Community Based Resilience Analysis Assessment Report

Yabello Woreda, Oromia Regional State, Ethiopia

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Acronyms and Abbreviations

AAU	Addis Ababa University
ACDRM	African Centre for Disaster Risk Management (ACDRM)
CoBRA	Community-Based Resilience Analysis (CoBRA)
CSA	Central Statistical Agency CSA
DRMFSS	Disaster Risk Management and Food Security Sector
DPPO	Disaster Prevention and Preparedness Office
EW	Early Warning
FAO	Food and Agriculture Organization
FGD	Focus Group Discussions (FGDs
KII	Key Informant Interviews (KIIs
NGO	Non-Governmental Organizations
PSNP	Productive Safety Net Program
SLF	Sustainable Livelihood Framework
ToT	Training of Trainers (ToT)
UNDP	United Nations Development Program UNDP
UNDP-DDC	United Nations Development Program, Dry land Development Centre (UNDP-DDC)
UNICEF	United Nations International Children Fund
WDRMP	Woreda Disaster Risk Management Profile' (WDRMP)
WMO	World Meteorological Organization

Executive Summary

Extreme climatic changes, such as drought and erratic rainfall occurring increasingly in Ethiopia have resulted in the need for developing coping and management strategies towards increasing the population's resilience to these natural hazards.

To understand how communities cope with the risks and shocks, and build resilience, the United Nations Development Program, Dry land Development Centre (UNDP-DDC) has facilitated the participatory development of a qualitative resilience assessment/analysis tool titled Community-Based Resilience Analysis (CoBRA). This assessment was introduced to Ethiopia after conducting pilot testing in Uganda and Kenya. It is believed that data gathered from this tool would complement the data from the micro-level (woreda level) risk analysis tool known as 'Woreda Disaster Risk Management Profile' (WDRMP) developed by the Disaster Risk Management and Food Security Sector (DRMFSS) of the Ministry of Agriculture, to identify underlying disaster risk factors in woredas and help design disaster management programs. This CoBRA assessment was conducted the Yabello woreda, Oromia Regional State, Ethiopia, from December, 09th to 27th, 2013, and was led by the African Centre for Disaster Risk Management (ACDRM), the Disaster Risk Management and Food Security Sector (DRMFSS) and the Oromia Region Disaster Prevention and Preparedness Commission with the full engagement of Yabello woreda sectoral offices.

The broad objectives of the assessment were to identify the priority characteristics of resilience in the target community, assess communities' attainment of resilience in the current conditions and in the previous crisis/disaster, identify characteristics and strategies of resilient households and identify the most highly rated interventions or services in building local resilience. This report outlines the findings of the Yabello woreda CoBRA assessment as well as feedback and inputs

from community representatives and technical stakeholders and partners.

The population of the woreda is 102,165 persons, of which 57,418 are females and 50,747 are males. The woreda has 17 kebeles of which 16 were selected for the study. The residents of the woreda are primarily pastoralists and agro-pastoralists. The woreda has a largely dry and warm climate, interspersed by two short rainy seasons, from March through May and then from October through November. The largely dry climate leads to chronic shortage of water for both human and livestock consumption. Further, the woreda has a near absence of infrastructure, including roads, electricity, health services, educational facilities,especially for livestock, , etc. The combination of these factors has led to persistent food insecurity in the woreda and vulnerability to shocks and disasters.

The study used the qualitative methods of Focus Group Discussion (FGD) and Key Informant Interviews (KII) to collect data. For this, a team of 16 facilitators from the local government offices and supervisors from the ACDRM team was formed. Before starting field data collection, the team was provided exhaustive training including a field training to familiarize them with the tools and methodologies for data collection. In each kebele, respondents were grouped by gender and in kebeles where the number of respondents was insufficient to form gender disaggregated groups, mixed groups were formed to gather data. Additionally, interviews were conducted with respondents from resilient households to gather data on their resilience. A total of 30 FGDs and 28 KIIs were conducted across the kebeles for this study. During the data collection, the team faced certain constraints and limitations, namely, longer time than anticipated spent on listing the resilience indicators and ranking them in order of priority; changes in kebele boundaries just before commencement of the study; and, absence of many community leaders in some kebeles due to their participation in other woreda level events.

The study found that the main hazards and shocks faced by the community comprised drought and associated food shortages, malnutrition and famine, with the 2010-12 drought being one of the most destructive. Most of the respondents felt that the current conditions were 'normal or 'good'. The respondents were asked to indicate and rank characteristics of resilient communities and their responses were grouped into five categories, namely 'Financial', Human', 'Natural', 'Physical', 'Social' using the 'Sustainable Livelihood Framework' (SLF). From the overall responses, the top five characteristics as ranked by the respondents emerged to be 'water for humans' followed by 'peace and security', 'market services', 'water for livestock ', and 'saving and credit services'. In terms of the SLF categories, characteristics addressing financial (659) and physical (637) categories were ranked highly while human (266) social (223), and natural (149) categories received relatively lower scores. The next paragraph summarizes the analysis of data by different categories.

Women gave more importance to availability of water for humans, followed by 'peace and security', whereas males ranked 'market services' highest followed by 'off-farm activities'. Pastoralists gave the highest ranking to 'market services', whereas the agro-pastoral respondents ranked 'water for humans' as the most important indicator. When analysed by the levels of program interventions in various kebeles—for example schools and heath facilities, roads and water supply, market and financial services, etc— respondents from high-, medium, and low-intervention level kebeles gave the highest rankings to 'education', ' peace and security' and 'human health' respectively.

The study also examined the respondents' perceived attainment of resilience. In normal/current periods, respondents ranked their attainment of characteristics of resilience on average 3.46 out of 5 as opposed to 2.48 during crisis periods, with the greatest degree of attainment seen in market service, saving and credit and animal health in financial category; water for livestock and water for humans in physical category; human health, food security and early warning in

human category; as well as peace and security in social category. In crisis years, lower ratings were given to financial, physical and natural SLF categories. The overall perception of the community members was that of having overcome the worst crises and being in the stage of rebuilding and growth. The agro-pastoralists were observed to have gained more resilience than pastoralists, whereas a majority of the pastoralists perceived to have decreased their resilience. Residents of high intervention areas reported to have gained resilience whereas resilience of those in middle-and low-intervention areas was perceived to be same and decreased, respectively. Most beneficial interventions for improving resilience were those related to water, education, health, productive farming and access to credit.

Data from the KIIs indicated that most of the resilient households had at least one member who had attained two years of formal education. Most households became resilient by engaging in multiple income generating activities including livestock rearing as well as petty trade, and adopting effective coping mechanisms including timely sale of livestock, maintaining water, access to credit and saving services, timely cattle migration, and engagement in off-farm activities, as well as access to government interventions and support programs. The key informants noted that interventions in the areas of business skill development, saving and credit services, livestock management, water, and farming practices would help improve their communities' resilience.

Feedback and validation of the findings of the study was sought from kebele and woreda sectoral office representatives as well as technical stakeholders/partners at the national level. The findings of this assessment were endorsed by the kebele and woreda representatives who emphasized the need for land use planning and demarcation of pasture land from farm land to further increase resilience. A consultative workshop was organized for technical stakeholders/partners who concluded that the ranked resilience characteristics resonated with the ground realities in the communities. Participants agreed with the resilience building measures cited in the findings, and that the

characteristics of resilient households, i.e, saving and credit, employment, diversified income generating activities, and ownership of large herds were accurate. While it was felt that scores on attainment of resilience were subjective, depending on the current conditions and may not be an absolute benchmark against which to assess future conditions, the assessment results could be usefully adopted by identifying 'keystone' indicators for monitoring.

The findings of the study highlighted that the communities in the Yabello woreda are still predominantly engaged in traditional pastoral livelihood, with low literacy levels. However, recently, growing number of pastoralists are transitioning to agro-pastoralism and are increasingly optimistic about improving their resilience. However, to further develop their resilience to environmental disasters, there is a need to improve availability of water for human and livestock consumption through storage of rain and flood-water, as it is directly linked to their survival and subsistence. Access to market services for livestock trade including access to roads and electricity, timely information, health products and services, etc, needs to be strengthened to enable the benefits of livestock trade to be cascaded to the communities. Credit and saving services play a critical role in enabling communities to cope with disasters and need to be expanded further. Resilient households cited multiple income generating activities, for which education and skill-development are very important. It is critical to deliver formal and vocational training to communities to equip them for gainful employment and vocation. With the increasing transition to agro-pastoralism, there is a stronger need for introduction of scientific and sustainable agricultural practices and technologies to ensure better utilization of natural resources. Finally, there is an urgent need to improve public infrastructure, especially roads, to ensure reach of interventions even in remote areas which are most vulnerable to crises.

1. Introduction

The impacts of extreme climatic events such as drought and unexpected erratic rainfall are causing multiple and complex hazards that have led to chronic asset depletion in Ethiopia. In response to these daunting challenges, the Ethiopian government—in collaboration with development partners—has been working to enable people to build resilience towards natural and anthropogenic hazards.

In recognition of the unclear link between development and resilience needs in disaster affected communities, the Disaster Risk Management and Food Security Sector (DRMFSS) of the Ministry of Agriculture have been developing a micro-level (woreda level) risk analysis tool known as 'Woreda Disaster Risk Management Profile' (WDRMP). This tool aims to examine underlying factors resulting in disaster risk and help design risk reduction programs. It also seeks to identify the kind of early warning and response systems that need to be framed in different risk contexts (hazard, vulnerability and capacity) and to enhance communities' and local, regional and national authorities' capacities for disaster risk management through preparing contingency plans. The risk profile is intended to be produced for all woredas (about 750) in the country and, as of February 2014, it had been completed for 190 woredas.

A need has also arisen to assess how the communities are coping with the risks and shocks and building resilience themselves. In this respect, United Nations Development Program, Dry land Development Centre (UNDP-DDC) has facilitated the participatory development of a qualitative resilience assessment/analysis tool titled Community-Based Resilience Analysis (CoBRA). CoBRA was introduced to Ethiopia after conducting pilot testing in two East African countries, namely Kenya and Uganda. It is believed that the data gathered through the CoBRA assessment would complement the existing WDRMP data-set from a positive deviance of the local communities' perspective to hazards.

