE PROJECT

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE
in

International Agricultural Development

in the
OFFICE OF GRADUATE STUDIES

of the

UNIVERSITY OF CALIFORNIA
DAVIS

Approved:

Kate Scow, Chair

Amanda Crump

Vikram Koundinya

Committee in Charge

2021

Table of contents

Abstract	2
I. Introduction	3
II. Literature review: OVERVIEW OF SOCIAL COHESION RESEARCH	4
A. Defining social cohesion.	4
B. Levels of social cohesion	6
C. Dimensions and aspects of social cohesion	6
III. Interviews with DIG staff on their perceptions of social cohesion	9
a) Approach	
i) Presentation to DIG staff on the findings from literature	9
ii) Interviews with DIG Staff	9
b) Results and discussion	11
c) Limitations	15
IV. Proposed Social Cohesion questions for DIG's survey	16
Set of proposed social cohesion questions	16
V. Discussion and Conclusions	20
References:	22
Appendices	24
1) Appendix 1: DIG's Social cohesion survey questions	24
2) Appendix 2: Social cohesion definitions	29
3) Appendix 3: Interview responses	31
4) Appendix 4: Tallied perspectives before the program	52
5) Appendix 5: Tallied perspectives during and after the program	53
6) Appendix 6: Approach for pretesting new survey	54

Abstract

Social cohesion is one of the attributes that governments and development agencies have interest in to evaluate how their programs affect the operation and interdependence of people in communities. Development in Gardening (DIG) seeks to understand how to define social cohesion and how it could be measured as part of monitoring and evaluation of their program. As defined in literature, social cohesion is the willingness of members of the society to cooperate and work together and support each other. Social cohesion promotes social inclusion, social mobility, and social capital. The purpose of this capstone project was to assist Development in Gardening (DIG) in developing survey questions that could be used to evaluate the impact of their programs in the communities they serve. The approach used to develop the social cohesion questions included (a) literature search to come up with a definition of social cohesion, its components, and how it could be contextualized within DIG's working framework, (b) interviews with DIG staff to survey their views on social cohesion in the DIG programs, (c) analysis of the interview responses, and (d) formulation of the potential survey questions about social cohesion for DIG to use in future evaluations. The findings revealed that DIG staff emphasized that social inclusion and social mobility were highly valued concepts in DIG's impact on social cohesiveness. They viewed that it was important to evaluate their program's outcome in helping improve farmers' self-worth and empowerment by equipping them with skills and knowledge to establish and manage vegetable gardens and overall improve their livelihoods.

I.

Int ro du cti on

Development in Gardening (DIG), an NGO working in Africa (<https://www.dig.org/>), has an interest in measuring social cohesion. DIG identified a need to develop survey tools that address community cohesion that are culturally appropriate for the DIG's community of farmers. Development of such tools will provide DIG with a means to evaluate the impacts of their programs not only at the individual level but also the community scale.

DIG works with vulnerable people in rural communities in Kenya, Uganda, and Senegal. Some of the vulnerable people served are people living with HIV/AIDS, young mothers, mothers with severely malnourished children, women, and people living with disabilities. Areas of focus for the DIG program include restorative agriculture, nutrition, food security, income empowerment and impact of community cohesion. The first four themes are measured before and after DIG's cohort training program. The participants are taken through a robust training that lasts at least six months and a survey is carried out to collect data which is used for comparison during midline and endline data analysis.

Interest in measuring social cohesion began when DIG used a set of questions from a CDC tool (see Appendix 1) to evaluate their participants on their well-being and feelings about the DIG program and its impact on their relationships generally in their community. The questions focused on the cohesiveness of their family and friends through their active role in sharing their new knowledge with others about what they have learned during or after the DIG training. This attempt was not successful due to the ambiguity of language used in the survey, making it difficult for the participants to respond well to the questions. According to DIG's analysis of this attempt, it was that either the participant did not have a connection with the words used or the questions were not culturally appropriated. Thus, DIG ceased using those questions to evaluate social cohesion during their impact assessment.

The overall goal of this capstone project is to assist DIG in developing an approach to evaluate their program's impact on social cohesion within the communities participating in their activities. Social cohesion is a term that describes the strength of relationships and unity among members of a community (Matsaganis et al, 2015). Social cohesion exhibits how a society deals with its own relations such as groups, individuals, associations, and territorial units (Berger-Schmitt, 2002). While scholars agree that social cohesion is an important component in the society given its role in influencing social and economic development, they admit that it is one of the most difficult to promote (Burns et al., 2018). In addition, social cohesion seen as one of the

influences of economic and social development but little progress on how to measure and track this domain as there lacks consensus on the definition itself (Burns et al., 2018). It is very important to have a clear concept about what is being studied to be able to design and evaluate survey questions.

The objectives of this project along with the associated activities were as follows:

1. Conduct a literature review on the definition of social cohesion and understand on how it is contextualized in development
 - a. Conduct a literature review to define social cohesion and its associated concepts (e.g., social capital). Identify indicators and methodologies used.
 - b. Give a brief oral overview of findings to DIG staff
2. Review the kinds of measurements DIG has used before in assessing the social cohesion and challenges of the survey used
 - a. Review documentation provided by DIG
 - b. Present and discuss to DIG staff
3. Gain an understanding about how DIG feels about the program influences social cohesiveness in the community. This is through their own experience by observing how the farmers who had gone through their program participate and share information with other members of the community particularly during and after attending the Farmer Field School and Farmer Business School program.
 - a. Create a survey for interviewing DIG staff
 - b. Interview DIG executive staff and field officers.
 - c. Create a report based on survey results
4. Develop a set of potential survey questions for measuring social cohesion for DIG to consider using during their evaluation and monitoring activities.

II. Literature review: OVERVIEW OF SOCIAL COHESION RESEARCH

A. Defining social cohesion.

Defining social cohesion has been difficult due to its intrusive nature. In general, it refers to communities as they exhibit characteristics of working together, “forging of a common sense of identity and belonging” (Burns et al., 2018). *Social cohesion* is seen as a desirable feature of social entities (Schiefer and Van, 2017). There is argument among scholars with little agreement on what social cohesion entails (Schiefer and Van, 2017). Lockwood defines *social cohesion* as a state of primary networks at community level and links it further with civic integration whereby institutions provide orderly or conflictual relationships between actors (Lockwood, 1999 as cited by Chan, 2006). Lockwood looks beyond altruism even though his focus is primarily negative.

This is evident in the way he measures social cohesion which includes things like absence or presence of crime, family disorganizations and urban riots (Chan, 2006).

According to Bruhn, *social cohesion* begins when every member of a group reaches every other member through a relational path. That link is often referred to as a social glue. On the other hand, *social capital* is defined as the network of relationships among people who live in a particular society which enable the society to function effectively (Bourdieu, 1893). The term social capital refers to those tangible assets that matter to people mostly in their daily lives such as goodwill, fellowship, and social intercourse (Hanifan, 1920). Social capital addresses topics such as density and quality of relationships and interactions that occur between individuals. Another aspect of social capital is trust which is based on values and norms and mutual feelings towards each other (Berger-Schmitt, 2000).

The Organization of Economic Co-operation and Development (OECD), recommends that social cohesion should be looked at through three perspectives: social inclusion, social capital, and social mobility (OECD, 2021).

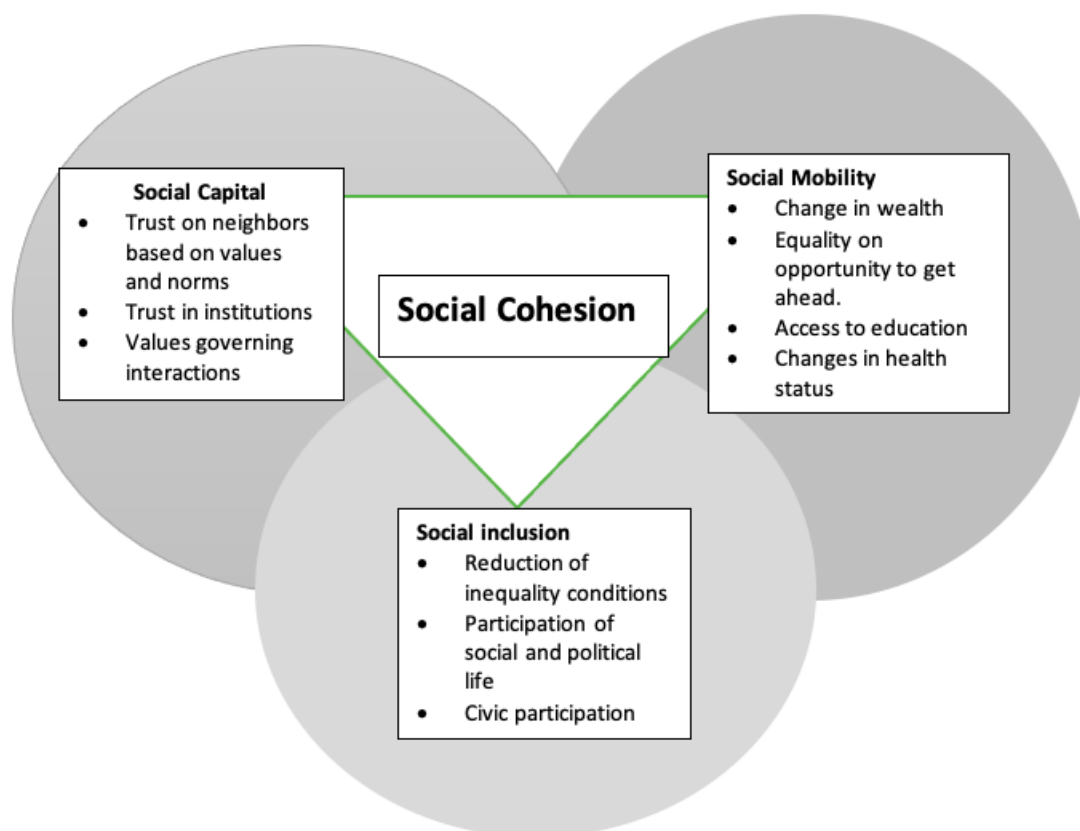


Figure 1: Perspectives of social cohesion

Source: author's diagram based on UN's perspectives on social cohesion. Department of Economics and social affairs : [Perspectives on social cohesion – the glue that holds society together | UN DESA | United Nations Department of Economic and Social Affairs](#)

There are a variety of definitions from different social scientists that attempt to define or describe social cohesion. These will not be considered further in the context of this study. However, more detailed definitions of social cohesion and social capital can be found in the glossary presented in this paper (Appendix 2). This paper chooses to use the OECD perspectives because, as an international organization, it works with governments to build better policies that promotes equality, prosperity, opportunities, and well-being for all. The interaction of OECD with governments creates a forum for establishing evidence-based international standards that improve economic performance among countries.

B. Levels of social cohesion

Social cohesion can be evaluated at different levels of organization, including the Individual, community, or institutional scale, as described below.

