DISSERTATION

U.S.-DRIVEN AGRICULTURAL DEVELOPMENT: NARRATIVES, KNOWLEDGES, AND PRACTICES DIRECTED TOWARDS NORTHERN ETHIOPIA'S AGRO-PASTORAL LANDSCAPES

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ABSTRACT

U.S.-DRIVEN AGRICULTURAL DEVELOPMENT: NARRATIVES, KNOWLEDGES, AND PRACTICES DIRECTED TOWARDS NORTHERN ETHIOPIA'S AGRO-PASTORAL LANDSCAPES

This dissertation examines the narratives and practices underpinning U.S.-led agricultural development interventions in Ethiopia from 2010 to 2024. This period marks a shift in the development discourse, exemplified by the launch of the U.S. government's Feed the Future (FtF) initiative in 2009 and the Locally Led Development (LLD) initiative in 2021. The U.S. government has been one of the largest donors to Ethiopia, and development interventions targeting smallholder agriculture are frequently framed as key strategies for addressing food insecurity and adapting to climate change. Despite this, there has been limited investigation into the narratives and practices that shape U.S.-led agricultural development policy in Ethiopia between 2010 and 2024.

Grounded in critical development studies, political ecology, and feminist critiques, this research investigates how development practitioners conceptualize agricultural development, define success, and engage with local agricultural knowledge systems and agroecological conditions in northern Ethiopia. This study primarily uses a qualitative approach, employing discourse analysis to examine policy documents, transcripts from development meetings, conferences, and workshops, as well as semi-structured interviews with development practitioners. Through these sources, I explore how development goals are framed, how local knowledge—particularly women's agricultural knowledge and agrobiodiversity practices—is integrated or marginalized, and how institutional constraints and the politicized nature of the development industry shape development practices and impede investigations into development.

Research findings reveal that while narratives of local ownership have become prominent within U.S. development discourse, U.S.-led development efforts continue to prioritize technocratic and market-

oriented interventions. These approaches frequently overlook or undermine context-specific knowledge systems that support smallholder farmer resilience and autonomy. However, Ethiopian development practitioners often have divergent understandings of development, and the roles local communities should play within interventions. Furthermore, the development industry is shaped by institutional barriers and limited transparency, which constrains both research into the industry and the industry's capacity to evolve. Overall, this dissertation contributes to ongoing debates surrounding agricultural development by examining how Western logics and narratives are utilized, how development expertise is employed, and what this means for more locally and ecologically grounded support for smallholder farming communities.

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CHAPTER 1: INTRODUCTION

Understanding how development policies are constructed and interpreted is central to analyzing the long-standing presence of international interventions in Ethiopia. In particular, U.S.-led development efforts—largely coordinated through the United States Agency for International Development (USAID)—have played a defining role in shaping agricultural and food security interventions in Ethiopia's northern highlands. This dissertation critically examines how U.S.-led agricultural development is conceptualized, with particular attention to the narratives, institutions, and discourses that shape development interventions targeting smallholder farmers. Grounded in critical development studies (CDS) and political ecology (PE), this project investigates how development policies are constructed across institutional contexts—and how they engage with or marginalize local knowledge systems.

Northern Ethiopia remains highly food-insecure, with emergency conditions persisting in areas of Tigray and northern Amhara (Nyssen 2024; World Food Programme 2022). Following the 1984/85 famine, international food and agricultural aid evolved from short-term efforts to long-term, institutionalized development programs (Furtado and Smith 2009; Mussa 2010). In 2022, USAID pledged to provide emergency food assistance to over 4.8 million Ethiopians (USAID 2022), while continuing to frame its long-term development mission as supporting "the journey to self-reliance" and ultimately aiming to "end the need for foreign assistance" (USAID 2021, 11).

Ethiopia offers a unique site for examining U.S.-led international agricultural development. Unlike other African nations, Ethiopia was never formally colonized, and as a result, no single Western nation became the de facto leader in the country's development (Furtado and Smith 2009; Becker 2020). However, from the 1980s through 2024, the United States—primarily through USAID—became the leading actor in development. Over this period, USAID introduced a series of technical interventions, including updated seeds, chemical inputs, and settlement schemes, many of which have had lasting ecological and social consequences (Hoben 1995; Bekele et al. 2020; Adnew et al., 2019; Regassa et al.,

2019). These top-down projects have often overlooked the environmental knowledge and agrobiodiversity maintained by smallholder and pastoralist communities (Hoben 1995; Fairhead and Leach 1996; Bezner Kerr 2014).

This research focuses on the period from 2010 to 2024, following the launch of USAID's *Feed the Future* initiative and the establishment of Ethiopia's Agricultural Transformation Agency (ATA). Both mark a rhetorical shift toward greater national ownership over the direction and implementation of foreign-funded development programs. Another shift occurred in 2021 with the U.S. government (USG) initiative of Locally-led development (LLD)[1]. Drawing from 46 transcripts of development meetings, 12 semi-structured interviews, and extensive documentary analysis, this study explores how development practitioners define development success and negotiate ideas of local participation. Like Mosse (2006), I approach success in development not as an outcome to be measured, but as something "socially produced and constructed" (p.940).

This work contributes to PE's call for methodological strategies that "complicate state power" (Meehan et al. 2013) and responds to Wainwright's (2008) call to question the geographies and epistemologies that underpin global development agendas. In doing so, it also addresses gaps in the literature surrounding how U.S. development policy engages with Ethiopian farming systems—systems marked by high environmental variability and long histories of locally adapted agricultural strategies, including the use of diverse crop varieties (Lanckriet et al. 2015; McCann 1995). By examining how U.S. and Ethiopian development practitioners interpret agricultural development policies, this research provides new insight into how global narratives—such as those surrounding climate change and modernization—are enacted on the ground. It also contributes to debates within critical development studies and political ecology on how knowledge, governance, and power are co-produced within

[1] The concept of locally-led development, or development that is led by the community targeted for interventions, has a long-standing presence in the literature (Ferguson 2006; Escobar 2012). Civil society organizations have played a significant role in discussions surrounding locally led development (Gingerich and Cohen 2015; Vera and Brusola-Vera 2021). I use the acronym LLD only to refer to USAID's policy priority and not the overarching concept of locally-led development, which has a variety of interpretations and practices.

transnational development institutions, and how these dynamics limit “local” engagement in agricultural policy.

This chapter situates the research within broader historical, political, and scholarly context. It begins with a background, outlining the evolution of U.S.-Ethiopia development relations, highlighting key turning points and the emergence of dominant narratives around food security, crisis, and interventions. The problem statement outlines the core issues motivating this study, followed by a discussion of its significance and contributions. The conceptual framework is grounded in critical development studies and political ecology. The chapter then introduces the guiding research questions, followed by an outline of the methodologies, describing how the data was collected and analyzed. A statement of positionality follows, and the chapter concludes with an overview of the dissertation structure, summarizing the content and purpose of each subsequent chapter.

1.1 Background

1.1.1 Development: Historical and Political Context

1.1.1.1 Historical Context of the Ethiopian State and Governance

Ethiopia's political history is central to understanding the country’s development trajectory and the role of international, and specifically U.S.-led development. Scholars have identified nationalism as “the major challenge in Ethiopia” (Woodward 2016, 158; Regassa 2021). Although Ethiopia was never directly colonized, its borders and state formation were deeply shaped by colonial dynamics (Woodward 2016), including Italy’s failed attempts at occupation, which weakened the capacity of the Ethiopian state in the early 20th century (McVety 2012). This historical context made Ethiopia more susceptible to internal instability and external influence from international agencies (Woodward 2016; Regassa 2021).

Under Emperor Haile Selassie (1930–1974), the government pursued agricultural modernization and centralized power by weakening the regional influence of aristocrats and traditional ruling classes (Clay and Holcomb 1986; McVety 2012). During this period, the United States became a major ally, with U.S. economic assistance to Ethiopia averaging $24.1 million annually between 1969 and 1974 (McVety 2012).

The 1974 revolution brought to power the Derg (roughly meaning "committee" in Amharic), a military regime that reoriented the state toward Marxist-Leninist policies. The Derg nationalized all land and initiated large-scale resettlement and villagization programs (Dejene 1991; Clay and Holcomb 1986). These interventions and violent repression were contributing factors to the 1984-1985 famine, particularly in the regions of Tigray, Wollo, and Eritrea—where over 1.5 million people died despite record high harvests in prior years (Keen 1994; de Waal 1991; McVety 2012). Conflicts are frequent drivers of resource scarcity (Holt and Lawrence 1993; Shipton 1990), and scholars argue that the famine's severity resulted not only from drought, but from political decisions that deliberately limited food distribution to these regions (McVety 2012; Clay and Holcomb 1986).

The Derg was overthrown in 1991, when the Ethiopian People's Revolutionary Democratic Front (EPRDF), led by the Tigrayan People's Liberation Front (TPLF), seized power (Abebe 2018). The EPRDF introduced a federal system, with a constitution that recognized the rights of all nations and peoples within the Ethiopian state, affirming that the "nations, nationalities, and peoples" that constitute Ethiopia "shall have the right to self-government in the territories they inhabit" (Regassa 2021, 70). While this system gave regional states formal autonomy, including over sectors like agriculture, decision-making remained centralized under the EPRDF (Furtado and Smith 2007). Furthermore, many political groups were excluded from meaningful participation, fueling ongoing tensions and contestation over the legitimacy of the EPRDF-led federal structure (Abebe 2018; Regassa 2021).

These tensions contributed to the rise of Prime Minister Abiy Ahmed in 2018, and a shift in political rhetoric and governance that included advocating for the absence of "boundaries between regions" (Regassa 2021, 73). The ongoing political tensions led to violent conflicts, most notably the

Tigray War (2020-2022), which some scholars describe as decolonial struggles against the revival of a centralizing, imperial vision of the Ethiopian state by Amhara nationalists and an authoritarian Ethiopian government (Regassa 2021; Gamedze and Ayalew 2021). The Tigray War was an armed conflict between the Ethiopian federal government and its allies, including Eritrea, against the TPLF, fought primarily in the Tigray region. An estimated 600,000+ people died in the war, which also involved grave, systematic human rights violations, triggering a long-term humanitarian crisis, and creating millions of internally displaced persons (Dahir 2020; Human Rights Council 2023; Nyssen 2024). This war also exacerbated food insecurity in northern Ethiopia, leading to famine conditions across Tigray (Nyssen 2024; FEWS NET 2021).

Recent development practices have been significantly constrained by the Tigray War and the civil unrest that started in 2018, and the political fragmentation continue to shape development policies, including U.S.-led agricultural initiatives (Dahir 2020; Walsh and Marks 2020).

1.1.1.2 Foundations of U.S. Agricultural Development in Ethiopia

The post-World War II period shaped the foundations of U.S.-led international development. Institutions like the World Bank and the International Monetary Fund (IMF) promoted a vision of modernity tied to industrialization and economic growth (Toye 2004). In his 1949 inaugural address, President Truman launched the U.S.'s formal development efforts—later known as the Point IV Program—aimed at extending "the benefits of our scientific advances and our industrial progress" to "underdeveloped areas" (Truman 1949). In Ethiopia, early U.S. agricultural projects in the 1950s focused on agricultural improvement centers (McVety 2012). This expanded in the 1960s with the creation of USAID in 1961, which funded agricultural research at U.S. universities and projects such as small-scale tractor distribution (McCann 1995). As many African nations gained independence in the late 1950s through 1960s, international institutions and aid agencies, including USAID, intensified their involvement in development and food aid initiatives (Woodward 2016). In 1971, USAID helped establish the Consultative Group on International Agricultural Research (CGIAR), a global consortium of research centers funded by governments, multilateral donors, and civil society organizations (Mulesa and

Westengen 2020; Lacy et al. 2021). Between 1971 and 2020, USAID contributed over $1.4 billion to CGIAR (Lacy et al. 2021, 25; CGIAR 2021).

Cold War geopolitics significantly shaped U.S. development efforts in Ethiopia. The Horn of Africa became a site of U.S.-Soviet competition, with both powers supporting opposing "client regimes" (Woodward 2016, 153). During the Derg regime (1974-1991), Ethiopia aligned with the Soviet Union. After the overthrow of the Derg and collapse of the USSR, the U.S. became Ethiopia's primary development partner (Furtado and Smith 2009; McVety 2012). The 1984/5 famine in Ethiopia marked another turning point, as images of hunger and crisis became central to Western narratives about Ethiopia. Famine and food insecurity have remained dominant frames through which international organizations, especially the U.S., explain ongoing development efforts (Mulesa 2021; Lanckriet et al. 2014; McVety 2012; Hoben 1995; Holt and Lawrence 1993; de Waal 1991). Climate change has further reinforced these crisis narratives, positioning environmental variability as a challenge to be managed through development policy (Campbell 2022; Gebreegziabher et al. 2016; Kassie et al. 2013; Nigussie et al. 2024).

The relationship between the Government of Ethiopia (GOE) and international development actors can be characterized by both cooperation and contention. Foreign development programs typically work through national governments as a matter of sovereignty (Agarwal 2014) and engaging with the GOE is especially important given Ethiopia's prominence in the agendas of international agencies and donors (The Government of Ethiopia (GOE) 2023). The nature of GOE-donor interactions depends upon the sector and nature of the project. For instance, the GOE retains primary control over seed distribution, requiring foreign corporations to partner with the federal government (Abraham 2013; USAID 2024a), while support for farmer-managed seed systems primarily comes from multilateral institutions and NGOs (Mulesa 2021, 16).

From the 1990s through the 2000s, Ethiopia retained greater policy independence than many other African states, where donors were more embedded within governments (Furtado and Smith 2007, 19–20). This has limited the international donor community's understanding of internal policy-making processes in Ethiopia. It has also allowed the country to maintain greater ownership over its development agenda, which was further reinforced by its decentralized political system (Furtado and Smith 2007, 20).

From 2010 to 2024, U.S. public and private actors played an increasingly influential role in Ethiopia's agricultural sector. This includes the establishment of the Ethiopian government's Agricultural Transformation Agency (ATA) in 2010, which was co-founded by the Gates Foundation, staffed in part by U.S. personnel, and heavily funded by USAID (USAID 2019; ATA 2018; FAO 2020).

The GOE's reports on international development, such as the *Annual Development Cooperation Report of Ethiopia: Ethiopian Fiscal Year 2015 (2022/2023)*, provides insight into the scale and structure of foreign assistance and USAID's engagement with the GOE. In this report, development funding is categorized as either "on-budget," meaning it flows through formal agreements with the Ethiopian government, or "off-budget," meaning it is implemented through NGOs and other actors (GOE 2023, 12). USAID, the country's largest donor, contributed approximately $2 billion off-budget, compared to $224 million on-budget (GOE 2023, 27). For agriculture, USAID provided $512 million off-budget versus $11 million on-budget (GOE 2023, 32). GOE's report also notes significant gaps in its data on off-budget activities, illustrating the limited transparency and the lack of GOE involvement in a significant portion of international development interventions in the country (GOE 2023, 12).

While crisis-driven narratives have helped entrench long-term involvement by the U.S. government in Ethiopia's agricultural sector, development efforts evolved to reflect neoliberal strategies that increasingly rely on market-based solutions and non-state actors.

1.1.1.3 Neoliberalism and Development

Neoliberal ideology has driven deregulation and shaped the development field more broadly (Harvey 2005; Corson 2010). The rise of neoliberal policies in the 1980s and their "institutionalization" in the 1990s led to declines or "reconfigurations" of state institutions (Corson 2010, 576). This shift

amplified the economic objectives of Western development efforts, often emphasizing the "creation of markets" (Li 2007, 21) and "re-regulation designed to create new commodities" (Corson 2010, 579), both of which are evident in U.S.-led agricultural development in Ethiopia (Carr et al. 2023; USAID 2019). Neoliberal policies often place the responsibility of improving productivity on the individual rather than the community as a whole (Ferguson 2006), while also shifting the policy risks to the individual (Mikulewicz and Taylor 2020, 630). For example, programmatic success is frequently measured by individual uptake of seeds introduced by the intervention, rather than the broader structural or agricultural impacts (Carr et al. 2023; USAID 2019). As services contracted across the U.S. government, international NGOs assumed larger roles (Nagar and Raju 2003; Ferguson 2006), and USAID shifted away from direct technical support, relying more on NGOs and private-sector implementation (Corson 2010; Ferguson 2006). Reforms such as "USAID's decentralization program" further increased the flow of public development funds into private initiatives (Mitchell 2002, 233).

A result of this decades-long neoliberal trajectory is the growing presence of corporate actors in U.S.-led agricultural development in Ethiopia—including a 2024 USAID partnership with DuPont focused on maize (USAID 2024a). This neoliberal context set the stage for the creation of Feed the Future, the U.S. government's leading agricultural development initiative, which promised to increase in-country ownership of development efforts.

1.1.1.4 Feed the Future

By the early 2000s, there was growing recognition of "the political and cultural embeddedness of science and technology" within agricultural development (Biggs 2008, 489). This period increased focus on how U.S.-based scientific research could support international development (Showstack 2011). In 2009, the USG launched its Global Hunger and Food Security Initiative, Feed the Future (FtF), managed by USAID and the U.S. Department of Agriculture (USDA). A key motivation behind FtF was the 2007-2008 spikes in food prices and global food shortages (McVety 2012). The initiative was grounded in the Rome Principles from the G8 Summit, pledging support for "country-owned plans" and "comprehensive" economic growth (Lawson et al. 2016; Feed the Future 2010). FtF also aligned with the U.S. State

Department's Quadrennial Diplomacy and Development Review (QDDR), described as a "blueprint" for U.S. development and diplomacy (U.S. Department of State 2015, 2; McVety 2012). The QDDR called for "elevated and modernized development" to "deliver results," with increased emphasis on food security, climate change, and economic growth, and proposed reforms to U.S. State Department and USAID operations (U.S. Department of State 2015, 83).

