

# Land Security is Food Security

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A case study on the linkages  
between land tenure security and  
food security in Ethiopia.



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## List of Abbreviations

BecA	Biosciences eastern and central Africa
CGIAR	Consultative Group for International Agricultural Research
EG&T	Economic Growth and Transformation Office
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
HDI	Human Development Index
IFAD	International Fund for Agricultural Development
ILRI	International Livestock Research Institute
LAND	Land Administration to Nurture Development
MDG	Millennium Development Goals
NGO	Non-governmental Organization
RLAUD	Rural Land Administration and Land Use Directorate
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development

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## **Abstract**

Focusing on land tenure issues is vital when conceptualizing successful solutions and projects as there is a clear association between land security and food security. People and communities who possess extensive rights to the land often have better opportunities to support a sustainable livelihood than those who have limited rights or no rights at all. Thus, the land is one of the most powerful resources farmers and communities can utilize to increase food production and overcome food insecurity. This study analyzes the association between land tenure security and food security within rural pastoral communities in Ethiopia's highlands. This was done by conducting semi-structured interviews with three categories of people: organization representatives, government officials, and rural farmers in the Bale Mountains. Because of the topic's sensitivity, interviews became rather difficult to conduct because respondents sometimes did not feel comfortable with the nature of the study.

During the study, various conclusions were made based off of the responses given by the subjects interviewed. The study quickly identified the fact that livestock-grazing areas do in fact make a big contribution to achieving food security in rural areas. It was also concluded that one must feel secure on his or her land and confident that the land is theirs in order to be productive on these livestock-grazing areas. Many rural farmers in Ethiopia currently do not feel secure on their land. Consequently, they are not producing enough food to feed their families. This was evident in the village where this study was conducted. Although this is the current status, the government has begun issuing land certificates within the highlands which is contributing to an increase in confidence. Lastly, the study determined, despite the fact that many people believe issues around land security issues are raised enough, discussions involving the topic are not as prevalent as other pressing issues.

Although the results of this study will not be of extreme relevance to pastoral areas outside of Ethiopia – because of the country's unique circumstances – it will help us better understand the needs and problems of rural Ethiopian livestock herders including pastoralists and mixed crop-livestock farmers.

## **Introduction**

### **2.1. Personal Background**

Growing up in a small rural town in Texas, agriculture has always been a part of my life. Whether I was raising livestock in my local FFA chapter or growing crops in my backyard, I could often find myself associated with agriculture. Entering high school, I knew I wanted to pursue a career in agriculture – granted, I didn’t really know exactly what I wanted to do specifically. I continuously found myself changing my career path every other week – from veterinary medicine to food science and even agricultural engineering. It wasn’t until I attended the Global Youth Institute in October 2015 when I finally found what career I wanted to pursue. The three day symposium opened my eyes to an entirely new field that I knew would be ideal to complement my interests and aspirations.

Upon graduating from Somerset High School – located just fifteen minutes southwest of San Antonio – I will double major in International Agriculture and Rural Development and Development Sociology at Cornell University. Attending the Global Youth Institute introduced me to a career path that encompassed both of my passions – helping others and agriculture. After learning about the Borlaug-Ruan International Internship from previous interns, I knew this was the perfect opportunity to experience firsthand what it is like to work in development. I decided to apply for the internship and after a very long and stressful five-month process, I was informed that I would be placed at the International Livestock Research Center in Addis Ababa, Ethiopia.

### **2.2. International Livestock Research Institute**

The International Livestock Research Institute – a member of the CGIAR Consortium – is a non-profit institution with partnerships worldwide that work to advance livestock production practices in order to raise communities out of poverty (CGIAR 2016). With its headquarters in Nairobi, Kenya, a principal campus in Addis Ababa, Ethiopia, and offices in West and southern Africa and in South, Southeast and East Asia, IRLI works on seven different research programs including animal biosciences, animal science for sustainable productivity, BecA-ILRI Hub, feed and forages bioscience, food safety and zoonosis, gender impact, livestock systems and environment, policy and value chains, and vaccine biosciences (ILRI 2016). The Ethiopia campus hosts twelve different organizations and research centers – ranging from wheat improvement to water management. These NGOs and research centers are working tirelessly to address the issues threatening food security and development – not only in Ethiopia but across the world.

One of ILRI’s responsibilities is the coordination of the International Land Coalition’s Rangelands Initiative – global component. ILC is a global partnership of intergovernmental and civil society organizations working to improve security and access to land (ILC 2016). One of ILC’s community-based initiatives focuses on rangelands working across Africa, Asia and Latin America. The global component led by ILRI focuses on the influencing global processes to pay more attention to land governance issues in rangelands and to support policy and legislation that enables the securing of rangelands for local rangeland users. Due to the fact that having equitable access to land is “fundamental to sustainable development”, the Rangelands Initiative acts as a vital advocate for communities where land ownership is unstable. Ethiopia is a prime example of where the ILC Rangelands Initiative through ILRI provides technical support to the development of policies and legislation that better protects rangelands resources for pastoralists and other local rangeland users.

### 2.3. The Federal Democratic Republic of Ethiopia

Ethiopia – Sub-Saharan Africa’s second largest country in terms of population – is considered one of the oldest civilizations, as well as one of the world’s poorest countries (World Bank 2016). Of the 195 sovereign countries in the world, Ethiopia ranks 174 on the UNDP Human Development Index (UNDP 2015). Although the country has made considerable progress towards achieving the UN MDGs, it continues to face persisting challenges regarding poor education, extreme pollution from the agricultural industry, and a corrupt political system (AfricaW). According to the Ethiopian government, the agricultural sector dominates the country’s economy accounting for nearly 50% of the GDP and still employs nearly 80% of the population (World Factbook 2017) The country’s most important agricultural exports include tea, beeswax, leather products, and, especially, coffee.

### 2.4. Ethiopian Land Policy

Before examining the current policies that govern Ethiopia’s land, it is important to first explore the preceding land tenure systems to understand the connections between the two. Over the course of the past century, Ethiopia has been ruled by several different regimes and governments – creating instability in the previous land holding systems (Weldegebriel 2012). The three most recent ruling bodies include the imperial regime of Haile Selassie, the socialist military regime, also known as The Derg, and the current Federal Democratic Republic of Ethiopia. Strong similarities can be drawn between all three of the land policies implemented by the different leaderships, though there are slight distinctions. Ethiopia’s land policies are unique to other African countries because it was never colonized by a western nation.