Individual level: This level focuses on the individual's personal behavior, attitude, and personal beliefs. For example, looking at an individual's competence in carrying out a task, sense of belonging, degree of like or dislike on something, individual behavior, participation, and motivation to be part of a group. The level was studied closely by Freud (Freud, 1921) to understand how an individual identifies with the group (motives), and the role of the individual in that group (Fonseca et al., 2018). When groups are capable of promoting good relationships among individuals, they shape their character by giving them opportunities to become what they desire to be (Braaten, 1991). The focus of evaluation is often on the incentives that make an individual stay in a group.

Community level: Research topics at the community level are centered around the collective behavior of a group, their beliefs, collective mentality, whether or how members of the group take individual responsibility and the nature and intimacy of topics shared in a group. Examples of community-level activities include mutual moral support, trust, social bonds, overlap of individual's friendship networks, pressures for conformity, civic society, common goals, and value of rewards in groups (Fonseca et al., 2019). Research on social cohesion has focused on social collective behavior and group close contact, group characteristics and beliefs, group collective mentality, the power of an individual who is affected by other members in the group, and the quality of relationships shared in the group (Durkheim et al., 1897).

Institutional level: At the institutional level, there for a society to promote equal opportunities and rights for all citizens (Fonseca et al., 2019). In broken or ill-structured systems, social cohesion is lessened. Evaluation of social cohesion considers how institutions play a role in providing resources or a platform for communities in a structured way and include consideration of handling social conflict, voting, civic society, trust, social disorganization, suicide rates, and reduction of inequalities (Fonseca et al., 2019). An institution plays a role in

promoting social cohesion by establishing structures which enable members of the community to have access to equal opportunities that improves their lives.

C. Dimensions and aspects of social cohesion

The Policy Research Initiative of the Canadian government summarizes social cohesion into two distinctive dimensions--Inequality and Social Capital--and under those two dimensions various aspects are distinguished (Berger-Schmitt, 2002). In addition, a third dimension--Social mobility--is described by (Nunn, 2012) for the Council of Europe, European Committees for Social Cohesion. These three dimensions provided the basis for the framework used in this study and are summarized below:

I. **Inequality** covers the following aspects:

- Equal opportunities for women and men, generations, social strata, and citizen groups
- Regional disparities
- Social exclusion

II. **Social capital** which includes the following aspects:

- Social relations, and activities within primary groups
- Quality of institutions that govern the society
- Quality of social relations

III. **Social mobility** includes the following determinants (Nunn, 2012).

- Social structures
- Family related influences
- Policy/institutional influences on social mobility

Inequality dimension describes the social cohesion of a society. However sometimes there's a tendency of defining social cohesion as social capital (Jenson, 2010). Social capital is "perceived as key resources to ensure system stability" (Jenson, 2010, pg 9). One of the aspects that contribute to inequality is *regional disparities*. The indicators for this dimension include access to transportation, education, healthcare institutions, employment opportunities. These indicator measures are defined as the "ratio of the highest to lowest values across regions of a country" (Berger-Schmitt, 2002, pg 407).

The unequal *opportunities aspect* captures the differences between women and men, generations, social strata, ethnic background, among others (Berger-Schmitt, 2002). Berger-Schmitt argues that equal opportunities between men and women have not yet been realized due to perceived roles of women and the discrepancies between genders with regard to work and compensation. An example of an indicator is the gross hourly earnings of men and women manual laborers in

the manufacturing industry. This can be easily adapted to evaluate work and compensation on rural farms for DIG's context.

Social exclusion is another aspect of inequality. Indicators focus on the process of social exclusion such as long-term unemployment, poverty, homelessness, feeling socially discriminated, and school dropout (Berger-Schmitt, 2002). Social exclusion has been used by the European Commission (Commission, 1992) in a multidimensional way to describe poverty and thus brings up the question as to how it can be defined exclusively and be differentiated from the notion of poverty. But Jenson explains it as a way to promote equal opportunities to the members of the society with the aim of reducing disparities (Jenson, 2010), for example poor living conditions.

Social capital dimension refers to social, political participation and integration of individuals within groups (Berger-Schmitt, 2002). Some of the indicators focus on the availability and frequency of social relations to neighbors, relatives and friends, support that is exchanged within these networks in case help is needed, support provided due to financial need or personal problems and participation in political and social organization (Berger-Schmitt, 2002; Putman, 2003). Social capital includes relationships with institutions, attitudes and values that govern the interactions among people and how these contribute to social and economic development. The aspects that contribute to social capital include:

Social relations and activities in small groups and associations. This aspect focuses on the social relations among friends, relatives, and neighbors (Berger-Schmitt, 2002). These are informal networks that can be tapped into for special activities or financial or personal problems. The informal network can also facilitate membership of groups to political or social organizations for civic engagements (ibid).

The quality of social relations is also an aspect of social capital. According to the European System of Social Indicators, four aspects are important to consider: 1) the quality of relations that exist in the informal networks which relies on specific persons; 2) the quality of social relations to a particular group or other people in general such as having attitude towards certain people in the community, or conflicts between population groups or in general; 3) affiliation such as national or group identity and 4) organizational ties. Examples of types of questions used to evaluate the quality of social relationships include:

- What do you say about the relations between your tribe and other ethnic groups?
- Which of these terms best describes how you usually think about yourself? Local, citizen of the country in general, tied to mine ethnic group, "foreigner", other
- How would you describe your relations with your primary network? Strong, very strong, medium, weak, not sure, other
- How would you describe your experience with a particular program? Very good, good, satisfactory, not sure, other

Another aspect of social capital is the quality of societal institutions and consider how well the institutions represent the people (Jenson, 1998). Institutions include government, political parties and unions, legal systems, political systems, healthcare, and labor unions. People should be able to trust that the institutions can serve the and provide all with equal opportunities to access resources. Another aspect is participation/non-involvement which refers to how people are involved in political participation.

Social mobility is another dimension of social cohesion that focuses on social fairness (Nunn, 2012). It seeks to address the extent to which society transforms principles of equality to reality (Nunn, 2012). There are various determinants of social mobility that help in determining the level of relative and intergenerational mobility. These include family related influences (genetics or socialization), policy (provision of childcare, education system), and social structures (e.g., inequality in pay differences).

Social structures can show the degree of inequalities in the society and dominant practices. For example, differences in the level of pay in the job market are an indicator (Nunn, 2012). Family related influences address how families place their children strategically either by gene transfer, socialization, transfer of assets to their children, or how they position the children within their social network.

Policy/institutional influences comprise the role of legislative and public services in the society. These can include the access to childcare while parents work so that they do not stay in poverty, hence providing a socialization platform for the child (Nuun, 2012). Institutions, for example, could redistribute state welfare to equalize children's life welfare chances if their parents face an income inequality that limits their ability to invest in their children (Nolan et al., 2010).

Above, I have described the levels and the dimensions that addresses various aspects that show in detail on how each dimension can be measured. Next, I will be describing the methods used in interviewing DIG staff and the designing of the surveys.

III. Interviews with DIG staff on their perceptions of social cohesion

a). Approach

1. Presentation to DIG staff on the findings from literature

A presentation of the literature review was made to DIG staff: Lauren Masey, Gloria Mushabe, Melamine Quattara, and Olivia Nyaidho. This was followed by discussion of what areas DIG would be interested in. Based on their responses, combined with information from the literature, a set of interview questions were developed to guide more detailed interviews about perceptions of social cohesion with all staff members, including the executive staff and field officers.

2. Interviews with staff

A total of 10 DIG staff from different countries were identified to be interviewed. They include:

Lauren Masey - Program Officer, USA. Lauren worked with the Batwa community in Uganda teaching them how to grow nutritious vegetables.

Olivia Nyaidho - Country Director, Kenya: Olivia works in coordinating the DIG program in Kenya in Homa Bay county.

Melamine Quattara – Facilitator who works with DIG farmers in Senegal

Gloria Mushabe - Country Director, Uganda. Gloria works with closely with people disabilities and the marginalized groups

Vincent Onyango- DIG field facilitator in Kenya: Vincent works with farmers during the training, Farmer Field School, and home visits

Sarah Obonyo- DIG field facilitator in Kenya Sarah works closely with farmers by doing home visits, training, and doing follow-up on their progress.

Jane Twebaze - Program assistant, Uganda. She works in supporting the country director and facilitators.

Pacras Kamuhanda- Facilitator, Uganda. He works with people living with physical disabilities.

Seckou Badji - Program assistant, Senegal. He works with DIG farmers.

In the first week of July 2021, interviews were conducted that lasted one hour long with each staff individually and their responses were recorded, transcribed in a table format (see Appendix 3)

Questions I posed to each interviewee were as follows:

1. Tell me how you see social cohesion/interdependence is expressed in the people you work with
2. How have you seen people's self-worth restored or improved as a result of participating in the DIG program?
3. What other things that stand out to show improvement on social cohesion since you started working with this group?
4. When we talk about gender roles, how much has that changed with the groups you are working with?
 - a. What are specific examples that have made you see the differences

5. Tell me how you've seen individuals lives changed over time during their participation in the Farmer Field school or Farmer business school (both social and economic changes)
 - a. What are the roles of women in the group and how has that changed over time?
 - b. What are the roles of men in the group and how has that changed over time?
6. In what ways have people's livelihoods changed as a result of social cohesiveness in the group or the community?
 - a. Do your cohort group interact with other groups outside the DIG program?
 - b. How are you able to foster interactions beyond the DIG program?
7. There are farmers with young children who attend your program. How is childcare addressed to enable mothers to attend the training?

I carried out zoom interviews and phone call interviews for those with no zoom access. I then transcribed, by typing, the recordings from zoom iCloud of responses from each person interviewed. I organized these transcripts in a table format separating the responses into two categories: "before DIG experience" and the "after DIG experience" of the farmer participants. This was to indicate how the participants were like before joining the DIG program and how they changed over time.

The feedback from the interviews (Appendix 3) was analyzed through deductive coding to identify the common themes addressed by most interviewees and other new additional observations that could potentially guide in drafting social cohesion survey questions. A summary of the findings (Appendix 4) on the social cohesion aspect in the DIG program indicated how different themes were analyzed by the respondents. I came up with the themes based on the aspects described in literature and some were from the responses which seemed common across the respondents. The themes included self-worth, sharing of ideas, participation in the group, gender roles, childcare, interactions outside the DIG program. These themes were used to analyze what were common responses across the board and identify what was new or unique that came up from the interview.

b). Results and Discussion

The interview questions touched on various aspects of social cohesion which exhibit human interaction and interdependence that can be found in the community. Various themes that emerged from the responses included self- worth or self-confidence, knowledge gain, improved livelihoods, interaction within the group and outside the group, family support, childcare, trust in other institutions, etc. as expressed by interviewees on the table below (Table1).

There were ten staff who were interviewed to understand their perspective on how social cohesion is expressed within people they work with. The table below shows the column for the themes with corresponding number of respondents that addressed it.