FtF's work involved Innovation Labs led by U.S. universities, which often partner with in-country researchers and private industry (Lacy et al. 2021, 25). From 2010 until 2024, nearly all U.S.-led agricultural development initiatives in Ethiopia were implemented through FtF. This framework sets the stage for examining how LLD is conceptualized and practiced within these U.S.-driven initiatives.

1.1.1.5 Locally-led Development Initiative

Following decades of advocacy by civil society organizations for locally-led development (Gingerich and Cohen 2015; Vera and Brusola-Vera 2021), in 2021, Administrator Samantha Power instructed USAID to prioritize and implement locally-led development (LLD) programming (Power 2021). Power set goals that included 25% of development assistance be directed towards "local partners," and by 2030, half of USAID's programmatic spending should go to projects where local communities "either co-design a project, set priorities, drive implementation, or evaluate the impact of our programs" (Power 2021, 6). LLD is described as "a set of internal reforms, actions, and behavior changes" aimed at aligning development work with "local actors' priorities and strengthen local systems…in which local actors set their own agendas, develop solutions, and mobilize the capacity, leadership, and resources" (USAID 2022a, 2). USAID guidance also suggests LLD can help by "maximizing results and reducing costs" (ACVFA 2024, 1). While these commitments mark a rhetorical shift toward more equitable development practices, how USAID operationalizes and measures "local" involvement remains contested and will be a point of discussion in this dissertation.

1.1.2 Agro-pastoral Landscapes in Ethiopia and Development Legacies

1.1.2.1 Agro-pastoral Landscape of Northern Ethiopia

Northern Ethiopia generally includes the provinces of Tigray, northern Amhara, and Afar. The northern Ethiopia plateau runs through the region, with elevations ranging from 1,500 to 3,400 meters, and both Tigray and much of Amhara are characterized by dry, highland conditions (Billi 2015). The region features a highly diverse topography, with stark elevation shifts—from high plateaus to lower riverine landscapes—over short distances (Abbate et al. 2015). The region's geology includes folded sediments, and varied soil types, leading to highly variable farming conditions within small geographic areas (Billi 2015). While Ethiopia is experiencing climate change through reduced rainfall and rising temperatures (Fazzini et al. 2015), the localized variability across the Ethiopian Highlands (Seleshi and Demaree 1995) means that environmental change will manifest differently across the region (Alemayehu and Bewket 2017).

The highlands of northern Ethiopia are characterized by non-equilibrium ecological dynamics, with agricultural landscapes shaped by recurring droughts and highly variable environmental conditions (Meze-Hausken 2004; Billi 2015). The modern landscape of lightly forested acacia grassland developed in the last few centuries (McCann 1995). In general, the grasslands and rangelands have been owned and managed communally (Howard and Smith 2006; Nyssen et al. 2009).

The vast majority of Amhara and Tigrayans engage in smallholder agriculture or agropastoralism, while most Afar practice pastoralism (Meze-Hausken 2004). Many Tigrayans and Amhara also practice transhumance, defined as "the seasonal movement of herds occurring between two points and following precise routes repeated each year" (Nyssen et al. 2009, 257). In northern Ethiopia, research indicates that pastoralists and agriculturalists have different rainfall requirements; lower precipitation levels have a greater impact on farmers than on pastoralists (Meze-Hausken 2004). Due to the region's high topographic variability, and increasingly unpredictable rainfall, precipitation measurements, and farmer perceptions often diverge (Meze-Hausken 2004). At times, meteorological data indicate seasonal stability, while farmers observe more instability and overall, less rainfall (Hadgu and Tesfaye 2013).

Understanding what constitutes drought conditions, and how drought is conceived by external monitors versus local experiences, exemplifies the importance of external interventions engaging meaningfully with local knowledge and experiences.

1.1.2.2 Defining Smallholder Agriculture

Smallholder farming in northern Ethiopia shares many characteristics with traditional agriculture globally, including crop diversity and adaptability to environmental change (Butler and D'Andrea 2000; Meze-Hausken 2004; Shewayrga and Sopade 2011; Palframan 2015; Pant and Ramisch 2010). While definitions for traditional agriculture can vary, in this region it refers to non-mechanized practices that rely on human and animal labor, and the vast majority of smallholder farmers across northern Ethiopia depend on rain-fed agriculture rather than irrigation (Butler and D'Andrea 2000; Gebreegziabher et al. 2016; Hadgu and Tesfaye 2013). Agriculture provides the majority of the economic productivity and employment in northern Ethiopia (Butler and D'Andrea 2000; CSA 2021; Gebreegziabher 2016).

In the Tigray highlands, farming almost entirely consists of smallholder agriculture. Reforms in the 1970s and 1980s lead to relatively equal land distribution; families typically have a total of 0.5-2.0 hectares, often distributed over two or three plots (Nyssen et al. 2009). Households with less than one hectare are considerably more vulnerable to famine compared to those with larger holdings (Dejene 1991). Crop yields can vary significantly year-to-year and between nearby areas (Holt and Lawrence 1993). Commonly cultivated crops include barley (*Hordeum vulgare*), wheat (*Triticum sp*.), *t'ef* (*Eragrostis tef*), and legumes (Nyssen et al. 2009; Butler and D'Andrea 2000; Kassie et al. 2013). Farmers primarily maintain soil fertility through crop rotation and natural fertilizer (Abdulkadir et al. 2017; McCann 1995).

Local agricultural knowledge in northern Ethiopia is rooted in generations of experimentation and adaptation, shaped by responses to the region's highly variable ecological conditions (Meze-Hausken 2004; Billi 2015; Tesfaye 1991; Teklu and Hammer 2006). This knowledge is understood as collectively held by the community and is maintained through practices such as communal seed exchange and shared ecological management practices (Tesfaye 1991; Teklu and Hammer 2006; Tsegaye and Feyissa 2017;

Mukai 2023). This agricultural context shapes how smallholder farmers engage with development interventions and informs their strategies for adapting to environmental and policy change.

1.1.2.3 Legacy of Development on Smallholder Agriculture in Ethiopia

Development interventions have had significant impacts on smallholder farming practices in northern Ethiopia. Hoben (1995) offers a relevant analysis of agricultural development narratives, highlighting how the 1984/5 famine was, at the time, widely attributed to poor soil quality from thousands of years of cultivation and population growth. These narratives justified the rapid rollout of "environmental management 'packages' without research on the environmental impact or their economic costs and benefits," resulting in "widespread and costly" consequences (Hoben 1995, 1007). Fertilizers were widely distributed to farmers, which negatively affected soil health, even decades later, and proved especially damaging to traditional crop varieties (Abdulkadir et al. 2017; Tesfaye 1991; Nandwa and Bekunda 1998).

The introduction of European and North American bread wheat varieties after the 1984/5 famine contributed to declines in the genetic diversity of crops in Ethiopia (Teklu and Hammer 2006; Tsegaye and Berg 2007). This can increase food insecurity, as growing multiple local crop varieties as the same time reduces the risk of total crop failure—different varieties have different resistances and vulnerabilities to diseases and environmental conditions (Teklu and Hammer 2006; Tesfaye 1991). Smallholder agriculture in Ethiopia has also been significantly impacted by other forms of development, including large-scale land investments (Bekele et al. 2020; Rahmato 2014). These overlapping development pressures have significantly impacted smallholder farmers in northern Ethiopia, shaping farmers' access to resources, crop choices, and resilience strategies.

1.1.2.4 Politics of Plant Diversity

Plant genetic diversity in Ethiopia was noted early in agronomy research; in 1927 N.I. Vavilov noted the country's large diversity of cultivated plants (Nesbitt and Samuel 1996). Ethiopia is recognized as the center of origin for several crops, including *t'ef (Eragrosis tef),* finger millet (*Eleusine coracana*),

and sorghum (*Sorghum bicolor*), along with hundreds of locally adapted varieties of crops domesticated elsewhere, particularly durum wheat (*Triticum durum)*, emmer wheat *(Triticum diccocum),* and barley *(Hordeum)* (Engels, Hawkes, and Worede 1991; D'Andrea and Mitiku 2002; D'Andrea 2008). Beginning in the 1970s, the Government of Ethiopia (GOE) and international donors established the Institute of Biodiversity Conservation, which created a national gene bank, and became a global model for preserving plant genetic diversity (Feyissa et al. 2013). Yet internationally, debates in the 1970s and 1980s began to challenge the "political neutrality" of "germplasm collection and exchange between countries"; CGIAR's role facilitating crop research and the organization's funding from the USG and U.S. foundations raised questions about how the collections were being used (Mulesa and Westengen 2020, 104).

For many decades, the GOE was protective of plant genetic diversity, enacting a strict biosafety law in 2009 based on the Cartagena Protocol on Biosafety, which prohibited the general use of GMOs (Abraham 2013). However, this position has shifted over the last decade. Mulesa (2021) contends that while "Ethiopia's positions in environmental governance, climate change…are perceived as 'progressive' on the international scene," the GOE has "sidelined alternative development pathways," including "support for the farmers' seed systems" (p.16). In 2018, Ethiopia officially authorized certain GMO varieties (Mulesa 2021), and in 2020, USDA produced a report regarding the GOE's changing position, applauding the shift and asserting it would "have positive influence on the acceptance of this technology in the region. Especially considering that a decade ago the country was at the forefront of the anti-GMO movement in Africa" (USDA 2020, 2). This evolving landscape reflects broader tensions between international influence, national sovereignty, and the protection of farmer-led seed systems in Ethiopia.

1.1.3 Actors in U.S.-led Development Interventions

The institutional landscape of U.S.-led agricultural development in northern Ethiopia consists of a complex network of global, national, and local actors (Figure 1). Major funders and policy drivers include USAID, which leads the Feed the Future initiative, and U.S.-based organizations like the Gates Foundation. These entities work closely with international research networks such as CGIAR, and NGOs

like The Alliance for Green Revolution in Africa (AGRA)—an initiative largely funded by the Gates Foundation that promotes agribusiness models for smallholder farmers (Mkindi et al. 2020).

Within Ethiopia, key government institutions like the Agricultural Transformation Agency (ATA) and the Ethiopian Institute of Agricultural Research (EIAR) serve as implementing partners. Regional institutions such as the Tigray Agricultural Research Institute (TARI) and local governance structures, including Gulo Makeda *Woreda*[2], further connect international and national institutions with local smallholder farming communities.

For institutional context, Figure 1 presents a broad conceptual overview of the flow of funding, personnel, research, and policy influence across institutions involved in U.S.-led development in Ethiopia. It illustrates how interventions are coordinated and implemented by multiple actors operating across various scales.

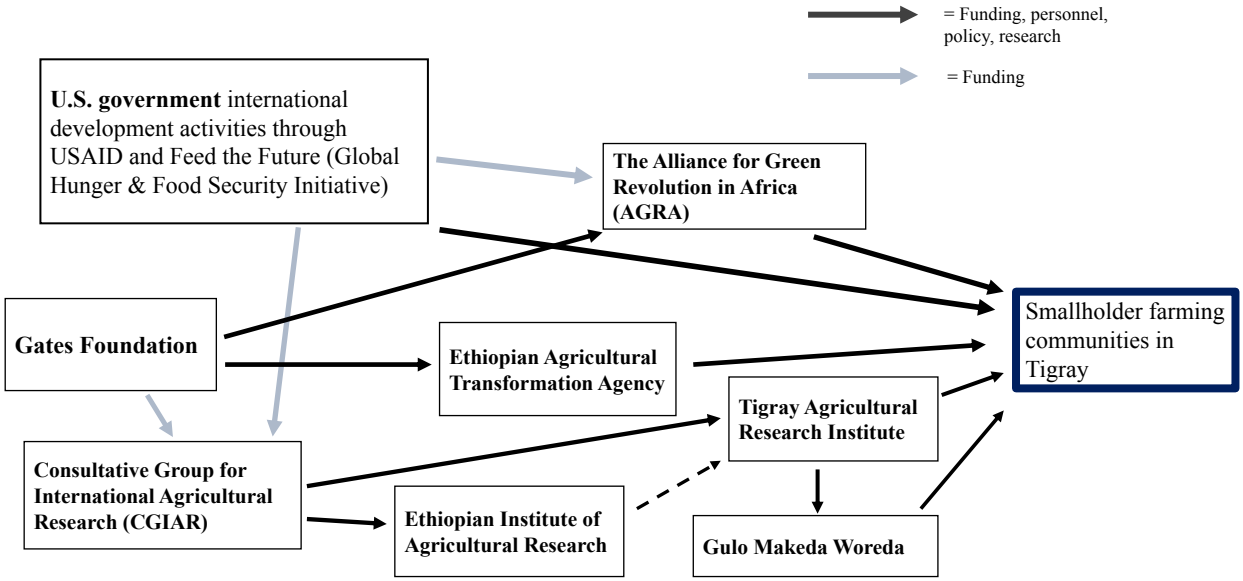

Figure 1. Institutional Actors: Interventions directors towards Tigray, Ethiopia (2010-2024)

[2] Administrative level comparable to a county or a district (Bekele 2022)

Figure 2 provides geographic context through a map of northern Ethiopia. Gulo Makeda *Woreda* is highlighted as an example of the administrative level at which development interventions of often implemented.

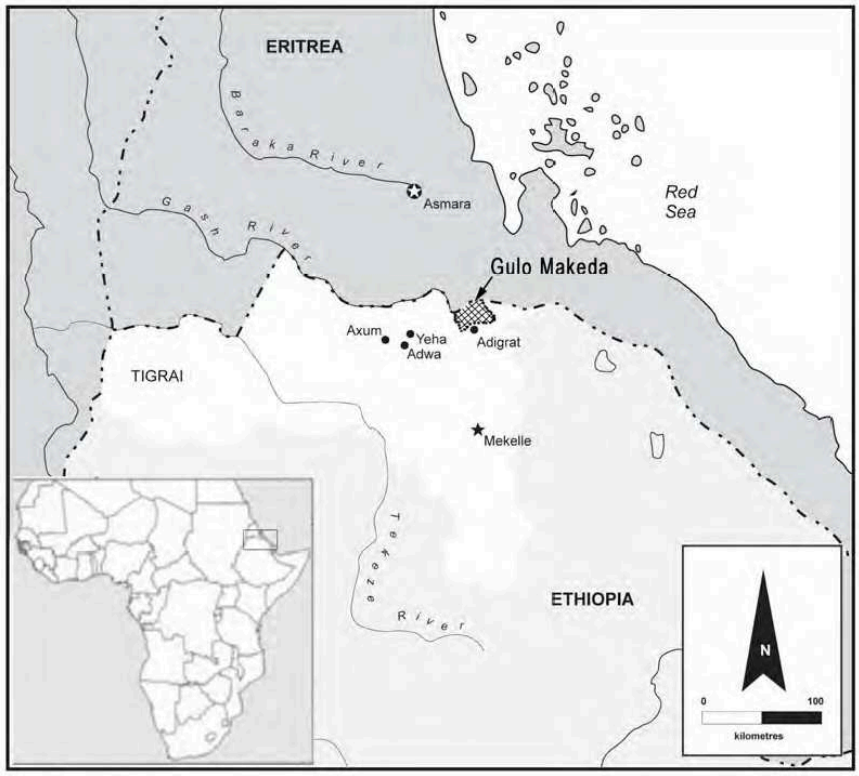

Figure 2. Map of Northern Ethiopia. Credit: Map modified from D'Andrea et al. (2008)

1.2 Problem Statement

Agricultural development in Ethiopia—and across much of Africa—is increasingly framed as a solution to food insecurity and adaptations to climate change (Teklu and Hammer, 2006; Weisser et al. 2014; Devereux and Kapingidza, 2020). U.S.-led interventions often promote strategies based on monoculture cultivation, synthetic fertilizers, and externally developed seeds (Mkindi et al. 2020 Juma 2015; Flachs 2020). These approaches have been widely critiqued for producing lasting negative ecological and social consequences, including soil degradation, biodiversity loss, reduced adaptive capacity of farmers, and the marginalization of local agricultural knowledge systems (Altieri 2012; Bezner Kerr 2014; IPES-Food and ETC Group 2021; Scott 1998). Similar strategies have also been

directed at pastoralists, as sedentarization and farming are often stated development goals for pastoralist communities (King et al. 2018; Regassa et al. 2019)

In Ethiopia's northern highlands, past interventions targeting smallholder farmers—particularly after periods of resource scarcity—have had long-term negative impacts (Hoben 1995; Abdulkadir et al. 2017; McVety 2012). Initiatives that fail to engage with local knowledge systems and land-use practices risk not only limiting their own effectiveness, but also actively worsen local vulnerabilities (Fairhead and Leach 1996; Hoben 1995; Regassa et al. 2019; Bekele 2020). With the rollout of LLD as a formal USG objective, there is a greater need to examine the underlying development narratives used by US-led development, such as who is considered "local" and how are this definition is embedded in broader development narratives?

At the same time, scholars have increasingly highlighted the challenges of researching the development industry (Green 2023; Mosse 2006). This includes institutional barriers that limit the ability to investigate how development policies are formulated, justified, and sustained—despite their far-reaching impacts. Therefore, this study not only examines U.S.-led development narratives, including how they are constructed and interpreted by Ethiopian practitioners, but also how research into development itself is shaped by institutional conditions and constraints.

1.3 Significance of the Study

This project contributes to development studies by examining how development narratives constructed and interpreted across institutional contexts. It offers insights into how U.S.-led agricultural development policies in Ethiopia are shaped by broader geopolitical discourses and how these policies are understood and negotiated by development practitioners on the ground. Building on Escobar's (2012) observation that foreign government agencies often formulate policies based on abstract "concepts of development and modernity" that are later reinterpreted during implementation (p.51), this study investigates the discursive and practical gaps between global development agendas and the perspectives of those tasked with implementing those agendas. It contributes to broader understandings of how development interventions engage with, ignore, or attempt to subvert long-standing socio-ecological

knowledge systems—systems that in Ethiopia reflect millennia of intertwined cultural, environmental, and agricultural practices (Balée 2006).