#### 2.4.1. Past Land Policies

**Haile Selassie Regime:** While Ethiopia was under Selassie’s rule, there was a vast and complex land tenure system in place. According to the United States Library of Congress, just in the Wollo Province, there were more than one hundred different types of land tenure. Assessment of landownership in Ethiopia was extremely difficult because of the various systems and the inadequate data records. In 1966, the emperor imposed a modern tax system which required the registration of all land holdings. The goal of this tax system was to dissolve the power of the landed nobility, but was opposed great by the parliament due to the fact that they were all land owners (Library of Congress). Under the regime, citizens inherited land from their family and were prohibited to sell it because “land was a common property of the village community”.

**Derg Regime:** The Derg, otherwise known as the Provisional Military Administrative Council, replaced the Selassie regime in 1974 and nationalized all rural lands (Jemma 2004). The reform measures put into place by the Derg initially provided use rights and tenure security to rural peasants, but allowed the government to control the rural economy and rural decision making. Although the reform changed many policies set forth by the preceding government, the Derg retained state ownership of the land, igniting a huge debate over land policies.

#### 2.4.2. Current Land Policies

**Federal Democratic Republic of Ethiopia:** Ethiopia is one of the few African countries that has yet to make significant modifications to its basic land policies implemented by its imperial rulers (FAO). Currently, citizens do not completely own the land which they reside on. Rural citizens only have use rights for the land that have inherited by their ancestors. Urban citizens may lease land in the city for up to 99 years. Selling or transferring land is prohibited by the government.

## Research

### 3.1. Conceptual Background

This study analyzes and assesses the connections between land tenure security and food security in the country of Ethiopia. Before beginning the analysis on these two issues, it was best to conduct theoretical research on them first. Below, both food security and land tenure security are defined – in general – to better understand the concepts. In addition, the terms ‘rangelands’ and ‘pastoralism’ are also defined as these areas of land and this agricultural practice were looked at greatly throughout the duration of the study.

- **Food Security:** Food security, as defined in The State of Food Insecurity 2001, is “a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO). Furthermore, we can now define the state of food insecurity as a situation when people do not have continuous access to safe and nutritious food in order to live a healthy life. According to the FAO’s State of Food Insecurity in the World 2015, food insecurity may be caused by several factors such as inadequate purchasing power, poor food production practices, and insufficient distribution of food – among other things. The time in which one suffers from food insecurity may vary from household to household but is often defined as either chronic, seasonal, or transitory. Food insecurity – in addition to deficient health conditions, feeding practices, and sanitation – can lead to other poor nutritional statuses such as malnutrition, undernourishment, and undernutrition.
- **Land Tenure Security:** Stated by the FAO, tenure security is “the certainty that a person’s rights to land will be recognized by others and protected in cases of specific challenges”. Unlike food security, tenure security cannot be directly measured and is – for the most part – what others acknowledge it to be. Households that do not have the security of land tenure are threatened greatly of insufficient food production and are not able to maintain a sustainable livelihood. The four common categories of tenure systems are private, public, open access, and communal. Rights to the land are often identified as use rights, control rights, and transfer rights, but may be defined further. Poor tenure security, of course, can lead to landlessness and ultimately extreme poverty.
- **Rangelands:** According to the Oregon State University Department of Animal and Rangeland Sciences, rangelands are a type of land where grasses, shrubs, and legumes are grown through a naturally occurring ecosystem such as a tundra, desert, or forest. Grasslands are identified as the largest ecosystems in the world, accounting for more than fifty million square kilometers (FAO). These areas serve as an important food source for livestock in both developed and developing countries.
- **Pastoralism:** Pastoralism is an agricultural system practiced by people living in dry, arid lands where farming is not suitable (IFAD). Pastoralists depend greatly on the status of the surrounding ecosystems and their livestock. According to IFAD, there are approximately 200 million pastoralists around the world. Although many challenges threaten the livelihoods of pastoralists, this livestock system is the best way to produce food and income in these harsh areas.



Several studies have suggested that food security can be increased even when farmers have access to small plots of land. It is understood that having adequate access to land – especially for rural farmers – is essential to produce enough food for one’s household. Furthermore, other studies have shown the importance of land tenure security issues being brought up on the local, national, and international dialogues sufficiently in order to meet the needs of the rural farmers. Pastoralist living and raising livestock in rangelands require abundant access to land and this study will identify the current status of food security in the Ethiopian rangelands.

### **3.2. Hypothesis**

How exactly do world leaders, NGOs, and the people growing food themselves plan to feed a population of over 9 billion by 2050 (Devex 2014)? Will they focus on improving water systems? Are they going to implement technology that will allow farmers to cultivate their land quicker, or perhaps introduce new breeds of crops that will produce more? What about focusing on the basic human and fundamental rights of owning the land on which people farm? According to the Thomson Reuters Foundation, in developing countries alone, such as India, Ecuador, and Uganda, usually less than half of the population owns extensive rights to their land if they own land at all. This statistic is even higher amongst women in developing countries. Is it possible for farmers to live productive and healthy lives even though they do not completely own land? There are many questions surrounding the idea that one must feel secure on the land they own in order to produce an adequate amount of food for their family. This study will focus on these pressing questions and will analyze the connections between land tenure security and land rights and food security.

Before beginning research on the linkages between land and food security, the following key questions were developed to form the foundation of the study:

1. How do rangelands and livestock-keeping areas contribute to food security at different levels such as community/local, national, and international?
2. How important is land tenure security in the rangelands and livestock-keeping areas for achieving food security?
3. What is the status of land tenure security in rangelands and livestock-keeping areas?
4. To what degree are rangelands and/or the land tenure security of rangelands part of discussions, debate, and dialogue on food security at the international/global and/or regional levels?