Table 1: Number of responses on each theme of social cohesion

Before Aspect of cohesion	number of respondents	After Aspect of social cohesion	number of respondents.
Self-worth Low self-esteem/ self-worth (Participants not comfortable interacting at the beginning)	9	Self-worth improved self-worth (Participants feeling comfortable interacting and sharing ideas and personal experiences). Even taking advice from other members of the group.	9
Social exclusion Cultural expectations on men's roles in the family (Men to provide for their families).	6	Social inclusion- Cultural expectations on men's roles in the family (Men to provide for their families).	5
Gender roles - There is gender gap in the roles of men and women based on cultural norms	9	Gender roles - the gender gap narrowing (men taking lead in helping and women taking leadership roles)	7
Perception of women ideas (How contribution women ideas are perceived - their ideas are less regarded)	6	Perception of women ideas- Women start sharing ideas and even take leadership roles during the program	6
Trust in neighbors or institutions Farmers not comfortable sharing ideas or personal issues	7	Trust in neighbors/institutions - farmers get comfortable sharing their own personal problems with group members. They also get comfortable asking questions from DIG staff.	9
Family support - those receiving support from family members at the beginning of the program e.g., husband or children	3	Family support - When participants establish beds of vegetables at home and they start thriving, a family member(s) begin to offer support by helping in the garden	6
Poor livelihood - at the start of the program, participants have very little resources	9	Improve livelihoods - farmers are able to buy other food they do not grow, pay tuition for their children, and pay for the medication and other household goods	9
Interaction within the group - very minimal at the beginning of the program	6	Improvement in interaction within the group	9
Interaction outside DIG group- very little at the beginning	5	Improvement in interaction outside the group	9
DIG fostering interaction/resource recommendations	7	DIG recommendations of other resources outside DIG program	7

Childcare - members with children having a problem with childcare	5	Childcare- members with young children come with children to the program if they are not able to find someone to leave their child with	5
---	---	---	---

Based on the responses in the above table (Table 1), there are many themes that focus on social capital and social inclusion as summarized in the social cohesion conceptual framework (Figure 1). The interviewed staff mentioned what they saw on the participants before starting the program and how they saw changes evolve during and after the participants graduated from the program.

Looking at the social inclusion dimension, at least 100% of the respondents agree that the marginalized groups have greatly improved on the way they interact and express themselves within the group and outside the group. That means that the DIG program is making a positive impact in providing space for interaction while gaining skills and knowledge during Farmer Field School (FFS). At the beginning of the program, they were not engaged as much because of feeling isolated. Before the program, some of the participants were hesitant to talk in the group, share ideas or personal problems because of the perception of feeling marginalized. That changed as they got familiar with each other.

Due to the stigma that is attached with their circumstances, Batwa people, for instance, were not able to mingle or interact so much with the wider population in the community. Lauren, the program officer, had worked with the Batwa community in Uganda and had observed that people in that community expressed low self-esteem because of the way the larger community perceives them. She further stated that “Uganda being a patriarchal society, men are expected to provide for their families but because of their economic situation they are not able to support their families.” The same sentiment is echoed by Olivia Nyaidho, the Kenya program manager, and the field officers. In Kenya, people living with HIV/ AIDS who attend the program feel uncomfortable talking in the group at the beginning of the program. Vincent stated that he would visit their homes and take time to listen to their concerns to understand them, which makes it easier for them to consider joining the DIG program. Because of his patience and giving them the opportunity to share their concerns with him, he started teaching “kitchen garden” and because of his frequent visits neighbors started visiting those homes to buy vegetables. He further states that “because people saw them make beds and are now growing different kinds of vegetables”, it has made them feel that they matter, restoring their self-worth that they can do something great.” self-worth was the concept most emphasized by all respondents.

Regarding the social mobility dimension, all (100%) respondents acknowledged that before farmers attended the program, their level of poverty was relatively high due to lack of resources to better themselves. The majority of the DIG participants are vulnerable people (People living with HIV/AIDS, people living with disabilities, marginalized people, etc.), they were not able to fend for themselves due to lack of income. Most of them didn’t have the knowledge of how they

could use their land to grow various vegetables and earn a living. For instance, Olivia stated that people living with HIV/AIDS were struggling to feed themselves and because of poor health issues they find it difficult to do heavy physical labor. She stated that “the families could not afford to eat a balanced diet. But after the farmers go through DIG’s Farmer Field School, they are able to provide their families and children with a variety of nutritious vegetables.” The farmers are eager to learn and usually seek help from their facilitators during establishment and management of their gardens, according to Sarah, the program field facilitator.

In addition, 6 out of 10 of DIG staff stated that they have seen family members coming to help in the garden, especially husbands who were not interested at the beginning. Sarah, the field facilitator in Kenya, mentioned farmers utilizing their income from selling vegetables to buy other foodstuffs, joining, and contributing to a saving group and using that money to expand their vegetable production, learning nutrition from the clinic staff on how to eat healthy”. As they started consuming nutritious meals, their health improved greatly and now they are able to grow their own vegetables for home consumption and some for the market and as a result they less depend on their husbands or family members for monetary value. As a result of the program, there is a reduction of poverty level among those who attend the program compared to other economically struggling families.

Addressing the improvement of livelihoods of many participants, at least all the interviewees (100%) believed the well-being of most participants who attend the DIG program has improved. The description of improvement touched on participants having improved health due to consuming a variety of nutritious vegetables and also attending clinics which they were hesitant before. The desire to get ahead was witnessed as most DIG farmers made efforts to attend the Farmer Field Schools to improve knowledge on establishment of vegetable gardens and because of the income they made through selling of their vegetables, they are able to buy their children school related materials. Nunn describes social mobility as a “measure of social fairness... it measures the extent to which a society transforms principles of equality of opportunity into reality (Nunn, 2012).” This statement helps us understand the dynamics of social mobility and how organizations play a role to enable those disempowered economically to tap into opportunities around them. Sarah Obonyo, a field officer, talked about how one family used the income they earned in “buying household goods and other food that they could not get from their garden.” They also “put their extra income into the savings group”. The resilience of DIG farmers to improve their lives addresses social mobility, social capital, and social inclusion. Before, the participants did not have money to take care of other family needs including not having money to help them participate in group savings. But now most had joined saving groups. Farmers started to interact with a wider audience especially in the market, participated in other community projects, and now could venture into other small businesses (Vincent from Kenya and Pacras and Jane from Uganda).

The dynamics of gender roles, which fall under social inclusion and social mobility, received varied responses on how the gender gap is evolving. At least 7 out of 10 respondents agreed that there was improvement in how tasks were shared among the participants. From Lauren’s

perspective, at the beginning of the program the roles were distinct due to cultural norms. For example, when participants were asked to perform tasks, men seemed to take up tasks that required more physical labor such as digging, and women took care of fetching water for irrigation in Farmer Field School gardens. There's still a perception that vegetable gardens are meant for women according to Gloria, Sarah, Jane, and Pacras. However, when DIG trains the participants, they encourage sharing of duties and, over time, men start to take up any task that requires attention. Gloria and Olivia talked about men who appreciate vegetable gardening as they have seen it generating an income and have begun to help in the garden. However, Noah, the technical adviser stated that gender roles vary a lot in different groups because people have different personalities and DIG provides a platform for leadership roles for women such as being a secretary or community leader. Though the gender theme had varied responses, there's a collective sense that gender roles are improving as tasks are shared within the program.

Lastly, linking the cohort group or participant to other resources has been one of the many ways social cohesions is fostered in the community. The resource linkages provide an opportunity to participants to mingle with other people in the community (social inclusion) and an opportunity to learn and tap into resources that will help them grow economically (social mobility). The participants have developed trust with the institution, and they are open to looking into those resources of which some farmers have gotten assistance needed. Noah provided an example of a woman who had graduated from the DIG program and had an opportunity to be a part of the potato growing research which was run by the USAID program. This farmer was selected because of the skills she had acquired from the DIG program. Farmers can not only tap into other groups for learning and applying for micro-lending, but also apply for government grants especially in countries like Uganda and Senegal. Kenya's DIG program provides a wider network of resources that farmers are referred to and some farmers have benefited from those resources. For instance, Olivia and Sarah mentioned farmers in Kenya attending training offered by the Ministry of Agriculture to learn about poultry keeping and fish rearing.

Childcare was one of the aspects included under social capital. The question referred to how children are socialized, especially when parents have to attend DIG meetings or farmer field demonstration gardens. There were varied responses on how children are taken care of during the 3-hour session. For example, Seckou from Senegal stated that children are left at home and taken care of by a family member such as a grandma or extended family members. In Kenya, Sarah mentioned that they allow mothers to bring along their children still being breast-fed, and the older women look after them while mothers perform tasks in the demonstration gardens.

Based on the responses from DIG staff, there was a great sense that lives of those who attend the programs have improved, their self esteem is also improved, the gender role gap is closing, especially when performing program related tasks, and trust improved among the participants. Some areas that varied based on country's culture included childcare interacting with outside the program and family support.

c). Limitation to the qualitative analysis

I performed qualitative data coding manually, using highlighters of different colors to underline different themes that emerged from the responses of all interviewees and assigned codes to each theme. Then I mapped those coded themes back to the conceptual framework to identify which dimensions were the most addressed. The limitation is that there could be biases in my analysis given that I was the only one who coded and analyzed the data. Some information might be omitted or over emphasized due to human error and unintentional personal bias, unlike if another person looked into the codes.

IV. Proposed Social Cohesion questions

Based on my interview results and consulting the literature, and also by following the conceptual framework, I came up with a set of draft questions that represented what I learned. I created interview questions using the aspects that are stated in bullet points in each social cohesion dimension (Figure1). For instance, in the social capital dimension, I picked the aspect of trust and developed a question that asks how a participant feels comfortable sharing his/her personal issues with others. The outcome is to aid in measuring to understand the level of the relationship members develop during and after the program.

The following are the proposed questions:

1. Since joining the DIG program, do you find it easy/difficult to express yourself with members of the group? - **Trust in members of the group**
Yes
No
2. How do you find it easy/difficult expressing yourself with members of your group?
I find it easier because _____

I find it difficult because _____
3. What is the nature of the conversations with group members when you interact? (Check all that apply) - **trust among people in the group**

Personal (with a few members of the group)
General talk outside the organization's (DIG) activities
Topics related to what we learn in DIG program
Organized meeting agenda by the DIG

Political or civic engagement conversations
Other

4. Do members of your group interact freely with each other? - **trust among people in the groups**

Yes, very often

No

Rarely

Not sure

5. How do you contribute to your DIG training group? Contribution can be in the following ways (e.g., tasks required to be done, leadership, coordination, secretary, or treasurer, etc. (This is an open question. Enumerator to write responses down on the space provided)

6. You feel confident expressing yourself in a group set up or with an individual you interact with. - **social inclusion**

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

7. Has your family been supportive of you since joining this group? If so, in which ways? (Enumerator can assist writing down the responses if the respondent is unable) - **opportunity to get ahead**

8. Your knowledge about gardening improved due to skills gained from: (check all that apply) - **access to knowledge/education**

DIG program

Government extension

Other organizations in the community

From my neighbor(s)

9. Do you feel that you have acquired valuable knowledge from DIG and applying it to your household? - **trust in the institutions**

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

10. Has selling vegetables at the market or your homestead increased your networks in the community (e.g., having customers who regularly buy my vegetables, those who order)? - **opportunity to get ahead**

Yes

No

Somewhat

11. When you need to attend a function (e.g., church, community meetings, development program etc.), do you leave your child(ren) to a trusted friend, a relative or a member in the group? - **opportunity to get ahead**

Always

Often

Occasionally

Never

12. Of all the community groups your household members belong to, which two are the most important to you or your household? - **trust in organized groups**

1. _____

2. _____

13. How many times did your household participate in these groups' activities in the last 6 months, i.e., attending meetings or doing group activities? (If respondents cannot remember exactly, statements such as many times or a few times will apply).