While grounded in foundational critiques of development by Escobar (2012), Li (2007), Scott (1998), and Ferguson (2006), this research offers a closer analysis of how policy discourses—such as "climate-smart agriculture," "resilience," and "locally led development"—are interpreted by development practitioners. By drawing on ethnographic interviews, institutional documents, and transcripts from development meetings, this study examines how development practitioners themselves construct meaning around these concepts and how these meanings shape the implementation of U.S.-led interventions. In doing so, this research moves beyond critiques of development as a top-down project and illuminates how discourse operates as a site of negotiation, constraint, and adaptation within contemporary development bureaucracies.

This study responds to calls within political ecology and critical development studies to examine development as a discursive process. Focusing on how development practitioners interpret key concepts contributes to scholarship on how power operates through language, institutional structures, and the circulation of expertise (Tate 2020; Mosse and Lewis 2006; Mitchell 2002; Foucault 1977). As others have noted, development work is often characterized by "hidden transcripts" and rhetorical ambiguity (Luetchford 2006, 128; Mosse and Lewis 2006), creating the appearance of "institutional coherence" while masking contradictions and strategic uncertainty (Tate 2020, 85).

Methodologically, this dissertation advances work on the challenges of conducting research in politically sensitive and opaque institutional environments. It reflects on the methodological constraints of accessing development spaces and provides strategies for navigating shifting political contexts, drawing on methodological insights within political ecology on the production and restriction of knowledge (Sultana 2021; Johnson et al. 2020; Coddington 2017). By using critical discourse analysis, along with interviews and archival research, this study also contributes to ongoing efforts to innovate methods for studying policy and practice.

Finally, this research speaks to the broader significance of critically examining the narratives that shape agricultural development. Interventions targeting smallholder farmers in Ethiopia—and globally—have far-reaching impacts on livelihoods, food systems, and local environments. By revealing how narratives of climate change, modernization, and "innovation" obscure deeper political and economic agendas (Weisser et al. 2014; Campbell 2022), this research contributes to global conversations about knowledge, priorities, and agency of smallholder farming communities. Ultimately, this study deepens our understanding of how development is conceptualized and implemented—particularly at the intersection of U.S. foreign policy, institutional power, and smallholder agricultural systems in Ethiopia.

1.4 Conceptual Framework

This study draws from Critical Development Studies (CDS) and Political Ecology (PE) to examine how U.S.-led agricultural development in Ethiopia intersects with power, knowledge, and governance. Drawing on critiques of Western development strategies (Ferguson 2006; Li 2007; Escobar 2012; Scott 1998), this research analyzes how development discourses and interventions are shaped by broader geopolitical agendas while often marginalizing local knowledge systems.

PE provides a critical lens for analyzing how power operates through knowledge hierarchies, particularly in relation to gender, institutional dynamics, and the politics of development. This analysis draws on insights from political ecologists (Sultana 2021; Sundberg 2014) and is further informed by foundational feminist scholarship on space and knowledge (Massey 2005; Haraway 1988). These frameworks provided a guide for answering my research questions, informing my analysis of how development practitioners conceptualize agricultural objects such as seeds, and how they engage—or fail to engage—with the knowledge and priorities of smallholder farmers in Ethiopia.

1.4.1 Development as Discourse

1.4.1.1 Defining Development

Development can be understood as a "historically produced discourse" (Escobar 2012, 6), with Eurocentric origins and grounded in Western concepts of "modernity" (Klenk 2004, 60) where science

can discover 'universal truth' (Johnson and Murton 2007, 122). Wainwright (2008) describes development as "an externally directed practice" and "an ontological process" (p.212), in which development practices create an "empirical historical geography" that "solicits neoliberal development and also silences… practices because their geographies do not match ours" (p.28). My research builds on this body of critical development literature by showing how U.S. development practitioners and Ethiopian development practitioners conceptualize development in fundamentally different ways (Chapters 2 and 3).

Critical development studies are further enhanced by Indigenous and decolonial perspectives (Regassa 2021; Quayson 2021; Gamedze and Ayalew 2021), which challenge the logics of modernity that typically underpin much of development (Mitchell 2002; Escobar 2006). Quayson (2021), drawing on Stephen K. White, argues that modern development frameworks shape the local "spheres of social interaction" through a "functionalist" lens (p.84). These assumptions shape institutions and everyday experiences—what Quayson, in a reflection on Frantz Fanon's "The Fact of Blackness," calls the "quotidian space" (Quayson 2021, 112). In the African context, modernity's "material and ideational prerequisites" (Quayson 2021, 84) continue to define what counts as progress, development, and rational governance, with significant implications for daily life and local social systems (Chapters 2 and 3).

Development was first practiced by colonial powers, based on the assumption that certain populations were more "improvable" than others, thereby establishing clear distinctions between groups targeted by development, and those implementing it (Li 2007, 15). These logics continue to shape institutions like USAID to categorize populations, using assessment like potential for productivity and market integration (Chapter 3). When communities were not seen as "improving"—often interpreted as lacking economic productivity—they could be dispossessed from the land (Li 2007, 21). This logic has continued, especially in development practices targeting pastoralists, smallholder farmers, and conservation (Li 2007; King et al. 2018; Nyantakyi-Frimpong 2020).

This dissertation also draws on Escobar's (2012) analysis of how development discourses rely on opaque language and conceptual ambiguity. For example, Escobar (2012) describes how a 1948 World Bank report claimed that two-thirds of the world population were poor, despite no shared definition for

‘poverty’. Yet a 1951 UN report using this reasoning still called for “a total restructuring of ‘underdeveloped’ societies” (Escobar 2012, 4, 23). This pattern—implementing changes without a clear understanding of local contexts—remains central to international development practices (Regassa et al. 2019; Bekele et al. 2020; King et al. 2018) and can be seen in my analysis of U.S.-led development in Ethiopia. Escobar (2012) also highlights how bureaucracies use definitions (e.g. poverty, local, resilience) as foundational elements within development practice. As discussed in Chapter 2, these definitional practices shape what counts as legitimate knowledge and who is seen as a legitimate development actor.

Throughout the 20th century, development largely consisted of “techno-science,” where engineering and technological interventions were aimed at perceived environmental “defects,” transforming “peasant” farms, and reforming economies and societies (Mitchell 2002, 15). This technical framing persists in current agricultural policy, where events such as famine are treated as evidence of underdevelopment and to identify development targets (Escobar 2012). Ethiopia is particularly vulnerable to these framings and is often depicted through narratives of environmental crisis and mismanagement (Hoben 1995; Lanckriet et al. 2014; McVety 2012).

Climate change policy has further complicated these narratives by blurring the lines between adaptation and development. Climate change policy narratives have been used in Ethiopia to promote the technological interventions towards pastoralists (Campbell 2022), and interventions targeting smallholder farmers are increasingly framed as climate adaptations but consist of the same practices as previous development tactics (Weisser et al. 2014). For example, the World Bank’s climate plan for Africa promotes “climate resilience” as a new development paradigm, but, as Mikulewicz and Taylor (2020) argue, this approach “obscures the contested histories of African development” and instead perpetuates a neoliberal agenda (p.626).

My work is grounded in these critiques of development—as an ontological process shaped by neoliberal logics, opaque terminology, and the legacies of colonial interventions. These factors underlie how development is practiced and are used to justify interventions that often fail to align with, or even acknowledge, the perspectives and priorities of the communities they target.

1.4.1.2 Political Ecology: Contemporary Development Narratives

In this dissertation, I approach Political Ecology as a "theoretical commitment to critical social theory and a post-positivist understanding of nature and the production of knowledge," which are considered "inseparable from social relations of power" (Bridge, McCarthy, and Perreault 2012, 7). This approach provides a lens through which to analyze development not only as a technical or environmental intervention, but as a political process. I also draw from feminist political ecology (FPE) to inform both my theoretical framing and methodological approach. FPE emphasizes "politics and power at different scales," while highlighting "gendered power relations" (Elmhirst 2015, 519), and encouraging "geographic thinking, practice, and engagement in the power-laden specificities of the subjects and spaces we work with and 'know from'" (Faria et al. 2021, 7). This emphasis on "situated knowledge" (Haraway 1988, 575) and power dynamics is reflected in how I approached my interviews and analysis across Chapters 2, 3, and 4.

I draw on critiques that highlight the structural inequalities embedded in dominant food systems (Montenegro de Wit et al. 2021; Nyantakyi-Frimpong and Carlson 2024; Flachs 2020; Nyantakyi-Frimpong and Bezner Kerr 2014). These critiques inform my analysis of how U.S.-backed agricultural development projects in Ethiopia reflect assumptions about what food systems should look like—and whose knowledge is valued in shaping them (Chapters 2 and 3).

This power-laden dynamic is captured in Neely's (2020) observation that "uneven power relationships" shape biological systems (p.14). In the context of Ethiopian smallholder agriculture, this insight describes how global power relations impact soil health, biodiversity, and farmer strategies. However, development logic often reduces biology to set of controllable variables, obscuring the complex and context-specific entanglement of these farming systems. As Neely (2021) also notes, development organizations often operate as if there is a single "…reality on top of which different sets of 'beliefs' accumulated," and the only way to improve is through adopting Western modernization strategies (p. 4). This assumption closely mirrors the perspectives of many U.S. development practitioners in my study, who framed technical solutions—such as updated seed varieties—as universally applicable (Chapter 3).

By grounding my work in political ecology, I analyze development not as a neutral or technical intervention, but as a historically and socially embedded process. This perspective illuminates how global power asymmetries are reproduced through development discourse and practice, often through the dismissal of local knowledge systems.

1.4.2 Critically Assessing Development and Agriculture

1.4.2.1 Geographies of Development and Technocratic Strategies

Understanding how Western knowledge systems interact with local conditions in Africa is essential for analyzing how development policies are shaped—and how Africa is constructed within global narratives. Massey (2005) critiques how globalization is framed as an "inevitability" (p.165), arguing that this framing often serves to legitimize extractive economic practices while conceptually distancing the global beneficiaries from the local poverty these practices create. This dynamic is evident in how globalization has unfolded in Africa. Ferguson (2006) argues that Africa has experienced "highly selective and spatially encapsulated forms of global connection" along with "widespread disconnection and exclusion" (p.14). Understanding these local and global connections are crucial to understanding the interrelationships of development practices.

International development often promotes pesticides, synthetic fertilizers, and single, high-yielding crops as "solutions" to smallholder agriculture (Altieri 2012, 5; Mkindi et al. 2020; Scott 1998). These strategies exemplify what Ferguson (2006) calls "scientific capitalism," in which development is framed as a technical rather than a moral or political project. Although "moral premises are implicit in these technicizing arguments," they are framed as part of "a non-moral order," where "technical principles of efficiency and pragmatism give 'correct' answers" to policy questions (Ferguson 2006, 80). This framing enables development actors to promote specific interventions as neutral, inevitable, or apolitical, even when they are embedded in power systems and cultural contexts.

This technocratic approach is exemplified by the fact that agricultural development is often framed primarily as an economic endeavor (Mitchell 2002). However, Massey (2005) emphasizes that

agriculture is "emphatically not just an economic activity," it is "explicitly relational…between human and nonhuman" (Massey 2005, 170). This perspective emphasizes the long-term cultural and environmental contexts of farming and challenges the dominant development paradigm that tends to abstract agriculture into inputs and outputs. These dynamics surfaced in my interviews with Ethiopian development practitioners, who often advocated for farmer-led seed systems and participatory approaches (Chapters 2 and 3).

This analysis reveals that the "rational knowledge" in development discourse is instead a "power-sensitive conversation" (Haraway 1988, 590). Objects, such as seed varieties, are not neutral—they can be seen as "engines of power" that materialize institutional and political agendas (Shaw and Meehan 2013, 216). For example, the promotion of certain seed varieties by U.S.-led development in Ethiopia (Chapter 3). My research explores how those who construct policies for smallholder farmers conceptualized agricultural objects like seeds, and how they engage with farmer knowledge and perspectives.

1.4.2.2 Expertise and Authority in Smallholder Agricultural Development

FPE scholarship has critiqued neo-Malthusian narratives, which "conflates the environmental impacts of human activity with the impacts of human numbers" (Ojeda et al. 2020, 1-2). Recent FPE scholarship has linked these narratives to contestations within international and national environmental and natural resource policies (Ojeda et al. 2020). These critiques are especially relevant for Ethiopia, where population growth is frequently framed as the primary driver of environmental degradation (Hoben 1995; Campbell 2022; Lanckriet et al. 2015). However, these narratives used to justify many agricultural development interventions often misrepresent or overlook Ethiopia's environmental history or local context, including historical land use, governance, or long-standing farmer and pastoralists environmental management practices (McCann 1997; Meze-Hausken 2004; Gebeye 2016; Chignell and Satterfield 2023). These knowledge systems and practices are frequently minimized by the persistent myths of "the precariousness of society–environment relations" in Africa, which continue to shape climate adaptation strategies and development discourse (Weisser et al. 2014, 114). These framings also reflect a broader

epistemological hierarchy, where Western knowledge systems are privileged over Indigenous and local ways of knowing (Sundberg 2014).

PE scholars have highlighted how these dynamics reinforce perceptions that non-Western or Indigenous knowledge is "pre-modern" and not legitimate, and therefore not applicable to contemporary issues (Sundberg 2014, 38). This bias affects how smallholder food systems in sub-Saharan Africa are perceived and supported (Bezner Kerr 2014). These dynamics emerged in my research, reflected in perspectives explicated by U.S. development practitioners (Chapters 2 and 3).

Development interventions often frame farming knowledge that is seen as 'traditional' as resistant to change. However, Scott (1998) argues that the adaptability and innovation within indigenous agricultural traditions is in stark contrast to the "conservatism" and rigidity of global agricultural policies. Even though development actors have argued that a "fundamental problem confronting agriculture" is the attitude "of experiment, trial and error, innovation and the adoption of new ideas" (Edwards 1989, 119; Carr et al. 2023), these practices already largely exist within smallholder agriculture across Africa and Ethiopia (Nyantakyi-Frimpong 2020; Bezner Kerr 2014; D'Andrea and Mitiku 2002; Clay and Holcomb 1986). This understanding of smallholder farmers' strategies appeared in a number of interviews with Ethiopian development practitioners (Chapter 2).

Recognizing that smallholder farming communities possess expertise, grounded in generations of adaptations and observation, is a significant point of discussion in both PE and CDS scholarship (Bezner Kerr 2014; Scott 1998; Escobar 2012; Li 2007; Nyantakyi-Frimpong 2020). This also aligns with increasing "calls for data sovereignty" in research, for communities to have more control over how the data that they give researchers is used (Montenegro de Wit et al. 2021, 320). Similarly, calls for seed sovereignty emphasize the importance of protecting farmers' access to and control over their seed systems—especially as development narratives increasingly tie climate resilience to standardized seed interventions (Nyantakyi-Frimpong and Carlson 2024). This was a point of concern for many Ethiopian development practitioners (Chapter 3).

Ultimately, FPE scholars are asking generative questions on these matters, including who is considered a development expert? (Sundberg 2014), and "Who builds and benefits from these technologies?", "Whose knowledge counts?" and "How do different and contested farmer subjectivities emerge through the adoption, alteration or rejection, of particular technologies?" (Nelson, Faxon, and Ehlers 2024, 19). These questions emerged throughout my research, especially when examining how agricultural objects, especially seeds, are points of contested authority and meaning in Ethiopian development (Chapter 3).

1.4.3 Reconceptualizing the "Field": Methods for Studying U.S.-led Development

This research draws on both critical development studies (CDS) and political ecology (PE) to examine how development operates across multiple scales. As Robbins (2012) notes, development involves "multiple scales of power and diverse players acting on local commons" (p.54), with local policies shaped through regional decisions, which are typically dictated by national or global economic and political decisions (Chipango 2018, 206; Robbins 2012). Similarly, Ferguson (2006) describes development as enacted through a "vertical topography of power" that connects local, national, and global actors, revealing how state and civil society are embedded in transnational processes (p.90). Understanding development as a multi-scalar process helps explain how development narratives and donor mandates are interpreted by development practitioners within Ethiopia.

While I was influenced by "studying-through"—a variation of "studying-up" that traces policy through institutional contexts (Tate 2020)—my methodology was tailored to fit the specific contours of U.S.-led international agricultural development (Chapter 4). Both CDS and PE scholarship call for methodological reflexivity, particularly in how "the field" is conceptualized (Johnson et al. 2020; Ferguson 2006). This scholarship urges the adoption of "methodological innovations" for studying development institutions and natural resource governance (Sultana 2021, 160; Green 2023; Johnson et al. 2020; Ferguson 2006). As Johnson et al. (2020) emphasize, the "varied materialities" of development—such as institutions, policies, and resources—"necessarily shape our methodological choices and fieldwork experiences" (p.385). In my research, the specificity of agricultural development institutions,

and their embeddedness in U.S. foreign policy shaped the scope and nature of my ethnographic engagement (Chapter 4).

This reflexive approach responds to Ferguson's (2006) concern that anthropology's traditional orientation toward "the field" and research focused on a singular community can "localize and depoliticize our understandings of global inequity…" (p.51). Given the institutional constraints of researching U.S. development, I adapted my methods to include archival research and virtual interviews. These adjustments allowed me to expand my research purview across time and space—from the launch of Feed the Future in 2009 to the present, and across over 10 sites in the U.S. and East Africa. Conducting interviews remotely also enabled participation from individuals based across three continents, a reach that would not have been feasible through in-person fieldwork alone.