The comprehensive CoBRA assessment was undertaken in the Yabello woreda, Oromia Regional State, Ethiopia, from 09th–27th December, 2013. The exercise was carried out with financial support from the European Commission Directorate General for Humanitarian Aid and Civil Protection under the framework of its Drought Risk Reduction Action Plan. This assessment was led by African Centre for Disaster Risk Management (ACDRM), Oromia Region Disaster Prevention and Preparedness Commission and Disaster Risk Management and Food Security Sector (DRMFSS), with the full engagement of Yabello woreda sectoral offices.

Prior to the field mission, the lead agencies/supervisors of the assessment team, i.e., ACDRM and DRMFSS, received intensive in-house and field-based training of trainers (ToT) from the UNDP-DDC on 20th–22nd November, 2013 and also customized the generic CoBRA tool to align with Ethiopia's local contexts. ACDRM in turn, provided a three-and-half days' training with targeted sessions on the CoBRA data collection tool to facilitators, field program coordinators and local NGO partners operating in the area, before commencing the field data collection exercise. A list of agencies that participated in the CoBRA training and the field data collection is provided in Annexure 1.

The CoBRA assessment has four broad objectives:

1. Identify the priority characteristics of resilience for a target community;
2. Assess the communities' achievement of these characteristics at the time of the assessment and during the last crisis or disaster;
3. Identify the characteristics and strategies of existing resilient households; and
4. Identify the most highly rated interventions or services in building local resilience.

This report outlines the findings of the Yabello woreda CoBRA assessment. It also incorporates key feedback and consolidated inputs

generated at the review and validation workshop on the draft assessment report by woreda sector office heads and community representatives in Yabello on 27th December, 2013. The report also summarizes the comments and recommendations made at the "National Workshop on Enhancing Community Resilience: Learning from the CoBRA", which was conducted jointly by DRMFSS, ACDRM and UNDP on 03rd April, 2014 in Addis Ababa.

2. Approach

A detailed explanation of the conceptual framework that underpins the methodology is contained in the CoBRA Conceptual Framework and Methodology document.[4]

2.1. Characteristics of the field site

Yabello woreda was selected for the first pilot CoBRA field assessment in Ethiopia based on several criteria including the availability of WDRMP data, occurrence of multiple hazards, strong government presence, other partner interventions, and high priority accorded by DRMFSS.

Yabello woreda is a drought prone lowland area located in the southern part of the country near the border of Ethiopia and Kenya (Figure 1). The total population of the woreda is 102,165 persons, of which 57,418 are females and 50,747 are males.[5] The woreda has 17 kebeles of which 16 were selected for the assessment (Figure 1). Information on demographic and livelihood data, and the number of FGDs and KIIs

[4] http://www.undp.org/content/dam/undp/library/environment%20energy/sustainable%20land%20management/CoBRA/CoBRA_Conceptual_Framework.pdf

[5] Central Statistical Agency of Ethiopia (2007). Population and Housing Census of Ethiopia. (CSA, Addis Ababa).

conducted in the targeted kebeles is presented in Table 1. All the participants in the assessment conducted through the FGDs and KIIs belong to the Oromo ethnic group.

Livestock rearing is the dominant economic activity in the woreda, followed by crop production (WDRMP, 2012)[6]. The target populations in the woreda derive their income predominantly from selling livestock (i.e., pastoralists). Some households that live around the towns also practice crop production to supplement their household consumption and income (i.e., agro-pastoralists). This feature of the woreda enabled the sampling to be conducted in both pastoralist and agro-pastoralist kebeles.

The climate of Yabello woreda and the Borena zone is described in several reports. According to World Meteorological Organization (WMO) 1982[7], the climate at Yabello is characterized by a temperature of mean annual maximum of 25°C, mean annual minimum of 12.8°C, annual average of 18.9°C; and by total annual rainfall of 744 mm and evapo-transpiration of 1278 mm. Ethiopian Mapping Authority. 1988[8] classifies the climate in Borena area as hot-semi-arid with mean annual temperature of 18-27°C and total annual rainfall of 400-800 mm. More recently, Bonya 2014[9] reported mean annual temperature of 21.8-27°C and total annual rainfall of 502.5 mm. The climate is manifested by two rainy seasons that last from March to May peaking in April; and from end of September to end of November, peaking in October. The dry

[6] WDRMP: Oromia, Yabelo woreda, 2012 (WDRP)

[7] WMO publication Volume A, N0. 9, 1982. Meteorological Messages-List of Stations, Country Ethiopia.

[8] Anon. 1988. National atlas of Ethiopia. Ethiopian Mapping Authority, Addis Ababa.

[9] Boneya Udessa, 2014. Impacts of Climate Change on Pastoral Communities in Dugda Dawa District, Borana Zone, Oromia Region, South Ethiopia, MSc. Thesis. Addis Ababa University.

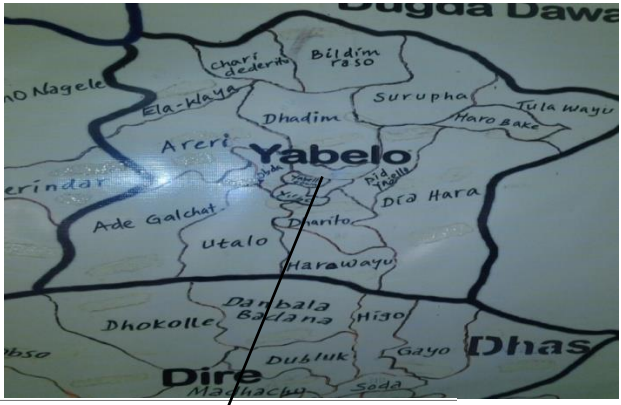
seasons are during months of December–February and June–September. During the dry seasons, particularly in the months of January and February, the local populations tend to experience reduced availability of pasture because of moisture scarcity, clearly indicated by higher evapo-transpiration than total annual rainfall. This woreda has been affected by seven cyclic droughts over the period of 1966-2003[10]. In general, access to drinking water as well as water for livestock is highly limited and difficult in the woreda at all times of the year—even during the normal periods. Household members are often required to walk for more than two hours to fetch water, putting a huge burden, especially on women and young girls—many of who drop out of schools as a result.

Additionally, most of the kebeles in the Yabello woreda are crippled by poor infrastructure including roads, electricity, and animal health services. In the kebeles selected for the CoBRA assessment, public electric power supply is almost nonexistent. According to the WDRMP report, access to veterinary services is poor and the existing services are not availed by large numbers of the local population due to financial constraints and/or religious beliefs. However, households' access to health facilities seems to be good with about 94% of the population obtaining health care in formal health institutions (WDRMP, 2012)[3].

The woreda is chronically food insecure, particularly in the months of January and February. Poor road conditions affect the communities' access to marketplaces to sell their agricultural and livestock products. The typical local coping strategies for mitigating hazards, mainly drought, include selling livestock, exercising long or short period migrations and/or reducing productive expenditures. In this context, informal savings and credit schemes play a critical role (See Section 3 for more detail) and NGOs have also been providing complementary support in these areas to enhance local coping abilities to shocks and stresses.

Figure 1. Surveyed kebeles in Yabello woreda

[10] Dugda Dawa District Culture and Tourism Development Office, 2012


Dugda Dawa
Nagele
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Dia Hara
Ade Galchat
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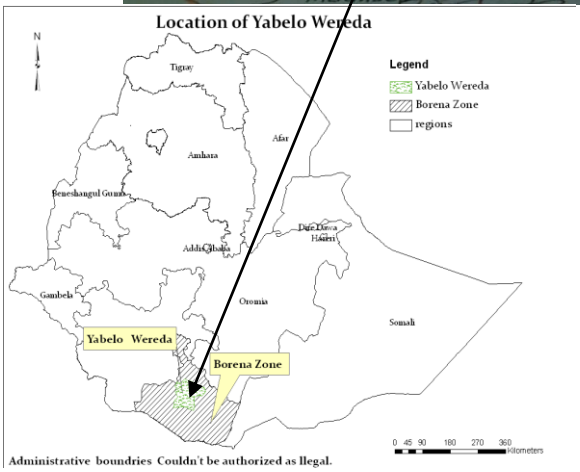
Location of Yabelo Wereda
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Amhara
Beneshangul Gumz
Addis Ababa
Dire Dawa
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2.2. Data collection

Data was collected using qualitative methods, in the form of FGDs and KIIs. The on-field data collection exercises were undertaken by a team of 16 facilitators, who were selected from different government offices in the woreda; and supervisors, who were selected from the ACDRM team. Representatives from the NGO partners operating in the area (i.e., Goal, CONCERN) also supported the data collection process. Box 1 provides the overview of the CoBRA field assessment steps and the key questions addressed through the FGDs and KIIs. Complete details of the methodology used to undertake the CoBRA assessment are included in the CoBRA implementation guidelines[11].

a three-and-half-day long training including a field-testing session in Yabello on CoBRA tools and data collection methods (e.g., FGD, KII and woreda level secondary data collection). The field training was also attended by a representative from UNDP-DDC (Nairobi) to provide necessary technical backstopping support. Immediately after the training and field testing of the pilot tools, the assessment team was divided into four groups of five members each, where every group comprised a supervisor and two pairs of facilitators. The supervisors and facilitators who were familiar with the local context jointly selected the locations and compositions of focus groups, using statistical data and criteria such as livelihood zones and level of interventions. Whenever possible, separate focus groups were organized for women and men to ensure that views on resilience from different gender groups would be adequately captured in the discussions. All male FGDs had more than 15 participants while female FGDs had at least five participants each. For those kebeles with insufficient number of female and/or male representatives, a mixed group was formed.

[11] http://www.undp.org/content/undp/en/home/librarypage/environment-energy/sustanable_land_management/CoBRA/cobra_guide/.

Following the ToT, ACDRM provided the facilitators and supervisors

Box 1: CoBRA Field Assessment Steps and Questions Addressed

FGD Step 1. Agree on the definition of resilience: What does a 'resilient' community look like? What are the main hazards or shocks facing the community?

FGD Step 2. Identify resilience characteristics: What does a 'resilient' community look like? What are the characteristics of a resilient community?

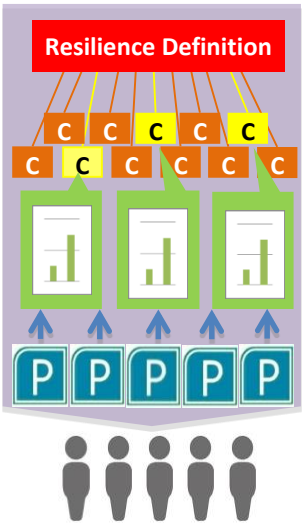
FGD Step 3. Prioritize resilience characteristics: Which resilience characteristics are the most important for the community (each FGD member ranks the three most important characteristics)?