Group 1 -----

Group 2 -----

14. Do you feel as a woman that your views are respected? (If you are a male, you can skip this question) - **reduction of inequality**

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

15. Has participation in DIG program enabled you to participate more in political activities in your community (e.g., voting, civic educator, campaign for political office, coordinator of government or political funded projects etc.)? -**trust in institutions/political participation**
- Yes
 - No
 - somewhat
16. Has your health improved due to the applied skills learned from DIG program in your household? -**changes in health status**
- Strongly disagree
 - Disagree
 - Agree
 - Strongly agree
17. Have you shared what you've learned from DIG with other groups or individuals in the community? - **access to get ahead/trust in institutions**
- Always
 - Often
 - Occasionally
 - Never

For the above social cohesion proposed questions to be effective, they need to be tested first before being administered during the actual monitoring and evaluation of the project.

V. Discussion and Conclusions

Overall, all the objectives of this study were achieved. Though the topic of social cohesion is very broad, I was able to focus on areas in which DIG was interested. Holding discussions with DIG staff about their perceptions of social cohesion helped greatly in shaping the research trajectory. I was able to talk to all of the staff members recommended by Lauren, the program officer, and all interviews went well.

Even though all the objectives were met, there were some challenges that were part of the learning curve involved. There was a gap between DIG's perception of social cohesion and the published literature. Given the diversity and breadth of this literature, findings had to be strongly focused to fit DIG's needs. Within DIG itself, there were differences in how staff defined social cohesion. I needed to do follow ups, sometimes, to check in with some staff, possibly due to differences in the level of interest in the topic of social cohesion. Also given that the topic of social cohesion was new for all of us involved in the project, and given the short timeframe of this project, the results of this study should be viewed as a first step in DIG's consideration of how social cohesion can be integrated into their monitoring and evaluation activities.

Another challenge was the diversity of opinions and varied ways in how the DIG staff responded to questions during the interview process. Some of the questions posed to the respondents were not always clear either due to the language used or the unfamiliarity with the topic of social cohesion. I sometimes had to ask one question many different ways to get a useful response. Sometimes staff members were unable to address some questions adequately or there was a feeling that some answers lacked objectivity, especially questions that dealt with childcare and the impact of income of the vulnerable people. Some of the questions may have been asked in a way that assumed that participants are prospering or doing very well and thus there may have been potential of asking leading or biased questions. Furthermore, there were internet or phone call connection issues with some interviewees, especially for field officers in Kenya and Uganda. The connectivity was sometimes so poor that it affected the conversation greatly. We had to reconnect a few times and sometimes it was only possible to receive short responses.

The lessons learned from this project is that, for this kind of project to be successful, more time is needed to accommodate the back-and-forth conversations needed to meet the expectations of the beneficiary (DIG organization). In this case, the last objective--development of social cohesion questions--was not addressed fully due to time constraints. There was not enough time to study the questions together with the organization representatives to get their perspective on each question. There were suggestions that the field officers should conduct an analysis of the questions, which might be very challenging given their different levels of competencies with the topic. The best way would be to reconcile information from the literature on social cohesion with more feedback from DIG staff on what are appropriate definitions and foci for DIG going forward. It also would be beneficial for all staff to provide feedback on and perhaps help in ranking the proposed social cohesion questions.

Besides time limitations, there were some challenges in reconciling academic research and the more practical expectations of a working organization. I had to learn how to filter information for the organization and still maintain an academic approach.

Based on this project, some broader recommendations for DIG would be to consider how to integrate the new and most relevant survey questions on Social Cohesion into their broader survey. Given that evaluating DIG's existing complete survey was not within the scope of this study, there was some overlap between DIG's survey questions and some of the proposed social cohesion questions. There is a lot of potential for synergy between DIG's existing questions and some of the new questions which might result in modifying some of the existing survey to accommodate the new focus on social cohesion. Hopefully this study provides DIG with a foundation to expand into greater consideration of social cohesion and its relationships to other elements of DIG's program.

References:

- Berger-Schmitt, Regina. "Considering Social Cohesion in Quality of Life Assessments: Concept and Measurement." *Social Indicators Research* 58, no. 1 (2002): 403–28.
- Bruhn, John. "The Concept of Social Cohesion." In *The Group Effect*, 31–48. Springer, 2009.
- Burns, Justine, George Hull, Kate Lefko-Everett, and Lindokuhle Njozela. "Defining Social Cohesion." Working Paper, January 2018. <http://localhost:8080/handle/11090/903>.
- Carron, Albert V., and Lawrence R. Brawley. "Cohesion: Conceptual and Measurement Issues." *Small Group Research* 43, no. 6 (December 1, 2012): 726–43. <https://doi.org/10.1177/1046496412468072>.
- Chan, Joseph, Ho-Pong To, and Elaine Chan. "Reconsidering Social Cohesion: Developing a Definition and Analytical Framework for Empirical Research." *Social Indicators Research* 75, no. 2 (January 1, 2006): 273–302. <https://doi.org/10.1007/s11205-005-2118-1>.
- Fonseca, Xavier, Stephan Lukosch, and Frances Brazier. "Social Cohesion Revisited: A New Definition and How to Characterize It." *Innovation: The European Journal of Social Science Research* 32, no. 2 (April 3, 2019): 231–53. <https://doi.org/10.1080/13511610.2018.1497480>.
- Hilton, Charlotte Emma. "The Importance of Pretesting Questionnaires: A Field Research Example of Cognitive Pretesting the Exercise Referral Quality of Life Scale (ER-QLS)." *International Journal of Social Research Methodology* 20, no. 1 (January 2, 2017): 21–34. <https://doi.org/10.1080/13645579.2015.1091640>.
- How to Presents a survey questionnaire. Accessed July 15, 2021. https://ctsi.ucla.edu/patients-community/files/view/docs/Howto_pretest_survey_questionnaire.pdf
- Kushner, Howard I., and Claire E. Sterk. "The Limits of Social Capital: Durkheim, Suicide, and Social Cohesion." *American Journal of Public Health* 95, no. 7 (July 1, 2005): 1139–43. <https://doi.org/10.2105/AJPH.2004.053314>.
- Matsaganis, Matthew D., and Holley A. Wilkin. "Communicative Social Capital and Collective Efficacy as Determinants of Access to Health-Enhancing Resources in Residential Communities." *Journal of Health Communication* 20, no. 4 (April 3, 2015): 377–86. <https://doi.org/10.1080/10810730.2014.927037>.

- Nolan, Brian, Gosta Esping-Andersen, Christopher Whelan, Bertrand Maitre, and Sander Wagner. "The Role of Social Institutions in Inter-Generational Mobility." *Geary Institute, University College Dublin, Working Papers*, January 1, 2010.
- Nunn, Alex, Council of Europe, and European Committee for Social Cohesion. *Fostering Social Mobility as a Contribution to Social Cohesion*. Council of Europe, 2012.
- Paiva Duarte, Fernanda de. "Social Capital." In *Encyclopedia of Corporate Social Responsibility*, edited by Samuel O. Idowu, Nicholas Capaldi, Liangrong Zu, and Ananda Das Gupta, 2188–92. Berlin, Heidelberg: Springer, 2013. https://doi.org/10.1007/978-3-642-28036-8_231.
- Schiefer, David, and Jolanda van der Noll. "The Essentials of Social Cohesion: A Literature Review." *Social Indicators Research* 132, no. 2 (June 1, 2017): 579–603. <https://doi.org/10.1007/s11205-016-1314-5>.
- Siisiäinen, Martti. "Two concepts of social capital: Bourdieu vs. Putnam." *International journal of contemporary sociology* 40.2 (2003): 183-204.
- Tools for development. Home accessed July 15, 2021. <https://www.tools4dev.org/resources/how-to-pretest-and-pilot-a-survey-questionnaire/>
- "UCLA CTSI | Accelerating Discoveries Toward Better Health | Home." Accessed July 15, 2021. <https://ctsi.ucla.edu/patients-community/pages/>.
- "Writing@CSU." Pretesting the Questionnaire. Accessed July 15, 2021. <https://writing.colostate.edu>.
- "From Definition to Measurement: Constructing a Social Cohesion Index for South Africa." Accessed August 3, 2021. <https://www.afd.fr/en/ressources/definition-measurement-constructing-social-cohesion-index-south-africa>.

Appendices

Appendix 1: Previously used survey questions

Community Support

For the following questions about your community and neighbors, I'd like to ask you to respond to the statement by indicating whether you agree, somewhat agree, somewhat disagree or disagree. *Ebibuuzo ebirikukwaata ahakyaanga na bataahi baawe, ninyeenda kukubuuza kugarukamu waaba orikwikiriza neinga otarikwikiriza.*

127. I would attend a community meeting if it were available. <i>Nkagiire omurukiiko rw'ekyaaro rwaaba ruriho.</i>	<input type="checkbox"/> Agree <input type="checkbox"/> Somewhat agree <input type="checkbox"/> Somewhat disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Don't Know/Didn't answer
128. I would attend a community meeting even if I did not have family support. <i>Nkagiire omurukiiko rw'ekyaaro n'obu ab'eka bakubeire batarikukihagira</i>	<input type="checkbox"/> Agree <input type="checkbox"/> Somewhat agree <input type="checkbox"/> Somewhat disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Don't Know/Didn't answer
129. I feel that I am really a part of this community. <i>Ndahurira ngu ndi omwe ahabantu omukyaaro eki</i>	<input type="checkbox"/> Agree <input type="checkbox"/> Somewhat agree <input type="checkbox"/> Somewhat disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Don't Know/Didn't answer
130. I can rely on people in my community if I need to talk about my problems. <i>Ndabaasa kuhikirira abantu omukyaaro kyaangye naaba nyine ebizibu</i>	<input type="checkbox"/> Agree <input type="checkbox"/> Somewhat agree <input type="checkbox"/> Somewhat disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Don't Know/Didn't answer
131. I can rely on people in my community to help me if I can't provide my child with enough healthy food. <i>Ndabaasa kuhikirira abantu omukyaaro. Ndabaasa kuhikirira abantu omukyaaro kyangye naburwa eby'okurya Birungi eby'omwaana wangye.</i>	<input type="checkbox"/> Agree <input type="checkbox"/> Somewhat agree <input type="checkbox"/> Somewhat disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Don't Know/Didn't answer

<p>132. I feel comfortable asking a neighbor or member of the community if I needed to borrow a physical resource. <i>Ndahurira ntiine kutiina kubuuza mutaahi wangye neinga omuntu weena omukyaaro naaba nyine ekingikwenda kutiiza</i></p>	<p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Somewhat agree</p> <p><input type="checkbox"/> Somewhat disagree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Don't Know/Didn't answer</p>
---	--