After developing this premise of questions to be asked, two initial hypotheses could be formulated. The first hypothesis was security to land and resources for the rangeland users is a determining factor of their food security. This postulate formed the basis of the study and would ultimately confirm if people need to have secure rights to land in order to produce enough for their families. The second hypothesis was the security of rangelands is not given adequate attention on the local, national, and international levels of dialogue on food security – playing a very important role determining whether or not this issue needs to be brought up more often.

### 3.3. Methodology

In order to produce the results for this report, multiple methods of research were conducted. The first method carried out was conducting semi-structured interviews with three categories of people – Category A, or representatives from NGOs, multilateral organizations, and research centers, Category B, or government officials, and Category C, or mixed crop-livestock farmers. This three-pronged approach would best surface the beliefs, statuses, and needs of the farmers as well as get insight from several leaders of different backgrounds. During the interviews, participants were asked a series of questions – both scripted and spontaneously (see appendix 1, 2, and 3 for questions). Their responses were used to answer the study’s key questions. For Category A, there were nine participants – all from organizations associated with food and/or land security. There were three participants from Category B, all working for the Ethiopian Ministry of Agriculture and Natural Resources and Ministry of Livestock and Fisheries. Category C was made up of sixteen farmers from the small village of Soba – located in the Bale Mountains (see appendix 4 for map). This group was equally represented by eight men and eight women and of various ages, household sizes, and agricultural backgrounds (i.e. type of livestock raised, crops grown, etc.).

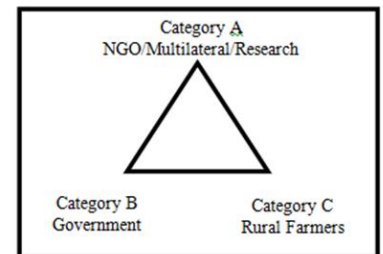


Figure 1: Figure displays the three-pronged approach that was used to collect qualitative data and to address all perspectives.

Conducting interviews with all three of these groups contributed to the success of this study because it allowed for responses from three different perspectives. Category A gave a perspective from the people producing data and formulating solutions for the challenges facing food security in pastoral areas. Category B served as the viewpoint from the government and allowed us to understand the policies they put in place. Arguably the most important category, Category C enabled the study to review firsthand the lives of rural Ethiopian farmers.

Category A – NGO/Multilateral/Research			
Label	Name	Organization	Position
A01	Michael Jacobs	Mercy Corps Ethiopia	Chief of Party, PRIME Project
A02	John Graham	Save the Children	Country Director, Ethiopia
A03	Dejene Negassa	USAID LAND Project	Pastoral Land Tenure Specialist
A04	Samuel Tefera	Addis Ababa University	Educator
A05	Dubale Tessema	USAID EG&T Office	Pastoralist and Livestock Programs Coordinator
A06	Yigrem Kassa	Mercy Corps Ethiopia	Deputy Chief of Party, BRACED
A07	Abraham Bongassie	Concern Worldwide – Ethiopia	Assistant Country Director
A08	Abubeker Ali	FAO Ethiopia	Resilience Team Leader
A09	Jason Sircely	ILRI	Ecosystem Ecologist

Table 1: Table displays the participants from NGOs, multilateral organizations, and research centers.

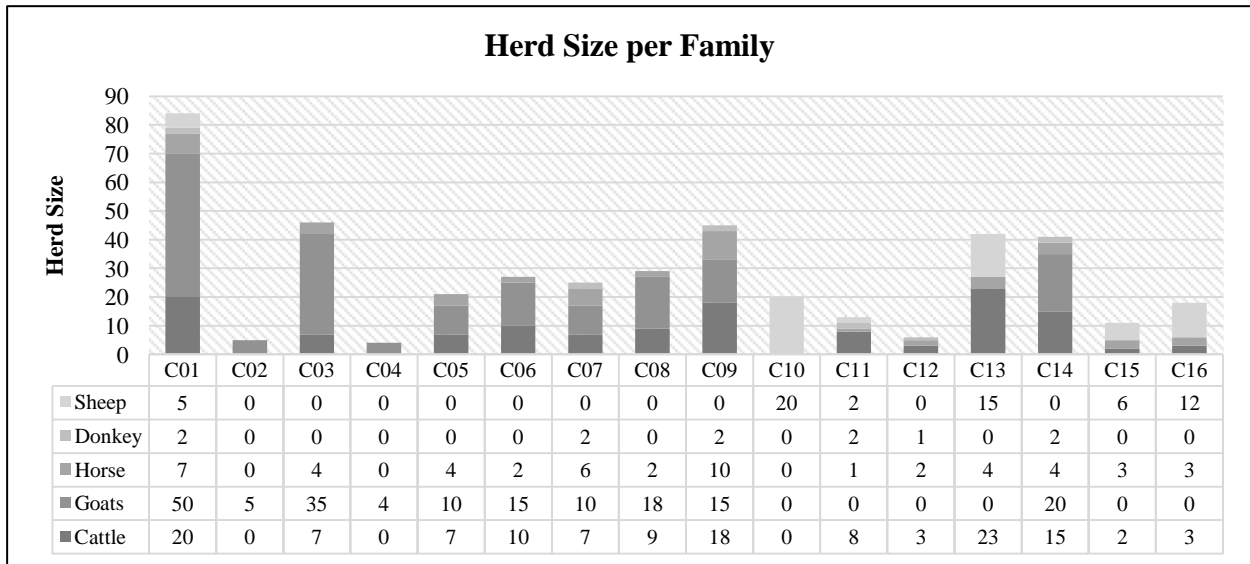
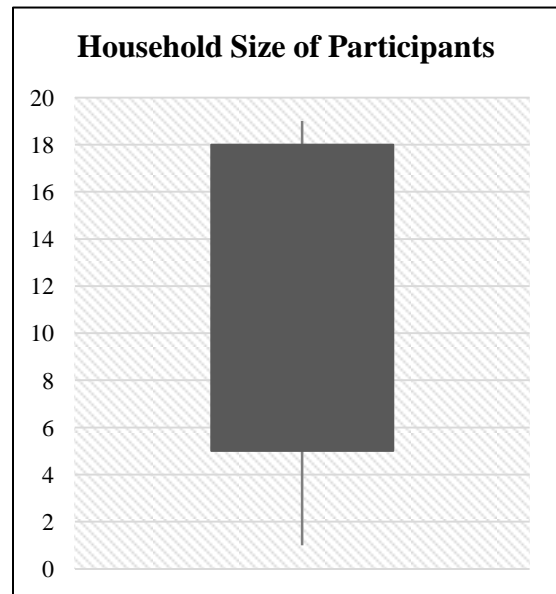
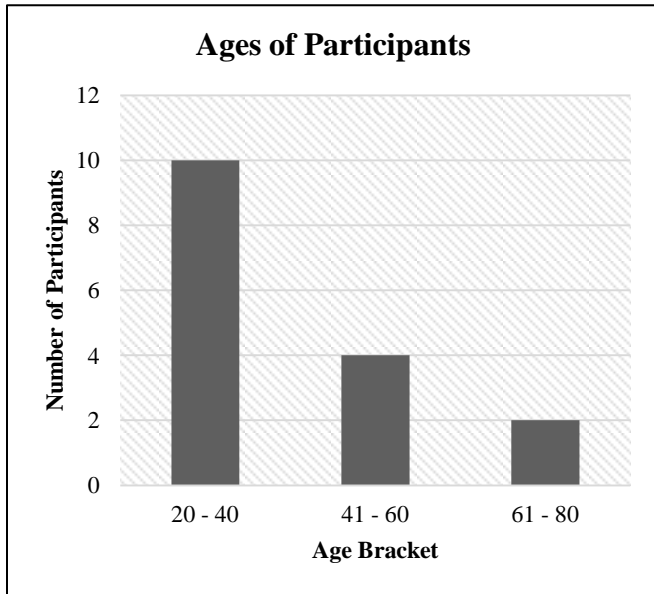
Category B - Government			
Label	Name	Organization	Position
B01	Bogale Abebe	Ministry of Agriculture and Natural Resources	Senior Land Use Expert, RLAUD
B02	Derara Kumbi	Ministry of Agriculture and Natural Resources	Rural Land Expert
B03	Daniel Temesgen	Ethiopian Society of Animal Production	Program Manager