FGD Step 4. Rate the community's progress in attaining the priority resilience statements: On a scale of 0 to 5, to what extent has this community achieved each of these characteristics in the current period, and in the last crisis period?

FGD Step 5. Identify the households in the community that have achieved (fully or partially) the resilience characteristics and list their common features and attributes

FGD Step 6. Identify interventions that have contributed to household resilience: What interventions have helped to enhance households' level of resilience, and what additional/future interventions would help to build resilience further?

KII with nominated resilient households: What factors or characteristics have contributed to your household's resilience? How did your household become resilient? Why do you think your family coped better with shocks and crises affecting the community? What interventions do you think would best build wider resilience in this community?



In each focus group location, at least one KII was undertaken with a household perceived to be resilient, as identified by focus group participants during their discussions. A total of 30 FGDs took place,

along with 28 KIIs. Table 1 summarizes the number and locations of FGDs and KIIs undertaken for this assessment.

Table 1. Demographic and livelihood data and number of FGDs and KIIs in the targeted kebeles

Name of Kebele	Population	Livelihood Zone	# FGD	#KII's
Ade Gelchat	2,710	Agropastoral	2	2
Areri	7,769	Agropastoral	2	2
Bildim roso	4,450	Pastoral	1	1
Charii	4,320	Pastoral	2	2
Dedertu	4,240	Pastoral	2	2
Dharito	3,150	Agropastoral	2	1
Dhadim	3,400	Agropastoral	2	2
Dia Hara	3,520	Agropastoral	2	2
Dida yabello	1,998	Agropastoral	2	2
Elwayee	4,000	Agropastoral	2	2
Harawayu	3,100	Pastoral	2	2
Harobeke	3,225	Pastoral	2	2
Obda	3,750	Agropastoral	3	2
Surpha	4,500	Pastoral	2	2
Tulawayu	3,525	Agropastoral	1	1
Utaloo	2,175	Pastoral	1	1
Total	**59,832**	**-**	**30**	**28**

1.3. Constraints and limitations of data collection process

Some of the key constraints experienced during the data collection process are listed below:

Resilience statement image/photo cards and bean scoring: As Box 1 shows, during the FGD participants were requested to develop outcome statements that described how their community would be if all households had achieved resilience. Each assessment team was provided with a set of simple images or photos to represent resilience characteristics, given the low literacy levels in some communities. As the participants mentioned one of these statements, the facilitators presented the relevant image. If non-standard statements were identified, facilitators were asked to draw simple corresponding diagrams or images and show them to the participants. In some FGDs, participants came up with a large number of statements and, accordingly, too many image/photo cards were displayed, resulting in many participants forgetting the relationships between the images and the statements. The iterative process of relating the corresponding statement to each image/photo took a long time and hence delayed the process. Further, at the time of ranking the statements with bean scores, some participants' ranking was influenced by the ranking given by the previous scorer without themselves properly looking into the whole set of the graphic pictures. The process of encouraging the focus groups to look at all the pictures carefully and relate them to their local realities in terms of resilience indicators without any bias resulted in longer time getting spent than was originally planned for the activity.

Changes in kebele boundaries: Right before the assessment, changes were made in the kebele administration boundaries by merging two kebeles into one or upgrading a portion of a kebele into an independent kebele status. These unforeseen changes made it difficult to select the locations and compositions of focus groups. Lengthy discussions were undertaken with the community representatives to resolve this challenge.

Conflicting schedules in some communities: During the period of the field assessment, woreda level trainings and awareness creation events on providing free labor service for natural resource management were conducted for a large number of community representatives. In some

locations, all the community leaders from both male and female groups were attending the trainings, and the assessment team had difficulties in organizing the FGDs without the presence of these leaders. This particularly resulted in poor representation of women in the FGDs as the contacted local partners provided more male representatives than females for the FGDs. Further, some of the age groups were not adequately represented in some communities, particularly the youth who were busy with other engagements.

2. Findings

This section reports on the summarized findings from the CoBRA field work conducted during December 2013 in Yabello woreda in Oromia Regional State. Specifically, the findings are presented according to the following categories:

- What are the main hazards or shocks facing the communities?
- What are the characteristics of a resilient community?
- To what extent has the community achieved resilience characteristics?
- What does a resilient household look like?
- What interventions contributed to household resilience?
- What additional interventions would best build resilience?
- How did key informants achieve and maintain resilience?

3.1 Main hazards or shocks

Overall, drought and associated food shortages, malnutrition and famine were perceived by the participants of focus groups as the most significant hazard facing the woreda in terms of frequency of occurrence and the number of people affected (i.e., most if not all the households in the assessed communities). All participants agreed to the droughts of 2010-2012 being the most damaging events, to be considered for the CoBRA assessment as this is in close agreement with the Humanitarian

Requirements Documents for 2011 and 2012. The number of beneficiaries of the humanitarian assistance increased from 38,268 in 2011 to 41,542 in 2012. Besides drought, seasonal floods, conflicts and animal diseases were also reported as the main hazards for the communities surveyed.

To a large extent, the communities viewed the current conditions as "good" or "normal" in comparison to the above mentioned crisis periods. For some communities, the situation still remains 'bad', because the long dry spell reduced crop and livestock production and hence has resulted in food insecurity.

3.2 Characteristics of a resilient community

Focus group participants were asked to describe what they view as the characteristics of a resilient community. In the following sub-sections, the results are first presented for the entire set of respondents to give an overall picture of the most highly rated statements. The results are then analysed further by category of respondent, i.e., gender, livelihood group and level of intervention in the community, which are used to disaggregate findings and identify differences across groups.

Analysis – all respondents

In each FGD, participants were encouraged to identify the characteristics or statements used to describe a resilient community. Once the long list of statements was completed, each member was given six beans to rank the three most significant statements in terms of priority for building resilience, with three beans for the most significant statement, two for the second most significant and one for the third. The bean scores were then totalled for each statement. For ease of

comparison, the statements were grouped into the five Sustainable Livelihood Framework (SLF) categories.[12]
Table 2 lists high to low ranked statements used to describe a resilient community within each of the five SLF categories (Note that many more statements/characteristics were included in the ranking, but were given low scores and hence are not reported here). The full list of the characteristics identified by the communities with scores and expanded statements is provided in Annexure 2.

Table 2. Community ranking of resilience characteristics by SLF category

SLF category	Top-ranking resilience characteristics	Total bean score*
Financial	Market service (181) Saving and credit service (159) Health care for livestock (153) Off farm activity (88) Agricultural input (72) House building (6)	659
Human	Human health service (127) Education from primary to tertiary (119) Productive Safety Net Program (PSNP) (15) Early warning service (5)	266
Natural	Land and rangeland management (76) Forest management and conservation (43) Pasture and fodder (30)	149

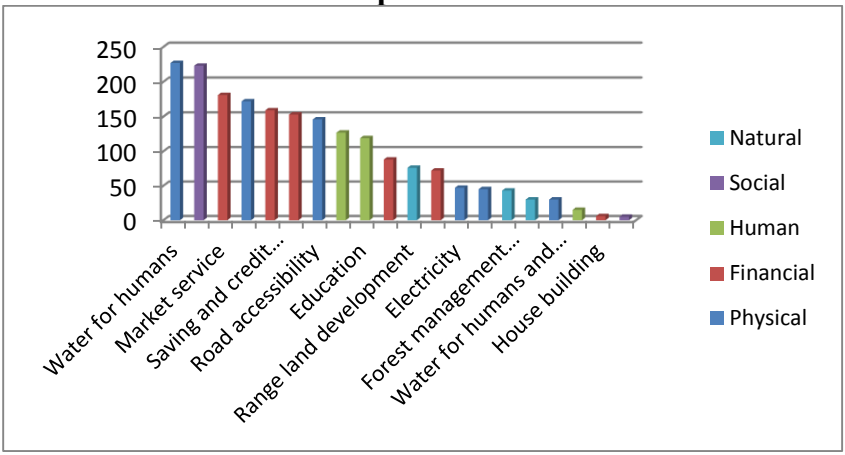
[12] The sustainable livelihood framework presents the main factors that affect people's livelihoods and typical relationships between them. It identifies five core asset categories or types of capital upon which livelihoods are built: financial, human, natural, physical and social. For further details on SLF, please refer to: UK Department for International Development (DFID), *Sustainable Livelihoods Guidance Sheets* (London, DFID, 1999).

Physical	Water for humans (227) Water for livestock (172) Road accessibility (146) Electricity (47) Telephone (45) Water for both humans and livestock (30)	667
Social	Peace and security (223)	223
Total bean score		**1964**

* Total bean score does not match the sum of the bean scores in the middle column because the middle column reflects only the top-ranking characteristics while the total in the right column reflects all the characteristics discussed in each category.

Figure 2 shows the high to low ranked characteristics used to describe a resilient community by all focus group participants in Yabello woreda in the order of bean scores. Figure 3 presents the total bean score under each of the five SLF categories.