133. In the past six months, have you joined together with other people in your community to address a problem or common issue? *Omumyeezi mukaaga ehweire, wayegeisire n'abandi omukyaaro kyaawe kugira ekizibu ekimwatereeza?*

- ☐ Yes
- ☐ No
- ☐ Don't know

<p><i>Now I would like to ask you about who usually makes decisions in your household. For each, please tell me which member of your household usually makes decisions - you, your spouse, both you and your spouse together, your mother-in-law or father-in-law or your own parents, or someone else? Hati ndeenda kubuuza ahamuntu orikusharamu omuka yaawe. Ahari buri kintu aheifo, ngambira orikushsarmu. Yaaba niiwe, omukundwa waawe, mwoona hamwe, nyokozaara, shozaara, abazeire baawe, neinga owundi muntu</i></p>	
<p>134. Who makes decisions about making household purchases for daily needs? <i>Nooha orikusharamu eby'okugura ebya burijjo</i></p>	<p><input type="checkbox"/> Head of household: Male</p> <p><input type="checkbox"/> Head of household: Female</p> <p><input type="checkbox"/> Both Male and Female Head of Household</p> <p><input type="checkbox"/> Adult child</p> <p><input type="checkbox"/> Parents or Mother/Father in Law</p> <p><input type="checkbox"/> Other: _____</p>
<p>135. Who makes decisions about healthcare for your family? <i>Nooha orikusharamu eby'obujajabi?</i></p>	<p><input type="checkbox"/> Head of household: Male</p> <p><input type="checkbox"/> Head of household: Female</p> <p><input type="checkbox"/> Both Male and Female Head of Household</p> <p><input type="checkbox"/> Adult child</p> <p><input type="checkbox"/> Parents or Mother/Father in Law</p> <p><input type="checkbox"/> Other: _____</p>

<p>136. Who makes decisions on what work activities you engage in? <i>Nooha orikushsramu emirimo eyi orakore?</i></p>	<p><input type="checkbox"/> Head of household: Male</p> <p><input type="checkbox"/> Head of household: Female</p> <p><input type="checkbox"/> Both Male and Female Head of Household</p> <p><input type="checkbox"/> Adult child</p> <p><input type="checkbox"/> Parents or Mother/Father in Law</p> <p><input type="checkbox"/> Other: _____</p>
---	---

137. How often do you and your spouse (husband) talk about what to spend household money on? [read categories] Leave blank if they have no spouse. *Ni kangahe obu iwe n'omusheija waawe murikugaanira ahaby'okutamu esente z'eka?*

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

138. How often do you and your spouse (husband) talk about worries or feelings? [read categories] Leave blank if they have no spouse. *Ni kangahe obu iwe n'omusheija waawe murikugaanira ahakwerarikirira neinga oku murikwehurira omumagara?*

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

139. Finally, I want to ask you to give me 3 words that describe how you feel about your future: *Ndikumara, ndeenda ngu ongambire ebigambo bishatu ebirikworeka oku orikuhurira ahabiro byaawe by'omumeisho:*

Self-Scale

***139. How many non-DIG farmers have you shared your DIG acquired knowledge within the past year?**

- ☐ None [if none, skip to the end prompt]
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

- ☐ 6 or more

140. Of the farmers you've shared your knowledge with, how many have gone on to start a garden?

- ☐ None
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6 or more
- ☐ I don't know

141. Of the farmers you've shared your knowledge with, how many have gone on to improve their gardens?

- ☐ None
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6 or more
- ☐ I don't know

142. For those farmers that I've shared my knowledge with, the most frequent topic they are interested in learning about is..... [Please choose one]

- ☐ I don't know
- ☐ Sustainable agriculture techniques [improved soil fertility, improved cultivation, improved sowing, etc]
- ☐ Gardening planning and management [sourcing inputs, crop selection, garden activity timing and planning]
- ☐ Gardening as a business [record keeping, marketing, sales, value addition, etc]
- ☐ Nutrition and nutrition-related activities [food preparation, consumption benefits, cooking demos]
- ☐ Group managed projects [group registration, conflict resolution, task planning, etc]
- ☐ Other _____

143. For those farmers that I've shared my knowledge with, the second most frequent topic they are interested in learning about is.....? [Please choose one]

- ☐ I don't know
- ☐ Sustainable agriculture techniques [improved soil fertility, improved cultivation, improved sowing, etc]
- ☐ Gardening planning and management [sourcing inputs, crop selection, garden activity timing and planning]
- ☐ Gardening as a business [record keeping, marketing, sales, value addition, etc]
- ☐ Nutrition and nutrition-related activities [food preparation, consumption benefits, cooking demos]
- ☐ Group managed projects [group registration, conflict resolution, task planning, etc]
- ☐ Other _____

144. On average, to what extent have you met with these farmers?

- ☐ 1-2 times

- ☐ 2-3 times
- ☐ 3-4 times
- ☐ 5-6 times
- ☐ More than 7 times
- ☐ I don't know

Appendix 2: Social cohesion definitions

Author (s)	Social Cohesion definition and other proxy words
Maxwell, Judith. 1996. "Social Dimensions of Economic Growth".	"Social cohesion involves building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges, and that they are members of the same community. (Maxwell 1996)
Fonseca, et. al., 2019	"Social cohesion is the process of building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges, and that they are members of the same community.
Directorate General of Social Cohesion of the Council of Europe	"Social cohesion is a concept that includes values and principles which aim to ensure that all citizens, without discrimination and on an equal footing, have access to fundamental social and economic rights."
<i>Strategy for Social Cohesion</i> adopted by the European Committee for Social Cohesion in 2000	'it does not define social cohesion as such but seeks to identify some of the factors in social cohesion ...' This strategy was meant to give rise to a number of policies, around which the Council of Europe would promote initiatives

Stanley, 2003. What do we know about social cohesion: The Research Perspective of the Federal Governments' Social Cohesion Research Network “	Bernard describes social cohesion is a "quasi-concept," a concept based on analysis of a situation, but which maintains a vagueness "flexible enough to follow the meanderings and necessities of political action from day to day (3
Canadian Journal of Sociology, 2003	“Social cohesion is then the sum over a population of individuals’ willingness to cooperate with each other without coercion in the complete set of social relations needed by individuals to complete their life courses”.
Chan et al. 2006.290. Reconsidering Social Cohesion	“Social cohesion is a state of affairs concerning both the vertical and the horizontal inter- actions among members of a society, as characterized by a set of attitudes and norms that include trust, a sense of belonging, and the willingness to participate and help, as well as their behavioral manifestations”.
Fernanda et al 2013. “Encyclopedia of Corporate Social Responsibility”	Social capital are those tangible assets [that] count for most in the daily lives of people: namely goodwill, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit”.
Margarita Poteyeva, 2013. Britannica	“Social capital, a concept in social science that involves the potential of individuals to secure benefits and invent solutions to problems through membership in social networks (Margarita, 2013).
Social Capital Research training	“Social capital is multidimensional and must be conceptualized as such to have any explanatory value” (Eastis 1998)

Putnam, 2007: 137-138 "Concept of social capital".	The concept of social capital is like tools (physical capital) and training (human capital), social networks have value. Networks have value, first, to the people who are in the network. ... What makes social networks even more interesting, however, is that they also have implications for bystanders.
Putnam, 1995. America's declining social capital	<i>Social capital is "features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (Putnam, 1995 p.67).</i>
Bourdieu, 1986	<i>"Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu, 1986 p.248).</i>

Appendix 3: Interview responses

Feedback from the interviews conducted between 5th-9th July 2021

Lauren's (Program Officer) perspective on Social cohesion

Lauren worked with Batwa people in Uganda and this group of people are socially sidelined due to their social and economic status. Most of these communities are people with disabilities and are viewed as dependents. This community was highly stigmatized because they are seen as not able to support themselves and are not self-reliant. The following table provides a summary of the Lauren's experience with Batwa community as it relates to social cohesion

Before the program	After the program
Self-worth/self esteem The Batwa community had low self-esteem (less confidence and self-worth) because of the way the larger community perceives them as lazy people.	They are more proud now of the accomplishment they have made through the DIG program and they have the ability to grow socially and emotionally.
Before DIG, the group were not able to participate in other groups or events in the community	The program helped them to start getting out of the community more such as Going to community trading centers, mingling with other people at the trading centers, churches, and other community events.
Uganda being a patriarchal society, men are expected to provide for their families and in this community, due to their economic situation, they are not able to support their families. That affects their emotional and self-worth or self-confidence.	Through the DIG program, the men now have the ability to provide for themselves e.g growing vegetables.
There was lack of knowledge on how to grow vegetables	Now they use the knowledge they have gained to grow vegetables and are able to feed their families.
Men were drinking a lot due as a way to cope with poverty because the men felt they have failed their role as family providers.	Currently, they are able to use the skills they have learned to improve their families. As they spend their time in the vegetable garden this has led to a reduction in alcohol drinking.
Gender: in patriarchal society, men are the ones who take a leading role in helping and that was exhibited during the program	The gender gap is closing because of shared responsibilities during DIG activities. Women are given opportunities to help and given leadership roles during leadership transitions.

Olivia's perspective on social cohesion - (Program Director in Kenya)	
The support groups which include people living with HIV/AIDS and people living with disability are highly stigmatized in the society. At the beginning, their gardens are seen as "gardens of people living with HIV/AIDS"	DIG has enabled these groups by building vegetable gardens which they share their knowledge and produce with other people including people without HIV status who come into their gardens to learn. As a result, the stigma about HIV people diminishes because people buy vegetables from them since the vegetables produced are of good quality.
There are also vulnerable people in the community such as elderly people. These are people who find it challenging to attend DIG programs but are willing to support others in different ways such as use of their land as demonstration gardens such as farmer field schools	Through the DIG program, those elderly people are able to spare space to be used as demonstration gardens for DIG farmers, at the same time the owner of the land starts to apply the same knowledge to their own individual vegetable production. The demonstration gardens come closer to them and are able to apply the knowledge gained in their own production.
Before, DIG program focused more on PLWHIV/AIDS and PWD (people with disabilities) to enable them grow in economically and socially	But now, DIG reaches people beyond these categories - neighbors copying what they see on DIG FFS demonstration gardens. They grow what they see in the demonstration gardens and seek DIG farmers' knowledge throughout the growing season. This has changed the livelihoods of a few neighbors who are not in the program.
Vulnerable people such as people with disabilities were not able to fend for themselves, dependent on family members for assistance which was a challenge to families	Those who attended the DIG program, their lives have changed to a life of independence. Great example is Peter who is partially paralyzed and has hearing loss. He runs a very productive garden and gets support from the family members, especially his wife. They are able to sell their products in the market and this has improved their lives greatly. Such vulnerable people, their self-worth is renewed and can share their knowledge and produce with other people in the community.