Table 2: Table displays participants from government offices.

Category C – Mixed Crop-Livestock Farmers				
Label	Name	Age	Household Size	Sex
C01	Roba Beker	47	18	Male
C02	Mohammad Amino	65	10	Male
C03	Lamio Jarso	25	7	Female
C04	Mohammad Kadish	23	5	Male
C05	Bifto Tuti	70	9	Male
C06	Sophia Koge	50	10	Female
C07	Momina H/Wotesa	40	10	Female
C08	Kemerya Mamo	23	4	Female
C09	Abdurehim Kanku	52	12	Male
C10	Muzdmil Haji	22	1	Male
C11	Zaro Obse	35	7	Female
C12	Rahma Tufa	20	4	Female
C13	Hamziya H/Ilmi	22	19	Female
C14	Abdukadir H/Fato	38	14	Male
C15	Hussen Kanku	41	9	Male
C16	Misra Badecha	25	5	Female

Table 3: Table displays participants from the village of Soba located in the Bale Mountains National Park.

### Family Statistics



The second method used was reviewing regional, national, and international discussions to see how often rangelands – in particular rangelands land tenure security – came up as an issue and comparing this number to the number of times other issues such as education, healthcare, and infrastructure were mentioned. This required searching online for several documents published by different leading organizations that work to improve food security. After determining the list of publications to be reviewed, a search for key issues brought up (i.e. land tenure, infrastructure, education, etc.) was conducted. The number of times each issue was discussed was then compared to the others.

### 3.4. Results

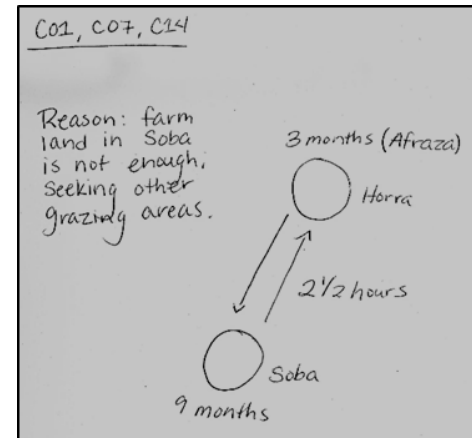
#### Method 1 – Semi-Structured Interviews

Based on the responses from the participants, the study's initial key questions could be answered.

1. How do rangelands and livestock-keeping areas contribute to food security at different levels such as community/local, national, and international?

Of the sixteen rural farmers interviewed, only five of them stated that their families move their herds of livestock to different grazing areas during the year. Most of the farmers that stated they didn't move livestock said so because their herds have been rapidly decreasing in size due to the increase of farmland in the area, inability to gain more livestock and increase in family sizes.

The five farmers that stated they moved their livestock were also asked to map their movements, as well as why they moved, how long it took to get to the location, and during what time of the year they moved.



Picture 1: Photograph displays a diagram of the movement of three families in the Soba village during the Afraza season

These five farmers all moved to one of the following three areas: Horra, Cotera, and Baru. Families sometimes move together, but often split up for months at a time in order to care for crops back in Soba. The areas these farmers move their livestock to play a vital role in keeping their livestock alive. Because farmland is increasing rapidly in the Soba community, grazing land is scarce. Being able to move their livestock allowed the families to keep their herds fed, but most of the farmers said it is getting more and more difficult to do so because the government is encouraging them to settle down and farm – instead of raising livestock. During the interviews – when asked what they needed in order to produce more food for their families – eight of the sixteen farmers said they wanted to convert the farmland back to grazing areas. One



Picture 2: Photograph displays an interview with local farmer, Lamio Jarso

farmer said his family had more than enough food twenty years ago when they only raised livestock. He continued to say that farming the land has pushed his family into a life of poverty. He said the government should convert the land back, or nothing will ever change. A majority of the farmers also stated that they could not successfully produce crops because the conditions are too harsh, they are continuously competing with the park's wildlife, and they are not receiving proper extension services from the government.

Other common responses from the farmers included family planning in order to control the village's population, coming together as a community to formulate a plan to produce more food, and learning the best farming practices. Every farmer that was interviewed stated that their family grew either barley, onions, or potatoes. This could be very problematic when trying to sell or trade produce because it limits the amount of income these families will receive.