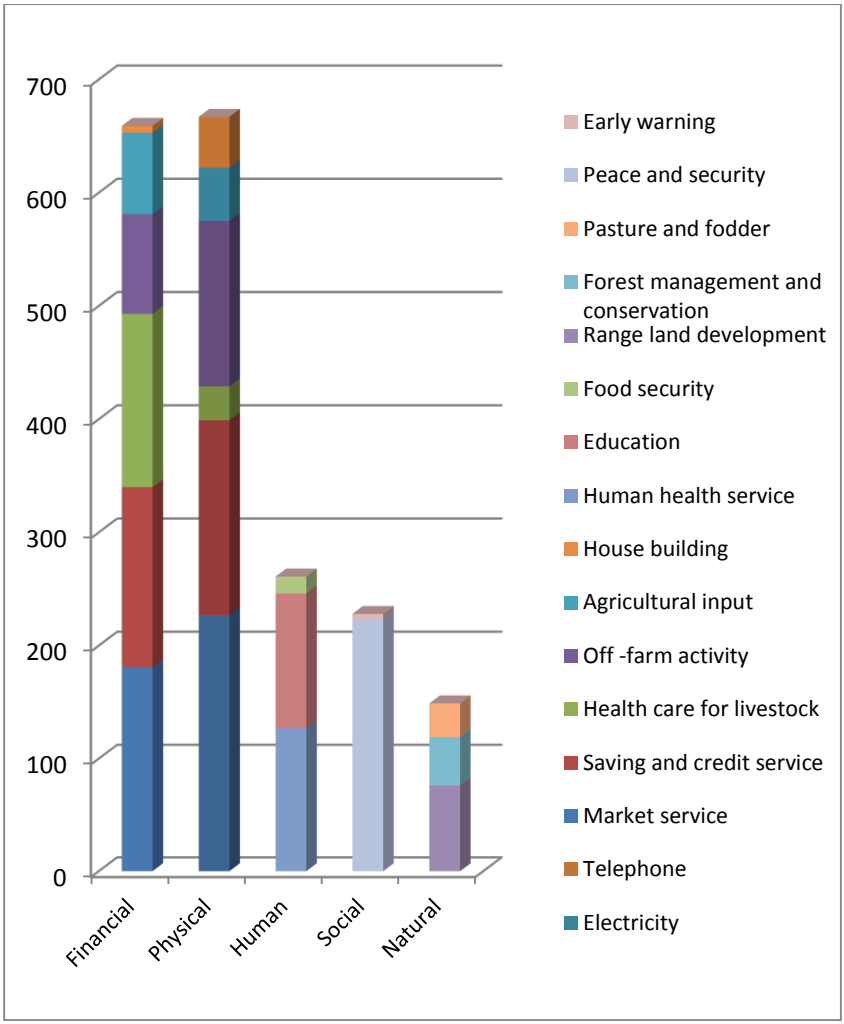
Figure 2. Top to lowest ranking resilience characteristics – all respondents



The characteristics on water supply for humans received the highest bean score (227) followed by peace and security (223), market service (181), water for livestock (172), and saving and credit service (159). Animal health (153), roads (146), human health service (127) and education (119) also received an above 100 bean score. In terms of the SLF categories, characteristics addressing financial (659) and physical (637) categories were ranked highly while human (266) social (223), and natural (149) categories received relatively lower scores.
The kebeles in close proximity to towns gave relatively higher bean score to primary/secondary education than those far from towns from observing households with educated members, that education is directly/indirectly linked to diversified and improved livelihoods, and better access to basic services in the long run. This is particularly applicable in view of the pastoralists' engagement with other economic activities in the woreda. Often, peri-urban households have transformed from traditional pastoral to agro-pastoral livelihoods by producing food crops in order to increase their family food security as well as to sell the farm products and diversify income sources.

With regard to the low score of food security, woreda sector office representatives in the consultative meeting shared the insight that food security is indirectly represented in the other characteristics particularly with market service, saving and credit and Productive Safety Net Program (PSNP). PSNP is a program run by the Ethiopian Government to address the needs of chronically food insecure households in selected woredas in the country. It operates as a social security, targeting poor households in two ways: through public works on soil and water conservation, tree planting and rural road construction; and direct support to those who cannot work. Communities now understand that productive farms, education, peace and security, health, natural resources, roads, etc. contribute to overall food security in the long run. Nonetheless, a recommendation was made to analyse the food-related community statements further to better understand local food security priorities in terms of access to the Productive Safety Net Program.

Figure 3. Top to lowest ranking resilience characteristics by SLF category—all respondents

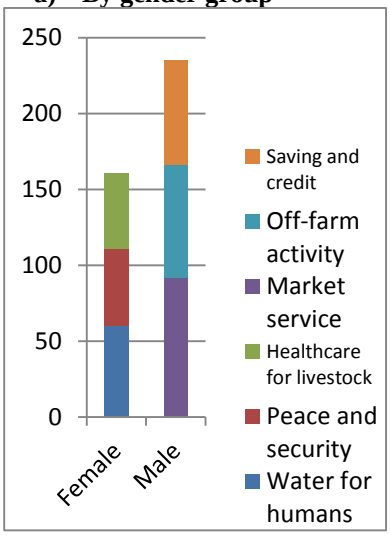


Analysis by gender

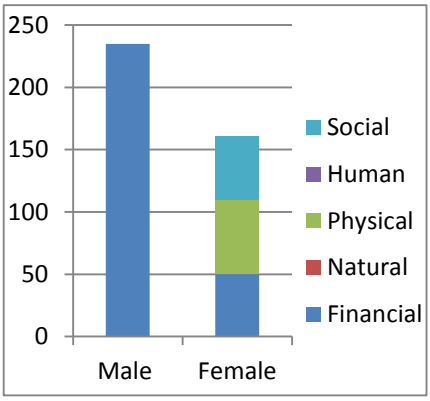
The resilience statements were analysed by gender groups comprising women and men groups, as well as mixed groups (men and women together). The mixed group was established in those kebeles with insufficient number of women and or men representatives to form separate gender groups.

Fig.4. Top-ranking resilience characteristics:

a) By gender group



b) By SLF categories



The most highly ranked resilience characteristics and their scores by gender group are presented in Table 3, which shows how differently women and men rate resilience characteristics. Women gave highest ranks for water availability for humans, reflecting their responsibility for taking care of their family. Men ranked market service in their top three, possibly reflecting the fact that men are primarily involved in herding

and therefore are more likely to be affected by large-scale cattle loss during a shock.

Surprisingly, the mixed groups (females and males together) ranked peace and security highly. This may reflect that when women and men representatives come together in a focus group discussion they may agree during discussions that all an important reason affecting resilience in their locality was tribal clashes between the communities. It should be noted that the members of the mixed FGD respondents were not pooled from the members of the women and men FGD participants; rather the mixed group formed by pooling men and women from kebeles which did not have sufficient number of women and men representatives. However, during the review and validation workshop held on April 3rd, 2014, the participants felt that the mixed group ranking is misleading; and they did recommend excluding it in the report. Hence the data obtained from mixed FGD was not shown in the report.

Table 3. Top-ranking resilience characteristics by gender group

Gender group	Top 3 resilience characteristics	Total score*
Female	Water for humans (60) Peace and security (51) Healthcare for livestock (50)	421
Male	Market service (92) Off-farm activity (74) Savings and credit service (69)	604

- *The third column reflects the total bean scores for all the statements provided by focus groups, while the bean core in the middle column reflects only the top-ranking characteristics in each group*

The subsequent consultative meeting with woreda line office and woreda level validation workshop provided further insight on the results as follows:

Women

- Water for Humans: Women's high priority on water availability reflects their burden of fetching water from long distances as well as their responsibility to prepare food for household members.

- Peace and security: This characteristic was prioritized relatively highly by both women and men based on the understanding that long-term stability is important to attain all other characteristics of resilience, more so since the woreda is located in the border area between Kenya and Somalia and characterized by volatile security situations. However, reduced cross-border tension in recent years has led to the improvement in peace and stability in the area.

Men

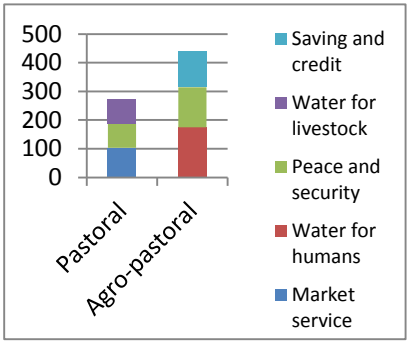
- Pastoralist men often try to find additional income in the towns working as daily labourers, so FGDs with men prioritized off-farm activities and market access as resilience characteristics. Many reviewers commented that these alternative income generating activities are increasingly becoming the key income sources at household level, as many are in transition from exclusively pastoral to agro-pastoral livelihood systems.

Analysis by livelihood group

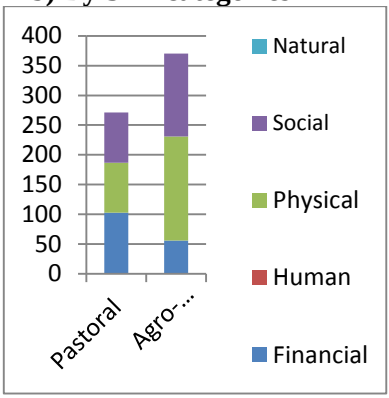
Resilience statements were also analysed for two livelihood groups: agro-pastoral and pastoral. Figure 5 illustrates the differences in bean score allocation by the five SLF categories among the two livelihood groups.

Figure 5.Top-ranking resilience characteristics:

a) By livelihood group



b) By SLF categories



Further to this, the most highly ranked resilience characteristics by livelihood groups are presented in Table 4.

Table 4. Top-three-ranking resilience characteristics by livelihood group

Livelihood groups	Top three resilience characteristics	Total score
Pastoral	Market services (103) Peace and security (84) Water for livestock (84)	749
Agro-pastoral	Water for humans (175) Peace and security (139) Saving and credit (125)	1215

*****Total score does not match the sum of the scores in the middle column because the middle column reflects only the top-ranking characteristics while the right column reflects all the characteristics discussed in each category

The data suggest the following:

- The pastoral group placed far greater weight on market services. This is because the area is hit by recurrent drought and the pastoralists require stable and reliable access to market for selling or restocking before they lose livestock resources in a disaster. The group prioritized peace and security, and water for livestock equally followed by health care for livestock, suggesting that these characteristics are critical to protect the assets and sustain pastoral livelihood.
- The agro-pastoral group prioritized water for humans. Like the pastoralists, peace and security was second in their priority. Additionally, they gave high priority to saving and credit service as a resilience characteristic.

Analysis by intervention level

A consultation was made between the CoBRA assessment team and woreda government sectoral offices to map the accessibility to and presence of the following basic services and interventions in all the Kebeles in Yabello woreda:

- Number and level of schools;
- Number and level of health facilities;
- Tarmac roads;
- Other main roads;
- Well-functioning livestock market/s;
- Water supply;
- Savings and credit programmes;
- Cash transfers;
- Telephone/ mobile phone coverage.