	The participation and success in gardening for people with disability has restored confidence of most people in the community as they see opportunities ahead.
Regarding gender roles, there are still distinctions of what men and women are expected to do.	Through the DIG program, men and women are able to participate in the program by sharing responsibilities. Any roles can be carried by a male or female.
<p>Receiving family support</p> <p>A great percentage of DIG farmers are female while male spend their time in the trading centers playing games.</p>	Now, most males are able to accompany their wives to the farms to support them in vegetable production or selling the produce in the market. As a result, most men have stopped being idle and playing games in the marketplace therefore helping their vegetable business to grow. There has been a tremendous increase in vegetable production where men help their wives.
<p>Improvement on health</p> <p>The widows before were unable to provide enough food for their children and grandchildren.</p>	Now the widows are able to nourish their children and grandchildren with nutritious diet because of their participation in the Farmer Field School program. (Knowledge gain)
<p>Interacting with other institutions</p> <p>Before, it was hard to know what kind of programs are out there for farmers.</p>	Through the DIG program, there is a connection between DIG farmers and the community. E.g the chief is able to recommend any additional help to the group, the Ministry of Agriculture recommends DIG for programs such as funding mechanisms.
<p>Improvement of livelihoods</p> <p>Before the farmers joined the program, a majority of them were not doing well economically</p>	<p>Now the farmers are able to grow vegetables and have some to take to the market and they are able to pay their children tuition. DIG has shown immediate outcomes either food or money.</p> <p>Selling produce helps the farmers to access better health, pay tuition and better shelter.</p>

<p>Interacting with other people beyond DIG Reaching out to other people was not easy before farmers attended the program</p>	<p>After graduating from the program, farmers are able to reach a wider audience through wearing DIG labeled t-shirts during market days while selling their produce, especially bell peppers which are known to have a longer shelf life. This gives them free publicity and people want to know about their product and in the process, they are able to know about DIG programs.</p> <p>The DIG farmers provide a link between DIG and other groups they meet in the market who in turn reach out to the DIG organization to request to be given training too.</p>
<p>Sharing of knowledge Before, there was no outward trickling effect on vegetable gardens in the community</p>	<p>DIG farmers have been able to share their knowledge to neighbors both intentional and unintentional ways (farmers copying what they are seeing DIG's FFS.</p>
<p>Knowledge about addition resources in the community Before joining DIG program, most of these vulnerable people didn't have knowledge of potential groups or resources in the community</p>	<p>Now the farmers are aware of other groups or support groups that offer services or other training. Examples of organizations DIG links to farmers are Trees for the Future, permaculture etc.</p> <p>DIG has facilitated exchange visits to show what other farmers are doing in different regions.</p> <p>DIG also organizes cooking demonstrations where farmers get to invite people from the community</p>
<p>Seed sharing Farmers do have local seeds and sometimes they are not aware of how they could be able to share the seeds which cannot be found in the agrovets shops</p>	<p>DIG has provided a platform where farmers can bring local seeds and share amongst themselves.</p> <p>Also DIG provides seeds for cost share (50%) and this goes a long way in helping farmers get enough seeds for planting for that particular season. Sometimes DIG offers the seeds for free to farmers in the program.</p>

<p>Interaction with institutions Interaction with government institutions/ representative is very minimal except mobilization of civic education or participations</p>	<p>DIG welcomes government employees such as chiefs into farmers' graduation functions.</p>

Gloria's perspective about social cohesion - Uganda Program Manager

DIG's program in Uganda focuses on reaching out to vulnerable people especially the elderly, the Batwa community, and people with disabilities. The following table gives a summary of areas DIG made a difference in people's lives.

Before	After DIG Program
<p>Confidence or self-esteem At the beginning of the program, the participants are not comfortable interacting freely This is because of low self confidence</p>	<p>DIG has created a space where farmers feel confident to express themselves and do interact with fellow farmers without feeling ashamed or shy. They share responsibilities such as watering the farmer field school gardens, digging the gardens, and during a learning session which is held by a facilitator.</p> <p>In addition, farmers in the program do express themselves freely, especially in regard to things they are learning.</p>
<p>Perception of women views/ideas Culturally men's ideas are valued more than women and those views are the ones that are more emphasized.</p>	<p>DIG encourages and provides a platform for both men and women to discuss what they have learned at DIG meetings. Farmers come together to learn in a participatory approach and work together in finding a solution in garden related challenges. Therefore, women have gained the opportunity to express themselves. During meetings, women are able to share their views.</p>

<p>Gender roles</p> <p>Leadership - women were not taking leadership roles because of the cultural perspectives that leadership roles are a priority to males.</p> <p>Agricultural activities - there is a cultural perception that vegetable gardening is done by women and that men</p>	<p>Through the DIG program, women are encouraged to take up leadership roles. The leadership roles are done in rotation to give women an opportunity to lead any assignment given to the farmers or. Trainers also include both male and female.</p> <p>Through participation in the DIG program, men have come to appreciate vegetable gardening because of the benefits they have seen as they support their wives during and after the program. Even though they saw that as women's gardens, they are now playing an active role in vegetable production as they have realized the short term and long term outcomes.</p>
<p>Access and distribution of seeds</p> <p>Before joining Dig, farmers had their own seeds or were not able to afford seeds sold at the agrovet shops.</p>	<p>Those farmers still in the program are provided with free seeds to use in their gardens.</p> <p>Cost-sharing for seeds is still available when the farmers are enrolled in the program.</p>
<p>Interactions in the group</p>	<p>DIG farmers are able to meet and work without a facilitator once they are assigned duties.</p> <p>In addition, DIG's facilitator helps in coordinating activities such as working in the garden, buying and selling seeds in the trading centers especially the ones that are not produced or available in the agrovet shops.</p>

<p>Interaction with other groups or other institutions</p> <p>When farmers come to the program they are encouraged to register with the government to enable them to receive grants when the government gives them out. resources</p>	<p>Farmers who have gone through the program know where to register themselves just in case there are government grants passed out to groups, they will be able to access them.</p> <p>In addition, former farmers who had graduated from the program reach out to the new farmers who are in the training to learn any new emerging skill so that they can apply it to their gardens. There is connection to past groups.</p>
<p>Family support</p> <p>When participants come to the program, sometimes it's only the husband or a wife or an individual</p> <p>For the Batwa community, both husband and wife joining the program and if they have children over 18 years old, they qualify to be in the group</p>	<p>Because of the practical training the participants receive, there has been much support from family members to a member enrolled in the DIG program. DIG encourages participants to share the knowledge with their family members and seek help in the garden. As a result, there is evidence of men and women supporting each other in vegetable gardening.</p> <p>Learning for both family members has been fostered by DIG and by the end of the program, families have the skills on how they can support each other beyond the program.</p> <p>DIG offers training to people who have disabilities and by extension, their caregivers benefit from the training because they are part of the support system for the disabled person. Therefore, it expands the network of those who receive training even though they did not enroll into the program.</p>
<p>Childcare</p> <p>Members with children are allowed to bring their children along if they don't have childcare</p>	<p>Older children get to learn about gardening by observing what their parents are doing.</p>
<p>How selling produce has changed farmers' livelihoods</p> <p>Before, the farmers were short of money to pay for their children's related school expenses.</p>	<p>Now, the parents in the cohort are able to use the money earned from selling their produce to buy stationery for their children that is required for their learning. The money earned so little to take care of tuition.</p>

Seckou's perspective on Social Cohesion - Senegal representative

DIG program in Senegal focuses

Before joining the program	During and after the program
<p>Self esteem, confidence to express themselves</p> <p>Farmers come from different backgrounds and speak different languages</p>	<p>When they join the program, they use a common language that promotes their interactions. The use of common language helps to unite the farmers because they understand each other.</p>
<p>Gender roles</p> <p>Senegal is also a patriarchal society and there are roles perceived to be gender based. For instance, digging the land is seen as a man's job.</p> <p>There are other duties such as teaching/ leadership which are seen as male jobs</p>	<p>After attending the DIG program, farmers work together and share duties across the board. DIG fosters sharing of duties which reduces the perspective of gendered roles.</p> <p>Now women are taking leadership roles in the program. For instance, the person who is facilitating or teaching farmers is a female. There is gradual acceptance of women as leaders in the group, which is changing the general perception on women's role in the society.</p>
<p>How livelihood has changed- changes on economic, social, health</p>	<p>The money earned goes to group savings to be used later for home related expenses, healthcare expenses and other needs.</p>
<p>Childcare</p> <p>Mothers who participate in the DIG program leave their children with family members such as grandmothers, neighbors for childcare</p>	<p>DIG respects the decision of participants as they leave children with family members or neighbors for childcare. But they still allow mothers who can't find childcare to come bring their children along.</p> <p>In the village, especially in Senegal, children play with friends, and they are taken by other relatives in the community who are adjacent neighbors because children play together, and mothers do not worry when to feed them because food cooked in the home where the child is left is shared.</p>

Family support	Men have begun supporting their wives during and after the program. Sometimes men harvest the produce and give their wives to go sell in the market. Sometimes it is men who take the produce to the market. So, the families help each other.
Interaction outside DIG group	<p>After farmers start production for the market, they take it to the market and sometimes they create connections with other sellers who come to their farmers to buy in bulk to sell.</p> <p>There is an outreach in the community to talk about what DIG is doing- creating awareness to let other communities know there's a program they can tap into.</p> <p>Reaching out other government officers for</p>
<p>Interactions with institutions</p> <p>Governments occasionally collaborate with development institutions to facilitate developmental training or support to the community.</p>	DIG links the farmers with government representatives just in case there is a grant, they could benefit from it.
<p>Use of money earned from the selling produce</p>	<p>The farmers, especially women are now able to put some money in saving groups. They use the money from the savings group to buy school related supplies, medicine, and other family needs.</p> <p>Mothers are learning how to feed their children- there is currently a pilot program that is teaching families with malnourished children. The DIG program is providing training and demonstration gardens that learn to grow a variety of vegetables to supply nutrition in their families.</p>

Vincent's perspective about Social cohesion - Field Officer in Kenya

Vincent does outreach and interacts with farmers so often. He carries out Farmer Field school training and Farmer Business School. He visits their homes to connect and offer any advice that farmers may need. He does the training with his colleague, Sarah.