Critical reflections within PE encourages researchers to reflect on how they are implicated in broader systems of knowledge production (Sundberg 2015; Sultana 2021), calling for approaches that are "grounded in place and time" and attentive to its consequences on participants' lives (Coddington 2017, 318). Coddington (2017) provides an illuminating example of methodological choices, that due to existing stressors on research participants, "Rather than prioritizing one-on-one interviews, I participated in local advocacy groups. Instead of rehashing painful narratives, I gathered secondary source materials that had already asked the same questions" (Coddington 2017, 319). Although my research was conducted in very different contexts, shifting political conditions and the potential risks to participants, was a major point of reflection through my research process and shaped my own methodological decisions, including when and how to conduct interviews (Chapter 4).

1.5 Research Questions

My research has been guided by three main research queries:

- Research question #1: What are the motivations and intentions behind U.S. development policies in Ethiopia's agro-pastoral landscapes?
    - a. How do development experts select specific elements, such as technologies, policies, or practices, as focal points for interventions in Ethiopian agricultural systems?

- b. Between 2010 and 2024, how have development priorities been identified and discursively framed within U.S.-based approaches, and in what ways do these priorities reflect or overlook local agricultural needs?

This research question is primarily addressed in Chapters 2 and 3. Sub-question (a) is explored in Chapter 2, where I analyze how U.S.-based development professionals frame priorities such as climate-smart agriculture and locally led development (LLD), and how these are interpreted differently by Ethiopian practitioners. Sub-question (b) is addressed in Chapter 3, which examines how U.S. priorities are identified and framed through focusing on standardized inputs such as improved seeds and fertilizers, while often overlooking local ecological conditions and smallholder farming practices.

- Research question #2: What conceptual differences exist between US and Ethiopian development practitioners' understandings of "development"?
  - a. How do these differences shape their respective agricultural development approaches in Ethiopia?
  - b. How is the concept of locally-led development (LLD) practiced within US-led development, and what roles do local institutions and leaders play within agricultural development initiatives?

This question is also addressed in Chapters 2 and 3. Sub-question (a) is explored through an analysis of practitioner perspectives and programmatic materials, highlighting differing priorities and assumptions—particularly around seed systems, gendered farming knowledge and labor, and crop diversity. Sub-question (b) is discussed in Chapter 2, which examines how LLD is understood and implemented, revealing a gap between U.S. policy rhetoric and practice, and noting how LLD often creates opportunities for private industry and state actors rather than local communities.

- Research question #3: What are the concerns that development practitioners have when participating in research, and how do these concerns shape the discourse and transparency around US-based agricultural development interventions?

This question is the focus of Chapter 4, which reflects on the methodological challenges of conducting research within a politicized development context. Drawing on my research process, I explore how development practitioners' perceptions of professional risk, along with institutional interests, and bureaucratic constraints, inhibit transparency and open critique, ultimately shaping the discourse and production of knowledge in the development industry.

1.6 Methods

1.6.1 Data Collection

1.6.1.1 Ethnographic Research

1.6.1.1.1 Semi-Structured Interviews with Participants

I conducted semi-structured interviews with individuals who have experience in agricultural development policy and implementation focused on smallholder farmers. Participants had experience working with U.S.-based NGOs, foundations, and government agencies, as well as Ethiopian government institutions. Some worked directly in implementation, including agricultural extension agents in Ethiopia and U.S.-based practitioners with temporary in-country roles. All interviewees were experts in smallholder agricultural development, with direct experience either working for USAID in Ethiopia or for a USAID-funded or -contracted organization. Each participant was assigned an alphanumeric identifier (e.g., respondent #4 is referred to as R4) to maintain confidentiality. These identifiers are used throughout the dissertation when quoting or referencing individual participants.

I used a combination of purposive and snowball sampling to identify participants (Guest 2014). Initial contacts were established through my previous work and educational experiences and were selected based on their involvement in agricultural development projects or policies in Ethiopia. Additional participants were identified through referrals and outreach via email. In 2022, I began reaching

out to prospective interviewees, and many agreed to be a part of this study. Between November 2023 and August 2024, I communicated with 41 individuals who, at some point, agreed to be interviewed. Of these, 12 participated in official interviews (Appendix 1), while an additional 22 provided informal insights, including reports and transcripts. These interactions are further discussed in Chapter 4.

While I met several prospective participants in-person during earlier phases of the research, most preferred to conduct the official interviews remotely from their own homes. Only one participant interview was conducted in person; the rest took place via Zoom or WhatsApp, and all interviews were conducted in English. Participants were geographically dispersed, with locations across North America, Ethiopia, and Europe, including Addis Ababa, Washington, D.C., and Toronto. Interviews lasted between 1 and 2.5 hours. With participant consent, all interviews were digitally recorded, except for one, in which I took detailed notes and followed up for quote clarification and accuracy.

Interview questions aimed to elicit two types of information: 1) Participants' experiences and professional roles in development, and 2) their perspectives of key development concepts. These questions were shaped by an initial review of literature, policy documents, reports, and programmatic materials as well as early informal conversations. Themes that emerged from early conversations and interviews informed subsequent interviews, following iterative approaches in research (Ryan and Bernard 2003).

There is evidence that thematic saturation was achieved. For example, multiple people independently recommended the same individuals, and recurrent themes emerged across interviews. Guest et al. (2006) found that foundational meta-themes often emerge within the first six interviews, and that 12 interviews typically reach saturation, although the number is impacted by the participants and variability of research sites. In this study, Ethiopian participants shared similar educational or institutional backgrounds, contributing to thematic consistency. Weller et al. (2018) also contend that "probing and prompting during an interview seems to matter more than the number of interviews," and that 12 interviews "should be sufficient with exhaustive probing" in focused research areas (p.15)—conditions reflected in this study.

Although the final number of formal interviews was 12, the broader set of informal conversations and documents contributed to my understanding of the discourses, priorities, and institutional dynamics shaping U.S.-led agricultural development in Ethiopia. As Guest et al. (2006) and Weller et al. (2018) argue, saturation is best evaluated by other factors such as redundancy across data sources, rather than a fixed sample size alone.

1.6.1.1.2 Transcripts and Recordings from Development Conferences, Meetings, and Workshops

As part of my data collection, I obtained transcripts and recordings from 46 meetings, conferences, and workshops involving development practitioners, held between 2006 and 2023 (Appendix 2). While I used materials from the meetings held between 2006 and 2012, this dissertation focuses primarily on 35 meetings held between 2012 and 2023, which provided the most relevant insights into contemporary U.S.-led agricultural development in Ethiopia. These events took place in various locations—including Addis Ababa, Washington, D.C., Des Moines, IA, and Nairobi—with many held virtually after 2020. Most of the data consisted of unedited written transcripts; others were audio or video recordings that I transcribed. I obtained these materials from a combination of development industry contacts, publicly available online sources, and correspondence with a USAID archivist.

Transcripts and recordings from development conferences, meetings, and workshops are valuable sources for ethnographic inquiry into international development. They provide windows into policy construction processes through interactions, language, and the negotiation of ideas. This ethnographic approach helps uncover "the complexity, ambiguity, and messiness of policy processes" by analyzing the "construction and building blocks of policy—actors and organizations, their activities and points of articulation" (Wedel et al. 2005, 43). It also illuminates how development professionals articulate their worldviews and how these perspectives influence policy (Wedel et al. 2005, 34), and helps trace processes of knowledge production and "the social life of ideas" (Mosse 2011, 10; Wedel et al. 2005).

Development professionals often "deny or conceal their own expertise and agency" to maintain a professional image aligned with development norms (Mosse 2011, 17). This can appear in interviews, where practitioners often obscure their own roles, presenting themselves as neutral facilitators (Mosse

2011, 17). Therefore, recordings and transcripts of development meetings can reveal how practitioners navigate competing agendas, justify decisions, and negotiate meaning. These materials capture key interactional dynamics, such as disagreements and consensus-building, and contain policy positions being negotiated among individuals within teams or agencies (Green 2011). They allow researchers to trace the "interactions and interfaces among parties to the policy process," even when participants do not see themselves as agents in the process (Wedel et al. 2005, 44).

This approach also challenges conventional notions of 'the field' as a geographically bounded space, which can "block off" other forms of knowledge (Gupta and Ferguson 1997, 15). For example, development meetings, conferences, and workshops are valuable sites of ethnographic inquiry (Mosse 2011; Green 2023). However, "expert communities" often resist being described ethnographically (Mosse 2011, 20; Green 2023) because ethnography foregrounds ambiguity, context, and "the instability of meaning," which creates tension with the emphasis on measurability and technocratic design that typically defines expert practice (Mosse 2011, 22).

Using these recordings and transcripts aligns with ethnographic methods because they "intercept(s) the interlinked chains" of ideas, beliefs, and theories in development processes, and contain "the ethnographic concern with individual actions and events" (Mosse 2011, 22). This dissertation approaches these materials as ethnographic sources that provide insight into how individuals interact, actively produce, contest, and negotiate development discourse. This method is especially suited to exploring the motivations and contradictions embedded in policy formation and identifying the roles and influence of particular actors.

This methodological orientation aligns with broader debates in anthropology and geography that call for more flexible and situated understandings of ethnography (Gupta and Ferguson 1997; Mosse 2011; Green 2023; Johnson et al. 2020). Scholars have emphasized that ethnographic knowledge is not tied to a singular field site (Billo and Mountz 2016; Lähdesmäki et al. 2020), and that development meetings and conferences are not peripheral to ethnographic inquiry but are critical sites where actors present authority, negotiate meaning, and enact policy (Koch 2023). These settings reflect what Ingold

(2014) calls the "relational" and emergent dimensions of knowledge-making through ethnography (p.384). By analyzing how development discourse unfolds in these spaces, this dissertation contributes to ongoing efforts to adapt ethnography to the complexities of studying expert institutions and international processes.

1.6.1.2 Archival Research

To trace how agricultural development policy is produced, communicated, and justified, I conducted archival research using documents from U.S. government agencies and Ethiopian institutions. This included policy reports, evaluation documents, strategy papers, and internal materials from organizations such as USAID, the U.S. Government Accountability Office (GAO), and the Ethiopian Agricultural Research System. Many of these documents were found online, on sites such as USAID.gov, and the Federal Register. These documents provided essential insight into how development narratives are constructed and how institutional logics are operationalized over time.

Many U.S.-based materials were accessed online through publicly available government databases, including:

- https://www.foreignassistance.gov, which offered USAID project overviews (2020-2024),
- https://www.usaid.gov/reports, for agency evaluations and strategic plans (2020-2024),
- https://www.aiddata.org, which compiles aid flows and project-level data, and
- USAID's online archive, originally covering 2012-2017 but also contained information through 2020 (https://2012-2017.usaid.gov/data).

I also corresponded with a USAID archivist and visited the U.S. National Archives. Although I considered submitting a Freedom of Information Act (FOIA) request to obtain additional internal documents, the publicly available resources, combined with correspondences and material that practitioners shared with me, ultimately provided sufficient information.

From my MA research conducted in Tigray, Ethiopia, I also drew on land use and agricultural planning documents from the Tigray provincial government and a *woreda* (county-level) office, as well as reports and evaluation documents from the Tigray Agricultural Research Institute (TARI). Ultimately, my archival research attempted to treat "the archive as a field site," and take an "anthropological attitude toward the documents" (Des Chene 1997, 77).

1.6.2 Data Analysis

1.6.2.1 Thematic Analysis and Coding Using Atlas.ti

I conducted a thematic analysis of the interviews, conference recordings, workshops, development meetings, relevant development documents. Transcriptions were completed using a combination of *Otter* and *Atlas.ti* software, both of which ensured privacy protections in accordance with IRB protocols. All transcripts and documents were coded using *Atlas.ti*. Data analysis began with open coding (Ryan and Bernard 2003), followed by the identification of key themes discussed by development practitioners (Wutich, Ryan, and Bernard 2014). I coded the 12 interview transcripts and transcripts of the 46 conferences, workshops, and development practitioner meetings, identifying relevant policies and contextual background.

Through this process, I identified recurring concepts and conducted deeper analysis of selected themes by re-analyzing and refining codes. This approach revealed how development practitioners conceptualize development and governmentality—what programs and objects they consider central, how they view their roles in implementation, and how they define development success. All programmatic and policy documents (Appendix 3) were also coded and analyzed in *Atlas.ti*. Practitioner perspectives were then synthesized with findings from the literature, government reports, and archival sources. As Hammersley (2015) reasons, it is essential to contextualize themes identified from development practitioners alongside the broader development discourse. Themes were interpreted in relation to contemporary social, environmental, and demographic conditions that are commonly used to support

development narratives. For example, specific initiatives mentioned in interviews were triangulated with reports, policy documents, secondary literature to assess their framing (Yin 2014).

1.6.2.2 Discourse Analysis

Discourse analysis served as a core methodological tool in this dissertation, allowing me to investigate how development practitioners construct, interpret, and circulate key ideas and narratives surrounding agricultural development in Ethiopia. It is particularly useful when working with large volumes of textual data (Gerring 2007), such as interviews, policy documents, and in research where the aim is to examine "how meaning is produced through language" (Willig 2014, 12-13) and how that meaning shapes institutional practices. Discourse analysis has been used to illuminate how development practices are made to appear commonsense (Escobar 2012; Klenk 2004). My use of discourse analysis draws on Critical Discourse Analysis (CDA), which is rooted in Foucault's (1977) work on the connections between governance, knowledge, and power. Specifically, how "knowledge functions as a form of power and disseminate the effects of power" (Foucault 1977, 69). In the context of U.S.-led development, institutions such as USAID "manage the circulation of discourse" in ways that seem neutral but reinforce power structures (Klenk 2004, 74). CDA focuses on how discourse operates at structural and textual levels, revealing how development texts exists through "different discourses, genres and styles" (Fairclough 2003, 3).

In this dissertation, I used discourse analysis to trace how development practitioners—through conferences, interviews, policy reports, and agency documents—frame concepts such as smallholder agriculture, development goals, technologies, and target populations. Fundamental to this use of discourse analysis is the insight that "different discourses construct and interpret phenomena in different ways" (Chaudhary et al. 2015, 26). For example, the concept of a "local actor" may carry one set of meanings within U.S. policy discourse and another within Ethiopian institutions. Development related terms such as "co-creation" were examined to understand how language not only reflects but also enables or constrains particular forms of action (Willig 2014). In this way, discourses can be both "descriptive" and

"performative," and are embedded in institutional behaviors and rhetorical "claims to authority" (Dittmer 2010, 279, 284).

Drawing on Willig (2014), I approached interpretation as a foundation of analysis; it informs "what the text is taken to represent" and how it constructs "a particular version of reality within a particular context" (p.13). Therefore, for all my data sources, such as report or interview transcripts, identifying what these individual sources represent, their function and context, was an essential step in the analysis. I also treated discourse as dynamic, identifying "moments of expansion when actors and ideas contribute to" new meanings, and "moments of discourse institutionalization," where these meanings become embedded in development practice (Chaudhary et al. 2015, 27). This perspective allowed me to analyze shifts in development discourse, especially around the Feed the Future (launched in 2009) and LLD agenda (introduced in 2021)—across both U.S. and Ethiopian contexts.

Overall, discourse analysis provided frameworks for examining development as a historically and institutionally situated practice, in which language operates as both a medium for meaning and tool of power. By connecting discourses across local and global contexts, I examined how institutions like USAID produce development knowledge, circulate policy narratives, and shape the implementation of agricultural policy and practice.

1.6.2.3 Bibliometric Analysis: Identifying Dominant Narratives and Sources

To complement my qualitative research, I conducted a bibliometric analysis to examine trends, narratives, and citation patterns in the scholarly literature on agriculture in Ethiopia. This approach draws on methods outlined by Chignell (2023) and Chignell and Satterfield (2023), who demonstrate how network and bibliometric analysis can be used to track dominant narratives, citation patterns, institutional influence, and shifting research priorities in the academic literature.

I began by collecting article metadata from the Web of Science Core Collection, using the Boolean string: ((TS=(Ethiopia)) AND TS=(agriculture)), which returned over 1,500 results. I exported the metadata—including titles, abstracts, authors, affiliations, citations, and keywords—and imported it into *Biblioshiny*, a browser-based interface for the *Bibliometrix* R package (Aria and Cuccurullo 2017).

The analysis focused on identifying frequently cited authors and institutions, as well as key themes and research areas represented in the literature over time. I also examined author affiliations, funding agencies, Sustainable Development Goal (SDG) linkages, and publication trends. These patterns revealed which institutions and narratives dominate research on Ethiopian agriculture and how these are shaped by global research agendas. This bibliometric analysis supported my broader goal of tracing how development narratives are produced and circulated, particularly around topics like seed systems, climate resilience, and agricultural modernization.

1.7 Statement on Positionality

This research is informed by political ecology, which challenges the idea of the researcher as a detached observer and instead emphasizes the researcher's embeddedness in the production of knowledge (Sultana 2021; Sundberg 2014; Coddington 2017). Haraway's (1988) concept of "situated knowledges" (p.575) has also influenced this work, providing a feminist lens through which to reflect on how race, nationality, gender, and institutional affiliation shape both the research process and the kinds of knowledge it produces (Faria et al. 2021). My positionality as a white, American woman—with prior experience conducting archival research and living in Washington, D.C.—shaped both my access to research sites and how I was perceived by participants. I likely had greater access to U.S. institutions and archives due to my citizenship, familiarity with government communication protocols, and English as my first language, which is often the default in international development contexts.

I interviewed participants who, in many cases, held more institutional power, career stability, and societal status than I did. However, my educational background and prior work in Ethiopia created points of connection that helped establish rapport—particularly with U.S.-based development professionals. My previous experience in Ethiopia also likely helped facilitate communication with Ethiopian development practitioners, though I remained aware that my outsider status and U.S. institutional affiliations could shape these interactions.

1.8 Overview of Chapters

In Chapter 2, I analyze how recent U.S.-led development priorities—particularly climate-sensitive policy and locally led development (LLD)—are understood and interpreted by both U.S. and Ethiopian development practitioners. Drawing on interviews, government documents, and discourse from meetings and conferences, I use discourse analysis to examine how concepts like "local," "co-creation," and "local actor" are framed in U.S. policy and perceived in practice. While U.S. rhetoric increasingly emphasizes local engagement, Ethiopian practitioners often view "development" as disconnected from their realities, instead emphasizing climate resilience, local livelihoods, and indigenous knowledge systems. This chapter highlights the overall disconnect between U.S. narratives and Ethiopian perspectives, particularly around the concept of development, local engagement, and environmental governance.