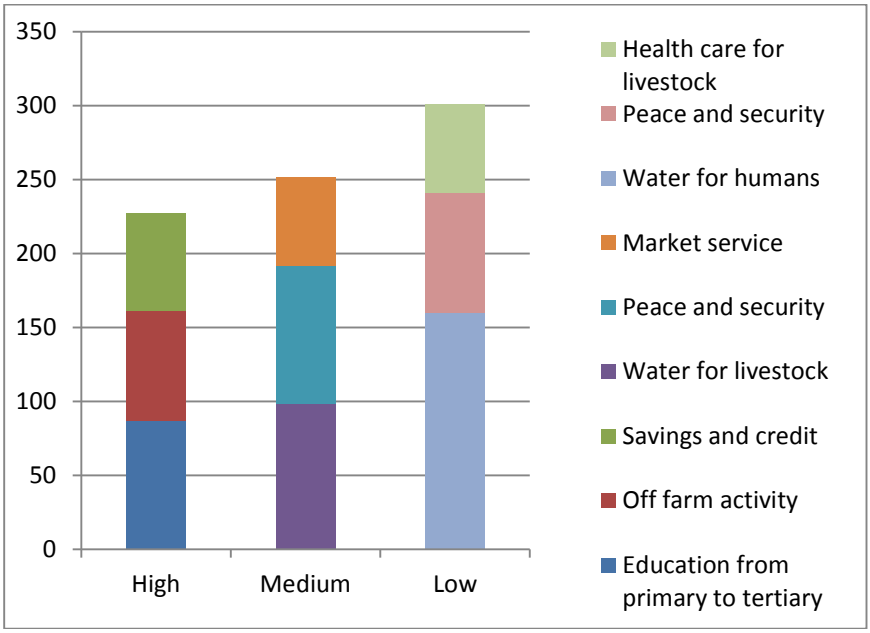
Interventions that are universally provided in all the kebeles, such as emergency food aid, were excluded from this mapping exercise. The 16

assessed kebeles were then divided into three groups based on the number of interventions:

- Four kebeles were categorized as low intervention areas;
- Ten kebeles were categorized as medium intervention areas; and
- Three kebeles were categorized as high intervention areas.

Figure 6 shows the differences in bean score allocation according to the five SLF categories among the three kebele groups with different services/intervention levels.

Figure 6. Top-ranking resilience characteristics by level of intervention.



Further, the most highly ranked resilience characteristics by intervention level are presented in Table 5.

Table 5. Top-ranking resilience characteristics by intervention level

Intervention level	Top three resilience characteristics	Total score
High	Education (87) Saving and credit service (79) Off-farm activity (46)	681
Medium	Peace and security (94) Market service (79) Off-farm activity (23)	596
Low	Human health (127) Water for livestock (87) Market service (57)	687

* Total score does not match the sum of the scores in the middle column because the middle column reflects only the top-ranking characteristics while the right column reflects all the characteristics discussed in each category.

The data suggest the following:

- High intervention areas have consistently placed the greatest emphasis on education. Populations in these areas understand that education is a key to improve livelihoods, increase income and assets and withstand various shocks and stresses in the long-run. They also prioritized financial characteristics of resilience such as saving and credit service, which help to protect their existing assets as well as help them to build additional resources.
- Medium intervention areas placed peace and security in higher priority to maximize the safety of their livelihood, followed by financial characteristics such as market service and off-farm

activity as these help to increase the household income. Market access also increases the availability of food.

- Low intervention areas placed greater emphasis on human health due to less availability of health care centres (clinics, hospitals, etc). They also prioritized water for livestock, since these areas rely on natural resources for the availability of feed and water for their livestock.

2.3. Extent to which the community has achieved resilience

Initially, the focus group participants were asked to consider trends in their prioritized characteristics of resilience. For each prioritised characteristic, participants were asked to provide a joint answer to the question: "over the last five years, has your community's attainment of this characteristic got better, worse or stayed the same?" on a scale of: 5- better;4- somewhat better; 3- no difference; 2- somewhat worse; and 1- significantly worse.

Next, they were asked to quantify the extent to which they had achieved their priority characteristics of resilience. Each statement was scored twice, first for the current period (agreed to be a normal period) and second for the last significant crisis period (almost universally identified as the drought period of 2010-2012), on a scale from 0 to 5, with 5 reflecting perfect attainment of that characteristic (for example, the entire community has access to sufficient, good-quality water at all times during a calendar year), and 0 reflecting no attainment (the community has no access to sufficient, good-quality water at all times of the calendar year).

Table 6 presents the trends and attainment scores by SLF category for the ranked characteristics of resilience. Overall in a normal/current period, community members ranked their attainment of characteristics of resilience on average 3.46 out of 5 as opposed to 2.48 during the crisis period. The greatest degree of attainment for the current period was seen

in the resilience characteristics on market service, saving and credit and animal health in financial category; water livestock and water for humans in physical category; human health, food security and early warning in human category; as well as peace and security in social category. In the natural category, although the average difference between crisis period and normal period is not high the attainment for forest management and conservation was almost double during recent years as compared to crises years. The reason for this can be attributed to government's strong commitment towards expanding the forest/ wood land cover through afforestation and law enforcement to minimize illegal tree cutting. These interventions have resulted in greater forest/bush cover on range and pasture land in the recent years after 2010–2012 crisis. The highest score given for peace and security can be the result of higher social stability and safety established in the area in recent times, suggesting that these communities have gained much greater benefits from peace.

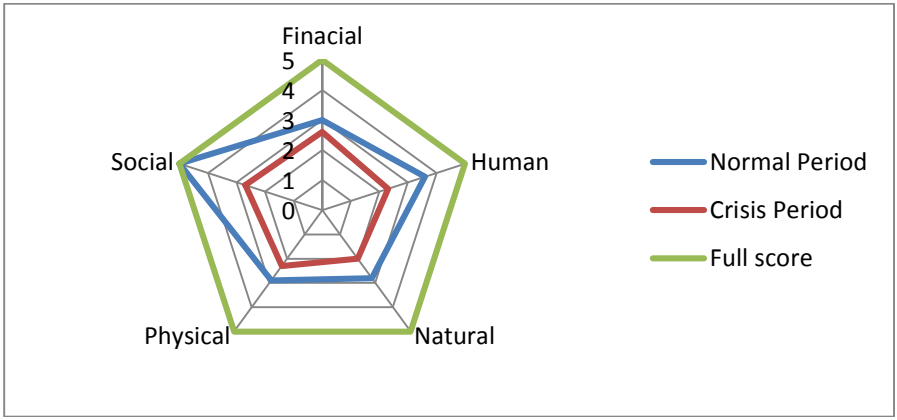
Relatively positive trends in the attainment of the resilience characteristics correspond closely with the changing local circumstances such as growing access to market service, water for humans and livestock as well as the progress in ground implementation of humanitarian interventions. For example, the government's recent initiatives in agricultural and rural development sectors (e.g., irrigation schemes, micro finance, livestock destocking and restocking through safety net programs, law enforcement on illegal tree cutting, etc.) may have directly/indirectly led to the communities developing a positive view towards the attainment trends of related characteristics such as saving and credit services, education, water for human/livestock, peace and security, forest conservation, etc. Improved climatic conditions would have increased pasture and fodder production and this may have encouraged pastoralists to manage available range-land for their livestock well. All these interventions and changes have contributed to the reduced livestock losses during crisis periods and enabled the protection of productive assets.

Table 6. Community attainment of resilience characteristics by SLF category.

SLF category	Top ranked statements	Trends the last five years	Crises year	Current year
Financial	Market service (181)	No difference	2.5	3.6
	Saving and credit service (159)	No difference	2.7	2.9
	Animal health (153)	Somewhat worse	2.5	3.3
	Off farm activity (88)	Somewhat better	3.0	2.8
	Agricultural input (72)	No difference	2.2	2.3
Category average			**2.6**	**3.0**
Physical	Water for humans (227)	Somewhat better	2.3	3.2
	Water for both humans and livestock (30)	Somewhat better	2.8	3.5
	Water for livestock (172)	Somewhat better	2.3	3.7
	Electricity (47)	No difference	1.5	1.6
	Roads (146)	Somewhat better	2.5	2.7
	Telephone(45)	Somewhat worse	2.6	2.6
Category average			**2.3**	**2.9**
Human	Human health (127)	Somewhat better	2.9	3.4
	Education (119)	Somewhat better	2.9	2.8
	Access to early warning (5)	Better	0.0	5.0
	Productive safety net program (15)	Somewhat better	1.3	3.0
Category average			**1.8**	**3.6**
Natural	Land and rangeland management (76)	Same /no difference	1.9	2.2
	Forest management and conservation (43)	Same /no difference	1.7	3.2
	Pasture and fodder (30)	No difference	2.3	2.8
Category average			**2.0**	**2.8**
Social	Peace and security (223)	Better	2.7	5.0
Category average			**2.7**	**5.0**
Overall average attainment level			**2.28**	**3.46**

Figure 7 illustrates the spider diagram of perceived attainment rates of resilience characteristics per SLF category. The outer ring represents a perfect or ideal score for all statements in that SLF category. The blue band shows communities' average attainment of those characteristics in the current period, and the red line represents perceived attainment in the last crisis period.

Figure 7. Community attainment of resilience characteristics- all respondents (score 0-5)



Generally, score differences in attaining the SLF categories are minor, but a comparison of the scores between the current period (perceived to be normal) and the crisis period (2010–2012 drought period) shows greater vulnerability in these categories. The dynamic nature of the 2010–2012 drought, which was characterized by long periods of dry spells followed by occasional flash floods and subsequent sporadic animal diseases, may partially account for the large gaps. The scores may reflect the need for more timely response in these areas at the onset of future drought hazards, before the impacts of shocks affect respective resilience characteristics significantly.

Overall, although some characteristics may have more gaps between normal and crises period, the communities in all the kebeles consider that they have overcome the stage of "vulnerability and assistance dependence" and are now in the process of preparing themselves to emerge from the impacts of the shocks, through stabilized asset building. These communities are therefore "vulnerable, but viable." [13]

Table 7 aggregates the scores given to each of the five SLF categories to provide an overall 'resilience score'. While this clearly masks differences between SLF categories, it is useful to provide an overall indicator of where communities see themselves, for comparison across groups. The figures should be viewed with some caution, as these scores represent community perceptions around attainment, and thus could overstate or understate reality.

Table 7. Aggregate resilience scores

	Current year rank	Crisis year rank
All groups	3.46	2.48
Livelihood group		
Pastoral	3.40	2.50
Agro-pastoral	2.95	2.70
Intervention		
High	2.93	2.83
Medium	3.16	2.73
Low	3.56	2.56

Note: Maximum possible score of 5

[13] From Enhancing Resilience to food security shocks in Africa, Discussion Paper 2012.

Results by livelihood group show minor differences in the resilience scores, where in the normal period pastoralists rank 3.4 and agro-pastoralist's rank 2.95. The reason for this can be attributed to the fact that pastoralists own large number of livestock or wealth during "normal" periods and tend to be more resilient whereas agro-pastoralists are unable to own similar numbers of livestock. In contrast, in crisis years, the resilience of pastoralists drops because they can lose their assets within a short time. However, due to adequate level of interventions in the recent years, their resilience even in crisis years is improving. On the other hand agro-pastoral groups depend partly on petty trading and on crop production which can also be affected by rainfall availability and decreases their income during crisis years. Rainfall dependent crop production is vulnerable to rainfall variability and this reduces their income and hence their resilience.