Before	After
<p>Sharing of ideas</p> <p>Before, vulnerable people were not free to share their ideas when they joined the group.</p>	<p>DIG strives to work with the vulnerable people to help them reduce the challenges they face. This is done through creating a platform where ideas are shared. Farmers are able to share ideas with each other. While DIG focuses on training people with disabilities, there are also members of the community who are not in that category but are admitted to the training. These people work together as a team. Sometimes they remind each other about eating healthy or taking medicine especially those who live with HIV/AIDS</p>
<p>Self worth</p> <p>The vulnerable people feel they are despised. The facilitator goes to their homes and spends time understanding them.</p>	<p>After working with the vulnerable people and teaching them about “good kitchen” people start visiting their homes because they see facilitators visiting them frequently. When their vegetable gardens flourish, people in the community start visiting their homes to buy some vegetables from them because they have seen them make beds and grow different varieties of vegetables. As a result, the vulnerable people start feeling confident/ self-worth because of the attention and orders for the produce they receive from both neighbors and those who sell produce in the market.</p> <p>Women gain confidence in asking a portion of family land to make vegetable beds.</p>

<p>Gender roles</p> <p>There are cultural norms of what men and women should do and during the start of the program, you will find males step back on tasks considered women tasks.</p>	<p>DIG promotes equality and distributes tasks equally. Over time, DIG has seen men take any tasks without hesitation and even help their wives or mothers in vegetable garden. Men also help women in selling produce in the market.</p> <p>When members join the program, there are also youth in the group and the youth support the elderly in terms of task performance.</p> <p>There is a tremendous change in the family because, now husbands can allocate their wives a small portion of land to grow vegetables because they will not ask for money.</p>
<p>How livelihoods have changed</p> <p>Before, most families did not work as a team in the vegetable gardens</p>	<p>Now, some families have taken vegetable Gardening as a business. Example is one family in Kenya which have set aside some land for growing vegetables and have variety of vegetables e.g. 10 beds growing cilantro, bell peppers and other traditional vegetables. They sell these vegetables, and the income has helped the parents pay school fees for their children, start a small business, and put some in their savings group.</p>
<p>Interaction with other groups</p> <p>When they first came in, most farmers did not know many possible projects they could do.</p>	<p>Some farmers now are aware of other programs out there and have interest in seeing what other groups are doing. Some interact by doing visitation on those projects other farmers are doing.</p>
<p>DIG fostering or directing groups to other resources</p>	<p>As farmers get to learn more and gain knowledge and skills about agriculture through farmer field school, DIG helps them to tap into other programs which they are not able to get during their time in the program. For example, DIG provides resources about other organizations such as Trees for the Future in which they learn about agroforestry, to other groups that do poultry, and ministry of agriculture.</p>

childcare	Most participants leave their children at home. Since the program is 3 hours the day they meet, therefore, most of the participants would leave their young children at home with family members. For those who can't find childcare, DIG encourages them to come with the children.
-----------	--

Sarah's perspective on social cohesion - DIG facilitator in Kenya

Sarah works closely with farmers by doing home visits, training, and doing follow-up on their progress.

Before	after
<p>Expressing themselves and interacting with other people</p> <p>At the beginning of the program, people living with disability, people living with HIV/AIDS seem fearful because of the stigma they face in the society.</p>	<p>But as they continue interacting in the DIG program, they start talking to each other and once they get familiar with each other, they start opening and sharing their personal problems.</p> <p>The vulnerable people start to share ideas during training sessions and garden demonstrations. Overtime they implement what they've learned in their home gardens.</p>
<p>Self-worth</p> <p>Vulnerable people feel much isolated because of the stigmatization that comes from members of the society. They stay at home and do not mingle with other people or extended family members. They keep to themselves and do not share why they are going through.</p>	<p>During the program, the participants become comfortable sharing their personal life and struggles with DIG staff who encourage them, pay them visits and help them start a vegetable garden. They also start sharing amongst themselves and become an encouragement for one another. Most group members become confident to say what they like or dislike.</p>
<p>Improvement of social cohesiveness</p>	<p>DIG has provided a platform where the vulnerable people communicate freely.</p>

<p>Gender roles</p> <p>There are tasks that are gender based on cultural norms such as fetching water from the river, harvesting vegetables, cooking demonstrations etc. these are seen as women roles. For men, they perceived to take “hard” chores such as digging, cutting trees etc.</p>	<p>At DIG, men and women are assigned work equally. There's no work preserved for men or women and once they are called upon to perform any task, they are ready to do it. For example, some of the duties are now performed by both men and women during the program include fetching water to irrigate farmer field school demonstration gardens, harvesting of produce, cooking demonstrations etc. DIG assigns chores and lets the participants know that chores are distributed equally and can be performed by any gender. Now men can fetch water for irrigating the vegetables,</p>
<p>How livelihoods have changed</p> <p>Women usually depend on their husbands to provide</p>	<p>Now the women can earn from selling their produce in the market or from home. Part of that income goes to rent a plot to produce more vegetables, buy household goods, pay school fees and put in a savings group. Some are able to use that money to start a small business.</p> <p>In addition, vegetable gardens have provided enough food to the family over time. They are able to feed their children and improve the health of their children who are malnourished.</p>
<p>Income</p> <p>Some participants, especially women, did not have income for themselves.</p> <p>The women depended on their husbands to provide for the family.</p>	<p>Now the money earned from selling vegetables is spent to pay school fees, buy household goods, rent a small plot and some they put in the savings group. Before, they depended on their husbands</p> <p>The women now depend on the income they earn from vegetable production. Therefore, the habit of depending on their husbands has reduced. As wives become more active in bringing income in the household, men have an easy time by supporting them in vegetable production. Sometimes they support their wives at the farm besides finances.</p>

<p>Interaction with other groups Before joining DIG program some of the</p>	<p>Now DIG participants interact with other groups or members of the community especially at the market center, or some other meetings organized by other organizations. When word goes round, some manage to go to those meetings to learn.</p>
<p>DIG fostering interactions outside the program</p>	<p>DIG has provided linkages to other organizations such as Tree for the Future and other programs where farmers in the program could learn from things that are not offered in their program.</p> <p>Also, DIG air their program through local stations to talk about what their programs are in the community.</p> <p>DIG also links participants to Ministry of Agriculture to learn other things they can do e.g training on poultry or fish farming.</p> <p>The farmers are also linked to the ministry of health where they learn about nutrition- having a garden, they are taught on how to grow a variety of vegetables and how to cook nutritious food. They also get trained on sanitation (how to maintain hygiene in their homes).</p>
<p>Childcare</p> <p>When it comes to childcare, usually DIG does not restrict farmers from coming with their young children.</p>	<p>During the program, DIG always supports mothers who have children by allowing them to come with their children. There are old women who cannot perform heavy tasks, they help in holding the children while observing the task being performed by the mothers.</p>

Noah's perspective on social cohesion - DIG's technical advisor

Noah is one of the executive staff of the DIG and had an opportunity to visit the regions where DIG works. His perspectives on how the program has impacted the community in the social cohesion aspect is summarized below.

<p>How social cohesion expressed</p> <p>people living with disabilities, People with HIV/AIDS, especially support groups feel stigmatized and feel removed from their community and neighbors and feel they're isolated or alone</p>	<p>DIG's program provides a safe spot or environment as these groups come together to learn and by extension they feel safe to share their experiences and see they're not alone and kind of being part of something bigger. DIG provides that space for these groups to feel part of the community and being part of the neighborhood.</p> <p>An example is a group in Senegal, one of the group members felt comfortable sharing her HIV status, knowing that other people are doing the same thing. She had fears about her children, and she was encouraged by the group members to take her children for testing and know their status. Hearing from others it makes members feel connected and makes it comfortable for them to share not only in the group but also become comfortable visiting the hospital or clinics.</p>
<p>Self worth</p> <p>Due to stigmatization around HIV status, some participants don't go out to look for work to do and this puts them in a spot where they feel they are not able to work and that takes a toll on the body physically. An example: a lady who was in the priority program was sick (HIV positive) and her malnourished child was not having enough food and caused worries and stress. In addition her child was not thriving health wise.</p>	<p>After she joined the program and other participants who had similar situations, DIG helped in starting up the vegetable garden in their homes. Then they feel better that something worthwhile and positive is happening in their homes.</p> <p>Because of the program, the neighbors start to notice their engagement as they sell their produce in the marketplace and sometimes, they sell vegetables to their neighbors. They have something to be proud of, which is a garden. One woman in the program had something to be proud of and she has something to take to the market and now she offers services to her neighbors whenever they need produce.</p> <p>Also, they have seen becoming supportive to the vulnerable people, especially husbands become more interested as there's additional income in the family.</p>

How social cohesion works within DIG farmers

At first, the group is disparate, because they did not have a group before, but they are interested in gardening and as they come together there are some setbacks because they were not in an organized form before, so they are learning how to work together.

DIG provided the space where they learn to work together and trust each other. As they progress, they start noticing their own expertise or effort, they share the knowledge amongst themselves and start to grow more and variety of vegetables. With networking, they start expanding their garden operation.

Farmers invite other members of the group and their friends and eventually some start forming their own cooperatives or groups where they could have group savings and loan each other.

The forming of groups enables them to have weekly meetings and not only with group saving activities, but also, they start engaging with clinic staff because there are gardens at the clinic sites.

During the time of hardships such as Covid-19, as a group they communicate with each other and share their concerns and through the group, they support each other in terms of sharing ideas or financial support through the money in the savings group. These activities show that groups are connected and communicate with each other to find solutions to problems they face.

<p>Gender roles</p> <p>Gender roles vary a lot in different groups and different personalities. The majority of participants are female.</p> <p>Initially, some husbands are not excited about their wives being in the program because they don't know what is in the program.</p>	<p>Oftentimes in these groups, women end up getting leadership roles such as secretary, community leader etc.</p> <p>For married women, some husbands will sometimes be not super into their partner participating in the program but as start paying attention into these kinds of programs they start seeing their partner or wife producing vegetables and selling and money coming in and going into household goods, they start see it as a worthwhile endeavor and start supporting them with their time or ending up joining them in the vegetable gardening and putting more that in vegetable production.</p> <p>But after seeing their wives run a successful garden, they start helping where they can. A good example is a Kenyan man who had a sugarcane farm, started clearing out land and gave out a section to his wife for vegetable production. As land belongs to a man, as he allocates a small section for vegetable production, it reduces the tension of being the only source of income but now the wife is able to earn some income out of vegetable growing instead of him working to give her money.</p> <p>Gender roles can be different culturally and can be difficult in certain situations, but the program provides a platform for leadership roles and has an independent self-employment which is gardening.</p>
--	--

<p>How income facilitates social cohesion</p>	<p>You will see that income earned weekly or bi-weekly goes towards medicine, education, and food. Income earned from vegetable selling makes a huge impact in the household. The income coming into the women makes a big difference because they spend it wisely oftentimes this small chunk of income spent on healthier expenditures such as buying food, medicine or healthy foods.</p> <p>This small income helps in many ways especially farmers to be more connected with other important sectors such as healthcare clinics. Having income helps them to afford transport and reduces the fear of healthcare providers because they often don't trust their clinics, or they feel that when they go there they are yelled at or stigmatized. So, by engaging with clinical staff in the care and often in the garden programs that are attached to the clinics, there becomes a connection and bond that creates trust and allows them to seek care and continued care.</p>
<p>Skills and knowledge Farmers in the program when they came in, they were eager to learn</p>	<p>After gaining knowledge and skills, farmers start applying those skills in their own garden. One example is the Kenyan woman who felt productive and expanded her vegetable production which she could use the earnings to pay school fees.</p> <p>Another example is Batwa community, which feel stigmatized but after gaining the skills and knowledge they feel uplifted into a place they feel important or gives them status. People with learning disabilities learning on rearing rabbits or growing vegetables is critical to them.</p>

<p>Family support</p> <p>There are participants who have expressed that they do not have supportive husbands. One participant in Uganda indicated that she had an abusive husband whom when released from prison, continued to abuse her.</p>	<p>After the DIG program, she was able to leave the husband and live with her sister. She felt comfortable doing that because she had a skill that she could use to make a living and provide for herself food and a source of income. Not only getting family support but also giving an individual the ability to actually be able to make an own decision for herself and this is promoted through farmer field schools influence.</p>
<p>Interaction of DIG participants with other groups</p> <p>Some when joining the program they didn't know much of other groups out there.</p>	<p>Farmers interact with other groups during and after the program. Example is the USAID program which was running a sweet potato project. One of the DIG farmers in Kenya who was a widow applied to the program and was able to go through that program because she had skills to enable her participation.</p> <p>Another example is that the people living with disability in Uganda are able to join other disability groups and are able to apply for government grants, they are able to interact with the government, submit forms that they need to do and are able to show that they have a functioning group that meets weekly. These are things that they wouldn't be able to access before and that takes them to the next level.</p> <p>There are others who became part of the hospital staff sharing with other farmers and neighbors relaying those skills and ideas to others. Some farmers become teachers to their fellow farmers.</p>

<p>DIG facilitating connections/interaction beyond the organization program</p> <p>Before, some farmers did not know about micro-lending institutions</p>	<p>DIG facilitates micro loan programs like Kiva which does small loan programs. DIG encourages some of their stronger farmers to apply for those kinds of loans. Also, there are government programs that the DIG leads them towards.</p> <p>Oftentimes, if there's health issues that they are facing, DIG gets to help them by connecting them to organizations that are working with health. Also, farmers are introduced to other government programs.</p>
--	---

Pacras and Jane's perspective about social cohesion - Uganda field officers

Pacras and Jane work with vulnerable people in the community and they are first and regular contacts for participants in the group.