2. How important is land tenure security in the rangelands and livestock-keeping areas for achieving food security?

Based on the responses from the three government employees and nine representatives, it is clear there is an association between land tenure and food production in rural communities. All of the subjects declared they believed having adequate access to land plays a vital role in the amount of food that can be produced for families. Although land tenure security issues were not specifically important to the work most of the organizations conducted, they all believed feeling secure on their land helps farmers produce more food. As stated by one of the representatives, “land is the lifeline of the farmers’ food production” and “the two key parts of farming land is land and labor”. One government employee went on to say if the farmers truly believe in their land, they will begin to invest in it and take care of it properly.

As discovered during the interviews with the rural farmers, many farmers in the country do not own adequate farming tools such as tractors. Many farmers own a few heads of cattle or donkey and a plow that they have to manually work in order to cultivate their farmers. In the Ethiopian highlands, farmers can be seen at all times of the day plowing their land. Although a majority of the land in the area is cultivated, most of the produce planted will not reach the families’ household due to wildlife, lack of water, or other outside factors. Most of the farmers that were interviewed often feel discouraged because they have to work so hard for so little produce

One important component of having adequate access to land is having equally adequate resources to help cultivate the land. During the interviews with the farmers, it was quickly learned that they do not have the proper resources needed to grow crops. Despite having seeds from the government, the farmers did not have various varieties of crops to grow, nor did they have other means of feeding the herds of livestock they owned. Approximately fifty kilometers east of Soba there is a research center called the Sinana Research Center that delivers technologies to increase productivity on farms. Sinana distributes improved crop breeds that gene banks such as Debre Zeit and the ILRI gene bank work to protect. Sinana also teaches surrounding communities how to grow fodder as feed for their livestock – giving an alternative to just allowing livestock to graze the land. When the farmers were asked if they have heard of the center, all but one of the farmers said yes. Furthermore, only a few of the farmers have heard of fodder, but none of them actually grew it. One farmer said the government had promised to show them how to grow fodder, but after continuously asking for it, they still have yet to grow the feed for their livestock.



*Picture 3: Photograph displays the village of Soba where the interviews with the sixteen rural farmers took place.*



*Picture 4: Photograph displays the Debre Zeit gene bank – one of the several gene banks in Ethiopia – that works to conserve a wide range of forage grasses, legumes, and fodder trees through its forage diversity activities.*

### 3. What is the status of land tenure security in rangelands and livestock-keeping areas?

Although the land is entirely owned by the State, distribution and administrative rights reside within the nine regional governments – Afar, Amhara, Benishangul-Gumuz, Gambela, Harari, Oromia, Somali, Southern Nations, Nationalities, and Peoples', and Tigray. Each region has an institutional structure that has adopted different land administrative systems (ARD, Inc. 2004). Several regional governments have launched land administration reform efforts in order to improve land administration, thus increasing tenure security for land users. One example of these reforms include the efforts started by some regions in the Ethiopian highlands, where they are beginning to issue land certificates – as learned during interviews with government officials.

The land certificates are being issued to rural families and give “ownership” to the land that they are using. As learned during this study’s interviews, there are two levels to the certificates being issued. A level one certificate is the first certificate a family can receive and solely certifies the general area the family owns. A family may have both the husband’s and wife’s name on the certificate. Currently, the government has only issued level one certificates, but hopes to begin issuing level two certificates in the future. The second level of the certificates will incorporate mapping the land using GPS or similar technology. The government is working to certify 80% of the highland population within the next five years, but has yet to begin certifying land within the lowlands where the land is mostly communally owned. The objective of these certificates is to give ownership to the people using the land, but this becomes extremely difficult to accomplish in the lowlands because communities are continuously moving their herds of livestock in search of water and grazing areas. Although the government is encouraging pastoralist in the lowlands to settle in one location and begin farming, they refuse to do so because they understand the conditions are too harsh for farming crops.

Several people believe these certificates have contributed to the increase of tenure security amongst farmers living in the highlands. With the exception of one of the farmers interviewed – due to the fact that he still lived with his parents – all of the subjects stated they felt more confident and secure on their land after receiving their certificates. Most of the farmers said they now feel in control of their land and if a dispute ever arises between neighboring farmers, they can easily settle it by using the certificates. Every farmer in the village paid a constant fee of five Ethiopian birr in order to receive the certificate and all of them declared that the process was easy to go through. When asked if they made any investments on their land (i.e. planting trees, soil conservation, water trenches, etc.) most of the farmers said they only used compost and fertilizers to increase crop production, but are hopeful they make more investments now that they feel secure on their land.

As stated by several of the subjects from Category A and B, the land certificates are making a notable difference in the level of confidence farmers have in their land. One of the representatives interviewed even stated that millions of the farmers will not invest in their land until they feel secure on in and they are confident the government will not take it away from them. In addition, he said farmers could get “70% more production with secure land”. Another representative said farmers have even started negotiating with investors that are interested in splitting profits made from selling their crops in return for assistance in improving their land. The Ethiopian government has created the National Rural Land Administration Information Center (NLIC) in order to keep accurate records of who the land is owned by and exactly how much they own. They are currently discussing how they can implement these certificates in the lowlands.

4. To what degree are rangelands and/or the land tenure security of rangelands part of discussions, debate, and dialogue on food security at the international/global and/or regional levels?

During the interviews with Category A and B, the subjects were specifically asked whether or not they believe issues surrounding land tenure security were brought up in local, national, and international discussions sufficiently. Simply put, five of the nine organization representatives from Category A believed land security issues were not being raised enough. Two out of the three government officials also thought the issues were not being brought up adequately. This being said, there is obviously a great need to bring the issues up in discussions more frequently in order to address the needs of mixed crop-livestock farmers in Ethiopia and around the world.

Several of the subjects stated that they believe issues around land tenure security are being brought up enough at the local levels, such as cabellos, but the discussion is lacking at the national level in Ethiopia because of the sensitivity of the issue. Many citizens are afraid to raise their voices when speaking against the government, which then hinders the amount of progress being made in land reform debates. One representative even stated that this dispute is “between two parties: the poor and the government”.