When the scores are disaggregated by level of interventions, surprisingly, low intervention areas ranked their level of attainment of resilience characteristics in current year more highly (3.56) than medium (3.16) and high (2.93) intervention areas. The reasons for this can be that low intervention kebeles are all pastoral communities, and the improvement in rainfall condition during the last two years has helped them maintain and increase their livestock and build assets and resulted in improving their resilience. Likewise, the medium intervention areas comprise both pastoral and greater proportion of agro-pastoral communities, and their resilience has increased more than that of only agro-communities. High intervention areas are all agro-pastoral communities, and their asset building towards resilience takes longer and is relatively lower than the low and medium intervention areas.

The woreda validation meeting reviewed these gaps in resilience scores between agro-pastoral and pastoral livelihood groups. The participants' insights are listed as follows:

Agro-pastoral

- The resilience attainment of these groups is more than the overall average. In the past years droughts have been affecting the food security situation in the woreda. In the current year, rainfall has been relatively higher and has resulted in good crop production.
- Government policy strategically focuses on the settlement of pastoralists and encourages sedentary farming. Under this framework, agro-pastoralists are the main recipients of increasing support from the government and other partners in Yabello woreda, as part of the transition from the former purely pastoral practices to more diversified livelihoods.

Pastoral

- Improved animal health through vaccination and disease control has been instrumental in improving resilience in Borena zone where Yabello woreda is located. Additionally, restocking interventions have been implemented by Pastoral Community Development Commission, NGOs and UN partners (e.g., FAO and UNDP). This has improved livelihoods in Yabello woreda.

- Due to high animal mortality during the crisis years (2010-2012), the pastoralists have suffered heavy livestock losses and it is difficult for them to replenish this resource within a few years' time. Therefore, their resilience would take a longer time to attain a higher level.

2.4. What does a resilient household look like?

Focus group participants were asked to describe the characteristics of households that are more resilient compared to others, i.e., the households that have already attained many (or all) of the resilience qualities prioritized. Consistently cited attributes and features of resilient households include ownership of a large herd including camel (currently

owned by 70% of households), access to veterinary services (currently benefiting 60% of the households), engaging in off-farm activities (currently benefiting 45% of the households), and having access to credit and saving services (currently benefitting 45% of households). The results indicate that resilience in households is typically characterized by the amount of assets and degree of accessibility to different goods and services. The percentage of households benefited from attributes of resiliency is listed in Table 8.

Table 8. Frequently cited features of resilient households

Characteristics of resilient households	Percentage of households benefited
Owning a large herd including camel	70
Having access to high quality rangeland	60
Restocking the herd in a timely manner	60
Having access to veterinary services	55
Having access to consistent peace and security	50
Having good family planning system	50
Engaging in off-farm activities	45
Having access to credit and saving services	45
Having member(s) who have completed primary education	25
Making hay	15
Saving money in the bank	10
Having access to high quality pasture, water and fodder	10
Having access to community pond	10
Accumulating enough food at home	10
Having access to improved roads	10
Owning a quality house in the town	5

Focus groups were then asked whether the number of resilient households is increasing, decreasing or staying the same. Table 9 presents findings for all respondents as well as findings disaggregated by gender, livelihood groups and intervention level. Please note, however, that the disaggregation is based on a small sample size and therefore the results should be viewed with caution.

Table 9. Is resilience increasing, decreasing or staying the same?

Respondents	Increasing	Decreasing	Staying the same
All respondents	11.1%	34.8%	53.9%
Gender			
Women	6.1	29.0%	64.8%
Men	16.2%	40.7%	43.1%
Livelihood groups			
Pastoral	0.0%	62.7	37.2%
Agro-pastoral	19.8%	36.1%	44.0%
Intervention level			
High	31.0%	23.0%	46.0%
Medium	11.0%	27.0%	62.0%
Low	0.0%	100.0%	0.0%

Overall, 11.1% of all respondents said that their resilience is increasing. Men were more likely to say that it was increasing (16.2%) than women (6.1%). More women tended to say that their resilience remained the same (64.8%) than men (43.1%).

A greater proportion of agro-pastoralists tended to conclude that their resilience is increasing (19.8%) as opposed to pastoralist communities (0%). The reason for this could be that agro-pastoralists have diversified their income sources compared to pastoralists who still rely on their livestock as their income source. In contrast, a higher proportion of pastoralists claimed that resilience is decreasing (62.7%) compared to the agro-pastoralists (36.1%). This might be due to the significant decline in herd size in the last decade. When disaggregated by intervention areas, high intervention areas show the highest percentage of respondents stating a resilience increase (31%), the medium areas tended to rate the resilience as staying the same (62%) while low intervention areas concluded that their resilience is decreasing (100%).

2.5. Interventions that contributed to household resilience

Communities were asked to list all the services and interventions they had benefitted from in the last two to five years. A reasonably wide range of interventions was mentioned, falling into the following categories: water, education, health, agricultural inputs, access to credit or other forms of business support, infrastructure, etc. From this long list, each community (through focus groups) was asked to jointly identify the most important current or previous interventions that had been most beneficial in building their resilience, and to explain the reasons for selecting those interventions. Table 10 shows that, among other existing interventions, those relating to water, education, health, productive farming and access to credit were prioritized most regularly.

Table 10. Ranking of resilience-building interventions

Type of intervention	Currently or recently provided	Further or future provision	Total score
Water Water source (pond) construction and/or maintenance, both for humans and livestock	25	50	75
Health Constructing health posts and upgrading status of health stations (staffing, drug availability, etc).	20	30	50
Access to credit or other forms of business support Particularly village saving and loan schemes	20	40	60
Infrastructure (road)	15	35	50
Education Constructing primary schools and encouraging enrolment of children and girls	15	30	45
Inputs to productive farms Irrigation, cattle fattening, agricultural inputs and extension services, etc.	10	30	40
Food Security (Productive Safety Net Program) (Beneficiaries)	10	20	30

Please note that the data in this table is sorted from the highest to the lowest score of currently provided intervention.

The focus groups were also asked to list three additional interventions they felt would best build their resilience. Most groups restated interventions similar to those mentioned in the first list, with the justification that the current provision or scale of intervention should be expanded (Table 10). The table shows seven intervention areas which are presented in a descending order of priority that the community suggested as divers for resilience.

Repeated high priority given to water, health and access to credit and saving interventions reflects their importance as characteristics of resilience for all focus groups. Water related interventions were highly prioritized (75 in total) by both pastoral and agro-pastoral livelihood groups, not surprisingly, given their direct impact particularly on improving food security and livelihoods. Health, education and infrastructure interventions were seen as a benefit that would improve lives and livelihoods, and contribute to various income generating opportunities such as future employment. Access to credit—specifically village savings and loans schemes—was also frequently cited. It reflects the power of credit in enabling households with depleted resources to start small businesses like rearing goats and sheep. Overall, education was the fifth ranked intervention, followed by productive farm-inputs and PSNP.

2.6. How key informants achieved resilience

A total of 28 KIIs were identified as resilient households by each focus group. Interviews were conducted with members of these households to examine the following four areas:

- Composition and characteristics of the household;

- Pathways to resilience;
- Ability to cope with recent shocks and hazards; and
- Priority interventions recommended.

2.6.1. Composition and characteristics of resilient households

The KII record sheet listed the age, gender, education level and economic activity of all interviewed members of the resilient household (Annexure 5). A total of 28 key informant households were interviewed. The household size varied from a family size of 1 member (2 households) to a family size of 12 members (1 household). Within this range, 2 households had 3 persons in the family, 5 households had a family size of 4 members each, 4 households had a family size of 5 members each, 1 household had 7 members, and another 5 households had a family size of 8 persons each. Two households had a family of 9 members, 3 households reported a family size of 10 members each, another 3 households had 11 family members each, whereas only 1 household consisted of 12 persons. The overall average family size was estimated to be 2.5 persons per household, which was much lower than the average household size reported for Borena zone (with average household size between 4.3 in urban and 5.4 in rural areas) and for Oromiya Regional State (with the average household size between 3.7 in urban and 5.0 in rural areas)[14]. Households with a higher proportion of youth have more productive labor available, which is highly favored by families and is also associated with increased prosperity.

According to the Yabello WDRMP (2011), the average literacy rate is low: only about 8% of the surveyed population could read and write easily, while another 3% of the population could read and write with difficulty. The general literacy level of the population above seven years of age is 9%. With regard to the education level attained, 83% of the population above 15 years of age have completed only 1st grade, and

[14] CSA. 2007. The 2007 Population and Housing Census of Ethiopia, Oromya Population.

only 9% and 4% of the population have managed to complete primary and secondary schools respectively. Concerning the CoBRA key informant households, all households had at least one member who had completed 1st and 4rd grade education and 21 household had members who had completed 1st grade, 2 households had members who had completed 2nd grade and 1 household had atleast one member who had attained 4th grade level in education. None of the households had members who had attained secondary education.

All the 28 KII respondents had household members engaged in one or more of the following activities:

- Livestock rearing/cattle fattening (28),
- Livestock/business/petty trade (27)
- Agriculture (9), and
- Wage employment or casual labor (4)

The age range of the respondents was 25–67 years, where the majority (17 respondents) were in the productive age group (i.e., range of 25–49 years) which was enabling them to manage different activities. The key informant households' economic activities were largely similar and included selling livestock, livestock products and/or crops. Some of them (28%) were engaged in retail business and rental of land and even had houses built in towns. Other respondents (14%) were engaged in regular employment in intermittent wage labour (road construction, local carpentry, etc.).

Majority of households (96.5%) were involved in livestock and petty trading. In general, the major income sources of the pastoralists was trading of livestock and sale of livestock products, while agro-pastoralists tended to have more diverse sources including petty trading (e.g., selling consumable items and crop products) and other on-/off-farm activities. The difference in wealth among the key informants depends largely on the number of livestock owned and/or agricultural land owned. Those possessing large number of livestock (e.g., more than 100) visit the market more frequently (in once a week or month), while

those with less livestock, which was the case for the majority of the key informants, come to market as infrequently as once or twice a year. As a result, diversification of income sources is perceived as a key strategy for resilient households to remain resilient.