In Chapter 3 I examine how U.S.-led agricultural development policies in northern Ethiopia have been shaped by goals of agriculture-led economic growth and market integration, particularly between 2010 and 2024. Focusing on the introduction of external inputs like improved wheat and chemical fertilizers, this chapter shows how such interventions often overlook the region's ecological and climatic diversity, promoting standardized approaches ill-suited to local conditions. Drawing from interviews and institutional analysis, I demonstrate how global disruptions—such as COVID-19 and the Tigray War (2020-2022)—have exposed the vulnerabilities of these input-dependent models. This chapter also explores differing conceptualizations of development between U.S. and Ethiopian practitioners, especially around women's roles in agriculture. While U.S. programs tend to marginalize women's knowledge of seed systems and crop diversity, Ethiopian institutions like TARI engage more directly with smallholder practices and local priorities, though gaps remain in fully integrating women's expertise. Together, these findings underscore the disconnect between externally designed interventions and local agricultural realities.

Chapter 4 reflects on the research process itself, focusing on the methodological and ethical challenges of studying U.S.-led agricultural development in Ethiopia. This chapter examines how political

instability, institutional opacity, and professional risk shaped access to participants and data. Development practitioners expressed deep concerns about anonymity and association with specific programs, revealing how institutional interests and the politicization of development constrain transparency and open critique. These dynamics not only impacted the research process but also offered insight into how discourse is carefully managed within the development industry. In response, this chapter emphasizes the importance of methodological flexibility, ethical reflexivity, and interdisciplinary approaches when researching powerful institutions. By situating practitioner concerns within broader institutional logics, the chapter underscores how these anxieties both reflect and shape development discourse—highlighting the need for critical, adaptive methods in international development research.

In Chapter 5, I synthesize the findings from the previous chapters, reflecting on the theoretical insights and methodological lessons that emerged through the research. I consider how development practitioners' perspectives, institutional constraints, and discursive practices complicate dominant theories of international development. The chapter evaluates the usefulness and limitations of the critical theoretical frameworks employed—such as critical development studies and political ecology—and suggests alternative or complementary approaches. It concludes by identifying key lessons for future research on U.S.-led development and highlights the value of reflexive, interdisciplinary methodologies for studying power, discourse, and institutional dynamics in global development practice.

2 CHAPTER 2: WHAT IS DEVELOPMENT? US VS ETHIOPIAN PERSPECTIVES

2.1 Introduction

From the 1990s until 2024, the U.S. government played a major role in agricultural development projects in Ethiopia. As of 2024, the U.S. Agency for International Development (USAID) is the largest donor to Ethiopia (almost $2.3 billion in 2023) (The Government of Ethiopia 2023). While significant research has analyzed the dynamics of agricultural development in Ethiopia after the 1984/5 famine/drought and the subsequent influx of aid (Clay and Holcomb 1986; Holt and Lawrence 1993; Rahmato 2014; Adnew Degefu et al. 2019), there has been minimal research on the more recent period of intensified development efforts in Ethiopia from 2010 until 2024, particularly interventions directed towards smallholder agriculture. Specifically, there has been limited research into how development interventions are constituted by their entanglements with agro-industries, U.S. political and economic agendas, and the dynamics of local community engagement. Agricultural development policies and interventions are often promoted to address food insecurity in Ethiopia and help adapt to climate change conditions (Teklu and Hammer 2006; Weisser et al. 2014; Devereux and Kapingidza 2020). This chapter explores the discourse and policy surrounding U.S.-led agricultural development, placing it in historical context and within the theoretical framings of critical development studies and political ecology.

This research is based on an analysis of development conference meetings and workshops, as well as documents, reports, and interviews with participants. Each participant was assigned an alphanumeric identifier (e.g. respondent #4 is referred to as R4). Key sources include meetings of The Board for International Food and Agricultural Development (BIFAD), an advisory board to USAID that helps shape policy discourse and direction, and documents from Feed the Future (FtF), the U.S. Government's Global Hunger and Food Security Initiative. Led by USAID, Feed the Future collaborates with multiple U.S. government agencies, and nearly all U.S.-led agricultural development programs in Ethiopia originate from this initiative.

How development policy is interpreted and practiced often differs from the policy itself (McCusker 2015). Policies formulated by foreign governmental agencies and "the concepts of development and modernity" are frequently reinterpreted and reconfigured by those implementing them in-country (Escobar 2012, 51). Thus, understanding the perspectives of development practitioners is crucial for investigating the motivations, intentions, and priorities of US-led agricultural development in Ethiopia. All participants in this study were experts in agricultural development directed toward smallholder farmers and had either worked directly for USAID in Ethiopia or a USAID-contracted NGO in Ethiopia. Those practitioners based in the U.S. were typically trained in U.S. development or agronomy programs, while Ethiopian development practitioners highlighted similar early-career training received by many in their field (through the Ethiopian Institute for Agricultural Research (EIAR) or a regional agricultural research institute).

2.1.1 Research Questions

The research in this chapter was guided by the following question and sub questions:

What are the motivations and intentions behind US development policies in Ethiopia's agro-pastoral landscapes?

a. Between 2010 and 2024, how have development priorities been identified and discursively framed within US-based approaches, and in what ways do these priorities reflect or overlook local agricultural needs?

b. How do development experts select specific elements, such as technologies, policies, or practices, as focal points for interventions in Ethiopian agricultural systems?

U.S.-led agricultural development efforts in Ethiopia focus on the transformation of agricultural systems to promote economic growth. This primarily involves the introduction of agricultural technologies, particularly high-yield crops, and facilitating market linkages and private sector partnerships. Attention to climate adaptation and mitigation within agricultural development is a more recent focus, and over the last few years USAID has been developing climate-led agricultural goals and measurements tools (Carr et al. 2023; CASA 2024). A key focus of this chapter is the U.S. government's

locally-led development (LLD) initiative. In 2021, USAID Administrator Power set a goal of 25 percent development assistance directed towards "local partners," and by 2030, for half of USAID programmatic spending to have local communities "either co-design a project, set priorities, drive implementation, or evaluate the impact of our programs" (Power 2021, 6). I use the acronym LLD to refer specifically to this U.S. policy priority, and not the overarching concept of locally-led development, which has a variety of interpretations and practices. The broader concept—where development is led by the community targeted by interventions—has a long-standing presence in the literature, from Ferguson's (2006) discussion of how "local" is understood by the "dominant 'development' vision of the world" (p.51), to Escobar's (2012) assertion that "the concepts of development and modernity are resisted, hybridized with local forms" (p.51). Civil society organizations have also played a significant role in discussions surrounding locally led development (Gingerich and Cohen 2015; Vera and Brusola-Vera 2021).

This chapter compares U.S. government development priorities, policies, and perspectives with those of Ethiopian development practitioners. These Ethiopia-based practitioners demonstrate a greater focus on climate change and the potential negative consequences of development interventions, compared to U.S.-based practitioners. They also emphasize the importance of seed restoration following periods of resource scarcity, policies that support climate resilience, and working with customary institutions.

2.2 Results

2.2.1 U.S. Development Practices and Perspectives

Understanding how LLD is defined and operationalized is essential to understanding how it fits within U.S. development discourse. While LLD is framed as a shift toward more inclusive and responsive development, U.S. agricultural development policy toward Ethiopia continues to reflect long-standing patterns of standardization. This standardization often limits the adaptability of interventions to local contexts and has significant implications for how complex challenges—such as nutrition, land scarcity, and climate resilience—are addressed. The following section examines how U.S.-based development

practitioners articulate these dynamics and how their perspectives reveal tensions between LLD rhetoric and development practice.

2.2.1.1 U.S.-Led Development Policies: LLD

Following Administrator Power's 2021 instructions, USAID made locally-led development (LLD) a priority. The LLD initiative, also described as a process of "localization," is defined as "a set of internal reforms, actions, and behavior changes" within development work to shift USAID's efforts towards "local actors' priorities and strengthen local systems…in which local actors set their own agendas, develop solutions, and mobilize the capacity, leadership, and resources to make those solutions a reality" (USAID 2022a, 2; ACVFA 2024; USAID 2024b). Specifically, LLD material emphasizes the use of "co-creation" to facilitate the localization process (USAID 2022c; Feed the Future 2022a; Carr et al. 2023). The U.S. Government Global Food Security Strategy for 2022-2026 describes how government policy is "increasing a locally-led approach and promoting locally-led solutions" through "using a co-creation process when designing FtF programs to bolster local participation and ownership" (Feed the Future 2022a, 70). Therefore, how LLD is implemented largely depends on how the U.S. governments defines concepts such as "local actor" and "co-creation."

2.2.1.1.1 "Local Actor" in LLD

Between 2021 and 2024, USAID has consistently stated that it's goal is to shift power to "local actors." USAID defines a "local Actor" as "individuals, organizations, and networks that originate from and are led by people within a given country or region, inclusive of government at national and sub-national levels" (USAID 2023a, 23). The specific "Inclusion Criteria" for a Local Actor also necessitates that the individual must "work directly with USAID" and that the support is a result of a specific survey, assessment, or USG-led tool, process, or assessment (USAID 2023a, 21; USAID 2021). The primary example given for supporting a local actor consists of a "series of engagements" from USAID "that would support a subnational government agency to improve understanding of USAID Monitoring, Evaluation and Learning (MEL) requirements" (USAID 2023a, 21; Feed the Future 2022a).

However, USAID's Advisory Committee on Voluntary Foreign Aid (ACVFA) noted in June 2024 that there is still significant debate within the development industry on how to define a "local actor," which continues to impact how USAID LLD policy is interpreted and executed (ACVFA 2024, 2). This debate is evident within USAID reports, policy documents, and meeting transcripts. USAID's 2023 Localization Progress Report notes that the agency is working to support development that "emphasizes local actors' priorities, needs, goals, and ideas" (USAID 2022a, 3). USAID's Global Food Security Strategy includes both "Do no harm" and "Do nothing about them without them," which involves "ensuring those whose lives are affected by decisions have a meaningful role to play in the making of those decisions" (Feed the Future 2022a, 17).

USAID reports, program documents, and meeting statements illustrate the broad parameters USAID has for a "local actor." BIFAD's Climate Report notes that co-designing investments should include "local innovators" and "early adopters" of development research (Carr et al. 2023, 46). Furthermore, USAID's 2021 operational policy emphasized the importance of "local stakeholders," who consist of "partner country governments, beneficiaries, civil society (including faith-based organizations), the private sector, multilateral organizations, regional institutions, and academia" (USAID 2021, 13). The significant inclusion and emphasis on multi-national civil society organizations as "local actors" or "local stakeholders" is evident throughout USAID policy, reports, and meeting reports. At a BIFAD meeting, a technical advisor emphasized that the CRS (Catholic Relief Services) and the Catholic Church could be seen as "a permanent local actor in many places with strong networks and reach" (BIFAD meeting Aug. 31, 2022). While CRS and the Catholic Church may have a longstanding presence in certain locations, referring to them as "local" overlooks the important distinction between institutions based in national or community contexts and international actors that work within global mandates.

USAID also uses the term Locally-Established Partner (LEP) to describe an entity or actor that serves as a point of interaction for LLD. LEP is a "U.S. or international organization that works through locally-led operations and programming models" (USAID 2021, 136). To be an LEP, the organization must have operated for over five years in the country, along with other requirements, including at least 50

percent of in-country office personnel being local (USAID 2021, 136). While USAID development guidelines have mentioned local customary institutions and knowledge systems, they are not explicitly utilized in policy, even in the context of local actors or LEP (USAID 2023b). Overall, for USAID, a "local actor" involves a variety of organizations, including academic institutions, international NGOs, and various levels of government. This illustrates that despite USAID's stated LLD commitment to empowering local actors, the definitions and criteria do not emphasize organizations and leadership based in the development locations.

2.2.1.1.2 "Co-creation" in LLD

USAID defines "co-creation" as a process and method that is "intentional" and "time-bound," it "can be pursued at any point in the Program Cycle" and is centered around "shared power and decision-making related to priority-setting, activity design, and ownership" (USAID 2023a, 10). Co-creation actors "typically involve Agency staff, implementing partners, program participants, and/or local communities in a collaborative design process" (USAID 2023a, 10). The concept became a point of discussion within high-level policy meetings. At a BIFAD meeting, a member urged USAID to "promote co-creation of adaptation best-practices with participants of USAID funding." The member noted the importance of emphasizing the "co-creation" process to those receiving USAID funding when participating "in activities such as Farmer Field Business Schools" (BIFAD meeting Sept. 11, 2023).

These statements illustrate a recurring theme in USAID policy processes; concepts such as "co-creation" are applied with great latitude, it often means engaging with and communicating information to those already engaged in USAID programs, instead of the actual co-construction of something new. USAID's overall approach to co-creation, as illustrated through policy documents and discourse among development practitioners, demonstrates a process that rhetorically emphasizes shared power and decision-making while relying on standard funding relationships. Furthermore, it also involves engaging the local communities or "collaborators" later on in the program "creation" process.

2.2.1.1.3 Operationalizing LLD within U.S. Development Policy

The underlying dynamics of the initiative is reflected in how it is operationalized—specifically what policies objectives are used in to implement the initiative. Table 1 illustrates the five most frequently co-occurring policy objectives, based on an analysis of U.S. Government (USG) agricultural development policy documents and meetings since the implementation of LLD goals in 2021 through 2024. While LLD policy and development practitioners claim a significant shift in international agricultural development policy with LLD, the primary policies being promoted within LLD, supporting local leadership, in-country research, innovation, and increased agricultural production, are all policy agendas that frequently occurred prior to LLD. "Co-design projects" is a newer policy agenda that increased in prominence with LLD. However, while these policy objectives were fairly recently initiated, there is little evidence that the "co-design" or "co-creation" process provides any significant mechanisms that would lead to a significant shift in development policy to being locally led.

Table 1: Operationalizing Locally-Led Development (2021-2024): Five most frequently co-occurring policy objectives

	Policy objectives	Key Citations
1.	Support local leadership	Feed the Future 2022a, 2022b; BIFAD meeting June 28, 2023; BIFAD meeting Sept. 11, 2023
2.	Support in-country research and development	Feed the Future 2022a, 2022b; Carr et al. 2023; BIFAD meeting Sept. 11, 2023
3.	Innovation in local development practices	Feed the Future 2022a; Carr et al. 2023; BIFAD meeting June 28, 2023; BIFAD meeting May 23, 2022
4.	Co-design projects: balanced external/internal input in decision-making	Feed the Future 2022a; Carr et al. 2023; BIFAD meeting Sept. 11, 2023; Power 2021
5.	Increase agricultural production/results	Feed the Future 2022a; BIFAD meeting Oct. 26, 2022; Power 2021

2.2.1.1.4 Progression of 'Local' Discourse Over Time

When Administrator Power gave USAID instructions to prioritize locally-led development (LLD) in 2021, it was the result of a long-term push from civil society organizations, along with many within USAID, to incorporate more locally-led programming (Gingerich and Cohen 2015). While LLD is presented as "a set of internal reforms, actions, and behavior changes" to shift USAID's work to "local

actors' priorities and strengthen local systems" (USAID 2022a, 2), this policy shift grew from USG utilizing the concept of "local" in various forms over many years.

Table 2 illustrates that from 2013 to 2023, the concept of "local" in U.S. government agricultural development discussions evolved from a broad acknowledgment of local solutions and leadership to a more strategic emphasis on locally-led development. In 2013-2014, discussions focused on supporting local leaders, and by the mid-2010s, there were references to building capacity in local institutions and collaborations with local communities. By 2018, the discourse shifted to local systems and actors, and USAID's Local Capacity Development unit was established in 2020. With the establishment of LLD in 2021, the discourse included equity and inclusion, along with the involvement of local voices in decision-making processes.

Table 2: How "Local" is Conceptualized: 2013- 2023

	The concept "local" in USG agricultural development discourse: 2013-2023
2013	"…we believe in local solutions and we believe in local leaders" (ACVFA March 14, 2013).
2014	"…the evolving philosophy of aid effectiveness now calls for ensuring necessary skills are held by local leaders, rather than US participants" (BIFAD Jan. 30, 2014). "Bridges need to be built among local communities, Innovation Labs and USAID…" (BIFAD Oct. 14, 2014).
2015	"…by searching out collaborations and partnerships these problems can be addressed through local and community programs" (BIFAD April 10, 2015).
2016	The "project can build capacity for local institutions to take over in the future…" (BIFAD Oct. 12, 2016).
2017	"The most valuable aspect of that partnership for Monsanto is learning to work with local partners in developing countries" (BIFAD Sept. 12, 2017).
2018	"Promoting local ownership and capacity building of local systems and actors…" (Feed the Future 2018a, 14).
2019	"Local context and strengthening local leaders are important" (BIFAD Oct. 15, 2019). USA "relies on its African implementing partners to use their local knowledge to co-develop projects…" (Feed the Future 2019b, 38).
2020	"…a new Local Capacity Development unit that has recently been established at USAID" (BIFAD Oct. 13, 2020). "National and local governments can adapt policy and regulatory options to local priorities and agroecologies, thus improving biodiversity and strengthening public-private partnerships in the process" (Feed the Future 2020, 25).
2021	"…create locally-driven, sustainable progress over the next five years" (Power 2021, 6). "…advancing approaches that work through local actors, partners, institutions, and systems; diversify USAID's partner base; and champion locally-led and funded development" (USAID 2021, 45).

2022	"USAID is deeply committed to locally-led development, equity, and inclusion to achieve sustainable solutions and to engage and empower local organizations and traditionally under-represented and under-served populations" (BIFAD Aug. 31, 2022).
2023	"…ensure that those with local knowledge had a voice in the decision-making process and that there was a balanced mix of external and internal input" (BIFAD Sept. 11, 2023).