*Picture 5: Photograph displays an interview with Daniel Temesgen, program manager of the Ethiopian Society of Animal Production, at the Kazanchis Urban Agriculture Compound.*

As stated previously, the government is currently encouraging farmers in the highlands, as well in the lowlands with minimal success, to begin farming the land instead of raising livestock. Several of the farmers that were interviewed in the Bale Mountains saided that they would prefer to convert back to their previous livestock grazing lifestyles, but the government has not asked what they are in need of. Many of them are trying to live productive farming lives, but are often unsuccessful because the government has yet to provide farming extension services. One farmer said the community needs to come together in order to formulate a plan, but the other farmers do not care. As seen throughout the village, the Ethiopian governments, as well as other agencies such as the United States Agency for International Development, have been providing food aid to the region. Although this food aid will give these farmers, and many other farmers, a meal to eat, it does not solve the recurring problems they are facing due to a lack of agricultural education.



*Picture 6: Photograph displays an example of the packages of food aid provided by the Ethiopian Ministry of Agriculture and Natural Resources. This package contained milling wheat.*

Many of the representatives that were interviewed were asked what their organization does in order to raise awareness around land tenure security in Ethiopia. Most of the organizations do not specifically work to increase discussions around the topic, but instead work directly with farmers providing technical and organizational support in order to increase food production. Many of them, though, said the topic needs to be talked about more in an effort to influence land rights reform.



## Method 2 – Review of Publications on Food Security

As stated previously, many documents were reviewed for the second part of this study. This method specifically answers the key question “to what degree are the rangelands and/or the land tenure security of rangelands part of discussions, debates, and dialogue on food security at the international/global and/or regional levels?” As discovered in the semi-structured interviews, many representatives and government employees believe the topics of rangelands and land tenure security are brought up enough in conversations about food security. Since it’s been established that one needs to have proper access and security to adequate land in order to produce enough food, this review of discussions is very important in determining whether or not conversations about land security issues needs to be brought more often.

	Date	Title	Organizations/Countries
1	2015	Global Food Security 2030: Assessing trends with a view to guiding future EU policies	European Commission DG Joint Research Centre
2	July 2016	Sustainable agricultural development for food security and nutrition: A report by The High Level Panel of Experts on Food Security and Nutrition	Committee on World Food Security, High Level Panel of Experts
3	July 2016	Global Food Security Update	World Food Programme
4	July 2016	Sustainable livestock development report	Committee on World Food Security, High Level Panel of Experts
5	2007	Framework for the Provision of Scientific Advice on Food Safety and Nutrition	Food and Agriculture Organization, World Health Organization
6	May 2016	The effect of aspirations on agricultural innovations in rural Ethiopia	European Commission, Center for Development Research, University of Bonn
7	June 2016	Economic growth and agricultural land conversion under uncertain productivity improvements in agriculture	European Commission
8	2008	Women, Food Security and Agriculture in a Global Marketplace	International Center for Research on Women
9	2014	CGIAR Annual Report	Consultative Group for International Agricultural Research
10	2012	Migration, Development and Urban Food Security	The African Food Security Network

Figure 2: Chart displays the list of publications reviewed.

In order to produce quantitative results for this method, a search for keywords was conducted for each publication reviewed. To try and eliminate as much bias as possible, broad issues were compared to each other, but four keywords for each issue were searched for. After searching how many times the keywords were discussed in each publication, the total number was combined to represent each broad issue. For example:

*In Publication A, 'water supply', 'sanitation', 'water distribution', and 'water source' were searched for and came up 10 separate times. Therefore, the issue of 'water' came up 10 times in Publication A. After searching through every publication, the total number of times 'water' came up as an issue was combined.*

To determine the broad issues and keywords that were going to be used, a review of UN-sponsored websites on development was conducted. The issues and keywords used were brought up most often when searching through the websites.

Broad Issue	Key Words
Land Security	Land security, land tenure, land policy, land rights
Health	Nutrition, health care, disease, maternal health
Education	Education, schools, teaching resources, technology
Water	Water supply, sanitation, water distribution, water source
Climate Change	Climate change, environment, energy, natural resources
Infrastructure	Infrastructure, roads, market access, investments
Inequality	Inequality, empowerment, human rights, social protection

Figure 3: Chart displays the broad issues and key words that were searched for in list of publications.

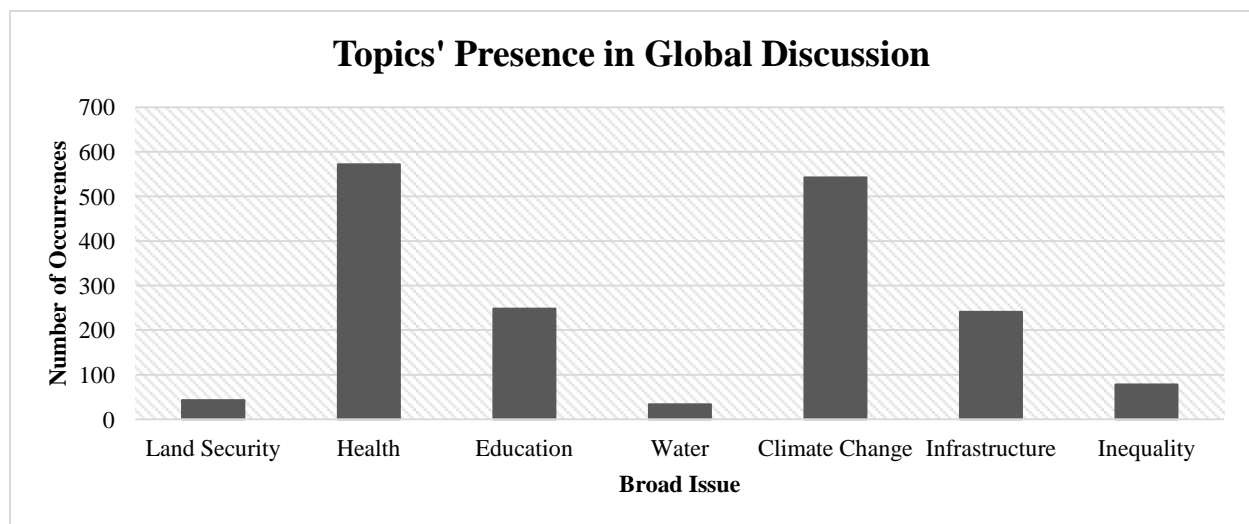


Figure 4: Bar graph displays the number of times each topic of development was discussed in ten different publications.