Before the program	After or during the program
<p>People with disabilities had challenges working by themselves because of the physical limitations they have</p>	<p>During the program they learn a lot and once they know how they could take care of themselves in terms of making a living, they ask for help. An example is when they are setting up a garden and need some help, then someone comes to their home to help as the disabled person guides him/her through.</p> <p>As a result of those interactions with other people, the person with disability starts to open up and talk about life and other personal issues. This has helped the people living with disability feel good and feel loved and recognized which was not the case before the program.</p>

<p>Self worth</p> <p>People with disabilities face challenges especially when they need assistance.</p>	<p>As they have gone through the program, people have started to see their worth because they have started having gardens such as sack gardens and now, they find support from other farmers.</p> <p>Now the vulnerable people know that they cannot sit idle and wait for people to do things for them. They have been empowered to work to support their families and that makes them feel good.</p>
<p>Change of livelihoods</p> <p>Before, vulnerable people were not comfortable talking about their personal lives</p>	<p>Because of frequent interaction with other people in the group and at home, they have open up about their status and those living with HIV/AIDS are encouraged to go hospital</p> <p>Now they don't feel poor or neglected because people come to their gardens to buy vegetables.</p> <p>they 've become role models to those who are not disabled in their village because people go to learn from them.</p>
<p>Gender roles</p> <p>Before some women were not ready to be leaders due to the perception of the culture that men are ones to lead.</p>	<p>In the program, women now take leadership roles that go beyond the program. They are willing to take up responsibilities and lead their assignments.</p> <p>Also, work is distributed equally and can be performed by any participant, be it a male or female. Examples include digging holes, vegetable gardening that is considered a woman's job.</p>

<p>Change of livelihoods</p> <p>Before, any small money people with disabilities had could hide.</p>	<p>Now the vulnerable people are growing a lot of vegetables for home consumption and taking some to sell in the market. Therefore, their lives have changed economically since they use money earned from selling vegetables to buy household goods.</p> <p>Now they can invest their money in the vegetable garden. They have been able to provide their neighbors with vegetables as some help to supply them with water to irrigate their gardens.</p> <p>Some of the money earned is spent to take the children to school, buying them school related materials. Sometimes they use money earned from vegetables to start small businesses such as rabbit rearing.</p>
<p>Knowledge gained</p> <p>Before DIG program, PLWD did not have access to knowledge that enabled them to get out of the conditions they were</p>	<p>Now the vulnerable people have knowledge about gardening, which they have used to implement in their own plots and telling others what they've learned.</p> <p>Some farmers teach other farmers how to manage vegetable gardens. Sometimes they are hired by other farmers to set up vegetable plots or sac gardens.</p>
<p>Childcare</p>	<p>Some participants come with their young children to the program if they don't have relatives or friends to leave their children during farmer field school demonstration.</p>

<p>Family support</p> <p>Before they understood the importance of the vegetable garden, there was no support for the vulnerable people.</p>	<p>Family members start to see the advantages of having the vegetable garden when they see their spouses earning from it and they allocate them a portion to grow vegetables.</p> <p>In addition, men start helping in the vegetable production by preparing the land for their wives or if they have persons with disability.</p> <p>If the market is far away from home, family members help their member who has a disability to take his/her produce to the market.</p>
---	---

Appendix 4: Tallied outcome of DIG's staff perspective on the group's social cohesion before

Aspect of cohesion	Lauren	Olivia	Vincent	sarah	Gloria	seckou	Noah	Pacras & Jane
Theme: Low self-esteem/ self-worth (Participants not comfortable interacting at the beginning)	X	X	X	X	X	X	X	X
Social exclusion Cultural expectations on men's roles in the family (Men to provide for their families).	X	X	X	X	X		X	
Gender roles -the gender gap narrowing (men taking lead in helping)	X	X	X	X	X	X	X	X
Perception of women ideas (How contribution women ideas are perceived - their ideas are lowly regarded)		X	X	X	X	X		
Trust in neighbors or institutions Farmers not comfortable sharing ideas or personal issues	X	X	X	X	X	X		X
Family support - those receiving support from family members at the beginning of the program e.g. husband or children		X			X	X		

Poor livelihood - at the start of the program, participants have very little input	X	X	X	X	X	X	X	X
Improvement in interaction within the group	X	X	X		X		X	
Improvement in interaction outside the group	X	X	X	X			X	
DIG fostering interaction/resource recommendations	X	X	X	X	X	X	X	
Childcare		X	X	X	X	X		

Appendix 5: Talled outcome of DIG's staff perspectives on Social Cohesion during and after the program

Aspect of cohesion	Lauren	Olivia	Vincent	sarah	Gloria	seckou	Noah	Pacras & Jane
Theme: Self worth improved self-worth (Participants feeling comfortable interacting and sharing ideas and personal experiences)	X	X	X	X	X	X	X	X
Social inclusion- Cultural expectations on men's roles in the family (Men to provide for their families).	X	X	X	X	X			
Gender roles and closing the gender gap (men taking lead in helping)	X	X	X	X	X	X		X
Perception of women ideas (How contribution women ideas are perceived - their ideas are lowly regarded)		X	X	X	X	X		X
Trust in neighbors and the community (DIG's farmers get to sell their produce to neighbors and at community market)	X	X	X	X	X	X	X	X
Family support - those receiving support from family members after the program e.g husband or children	X	X	X	X	X	X		

Improvement of livelihood	X	X	X	X	X	X	X	X
Improvement in interaction within the group	X	X	X	X	X	X	X	X
Improvement in interaction outside the group		X	X		X		X	
DIG recommending other resource	X	X	X	X	X	X	X	
Childcare		X	X	X	X	X		

Appendix 6: Approach on how to pretest newly developed survey question

A. Importance of pretesting new survey question

New survey questions can be daunting to some respondents if they are not clear. When an organization wants to know the impact of the program they are implementing, using survey questions is one of the greatest tools to use to measure that change. One of the ways to test newly developed questions is through pretesting to help identify the questions that do not make sense to the respondents or to identify those questions that might lead to biased answers. This process is to check whether the questions work as intended and are understood by the participants who are likely to be administered to (Charlotte, 2015). Not only does pretesting help to detect potential problems but also helps in reducing errors when gathering and reporting data. The pretest is to assess the readability, length, and difficulty of the survey (ctsi.ucla.edu). Another importance of carrying out a pretest for a survey questionnaire is to help in predicting how participants will respond to the questions asked. The pretesting gives an idea of the interest of the respondents such as understanding their level of comprehension, fatigue, discomfort based on the questions asked and overall well-being of the participant while taking the survey. In addition, the pretesting of survey question helps in to predict on how research protocols can be refined to reduce the amount of time required to administer the survey and also to determine what would be the best form of administration such as phone, in person, or computer (ctsi.edu: [HOW TO:](#))

To confirm that the question is reliable, it must be answered by the respondents the same way each time it is presented to them ([Pretesting the Questionnaire](#)). That means, the tester can compare the answers the respondents gave in one pretest with answers in another pretest. Also, the validity of the survey question can be determined by how well the survey question measures the concept it is intended to measure (colostate.edu). For instance, an interviewer can ask questions to compare the answer to another question which is measuring the same concept to understand if there's convergence and divergence in the answers provided.

B. Steps on how to carry out the pretest survey questions

The steps of carrying out a pretest for survey questions has been adopted from the pretesting protocol recommended by UCLA CTSI Community Engagement and Research Program (CERP) and Tools for Development Resources (ctsi.edu: [HOW TO:](#), ([tools4dev.org](#)) GIVE REFERENCE IN REF LIST AND CITE HERE).

Step 1: Participants selection

1. Select at least 5-10 people from your target group. The people that will participate should be from the community where the study will take place (ctsi.ucla.edu)
2. When they've assembled, explain to them the purpose of the survey. Let them know that you are assessing the answers to the questions and their responses, their impressions of the questions (ctsi.ucla.edu). Ask the respondents to complete the survey one at a time (it should be complete as the way it should be completed during the actual monitoring and evaluation of the project).
3. Take note of all comments and questions respondents raise. While asking them to read loud (if they can) to themselves, encourage them to think out loud ([tools4dev.org](#)). Let them tell you exactly what comes into their mind when they read and answer a question. As you listen, take notes on everything you hear them say. Examples of the comments that may pop up from their thoughts aloud may include: "The option I want is not available", "Why ask this question?" This question makes me uncomfortable to answer", "I don't understand the question", "The interview seems to be long". What do you mean by this?" ([tools4dev.org](#)).
4. Make an observation on the respondent's well being such as any signs of exhaustion and confusion when the respondents are answering the questions ([tools4dev.org](#)). Also, pay attention to where they hesitate while reading or answering the questions and take note (ctsi.edu: [HOW TO:](#) .
5. Remember to record how long the respondent has taken to answer all the questions (ctsi.edu: [HOW TO:](#))

Step 2: Analyze the information collected

- Do analysis to ascertain if there was a trend or issue in responses with particular questions (ctsi.edu: [HOW TO:](#)).
- While doing analysis, determine whether the responses given are within the parameters anticipated.

Step 3: Do make revisions to the material if necessary and retest the questions

1. Revisions are made based on the information collected during answering the questions. At this stage, the questions can be edited, removed or some combined due to containing similar content.

2. Assess whether the language used needs to be improved: whether it needs to be detailed, simplified, or needs to be more explicit.
3. Be aware that major revisions may require the consultation with survey experts and will need another retesting of the survey questions because of major changes you've made (ctsi.edu: [HOW TO:](#)).