This progression from 2013 to 2023 reflects a growing willingness to engage with local priorities and perspectives. However, the policy objectives used to implement LLD, along with how USAID defines central concepts in LLD policy, illustrate that many of the general approaches employed by LLD policy reflect long-standing USAID policy. Specifically, how LLD concepts are defined are not easily recognized as polices that would further locally-led development. Overall, these shortcomings in USAID's LLD framework highlight a broader issue: the reliance on a standardized approach that often overlooks the needs and contexts of local communities.

2.2.1.2 Standardized Approach of U.S.-Led Development

Limitations in the way that LLD is being implemented can be connected in many ways to the standardized nature of U.S. government policy practices, specifically surrounding USAID. Development practitioners argue that the standardized approach of agricultural development interventions limits their effectiveness, primarily due to a lack of flexibility and adjustment to local contexts. Interventions are often not effectively tailored to local food systems, livelihoods, geography, and the capacity of communities to adopt new technologies, practices, or inputs. This lack of contextual adaptation is particularly evident in the way U.S.-based development addresses challenges related to land scarcity, which is a critical issue not only in northern Ethiopia, but limited access to arable land and competing land uses are common constraints that impact smallholder agriculture globally (Radel et al. 2018; Nyssen et al. 2008; Tadele 2021).

2.2.1.2.1 Land Scarcity and Agricultural Development

While U.S.-based development programs acknowledge the limited land available to farm, it is not effectively taken into account in interventions. Within international development literature, land scarcity for farmers has long been identified as an issue (FAO 2020). A 2006 FAO report noted that in northern

Ethiopia, "due to land scarcity, grazing land has been converted to agricultural production and crop land is no longer left in fallow" (Howard and Smith 2006, 98), and an Ethiopian government report indicated that because of limited land, increases in crop production for smallholder farmers will be due to high-yielding crops and agricultural inputs (The Federal Democratic Republic of Ethiopia 2018). This is reflected in ongoing U.S. development policy. An FtF program emphasized introducing "high-yielding" and "productive" crops, which would require more inputs, such as water (Feed the Future 2018b, 45). A list of successes for the project included "Agrodealers purchased 30 quintals of Gagabe haricot bean variety to distribute to PSNP (Productive Safety Net Program) beneficiaries" (Feed the Future 2021a, 36).

While U.S.-based development programs acknowledge the limited land available to farm, it is not effectively addressed in the overall design of interventions. Policy documents, development practitioner meetings, and interviews with participants indicate that development practitioners are aware of the fact that due to the limited land, farmers must make difficult decisions on a regular basis. A member of the "BIFAD Subcommittee on Systemic Solutions for Climate Change Adaptation and Mitigation in Agriculture, Nutrition, and Food Systems" wondered whether farmers should use land to "plant forages to feed livestock or plant maize and beans" and acknowledged that because farmers have "limited land for agricultural expansion," there is a necessity "to have integrated strategies in place" (BIFAD meeting Oct. 26, 2022).

However, agronomists who have worked for USAID projects in Ethiopia did not identify limited land and the resulting decisions as a factor in the effectiveness of agricultural interventions. Two participants who are U.S.-based agronomists and have worked for USAID-Ethiopia projects identified education and interest from farmers as the biggest barriers to the adoption of updated seeds. One participant noted how farmers are resistant because of family traditions, and therefore, it is important to "campaign on the ground to convince farmers to adopt new varieties" (R7). Another U.S.-based participant noted that, in general, there is often a significant "lack of adoption by farmers" of the improved seeds because they may not do as well as some of "the local varieties" (R8). Overall, while there is recognition that these difficult decision points exist for farmers, minimal effectual practices take

this into account. There is no adequate acknowledgment by in-program material or by development practitioners that through introducing updated seeds, farmers have less land available for their traditional crop varieties and/or forage for livestock. This interplay between land limitations and agricultural interventions has broader implications, including farmers' health and nutrition.

2.2.1.2.2 Food Systems, Nutrition, and U.S.-Led Development

As with the challenge of limited land, the importance of nutrition is noted across U.S.-led agricultural development, specifically for Ethiopia, given recurring famine conditions (McCann 1987; Holt and Lawrence 1993; Butler and D'Andrea 2000). The two main ways that U.S.-led development attempts to improve nutrition are 1) working to increase agricultural production, largely through introducing higher-yield crops, and 2) through new, densely nutritious foods. There is an overall lack of acknowledgment of how local varieties are valued and the nutrition that they provide. Therefore, U.S.-led development work does not effectively address the potential negative impacts on the health of farming communities resulting from the effects of interventions on the nutrient levels in farmer diets.

USAID takes the lead on nutrition development programs in Ethiopia; the agency chairs the Nutritional Technical Working Group, a consortium of international donors to Ethiopia (USAID 2019, 33). The agency has also made nutrition central to its long-term agricultural development goals. A BIFAD board member described "agriculture and economic development" as "a means leading to nutritional and economic self-reliance" of a nation (BIFAD meeting Feb. 27, 2008). While policy documents described how "the complex nature of malnutrition requires an integrated, multisectoral approach inclusive of investments across agriculture and food systems, health systems, resilience, and the environment" (Feed the Future 2022a, 27), discussions during strategy meetings regularly frame nutritional issues as a deficit of food. The Global Food Security Strategy for 2022-26 described increased agricultural productivity as continuing to be critical "to achieve our nutritional development outcomes" (Feed the Future 2022a, 30).

However, there is a lack of acknowledgment of how development projects could contribute to decreased nutrition. One participant, who is a former technical consultant for USAID-Ethiopia projects, argued that agricultural development projects could actually contribute to caloric deficits. This is because

development projects introduce new activities to farmers and almost always involve an increased workload. An increase in agricultural productivity from the new activities is not inevitable, and farmers would necessarily experience a delay before increased production. The participant argued that if development projects "compel people to exert more energy than they have," then the "development is culpable (of) starving people" (R1).

USAID also explicitly states nutritional deficits can be addressed through the introduction of crops with higher nutritional values than local crops. A member of BIFAD's "Subcommittee on Systemic Solutions for Climate Change Adaptation and Mitigation in Agriculture, Nutrition, and Food Systems" emphasized the importance of "promoting nutrient-dense, climate-resilient crops" (BIFAD meeting Aug. 31, 2022). Also, an FtF Ethiopia project report claimed, "new sorghum hybrids under development combine high protein digestibility (HPD)" and show "promise for various food applications due to superior functionality and improved protein nutritional quality" (Feed the Future 2021b, 31).

From the 2010s until 2024, there have been recurring discussions within USAID policy documents and strategy meetings surrounding the nutritional value of local crops. Recommendations given during a 2018 USAID-East Africa stakeholder workshop include running "assessments on the nutritional value of commodities," such as "foods locally known but for which no scientific research has been carried out on their nutritional value" and then conducting an "education campaign on those crops identified" (USAID 2018, 29). Many of these themes—of indigenous crop identification and then improvement and promotion, were reiterated in a BIFAD meeting. The U.S. Department of State's Special Envoy for Global Food Security stated in the meeting that "A challenge for indigenous crops is historic underinvestment in improvement of yields and other key attributes that would make them a more viable commercial option for farmers" (BIFAD meeting Sept. 11, 2023). Furthermore, the first step is "to identify crops with the greatest potential to provide additional nutritional value" (BIFAD meeting Sept. 11, 2023). A former agronomist for USAID projects in Ethiopia described *t'ef* this way: it is a crop of cultural and nutritional importance for Ethiopia but "lags in research development and improvement," and there are not many resources "at the moment to better understand how to improve it" (R8). While it is

evident that indigenous crops are increasingly valued by development practitioners, the development process focuses on identification and then improvement and promotion rather than supporting farmer use of existing varieties in the field.

U.S.-led development in Ethiopia has noted the importance of diet diversity for nutrition (Feed the Future 2019b). However, agencies do not acknowledge the decreased diversity of local food sources that often occurs with agricultural development programs (Mkindi et al. 2020; Juma 2015). Discussions and policies on nutrition have also not demonstrated an understanding of the consequences of replacing or reducing the nutritional contributions of local crop varieties. The consistent reduction in crop diversity in local food systems from standard agricultural development programs (Bezner Kerr 2014; Altieri 2012) highlights the unintended consequences of development interventions that do not fully engage with local and traditional food systems. Overall, U.S.-led agricultural development practices and perspectives on nutrition illustrates a highly standardized system. Despite evolving emphasis on locally led development in policy discourse, these practices continue to demonstrate limited engagement with local agricultural knowledge, which is a clear contrast to the perspectives of Ethiopian development practitioners.

2.2.2 Ethiopian Development Practitioner Perspectives

Ethiopian development practitioners interviewed for this study (referred to in this section as participants) are all experts in agricultural development with a focus on smallholder farmers. They have either worked directly for USAID in Ethiopia or for USAID-contracted NGOs in Ethiopia, many also have experience with Government of Ethiopia (GOE) agricultural development programs or provincial agricultural institutes. However, the concept of 'development' is not central to how these participants understand their work. Instead, increasingly over the past decade, they have prioritized climate resilience as a guiding framework. Practitioners frequently emphasized the importance of incorporating and understanding local perspectives, highlighting ongoing challenges to local seed systems and the importance of engaging with customary institutions. These perspectives are consistent with perspectives that emerged from recordings and documentation of conferences, panels, and workshops held in Ethiopia, which further illustrate how Ethiopian practitioners conceptualize and approach their work.

2.2.2.1 Conceptualizing Development

The concept of 'development' is not central to how Ethiopian development practitioners understand their work. Their roles were not described in terms of 'development,' nor did 'development' seem to serve as a primary motivation for their agricultural efforts. None of the Ethiopian development practitioners I interviewed had ready answers to questions like: "What is development?", "How would you define development?", or "What should be the goal of agricultural development?" One participant responded that "those types of questions are too broad," but noted that the issues development aims to address often stem "from structural problems, like the infrastructure...for example, access to markets," and involve responding to "broad challenges." He explained further: "even though we call them smallholder farmers," the fact that "they produce something to eat and something to sell," within larger regional systems, means their challenges are deeply tied to broader structural conditions (R6). This response illustrates that for some Ethiopian practitioners, the focus is not on 'development' as an abstract idea, but on addressing concrete systemic barriers that impact smallholder farmers.

Another participant also considered the questions on development too broad and did not provide an answer (R5). However, she described what should not be considered development, highlighting concerns with Green Revolution programs, including The Alliance for a Green Revolution in Africa (AGRA) (Mkindi et al. 2020). Wrestling with the practical implications and meaning of "development" was a recurring theme. At an agricultural development conference near Addis, a development practitioner who has worked for USAID did not articulate a clear vision of development but argued how a central concept of development should be having "a clear common goal" for the communities who are the focus of the development. Furthermore, "as development partners, we need to have a common goal" in order to support "resilient communities" (DREAM II conference March 16, 2022). For many Ethiopian development practitioners, this concept of resilience is central to their conceptualization of development and is intrinsically tied to climate preparedness and support for livelihoods.

2.2.2.2 Climate Resilience and Local Livelihoods

Ethiopian development practitioners primarily discussed development in terms of climate resilience, preparation for climate-related events, and supporting local livelihoods by adapting to changing conditions on the ground. A participant emphasized the need for "climate smart systems" and a more cohesive and comprehensive "Climate Action Plan". He noted that while climate planning occurs at the international and, to some extent, national level in Ethiopia, it is largely absent at regional and local levels. Describing how he approaches planning, he said: "I see myself in the next 10, 20, 30, 40 years…how would this place look?" (R2). This perspective leads to a focus on project implications and whether "development objectives" might exacerbate the impacts from climate change. For example, he posed the question: "how do you protect your underground water? We don't want to drill more irrigation systems; all this will do is take more water out of the system" (R2).

Many of these concepts were reiterated by other Ethiopian participants and in development conferences. A development practitioner from Afar emphasized the importance of protecting natural resources in that region, especially due to the changing conditions, and that both agriculturalist and pastoralist "livelihoods need to be seen" and respected in development activities (DREAM II conference March 18, 2022). In discussing development and climate change, another emphasized the importance of updating practices, particularly natural resource management, and the training and skills offered, in order to adjust to new conditions, because for farmers and pastoralists in the drylands: "the last 23 years and where it is now, things are changing rapidly, and the problems are…changing rapidly" (DREAM II conference March 18, 2022). Overall, Ethiopian development practitioners discussed livelihoods in connection with climate change, and the threats to livelihoods due to rapidly changing environmental conditions, and a lack of support to adapt to those conditions.

In the intersection between climate change and development, Ethiopian practitioners noted the importance of taking into account other factors that are dramatically shifting conditions in Ethiopia. One participant explained: "what's making climate change more difficult for the communities and households" are additional factors "like the conflict in the Tigray, Amhara region," because "thousands and thousands

of people have been displaced, people migrate to new areas, (and then) their crop production, their seasonal patterns, all that's impacted" (R12). The participant then described how "in the next 10, 15 years, there will be more climate IDPs (internally displaced people), so how do you reverse the trend? What are the climate proofing activities? How do we help communities to conserve more water? (R12)." These sentiments were expressed by a number of Ethiopian development practitioners; instead of "development" they emphasize the interconnected nature of climate resilience and socio-political challenges in Ethiopia, and the need for interventions that are locally tailored, flexible, and planned with future climate conditions in mind.

2.2.2.3 Ethiopian Practitioner Engagement with Local Institutions and Food Systems

2.2.2.3.1 Customary Institutions and Local Leaders

Ethiopia-based development practitioners consistently highlight the importance of working with customary institutions and local leaders, typically overlooked in development projects. One participant noted how in the Somali region and in Oromia, overall customary institutions had larger roles in their communities (R2). Therefore, through these customary institutions the communities could engage the government more effectively, and the government listens to them more, which provides greater local leadership on many relevant issues, "from political water management (and) national source management," including "many different layers" of governance (R2). Another participant noted how although customary institutions were in general not as strong in Tigray and Amhara provinces, it was still crucial to engage with and follow the networks and local knowledge systems that exist (R5). This participant noted the importance of working within the local language. For example, a presentation at the 2022 development conference near Addis credited the success of a project to the "formal communication" system that exists in Afar, where "… information was moving through the *Dagu*, the local radio through local language, as well technical advisories were disseminated using community action groups (as) informational disseminator(s)" (DREAM II conference March 16, 2022).

Another participant emphasized that working in the local language and engaging community-identified leadership was essential (R10). A presentation at a 2022 development conference near Addis expanded on this idea, explaining that by using the local language and working with local leadership, development projects can "identify those champions at the regional level, at the *woreda* (county) level, from the community to work with them so that it was successful…" (DREAM II conference March 16, 2022).

Linking connecting community engagement with climate response, one participant explained that when a community becomes the focus of a climate adaptation intervention, the community already "know the trends." But he emphasized the need to communicate the ideas through "more localized language, more local context," and use it to create "a plan for 10, 20, 30 years" in the future. He criticized the current state of planning as "ad hoc," calling instead for "more long-term policies" that are "climate smart," especially because "a lot of these communities are doing the adaptation. So, how do we support their climate work?" (R2). Together, these perspectives underscore the importance of localized leadership, language, and long-term planning in supporting climate resilience within development work.

2.2.2.3.2 Supporting Local Knowledge and Biodiversity: Seed banks and farmer practices

Development projects discussed by Ethiopian development practitioners more frequently attempt to incorporate and understand local perspectives and needs. This includes national and local seed banks, and their role during periods of resource scarcity, along with the local cultural significance of seeds and local food systems. Seed preservation and distribution in Ethiopia occur at multiple administrative levels, including a national seed company and a national initiative led by the Biodiversity Institute, with each also operating their own seed company (R3). All development practitioners noted the importance of preserving plant genetic diversity *in-situ* (in farmers' fields) and *ex-situ* (in research institutes/gene banks). Community seed banks and the national seed bank emerged as an essential component of facilitating the circulation and preservation of locally adapted varieties (Mulesa 2021; Mulesa and Westengen 2020; Tsegaye and Feyissa 2017).

However, there are a variety of perspectives from participants and within development workshops on the level of interaction and support farmers receive from seed banks. An agricultural expert described how farmers can choose from many different local varieties that are stored in seed banks (EIAR 2019, 9). However, a participant who also worked extensively with EIAR said he was unaware "if any farmers are interested in" withdrawing seeds from the seed bank (R6). Yet, another participant described: "if farmers require some seed, which has been collected from the locality," they "borrow from the seed bank, grow and then return after harvest… That way, the system works to supply the local varieties to the community, which are also locally adapted" (R5). The participant described that if a community experiences an event that leads to a "complete failure" of their harvest, they ask a nearby community. The participant continued:

If it's not found in the neighborhood, they go to a distant place, and try to fetch from market or from some knowledgeable resource, such as farmers who are seed experts and who are keeping diversity. The last resource is to get accession from the national gene bank and do restoration. But that takes a long time, Farmer-to-Farmer system helps to restore diversity very shortly (R5).

Farmers increasingly experience stresses to their food systems due to "seasonal fluctuations" related to climate change, which often lead to farming communities experiencing seed shortages (Tsegaye and Feyissa 2017). Because of these factors, a participant argued that "climate solutions" on the ground will only come from "information, awareness creation, and conversations on the community level" (R2). While seed banks and farmer knowledge play an essential role in preserving plant diversity and supporting local food systems, Ethiopia-based development practitioners highlight significant challenges facing local seed systems, particularly in how seeds are conceptualized and treated within U.S.-led development models.