## **Conclusion**

### **4.1. Summary**

As the population of Ethiopia, and the world, continues to grow exponentially, the amount of concerns facing food security continue to grow as well. As seen in this study, rural farmers in Ethiopia do not feel they have extensive rights to the land they farm and raise livestock on. This creates significant problems as farmers attempt to grow food for their families. Because of land fragmentation and land tenure insecurity issues more and more farmers are finding themselves in a brutal situation. Many are not producing enough food because the land does not belong to them. Although discussions around the issue have been arising in various debates and discussions, more awareness on the issue needs to be brought up in order to grant more efficient rights to the people affected directly by the policies. The government needs to reach out to these local communities more frequently in an effort to get farmers to produce more food.

### **4.2. Limitations**

The amount of time given for this internship definitely hindered the results of the report. If the amount of time for the study was extended, more views from representatives, government officials, and rural farmers could have been recorded. There could have also been more samples from different parts of Ethiopia such as areas in the Amhara Region, Yabelo, and Yangudi Rassa National Park. A larger number of samples would have benefited this report by giving a wider range of views and needs in different areas of Ethiopia.

### **4.3. Suggestions for Further Studies**

In order to better conduct studies similar this one, the following suggestions are made:

1. Using a larger sample size – for all three categories – will yield a more sophisticated cumulative response which could be analyzed more properly. Due to the fact that this study one incorporated the responses from three government employees, it was difficult to determine the true perspective from the category. The same goes for the nine representatives that were interviewed. Problems came up when analyzing the responses, especially because very few of the organizations specifically worked with land rights. Although the same size for the farmers was useful to get a perspective from this category, it would be beneficial to interview farmers from other parts of the country.
2. Allowing more time to interview the rural farmers will significantly improve the results of this study. One full weekend was granted to interview the farmers – with approximately four hours being utilized each day.

### **4.4. Relevance to Field**

This study could be of extreme relevance to fields working in land use and ownership rights. Professionals in the field could use the results to encourage discussions around land tenure security as well as influence policymakers and government officials to work in favor of the needs of rural farmers. Because rural farmers are the backbone of developing countries like Ethiopia, it is important for both the government and multilateral organizations to support their needs as much as possible. This study shows the importance of rural farmers having ownership of their land how changing policies to support that idea will greatly benefit rural communities.

## Reflection

My internship in Ethiopia was a truly life changing experience and is the most memorable event in my life thus far. When I first learned about the Borlaug-Ruan International Internship, I automatically knew that was how I wanted to spend my summer. Without hesitation, I began my application and learned I would spend my summer in Addis Ababa, Ethiopia. The weeks leading up to my departure for the unknown had me feeling very anxious, yet extremely excited. I did not what to expect from this adventure, but I was definitely ready to accept any challenge that would come my way.

Having the opportunity to experience life in a different country – and a developing country at that – allowed me to grow tremendously. I was able to grow as a person and as an advocate for the agricultural industry. Growing up in the United States is completely different from growing up in a country like Ethiopia. While we are never thinking about where our meal is coming from, rural farmers across the suffering nation are continuously hoping they will have enough food to feed their families. While we expect to get an education, a well-paying job, and a lavish lifestyle, this is merely not an option for the farmers. And while we are able to fly across the world, visit their depleting communities, and fly back to our comforting households, they are trapped within their communities.

This opportunity has encouraged me to pursue a career in international development because I won't accept the fact that there is such inequality within our world. My internship is only the beginning of my efforts to help people achieve food security. After graduating from Cornell University in 2021, I plan to join the Peace Corps where I will leave in a developing country for two years and help rural communities with community planning and economic growth. I thank the World Food Prize for opening my eyes to this career path that I feel so confident in dedicating my life's work to.



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## Appendix 1 – Category A Interview Form



**Case Study: Linkages Between Land and Food Security**  
In Cooperation with the International Livestock Research Institute



### Category A – NGO/Multilateral/Research

#### Interview Information

Full Name: \_\_\_\_\_  
*Last* *First*

Position: \_\_\_\_\_

Organization: \_\_\_\_\_

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Contact: \_\_\_\_\_ Label: A

Location: \_\_\_\_\_

#### Questions and Responses

- I. Can you tell me how your organization contributes to the food security of the Ethiopian people?
- II. How important do you think land security is to obtaining food security for the people of Ethiopia?
- III. Is land security important for the work that you and your organization do?
- IV. Is this perspective shared by your organization (generally)?
- V. What documentation (reports, statements, guidelines) has your organization produced highlighting the links between food security and land security?


<p>VI. What else has your organization done in regards to highlighting the linkages between food security and land security? Do you think they could do more in this regard?</p>	
<p>VII. Do you think people in Ethiopia feel that their access to land is secure?</p>	
<p>VIII. Do you think this feeling is the same across the population of Ethiopia (i.e. for highland crop-livestock farmers, and for lowland pastoralists)?</p>	
<p>IX. What do you think are the benefits of public land ownership to food security of the population of Ethiopia (i.e. where all land belongs to the State and the population has use rights to the land)?</p>	
<p>X. How do you think land security of the people of Ethiopia could be improved in i) highland crop-livestock areas and ii) pastoral areas)?</p>	
<p>XI. On the understanding that there are linkages between food security and land security, do you think land security issues are brought up in local, national, and international dialogue enough? Furthermore, how does/could your organization ensure these issues are discussed sufficiently?</p>	

<b>Closing Remarks</b>



## Appendix 2 – Category B Interview Form



**Case Study: Linkages Between Land and Food Security**  
 In Cooperation with the International Livestock Research Institute



### Category B – Government

#### Interview Information

Full Name: \_\_\_\_\_  
Last First

Position: \_\_\_\_\_

Organization: \_\_\_\_\_

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Contact: \_\_\_\_\_ Label: B

Location: \_\_\_\_\_

#### Questions and Responses

- I. Please could you explain to me the key features of the current land policy and legislation at national level in Ethiopia?
  