Pathways to Resilience

Respondents stated that they became resilient because they have been involved in different income generating activities such as engaging in off-farm activities, credit and saving services. One respondent said that he earned some money from gold mining (which is an off-farm activity) and established himself as an agro-pastoralist with 15 livestock, which he purchased with the gold mining income. Few others said that they become resilient because they had changed the type of livestock to goat and camel rearing, which are relatively more drought tolerant and can survive with less pasture and water scarcity, as well as having more demand and better price in the market. The majority (50%), mainly those around towns, reported that they utilized the early warning information and sold large proportions of their livestock before the hazard materialized, keeping the money in the bank to invest it in other income generating activities later.

Ability to cope with recent shocks and hazards

All of the resilient households, both pastoral and agro-pastoral, felt that they were less affected by the recent drought hazard and became more resilient than others because of various coping activities, which include, among others:

- Avoiding livestock loss during the crisis period by selling them earlier and keeping the money in the bank etc., to reinvest;
- Maintaining water (e.g., building ponds) and procuring hay in a timely manner to feed their productive livestock (e.g., cows, female goats, etc.);

- Accessing to saving and credit services and undertaking petty trading;
- Migrating to where pasture and water is available in a timely manner;
- Engaging in off-farm activities.

Importantly, many resilient households referred to the support provided by government and non-governmental organizations in awareness raising, training/capacity building, which educated and empowered them to undertake these modern and innovative preventive, mitigative and preparedness actions (e.g., diversification of economic activities, utilization of early warning information for timely destocking/destocking, etc., access to saving and credit services).

Priority intervention areas and interventions recommended

An extensive list of interventions was recommended by both the focus group participants and the key informants, and the two groups shared a common view on the interventions needed to build resilience in the following areas:

- **Water for humans and livestock:** In Yabello woreda where many households are highly dependent on livestock rearing, water and pasture play critical roles. Just to save their livelihoods, the government, UN agencies and NGOs often provide water rationing service during droughts in the woreda. Both pastoral and agro-pastoral households prioritize interventions for water development to gain more permanent access to water resources for livestock and human consumption and this is a major factor in building their resilience.
- **Access to credit:** Access to credit was ranked as one highest resilience characteristics and the key informants recommended

that this practice be expanded in the future. According to WDRMP survey (2011), access to credit is limited in the woreda and only 11% of the households have borrowed money.

- **Agricultural inputs:** According to the Household Economic Approach study (2009), the whole Borena zone is a net consumer of food crops. However, this situation is changing as an increasing number of households shift to agro-pastoral livelihood and many households are now engaged in crop production for both household consumption and income generation. Commercial farming is considered profitable in Yabello woreda as the price of cereals and pulses in the woreda is relatively higher than in other areas. Many agro-pastoral key informants expressed their interest in expanding agricultural practices and recommended interventions in this area.

From the data obtained it is clear that many of the FGD respondents and key informants did not mention skill development as a key intervention area. They ranked formal education believing that it would help their children attain some employment after graduation and this will improve their living conditions and hence build their resilience. This might be due to the fact that most of the respondents are less educated and are unaware of other additional skills which could help improve their efforts to generate additional income.

With respect to maintaining resilience at the household level, many resilient households referred to the support provided by government and non-governmental organizations in awareness raising, training/capacity building which educated and empowered them to undertake these modern and innovative preventive, mitigative and preparedness actions (e.g., diversification of economic activities, utilization of early warning information for timely destocking/destocking, etc., access to saving and credit services).

Key informants were asked to list up to three most important interventions to improve their communities' resilience. Interventions

most frequently mentioned were justified on the basis of their helping increase households' productive assets and business skills, and hence income. While a diverse set of interventions was recommended, some of the most frequently mentioned interventions include:

- Business skills, and savings and credit: Expansion of business skills and diversifying income sources with savings and credit support were most frequently cited (19 respondents). These interventions included the creation and enhancement of informal savings and credit/self-help groups, business training and capacity building for diversification of livelihood activities (both on- and off-farm) and increased access to more formal credit and banking services.
- Livestock support: Interventions around improving livestock production were came second, being cited by18 respondents. These included the fields of livestock market access, livestock management practices, restocking with more drought-resistant breeds, pasture management, fodder production and animal health care.
- Water for humans and livestock: Water resources related interventions were third most frequently cited, by 11 respondents. Both pastoral and agro-pastoral households prioritized the establishment of new water facilities as well as the rehabilitation of the existing ones to ensure more permanent access to water resources for livestock and human consumption.
- Farm support: Eight agro-pastoral key informants expressed their interests to expand their agricultural practices and recommended interventions in training related to crop farming and species.

3. Summary of feedback from kebele representatives, woreda sectoral offices representatives and technical stakeholders/experts at higher level.

3.1. Feedback from woreda level validation meeting

The findings from 16 kebele assessments were presented to community representatives who came from 17 kebeles to attend the woreda training workshop. A separate session at the woreda level was also held with various technical stakeholders/experts pooled from woreda sector offices on December 28th, 2013, after the completion of field data collection (*See Annexure 3 for the list of woreda level technical stakeholder participants in the validation workshop*). Pastoralist and agro-pastoralist community representatives, as well as woreda sectoral office representatives were briefed on data collection process (FGD and KII) and on the findings of the assessment in the meeting. Selected questionnaires were presented for their views on resilience characteristics in the woreda. No major gaps or disparities were found between the two groups (*Woreda sectoral office heads and community representatives*) in their understanding of the CoBRA process. Both the kebele and woreda representatives accepted all the findings and emphasized that land use planning and demarcation of pasture land from farm land needed to be worked out by the government.

3.2. Feedback from national consultative workshop

In addition to the initial meeting at the woreda level, the Yabello woreda CoBRA findings were presented to representatives from the government and from UN Agencies and NGO offices as technical stakeholders/ experts (Annexure 4). The major feedback, comments and suggestions on the data presented is included here, to help add to the understanding and context of the findings.

- **Participants felt that the ranked resilience characteristics resonated with the reality in these communities.**

  Overall, there were no surprises and the statements prioritized by the communities were confirmed to be as expected by technical stakeholders who suggested that these characteristics were known and also reported by other WDRMP assessments. They also felt that the list was adequately exhaustive. The meeting participants agreed that many of the highly ranked statements reflected issues that were not adequately addressed in the woreda. They highlighted 'access to credit and water' as sectors that are critical to resilience but are largely not sufficiently addressed. They also felt that education was critical. However, they also suggested that some of the resilience characteristics or statements identified by the community need to be disaggregated further for clarity. For example, peace and security is a broad concept which could include the elements of good governance, functioning of local institutions, public participation, etc. Additionally, they also recommended that it may be useful to analyze the data at Kabele level to capture more context specific information rather than generalizing the findings only at woreda level.

- **Participants agreed with the resilience-building measures cited**. Almost all resilient building measures considered critical by the findings of this study had more or less been tried either by government, UN agencies or NGO's in the woreda. Therefore, high priority issues mentioned in the data were accepted by the participants. But they recommended that it would be useful to have an in-depth analysis of indigenous coping strategies used by pastoralists vis-à-vis the CoBRA results as one way of enhancing resilience of pastoral communities.

- **Participants felt that the characteristics of a resilient household—saving and credit, employment, diversified income generating activities and large herds—were accurate.** They made no particular comments.

- **Attainment of resilience scores is based on perception as well as timing of the assessment.** The participants expressed concerns for a risk of the scores to be taken as precise and not placed within the local context. Further, that scores were heavily influenced by seasonality and current conditions. As a result, an assessment undertaken in a few years might not provide a sense of whether or how resilience has improved, as it could be affected equally by the set of unique local conditions of that period, rather than truly reflecting how conditions have changed over time.

- **The participants agreed that the assessment results could be usefully adopted by identifying 'keystone' indicators for monitoring.** CoBRA highlighted a few resilience statements that the communities in Yabello woreda largely view as common priorities, which can be monitored independently as a small set of key markers of resilience. These indicators could also be compared to standard data sets, such as the WDRMP, poverty indicators and Household Economy Analysis data, to identify the gaps in long-term monitoring frameworks for building resilience. It would be critical to cross-reference the CoBRA data/findings with other existing datasets such as WDRMP in order to compare and complement the recommendations from different studies.

- At present, crop-farming is being widely practiced by many households in Yabello. It would be critical to assess the feasibility of this livelihood diversification practice for resilience building of pastoral households.

- On the gender disaggregation, the participants noted that the mixed gender group ranking is misleading and needs to be excluded from the report presentation, since it gives conflicting information on the resilience characteristics prioritization. For example it is difficult to understand how peace and security emerge as the first priority when the neither male nor female respondents give it the highest ranking.

- It is useful to add an explanation of the method for selecting participants of the FGDs, in terms of age, livelihood, and wealth groups etc., for clarity. Selection of the participants in the FGDs should be undertaken in a structured manner to capture the various dynamics determining their responses.

5. Conclusions and recommendations

5.1. Conclusions

- FGD and KII participants in Yabello woreda identified 18 characteristics that can increase their resilience, namely, water for humans (227), peace and security (223), market service (181), water for livestock (172), saving and credit service (159), animal health (153), roads (146), human health service (127), education (119), off-farm activity (88), agricultural inputs (72), production of pasture and fodder (30), water for both humans and livestock (30), electricity (47), telephone (45), food security (15), house building (6) and access to early warning information (5). When these were categorized by SLF categories, the physical category attained a high ranking and this shows that the community is still predominantly engaged in traditional pastoral livelihood. There is clear evidence that the illiteracy level of the community is high.

- Pastoralists in Yabello woreda are in a transition stage from *pastoralism to agro-pastoralism*, which is reflected in the statement on 'improvement in agriculture practice' getting one of the highest bean scores.

  As discussed above, small numbers of respondents (11.1%) in the FGDs and KIIs said that their resilience was increasing, while a relatively larger number (i.e, 34.8% and 53.9%) reported that their resilience was decreasing and remaining the same, respectively. As compared to the number of food aid beneficiaries, out of the total population of 102,165, food aid beneficiaries in 2011 were 38268 (i.e. 37.5%) and in 2012 were 41542 (i.e., 40.7%). The results obtained from FGDs and KIIs found to be within the range of food aid supported population.
- From the data collected it is understood that resilient households are those who have access to large number of cattle, diversified income generating opportunities such as off-farm employment and/or accumulated relative wealth in cash or in kind. Resilient households sell their livestock before the drought arrives and retain only productive animals (cows, ewes) through feeding accumulated hay and utilizing water rationing. In most cases they send the animals to other places where water and pasture is available.