2.2.2.3.3 Challenges to Local Seed Systems

Ethiopia-based development work emphasizes the challenges that local seed systems have faced, particularly around how seeds are generally conceptualized and approached within U.S.-led development models. A participant argued that development interventions usually do not appreciate how farmers "give serious attention to seed quality and management" because "food is more than a commodity," and seeds

"should not be commodified…." She continued: "companies produce it, sell, make money, (and then are) finished. But, farmers consider (seeds) a sacred thing…a seed has a life, it is a continuation of their food production" (R11). This concern was also voiced by an Ethiopian development practitioner, who gave the critique: "We are assuming that seed is a commodity like any other commodity like shoes or dresses" (EIAR 2019, 10). A participant further argued that the farming communities she had worked with "are gradually losing that wisdom" because farmers "depend on the new seeds coming, (and) buy it from companies," which is not "how the community see and value seed; seed must be planted continuously" to adapt to changing conditions (R11).

There were a variety of perspectives surrounding utilizing seed varieties from farmers, and farmer access to seed banks. One participant described how the "bank located in Addis does collection missions all over the country," and stores the seeds, and then when any researcher would like to do research, they "have the right to take accessions from" the national seed bank (R6). Another participant critiqued this research process; when a researcher takes seeds from the bank and does a modification that may count for at most 10% of the seed's genome, but then receives a patent for the seed, the patent is given to "the one who did the smallest modification" (R5). The participant continued: "How about the farmers who have been experimenting for thousands of years, who developed the variety, and who supplied the source material? That that's what doesn't align for me, is not fair. Why do we need to patent life forms?" (R5). This critique underscores a perspective among many Ethiopian development practitioners: the recognition of farmers' contributions and knowledge systems, particularly in the face of external development interventions that often prioritize profit-driven models. Overall, Ethiopian development practitioners emphasize the importance of preserving local seed systems and valuing farmer knowledge, while advocating for development approaches that include farming communities' perspectives and adaptive strategies.

2.3 Discussion

This chapter examines how the concept of development is understood within U.S.-led agricultural development in Ethiopia, focusing on the perspectives of both U.S.-based and Ethiopian development

practitioners. The study results are discussed in relation to PE and the critical development literature, which help frame the analysis of LLD rhetoric, policy, and the other defining characteristics of U.S.-led development. Despite the stated commitments to LLD and climate change policy, the U.S. agricultural agenda in Ethiopia continues to prioritize economic growth through the introduction of new agricultural inputs. This reflects long-standing patterns in development practice identified by Ferguson (2006), Li (2007), Mitchell (2002), and Scott (1998). However, several unexpected factors have complicated these dynamics, including contested interpretations of seed sovereignty, alternative framings of development through climate resilience and livelihoods, and varied approaches to community engagement, particularly through customary institutions.

2.3.1 U.S. Agricultural Development: Priorities and Practices

The agricultural development perspectives and priorities reflected in U.S. documents, reports, meetings transcripts, and the views of development practitioners emphasize policies and approaches that focus on improving economic conditions of smallholder farmers, mainly through market-based approaches utilizing updated seeds varieties. However, these approaches often fail to account for interacting factors such as nutrition, land scarcity, and the value of traditional crops. U.S. development practices also overlook local knowledge systems, including customary institutions, and tend to privilege outside expertise and scientific authority. By seeking to change farmer behaviors, U.S.-led agricultural development in Ethiopia asserts authority over concepts of rationality and science, shaping the narratives and interventions that guide development policy.

Seeds are generally framed as a commodity within U.S.-based agricultural development initiatives to operationalize broader economic agendas. While Ethiopian participants noted the immense value of preserving local seed varieties, USG development activities typically present the introduction of new seeds as an economic opportunity, often described as "mutually beneficial" (Feed the Future 2022a, 17). However, these interventions frequently fail to account for the local context and existing agricultural practices. For example, although development practitioners and policy documents do not explicitly suggest that farmers should abandon traditional crops, the reality of land scarcity means that adopting a

new seed variety often requires discontinuing traditional varieties. This dynamic is common in smallholder farming contexts and has been widely documented as a consequence of agricultural development interventions (Mkindi et al. 2020; Altieri 2012; Bezner Kerr 2014), and often corresponds with declines in farmers' dietary nutrition (Flachs 2020).

Another example of failing to account for local contexts involves the fact that U.S.-based development actors often identify a lack of education or interest among individual farmers as the main barriers to adopting updated seeds. This framing reflects a broader tendency within U.S. interventions to focus on the individual farmer as the agent of change, while overlooking the community-based nature of smallholder agricultural knowledge in Ethiopia. Practices such as seed selection, cultivation strategies, and environmental adaptation are rooted in community-based knowledge systems (Tesfaye 1991; Teklu and Hammer 2006; Tsegaye and Feyissa 2017; Mukai 2023).

U.S.-led development discourse and programming for agricultural interventions in Ethiopia routinely use rationales of "science" and "rational knowledge" (BIFAD meeting Sept. 11, 2023; BIFAD meeting May 23, 2022). However, a bibliometric analysis using the software *Bibliometrix* (Aria and Cuccurullo 2017) reveals that the discourse and narratives of U.S. development are not necessarily aligned with scientific understandings of the issues. A notable disconnect exists between the sources and focus areas of academic research on agriculture in Ethiopia, and those used in U.S.-led agricultural development material. The fifteen most-cited academic sources on Ethiopian agriculture between 2000 and 2024 were absent from relevant USG reports (Appendix 3). This disconnect suggests that, although U.S. development programming invokes scientific authority, the sources it cites often diverge from the core evidence based established in peer-reviewed academic research.

This divergence is further reflected in a thematic analysis of literature from 2018 to 2023, which highlights key differences in focus areas between peer-reviewed research and U.S. development documents. The main themes in the peer-reviewed literature include: 1) climate and precipitation; 2) crop adoption; 3) land-use management; 4) and nutrition diversification. In contrast, the primary strategy and programmatic documents for U.S.-led agricultural development in Ethiopia (Feed the Future 2018b,

2018a, 2019a, 2019c), emphasized 1) growth/production, 2) private sector, 3) investments, 4) and nutrition. While there is some overlap with the theme of 'nutrition,' the differences in sources and priorities challenge U.S. claims of "evidence-based" and scientific motivations, suggesting that these practices overlook key insights from the peer-reviewed literature.

These dynamics echo Haraway's (1988) argument that what is presented as "rational knowledge" is actually a "power-sensitive conversation" (p.590), indicating development narratives and agendas shape policy more than evidence drawn from academic literature. This disconnect between U.S.-led agricultural development narratives and the realities of Ethiopian agriculture highlights the importance of considering how Ethiopian development practitioners conceptualize and prioritize their work.

2.3.2 Ethiopian Development Practitioners: "Development" and Priorities

For Ethiopian development practitioners, 'development' was not the primary driving force behind their work. Instead, their efforts were motivated by specific goals, including climate resilience, preparation for climate-related events, and supporting local livelihoods. Over the last few years, the rhetoric of U.S.-based agricultural development policy towards Ethiopia was more in line with current Ethiopian development practitioners, with the integration of climate planning into development policy (Carr et al. 2023). However, there still are significant differences in how issues are understood and approached. Based on a thematic analysis of U.S. international agricultural development policy, climate change was first mentioned as a theme in 2015 and then largely disappeared from discussions through 2021, but then became a significant focus of agricultural development policy starting in 2022. Therefore, USG documents state that integrating climate policy into development programs is still in the early stages (Carr et al. 2023). However, the specific policies noted in integrating climate change policy into agricultural development differ from Ethiopian development practitioners' conceptualizations of the issues. For example, the BIFAD report on "Operationalizing USAID's Climate Strategy" includes recommendations for a "market systems approach" (Carr et al. 2023, 36), which was not a focus of Ethiopians' climate discussions.

The increasing inclusion of climate change policy in all levels of government and civil society reflects not only the increasing physical presence of climate change but also the "discourse" of climate change and how it impacts political contexts (Weisser et al. 2014, 111). Despite the new terminology and stated motivations of these policies, Weisser et al. (2014) argue that instead, the practices are usually continuations of previous development techniques. This is evident in the use of similar "market systems approach" (Carr et al. 2023, 36), a longstanding practice of U.S. agricultural development.

Ethiopian development practitioners discussed the threats to livelihoods due to climate change, and the importance of supporting the livelihoods of pastoralists and smallholder farmers. USG documentation on the subject has a different approach. The BIFAD report recommends "livelihoods diversification" (Carr et al. 2023, 31), and specifically for dryland smallholder farmers, recommends "adaptation approaches involving less reliance on climate-sensitive livelihoods (Carr et al. 2023, 12). While Ethiopians also noted that climate change is an existential threat to traditional livelihoods and there should be support for training for other livelihoods, the greatest emphasis was placed on supporting smallholder farmers and pastoralists to maintain their livelihoods.

Ethiopian development practitioners also noted the impact of climate change on livelihoods from displacement and the ability to maintain a livelihood in a new environment. Forced resettlement has a major impact on farmers' abilities to adapt to environmental change. The "knowledge stored in the collective memory of the locality" is lost when farmers move to a new ecological context, such as the forced resettlements under the Derg regime in Ethiopia in the 1980s (Clay and Holcomb 1986). When farmers were moved from the highlands to distant settlements, they were no longer "agricultural experts" and instead were seen as "unskilled" laborers who depended on the government for survival (Clay and Holcomb 1986; Scott 1998, 251).

While climate change is causing significant displacement within Ethiopia, Li (2007) discusses how "displacement and impoverishment" are often "co-produced" with economic development (Li 2007, 20), and some of these issues originated in development interventions (McAdoo et al. 2018). This reflects Sultana's (2022) assessment that when discussing the implications of climate change, "historical and

geographical differences are highlighted and brought to the forefront" (Sultana 2022, 119). For livelihoods in Ethiopia, the impacts of climate change are then compounded by historical and current development programs and practices.

2.3.3 Understanding Locally-Led Development (LLD)

2.3.3.1 LLD: 'Local Actors' and NGOs

USG's Global Food Security Strategy states that "through our partnerships with these organizations, we will strive to shift leadership, decision-making, and ownership of the research agenda-setting process to local actors" (Feed the Future 2022a, 75). However, LLD interpretations of "local actors", which includes international organizations, provide more opportunities for the private sector in local development contexts. This is in line with a neoliberal shift over the last few decades in U.S. development practices, which has significantly altered natural resource governance, including creating opportunities "for private actors to influence state policy" (Corson 2010, 576). NGOs, typically foreign-based, have played longstanding and major roles in international development projects for many decades (Shackleton et al. 2010). However, when an NGO does development work in a community, and the power differentials are not taken into account, then the results can serve the NGO's interests over the community's interests (Bohensky and Maru 2011).

USG's Global Food Security Strategy for 2022-2026 acknowledged the importance of "addressing harmful power dynamics or other incentives that limit local actors' abilities to change…" (Feed the Future 2022a, 61). Also, a report commissioned by USAID on "Integrating Local Knowledge in Development Planning" acknowledges that among NGOs working with the agency, "there was widespread agreement that a participatory process that respects local knowledge is necessary," and many emphasized "the need for a broader power shift away from development organizations and toward communities," and that local actors should "drive the agenda, control resources, and hold decision-making power…" (USAID 2022b, 13). Despite these perspectives from NGOs, including those working on agricultural development in Ethiopia, the way the USG engages with international NGOs and the role

that the USG gives international NGOs limits their ability to act upon these perspectives. For example, the 2022 BIFAD meeting discussion that contented the Catholic church could be seen as a local actor (BIFAD meeting Aug. 31, 2022).

USAID-contracted NGOs noted the importance of working with local farming communities since they use "traditional practices and ecological knowledge passed down through generations," and while scientists' knowledge systems are different, "the resulting practices were the same" (USAID 2022b, 14). This reflects common approaches to ILK (Indigenous and Local Knowledge); legitimizing the knowledge systems through confirmation in Western science. While both forms of science involve a "close observation of nature and natural phenomena," ILK differs from Western frameworks through its strong connection to "specific physical localities" (Pierotti and Wildcat 2000, 1333). This process also illustrates Tengö et al (2014)'s support for ILK's "own internal systems" to assess the "legitimacy of knowledge" (p.583). The ways in which knowledge gains legitimacy should be in line with the knowledge system itself. When ILK is integrated into or communicated through different systems of knowledge, it can be subject to "the positivist–reductionist paradigm" (Berkes and Berkes 2009, 11).

This framing of ILK also illustrates an aspect of Haraway's (1988) critique of science, which tends to produce knowledge from "the view from above, from nowhere, from simplicity" (p.589). Knowledge from 'nowhere' sharply contrasts with Simpson's (2017) concept of being "grounded" in Indigenous scholarship, where "the land…is both context and process" (p.151). LLD's providing a significant role for the private sector and lack of effective engagement with ILK demonstrates that while LLD rhetorically emphasizes local leadership and knowledge integration, it aligns with neoliberal paradigms, which can lead to even greater power imbalances within communities.

2.3.3.2 Ethiopia-Based Practitioners: Approach Towards Local

Ethiopia-based practitioners understand and approach locally-led development differently, emphasizing customary institutions and *woreda* leadership. While U.S. LLD policy does not intentionally

engage with customary institutions, or *kebele*[3] and *woreda* leaders, Ethiopia has a legacy of such resource management institutions. One example is the *Qero* system, an indigenous institution in Amhara and Tigray historically responsible for the protection and management of communal resources in a community (Ashenafi and Leader-Williams 2005). Although the system was officially dissolved following the 1975 land reforms, when all land was nationalized (Howard and Smith 2006), these customary practices continue to operate informally in many arears (Ashenafi and Leader-Williams 2005; Howard and Smith 2006). Research into pastoral knowledge systems and monitoring of rangelands illustrates the effectiveness of these customary institutions at identifying the causes of environmental change, differentiating various types of land degradation, and identifying areas that are at risk (Oba 2012). Despite this, there is an overall lack of engagement with customary institutions within policy and research, and institutions not assisted by outside agencies are less easily identified (Shackleton et al. 2010; Raina and Dey 2020).

However, working with customary institutions and other community organizations could provide U.S.-led LLD with opportunities to constructively conduct development that is led by the community. For this to effectively occur, the community would need to be involved in decision-making, especially in the implementation stage of the project (Waylen et al. 2010). Also, as with other forms of natural resource management, legal rights should not be seen as a result of effective natural resource management but instead, as "a pre-requisite for responsible management" (Child and Barnes 2010, 291).

2.3.3.3 Local Food Systems and Sovereignty

While U.S.-based development programs acknowledge the limited land available to farm, it is not effectively taken into account in interventions. This can have significant impacts on program implementation. An Ethiopian government report indicates that due to the limited land, any increase in crop production for smallholder farmers will be due to research into high-yielding crops and an increase in agricultural inputs (The Federal Democratic Republic of Ethiopia 2018). However, research indicates

[3] Village-sized administrative unit within a *woreda* (Mukai 2023)

that when new varieties are introduced, while there may be an increase in the production of that crop, it likely leads to a decline in the production of local staple crops. For example, in Rwanda, which is often touted as a success for large-scale agricultural interventions, when maize production increased, it "came at the expense of other staple crops" (Mkindi et al. 2020, 23). Those staple crops "were more important food crops than maize… providing nutritional diversity in addition to benefits to the land" (p.23). Overall, within U.S.-led development, there is a lack of discussion on how local diets are constructed, the nutritional value of traditional staple crops, and the consequences of replacing those crops (Flachs 2020; Juma 2015; Altieri 2012; Bezner Kerr 2014). And when agricultural technologies and crops are introduced without understanding how they fit into socio-ecological systems, it can lead to losses of valuable crop diversity and plant genetic diversity (Teklu and Hammer 2006), and lasting negative impacts on soil quality (Abdulkadir et al. 2017).

When replacing local practices under locally-led development, it could be valuable to ask: "Who builds and benefits from these technologies? In their design and deployment, whose knowledge counts?" (Nelson, Faxon, and Ehlers 2024, 19). Development researchers typically use traditional seed varieties from Ethiopia farmers as the genetic basis for the updated varieties. However, there are calls for seed sovereignty for farmers (Nyantakyi-Frimpong and Carlson 2024) and increased "calls for data sovereignty" in research (Montenegro de Wit et al. 2021, 320). This 'sovereignty' is distinctly different from state sovereignty, which gives GOE the rights over all plant genetic resources in the country (Mulesa and Westengen 2020).

2.3.3.4 Future of LLD

Development practitioners expressed optimism for future USAID commitments to LLD, and the increased value placed on farmers' perspectives, including co-designing projects. Program documentation emphasize that the initiative is still in its early stages, and USAID commissioned reports to assess LLD progress (Russell and Sadinsky 2024; Adomako and Cohen 2023). Adomako and Cohen (2023) found that while USAID identified 7.3 percent of funding going to local organizations, by using methodology from Publish What You Fund (PWYF) and a different definition of "local organizations," actually 4

percent of USAID funding was going to local organizations (p.2). Another study on LLD activity in Colombia found that while USAID is far from meeting its LLD goals, the total amount of funding directed towards local organizations have increased (Fox and Hallock 2024).

The USAID commissioned report also recommends identifying 'local' organizations through different criteria, such as those "headquartered and incorporated in the recipient country" and those "only working sub-nationally or nationally" (Adomako and Cohen 2023, 2). Another report by a USAID contracted NGO recommends USAID acknowledge the "pre-existing social capital," "redefine success to be more reflective of localization reforms," and shift to funding that "actualizes" local leadership (Vera and Brusola-Vera 2021, 6). Furthermore, there are also critiques of how USAID interacts with the local organizations, arguing local organizations have limited access to USAID resources, such as data and their online platforms are difficult to use (Fox and Hallock 2024). Therefore, implementing all these recommendations would be a step towards actually engaging local communities who experience interventions in the development process.

2.4 Conclusion

U.S.-led agricultural development policy in Ethiopia primarily involves introducing agricultural technology, particularly high-yield crops, and facilitating market linkages and private sector partnerships. Climate change policy and LLD are more recent policy priorities. However, the focus continues to mirror past practices, particularly in the emphasis on introducing agricultural inputs. Ethiopian development practitioners, on the other hand, place a greater emphasis on climate resilience, customary institutions, and farmers' perspectives. US-led agricultural development in Ethiopia could benefit from engaging more with these perspectives and with the recommendations given in the commissioned reports on LLD (Adomako and Cohen 2023; Vera and Brusola-Vera 2021).