- II. Are there any differences in policy and legislation in the i) crop-livestock mainly highland areas of the country and ii) the lowland pastoral areas?
  
- III. How important do you think land security is for food security of the population of Ethiopia?
  
- IV. How does current Ethiopia land policy and legislation contribute to the food security of the people in these different areas?
  
- V. What are the challenges of implementing land policy and legislation in Ethiopia – in particular in relation to food security?


- |   |  |
|---|--|
| <p>VI. The FAO and Committee on World Food Security have published a set of guidelines in which States should follow to achieve food security. In the part that regards tenure rights, the FAO and CWFS recommend “States should strive to establish up-to-date tenure information on land...by creating and maintaining accessible inventories.” What is the federal government doing to ensure that such inventories (i.e. documentation of land holdings) are being established?</p> |  |
| <p>VII. Do you think people in Ethiopia feel that their access to land is secure?</p>   |  |
| <p>VIII. Do you think this feeling is the same across the population of Ethiopia (i.e. for highland crop-livestock farmers, and for lowland pastoralists)?</p>  |  |
| <p>IX. On the understanding that there are linkages between food security and land security, what else could be done to improve both land and food security for the population of Ethiopia in i) highland mixed crop-livestock areas and ii) pastoral areas?</p>  |  |
| <p>X. Do you think land security issues are brought up in local, national, and international dialogue enough?</p>   |  |

**Closing Remarks**



III. Do you grow any fodder, shrubs, or legumes? If so, which forages do you grow and what are they grown for?

IV. Where did you get the seeds or planting material from?

**Land**

I. What is the size of the plot of the land you own?

II. Are you able to produce enough food for the family on this plot?

III. Do you make investments on your land?

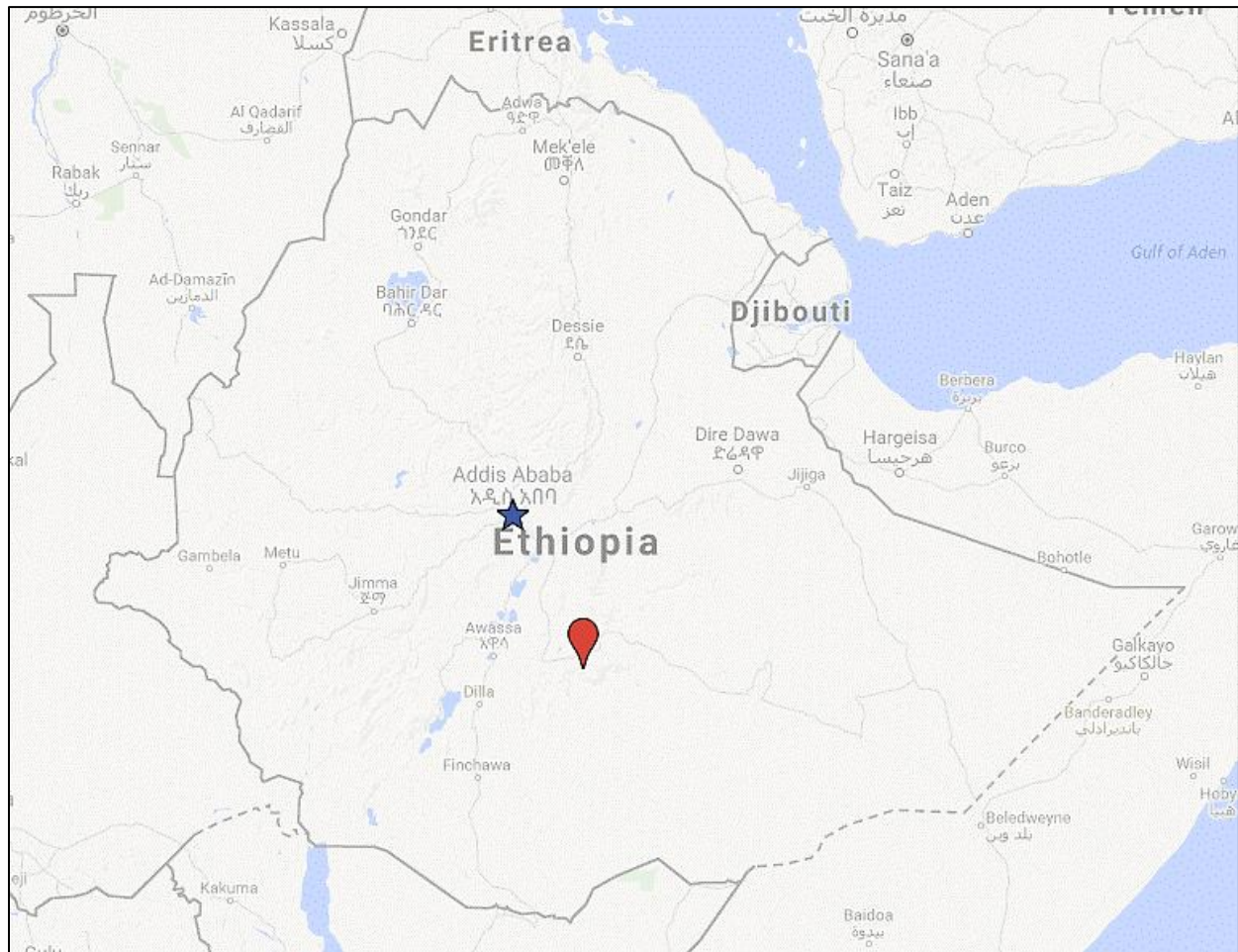
IV. What investments do you make?

V. Why don't you make investments on your land?

**Certificates**

Do you have any certificates from the government for your land?	
<b>YES</b>	<b>NO</b>
Do you have a level 1, level 2, or both?	Are you in the process of receiving a certificate?
Was the process of receiving the certificate easy or difficult?	Have you been approached by the government about the certificates?
Has receiving the certificate encouraged you to invest in your land?	If or when you receive a certificate, will you start investing in your land more?

## Appendix 4 – Map of Ethiopia



### Legend

- ★ Addis Ababa
- 📍 Bale Mountains National Park
- Soba
- Sinana Research Center
- ✚ Cotera
- ◆ Horra
- 📏 50km