5.2. Recommendations

The following recommendations were drawn from the results of field assessment and feedback from local and national consultations:

A. Strengthen and improve the availability of water for human and livestock consumption

The population of Yabello woreda and the surrounding zone is known to lead a pastoralist livelihood and being predominantly dependent on natural resources (for grazing and browsing of their livestock) and seasonal rainfall. Therefore, it is not surprising if they relate water with their existence. Borewell construction to store seasonal rainfall and flood-waters as well as maintenance of traditional deep wells is important to improve the availability of water both for humans and livestock for boosting production of livestock and increase the resilience of the community.

B. Improve livestock market services

The pastoral community is the largest supplier of livestock in the country—both for domestic consumption and export. However, the community is unable to derive significant benefits from the sale of animals due to poor market infrastructure and lack of associations. It is recommended therefore to further strengthen existing markets and introducing required goods and services to bolster trade of livestock. Recently, the government has started providing early warning information on droughts, and communities are exercising destocking of livestock

population before hazards hit the area to prevent death of livestock. This maintains the resilience of the community. Over 50% of the community were beneficiaries of early warning information system for livestock destocking, and 60% of the households were benefited from timely restocking. Additionally, improved market situation also supports the health of livestock as the availability of drugs and vaccines improves.

C. Enhance saving and credit services

It was clear that the FGD respondents and resilient KIs used saving and credit services for local agricultural commodity exchange to make a reasonable profit. Because of limited access to credit and saving services brokers are monopolizing the market and are key barriers preventing households from making profits and investing to expand their agricultural production and other income generating activities.

D. Expand the outreach of education including skill development for agro and pastoral youth

The assessment results indicated that access to secondary and tertiary level education in Yabello is still very low, despite the fact that the government is investing to expand educational facilities in pastoral areas. The FGD and KII respondents have articulated that formal education is important for their children to shape their future destiny. They also emphasized that secondary and technical, and vocational education and training is very important as this is strongly linked with employment and other opportunities and at the end help to improve the resilience of the household.

E. Enhance agricultural production and sustainable use and management of natural resource

The communities in the kebeles utilize large area of range land, but the availability of fodder and grass is gradually declining. This is because in addition to rainfall variability there is no planned utilization of natural resources, and a combination of these factors has resulted in the scarcity of resources which most of the times leads to conflicts. This needs serious measures to be taken to save the natural resources as well as to maintain the livelihood of the community.

The FGDs and KIIs highlighted that increasing crop production is important to cover both household consumption and to get additional income. Therefore, the supply of improved crop varieties and other agricultural inputs is important to increase the income and hence the resilience of the community.

F. Improve Road Accessibility

Many of FGD and KII respondents have emphasized the importance of road accessibility. Roads help them to reach their service destinations as well as the markets. Road accessibility also helps to expand education in the remote kebeles.

Annexure 1. List of participants in the CoBRA assessment in Yabello woreda

- **ACDRM Team**

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- **Yabello woreda Team**

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16	Behailu Asres	Experienced Private Worker	0916130440
17	Robele Balchs	Pastoralist Office	
18	Barite Gudina	Womens Association	
19	Guyo Kalicha	Agri-Business Development Office	0910013173

Annexure 2. Complete resilience statements and scores by FGDs

Resilience characteristic	Complete resilience statement	Bean score
Financial		
Market services	The community would have easy access to markets to buy necessary consumable goods and sell their produce (e.g., livestock and animal products).	181
Saving and credit	People would have good access to affordable credit and would be saving money (through banks, microfinance organizations, community savings and credit).	159
Health care for livestock	The community would have access to high-quality and affordable animal health services, including veterinary services and vaccinations, whenever they need them.	153
Off-farm activities	Many households would be involved in off-farm income generating activities such as small businesses, wage labour and trading.	88
Agricultural inputs	Farmers would be more productive and profitable (i.e., they would have access to inputs like improved seed, fertilizers and good pest management system).	72
House building	Building additional house/s around towns generate additional income.	6
Human		
Human health services	The community would have access to quality and affordable basic health care locally	127

Education from primary to	All children would be able to complete primary education as well as the young	119
Physical		
Water for humans	The whole community would have access to sufficient, good-quality water at all times of the year.	227
Water for livestock	Livestock would have access to sufficient water at all times of the year through the improvement of traditional water storage and construction and regular maintenance of water points.	172
Road accessibility	There would be good-quality roads to and from the community.	146
Electricity supply	The community would have access to affordable electricity supply.	47
Telephone	There would be a reliable mobile phone network to all communities all the time.	45
Water for both humans and livestock	Availability of water is the guaranty for existence/livelihoods. Otherwise there will be forced migration searching for water and pasture which in turn results in ethnic clashes (sometimes cross border conflicts), health problems for both humans and animals.	30
Social		
Peace and security	The whole community would enjoy continual peace and security.	223

hence help maintaining large herds.

Annexure 3. Participants in CoBRA Yabello woreda technical stakeholders feedback session.

Name	Organization	Telephone
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Kadiro Abdulkadir	Yabello Woreda Health Office	0911
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Kanu Boru	Yabello Woreda Administration Office	0911 078724
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Addisu Tuna	Education Office	0916982821
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Wario Denge	Rural Road Office	0912748415
Bolfo Simon	Education Office	0937328907
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Doyo Galgalo	Woreda Finance Office	0911958445
Hutu Jarso	Cooperative Office	0916178533
Marigeta Tadesse	Woreda Youth and Sport Office	0917848748
Gino Boru Gelma	Woreda Administration	

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Guyyoo Guttu	Obda Kebele	
Lokko Abdu (F)	Surpha Kebele	
Elemaa Biduu (F)	Bildum Kebele	
Jaraa Joroo (F)	Adegelchat Kebele	
Boraqee Huqaa	Dida Yabello Kebele	
Qurii Libon (F)	Tuluwayu Kebele	
Warioo Boru	Chari Kebele	
Kadiroo Debessa	Utalo Kebele	
Looko Jatanii	Harawayu Kebele	
Warioo Huqaa	Abanuhara Kebele	

Annexure 4. Participants in the national workshop on "Enhancing Community Resilience: Learning from CoBRA Yabello Woreda Assessment"

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48	Fiseha Haile	DRMFSS	0920 22 11 45
49	Solomon Aklilu	AAU	0911 13 63 84
50	Fikre Firew	AAU	0921 33 56 62
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57	Sofonias Yosef	AAU	0913 91 87 62
58	Tsefye Beyene	AAU	0911 51 94 49
59	Mubarek Mohamed	AAU community radio	0923687400
60	Eyuel Solomon	Afro Fm 105.3	0911 65 84 69
61	Fesha Amare	AAU	0913 55 50 82
62	Ezra Ejigu	Fana	0911416678

Annexure 5. Indicator for key informant age, livelihood, family condition and income source

Name of KI	Age	Kebele	Livelihood	No of Family	Education (grade)	Health condition	Source of Income
Dawa Jera	40	Surphaa Bereso	Pastoral	3	3	Good	Sale of animals once a year
Bakie Hirbo	63	Yubdo	Agro-pastoral	8	3	Good	Sale of animals once a year
Alima Sheremo (F)	56	Surphaamagala	Pastoral	4	1	Healthy	Sale of animals twice a year and sale of milk daily
Sake Huluka (F)	60	Adegelchat	Agro-pastoral	5	1	Good	Sale of animals twice a year
Jatenie Kechie	36	Cherie	Pastoral	4	1	Healthy	Sale of animals once a year
	45	Elwaye	Agro-pastoral	4	1	Healthy	Sale of animals twice a year and sale of milk daily

Dalecha Huqa	30	Areri	Agro-pastoral	5	3	Good	Sale of animals once in a year, milk weekly, crops once in a year
Gudayie Godana (F)	38	Arboro	Pastoral	7	1	Healthy	Sale of animals once a year, milk monthly
	60	Dharito	Agropastoral	4	1	Healthy	Sale of animals twice a tear
Masule Godana (F)	25	D/Saden	Pastoral	5	1	Healthy	Sale of animals twice a tear, milk monthly
Dadie Guio	42	Dederte	Agropastoral	9	3	Healthy	Sale of animals twice a year, crops once a year
Anna Sorsa (F)	35	Dedertu	Agropastoral	11	1	Healthy	Sale of animals monthly, milk monthly, crop twice a year
Elema (F)	67	Dhadim	Agropastoral	10	1	Healthy	Sale of animals

Alie Guiyo	60	Haro beke	Agropastoral	10	1	Healthy	Sale of animals 5 times per year, milk daily
Waqo Arero	52	Ade Gelchat	Pastoral		1	Healthy	Sale of animals 6 times per year, milk and others 3 times per year
Kossie Guyo	55	Arboro	Agropastoral	8	1	Healthy	Sale of animals monthly, crop twice per year, house rent monthly.
Bokayo Jarsso	40	Chlokesa	Agropastoral	8	1	Healthy	Crop sale twice a year, cattle fattening
Jatenie Gulechia		Chlokesa	Agropastoral	3	4	Healthy	Sale of animals twice a year, milk and others 2 times per year, petty trade all year round, as employed in road construction and as

							carpentry assistant twice a year.
Boneyia AbaKule	48	Tula wayu	Pastoral	12	1	Healthy	Sale of animals twice a year, house rent monthly. petty trade monthly
Haro Godana	55	Utalo	Pastoral	8	1	Healthy	Sale of animals twice a year
Godana Taa	32	Dida hara	Agropastoral	5	1	Healthy	Sale of animals twice a year, petty trade daily
Keble Gelma	45	Harawayu	Pastoral	9	1	Healthy	Sale of crops twice a year, sell of milk daily, salary
Gelgelo Elemu	45	Harawayu	Pastoral	8	1	Healthy	Sale of animals yearly, crop yearly
Tadie Debesso	49	Dedertu	Agropastoral	4	2	Healthy	Sale of animals twice a year, milk and others monthly, petty trade, all year

							round, wage from road construction
Gofer Kurie	40	Dadim	Pastoral		1	Healthy	Sale of animals twice a year, livestock trade weekly
Mengistu Assefa	49	Obda	Agropastoral	10	2	Healthy	Sale of animals and crops once a year
Tume Abdie Jilo	60	Harobeke	Pastoral	11	1	Healthy	Sale of animals 3 times and milk daily
Huka Bante	45		Agropastoral	11	1	Healthy	Sell of animals and crops twice yearly