When LLD was prioritized in 2021, Ethiopia was experiencing both the Tigray war and the COVID-19 pandemic. Participants communicated that these events significantly impacted agricultural development work in Ethiopia. During the COVID-19 pandemic, global "development" practices were challenged, as Leach et al. (2021) states: "long-dominant development models, such as those promoting

economic growth, market liberalisation, [and] globalisation…are now under unprecedented challenge" (p.2). Similarly, Sultana (2021) reflects that "post-pandemic transformations necessitate a rethinking of international development models and political ideologies of growth…" (p.1727). While there has been a shift in rhetoric, these reflections have largely not occurred.

This chapter answers my research questions in the following ways:

What are the motivations and intentions behind US development policies in Ethiopia's agro-pastoral landscapes? a. Between 2010 and 2024, how have development priorities been identified and discursively framed within US-based approaches, and in what ways do these priorities reflect or overlook local agricultural needs? b. How do development experts select specific elements, such as technologies, policies, or practices, as focal points for interventions in Ethiopian agricultural systems?

Chapter 2 addresses these research questions by analyzing how U.S.-led development policies in Ethiopia—particularly those implemented through USAID—frame development through standardized goals of economic growth, market integration, and productivity, often emphasizing nutrition, private sector investment, and new technologies. These priorities are rooted in Western understandings of poverty and development and are justified through claims of "evidence-based" and "scientific" practice, yet they show limited engagement with peer-reviewed literature or local context. The rhetoric of Locally Led Development (LLD) has been adopted in policy, but in practice, it largely reflects long-standing top-down development models, failing to substantially shift power to communities or align with Ethiopian priorities. In contrast, Ethiopian development practitioners emphasize climate resilience, the strengthening of local seed systems, and support for livelihoods through long-term, community-driven strategies. They often reject broad notions of "development" in favor of concrete adaptation work and stress the importance of engaging customary institutions, working in local languages, and recognizing community expertise.

The previous discussion supports these findings by showing that what is framed as locally led or evidence-based in U.S. policy often overlooks key insights from Ethiopian practitioners and academic research. These findings highlight significant divergences in how development is conceptualized and

operationalized by U.S. versus Ethiopian actors, particularly around climate change, seed sovereignty, and participatory governance.

3 CHAPTER 3: NORTHERN ETHIOPIA: U.S. VS ETHIOPIAN DEVELOPMENT PERSPECTIVES

3.1 Introduction

Following the 1984/5 famine in northern Ethiopia, the region became a focal point for agricultural development interventions, with the U.S. government playing a major role in development projects (Hoben 1995; Furtado and Smith 2009; The Government of Ethiopia 2023). While research has analyzed the dynamics of agricultural development in Ethiopia following the 1984/5 famine (Clay and Holcomb 1986; Holt and Lawrence 1993; Rahmato 2014; Adnew Degefu et al. 2019), there is limited research on how development interventions directed towards smallholder farmers in northern Ethiopia engage with farmer knowledge, reflect local environmental conditions, and intersect with the U.S. agricultural industry agro-industries. Agricultural development interventions in northern Ethiopia are often promoted as solutions to long-term food insecurity and strategies for climate change adaptation (Adnew Degefu et al. 2019; Teklu and Hammer 2006; Weisser et al. 2014). This chapter explores the discourse and policy surrounding U.S.-led agricultural development in northern Ethiopia.

Northern Ethiopia generally includes the provinces of Tigray, the northern part of Amahara, and Afar. The Tigray plateau runs through the region, with elevations ranging between 1,500 to 3,400 meters, and Tigray and much of Amhara are characterized by dry, highland conditions (Billi 2015). This research draws on an analysis of development conference meetings, workshops, documents, reports, and interviews with participants. The Tigray Region Agriculture Research Institute (TARI) is a focus of this study. TARI has traditionally worked with the Ethiopia Institute for Agricultural Research (EIAR), U.S.-based agricultural research centers, and international research consortiums under the Consultative Group on International Agricultural Research (CGIAR), including CIMMYT (Centro Internacional de Mejoramiento de Maíz y Trigo- International Maize and Wheat Improvement Center).

Understanding the perspectives of development practitioners is crucial for investigating the motivations, intentions, and priorities of U.S.-led agricultural development in Ethiopia, and policies

formulated by foreign governmental agencies are frequently reinterpreted and reconfigured by those in-country (Escobar 2012). All participants in this study are experts in agricultural development for smallholder farming and have either worked directly for USAID in Ethiopia or a USAID-contracted NGO in Ethiopia. Each participant was assigned an alphanumeric identifier (e.g. respondent #4 is referred to as R4). U.S.-based development practitioners were typically trained in U.S. development or agronomy programs, while Ethiopian development practitioners highlighted that many in their field received similar early-career training (through EIAR or provincial agricultural research institutes). All Ethiopian development practitioners in this study also had experience working in northern Ethiopia.

Research Questions

The research in this chapter was guided by the following questions:

1) What are the motivations and intentions behind US development policies in Ethiopia's agro-pastoral landscapes? Specifically, between 2010 and 2024, how have development priorities been identified and discursively framed within US-based approaches, and in what ways do these priorities reflect or overlook local agricultural needs?

2) What conceptual differences exist between US and Ethiopian development practitioners' understandings of "development"? Specifically, how do these differences shape their respective agricultural development approaches in Ethiopia?

While U.S.-led agricultural development regularly frames national self-sufficiency as the primary development goal, this study's focus on northern Ethiopia highlights how these goals do not necessarily lead to self-sufficiency on local or household-based levels (Agarwal 2014, 1264). This disconnect is evident because U.S.-led development prioritizes large-scale productivity and market integration, promoting standardized technologies such as updated seeds and mechanization while overlooking northern Ethiopia's diverse agroecological conditions and farmers knowledge.

Moreover, these interventions are particularly vulnerable to supply chain disruptions during crises. The Tigray War (2020-2022), which occurred across Tigray and into Amhara, not only disrupted development activities but also intensified food insecurity in northern Ethiopia, leading to famine

conditions in Tigray (Nyssen 2024; FEWS NET 2021). In contrast, TARI's development efforts emphasize crop diversity, smallholder farming practices, and local agricultural knowledge. However, significant gaps remain, as development interventions often fail to meet farmers' needs and engage with their perspectives. Additionally, while Ethiopian development practitioners increasingly recognize the importance of consulting with women in agricultural interventions, their knowledge and expertise remain underrepresented. This continued marginalization likely undermines the effectiveness of interventions and ability to support smallholder farmers.

3.2 Results

3.2.1 U.S. Perspectives on Agricultural Development in Northern Ethiopia

U.S.-led agricultural development in Ethiopia is shaped by national-level priorities and regional categorizations, influencing how interventions are designed and implemented. National development priorities are evident in how development is framed by participants and in U.S. government (USG) documents. One participant defined the ideal agricultural development conditions as a nation being "self-sufficient" and having "food security addressed on a national level" (R1). This concept is reflected in recent USAID programs, including a 2022 report on introducing sorghum and millet varieties, which noted their primary goal was "robust support of national capacity" (Feed the Future 2022b, 13). Another participant emphasized the importance of engaging with national governments and their research programs. She described how "government-based programs (are) doing really important work developing the seeds," because "their research agenda isn't influenced" as much by corporate ones (R4). However, agricultural interventions in Ethiopia are also shaped by regional and geographic considerations. The next sections examine how northern Ethiopia is conceptualized as a target for U.S.-led agricultural development interventions.

3.2.1.1 Framing Ethiopia: Development Narratives and Geographies

In USAID's 2018 Ethiopia Country Development Cooperation Strategy, Ethiopia's development challenges are framed through categorizing its population. USAID's strategic approach identified three

population groups: 1) “Productive Ethiopia,” consisting of those who have large landholdings, 2) “Hungry Ethiopia,” characterized by small landholdings with variable precipitation and whose farming is “a risky enterprise”, and 3) “Pastoral Ethiopia,” who experience even less rainfall and frequent droughts (USAID 2019, 4). USAID applies these categories to *woredas* (counties) (p.23). The strategy highlights “the potential of ‘Productive Ethiopia’ to be the engine of economic growth and food self-sufficiency” for the other two populations (p.15). This includes the “increased labor requirements of Productive Ethiopia’s expanding value chains, particularly for high-value commodities such as coffee and sesame,” which, according to the report, “can be met by the underutilized labor available in Hungry and Pastoral Ethiopia” (p.24). While the terms “Productive,” “Hungry,” and “Pastoral” Ethiopia are less frequently used by U.S. development practitioners or in recent USAID documents, similar categorizations persist and often align with comparable strategies, such as USAID’s “Zone of Influence”.

USAID designated much of northern Ethiopia a “Zone of Influence” (USAID 2021). A “Zone of Influence” (ZOI) refers to areas prioritized for USAID interventions in Ethiopia. Similar to the previous population categories, the ZOI model is based on “regional economic integration” to “bind rural market sheds with rapidly growing and industrializing urban areas” (Feed the Future 2018, 12). For example, a zone encompassing areas around Mekelle (Tigray’s capital) aims to provide “market linkages to Mekelle, where an increasing demand for labor and food provides income options for rural families” (Feed the Future 2018, 12). The ZOI designation remains a key determinant of U.S.-led interventions (Carr et al. 2023). I examine how these categorization frameworks shape U.S.-led agricultural development efforts in northern Ethiopia. By analyzing the implications of USAID’s conceptualization of the region, this chapter explores how development narratives influence intervention strategies.

3.2.1.2 U.S.-led Agricultural Development Policies in Northern Ethiopia

3.2.1.2.1 Commercialization and Agricultural Inputs

U.S. agricultural development programming for northern Ethiopia over the last decade has focused on market-oriented development that increases farmers’ use of updated agricultural inputs.

USAID's Agricultural Growth Program (AGP) in Tigray aimed to support "commercializing the agricultural sector" and enhance "the competitiveness of six specific value chains," including wheat and maize, which were chosen "because of the potential income opportunities they provide" (USAID 2012, 1). The U.S. Government's Global Hunger and Food Security Initiative Feed the Future's (FtF) project in Tigray sought to assist "chronically food insecure households" by improving "access to tailored financial services" and increasing "income from nutrition-sensitive and climate-smart crop and livestock production" (Feed the Future 2021a, 8). These crops are primarily developed at regional, national, and international research centers. Participants described how Ethiopia's wheat production in the highlands "is fueled by CGIAR, specifically CIMMYT," which has research partners in Ethiopia (R3). However, another participant argued that the "CGIAR system and the network of gene banks (have been) increasingly corporatized over the years," and that this corporate influence and increasing profit-driven models "(is) taking away from the work of the national and regional research centers" (R4).

Project success is often measured by smallholder farmers' increased use of externally sourced agricultural inputs. For example, a 2021 FtF report highlighted progress in South and East Tigray as "sourcing 8,000 quintals of improved wheat seed," supporting "the procurement of 20 tractors with accessories," and "train(ing) 60 tractor operators" (Feed the Future 2021a, 33). However, while specific seed varieties, such as improved wheat, are directed to particular regions like South and East Tigray, participants noted that many improved varieties of seeds "are generalized on a national level" (R8). This means that seeds are often bred and distributed for use across an entire country, without tailoring them to specific regions or localities within a country.

While farmers' use of improved seeds increased between 2012 and 2021 (CSA 2021), these programs have been less popular in Tigray. Despite being a major staple crop-producing region, Tigray accounts for only 1% of national improved seed usage (Negassa et al. 2021, 24). Regardless, U.S.-led development has prioritized increasing access to new inputs. An FAO report notes that in some areas of Tigray, there is "growth in demand for improved seeds," which it attributes to USAID-supported efforts, including "linkages to improved seeds" that "alleviate the liquidity constraints that limit their use" (FAO

2020b, xi). While some participants attributed farmers' hesitancy to "family traditions," others argued that "there's a lack of adoption by farmers of the improved lines because they may not do as well as some of these other local lines (local crops varieties)" (R8).

A participant described how agricultural geneticists focus on traits they consider important, but there is a lack of communication "with the breeders and the farmers who are going to be implementing those traits" (R7). Environmental factors like soil quality or elevation are often not considered. For example, if a researcher develops a disease-resistant crop for Ethiopia, they only consider the disease and "the disease doesn't care what the elevation is" (R7). However, a "trait like flowering time," or like chaffs (husks surrounding seeds), is heavily influenced by the environment (R7, R8). Participants noted that local varieties in Ethiopia already serve as a "targeting breeding strategy," as farmers select seed varieties with traits best suited to their specific environments. One participant argued that a more "targeted breeding strategy" by agricultural researchers would be beneficial but is not feasible, due to the costs and resources involved in developing seeds for so many different contexts (R9).

These factors play a role in concerns expressed during a meeting of The Board for International Food and Agricultural Development (BIFAD), an advisory board to USAID. A meeting participant described how USAID-funded projects have "tested, adapted and validated a number of promising crop(s)" for the Ethiopian Highlands, ensuring there are "value chains in place for market-driven intensification." However, he expressed concern about the lack of "research evidence to support" this work, stating that most initiatives "at best (have) a patchy supporting evidence base" (BIFAD meeting April 20, 2017).

In addition to introducing new machinery and updated seeds, USAID progress reports emphasize chemical fertilizers. A 2021 report states that "the application rate for chemical fertilizers has increased," yet, "the number of users has decreased," and Tigray only uses 4.3% of all chemical fertilizers in Ethiopia (Negassa et al. 2021, 19). In sum, in Northern Ethiopia, U.S.-led agricultural development measures success by smallholder farmers' increased use of externally sourced inputs, because of a research and development process that rarely engages directly with local conditions and needs.

3.2.1.2.2 Agricultural Interventions During Conflict and COVID-19

U.S.-led agricultural development in northern Ethiopia was significantly impacted by the Tigray War. Programmatic documents note that the "conflict in Northern Ethiopia has disrupted research and development activities in Tigray and Amhara regions" (Feed the Future 2022b, 18). Participants specifically described a disruption in agricultural research due to reduced communication between TARI and EIAR. One participant highlighted a strained relationship and increasing separation between the EIAR and Tigray institutions, such as TARI (R8).

The Tigray War also affected farming conditions. Due to "active conflict areas include(ing) (the) majority of Tigray region," it's estimated that Tigray lost at least 5% of their crops in just the first six months of the conflict (Negassa et al. 2021, 37). Throughout 2020-21, FtF attempted to "reactivate" programs in Tigray, but as the war escalated, work could not "resume full-scale implementation," as "communication with Tigray was suspended, access to banking in Tigray was closed, and fuel availability within Tigray became a challenge" (Feed the Future 2021a, 6). Participants described how local development partners were further constrained as the "central government (was) cutting them off from select resources," like access to the national seed bank, making research and development efforts "financially harder to sustain" (R9).

The COVID-19 pandemic further exacerbated these challenges. Agricultural productivity in Ethiopia was already significantly lower than usual (FAO 2020a). FtF launched "livelihood recovery activities for households affected by COVID" but implementation in Tigray was impossible due to the war (Feed the Future 2021a, 9). Programmatic reports illustrate the combined effects of these crises on agricultural value chains, which are central to development efforts. U.S.-led initiatives faced "value chain related challenges," including "shortage of basic, pre-basic and certified seeds" (Feed the Future 2021a, 63). Overall, the "suppression of the supply chain due to conflict, Covid-19," had a "significant impact on production and food availability" (Negassa et al. 2021, 72). These challenges added to the challenges concerning how U.S.-led agricultural development interacts with local farming systems, particularly in its approach to engaging with local agricultural knowledge.

3.2.1.3 Engagement with Local Agricultural Knowledge

3.2.1.3.1 U.S.-led Development Approaches Towards Local Knowledge in N. Ethiopia

U.S.-led agricultural development's engagement with farming on a local level focuses on supporting research—such as through TARI—and market-oriented goals, but direct engagement with farmer knowledge remains limited. How local perspectives are incorporated is often intertwined with how development research is conducted. Participants working in agricultural research, who develop crop varieties for introduction in Ethiopia, described a growing interest in engaging with local perspectives. However, this engagement is typically framed as working more closely with research institutes in Ethiopia or East Africa. A participant explained, "we have a lot of contact with international organizations like CIMMYT… or other CG centers," for example, "we'll have meetings with a CIMMYT breeder in Nairobi, Kenya to find out" what "they are focused on trying to overcome" (R7).

USAID frequently relies on CGIAR institutes and their research to shape its understanding of local knowledge and practices. For example, a USAID-commissioned report includes an ICRAF-led (International Centre for Research in Agroforestry) "review of farmers' local knowledge of crop-livestock, trees systems" in Northern Ethiopia and an ICARDA-led (International Center for Agricultural Research in the Dry Areas) "characterization of farming and livestock production systems," which included regional research centers (Pound et al. 2015, 14).

Participants also described working with government research centers within Ethiopia to access local perspectives: "We also have a lot of contact and collaboration with those NARS (National Agricultural Research System) programs…" (R7). At the national level, this involves the EIAR, and for Northern Ethiopia, U.S.-led research focuses on the regional research institutes. For example, in 2016, FtF awarded a grant to TARI and Amhara Region Agriculture Research Institute "to study the effects of herbicide application in wheat crop and on honey bee populations in Ethiopia" (Feed the Future 2016, 13). FtF also provided research funding "to introduce disease tolerant and high yielding lentil varieties" and "to increase farmer's access to quality declared wheat seed" (Feed the Future 2021a, 6). However, U.S. development reports often lack transparency regarding the sources used to describe local agricultural

conditions. For example, FtF reports regularly used the phrase "based on stakeholder consultations" in Tigray (Feed the Future 2020, 22). The term "stakeholder" is ambiguous, especially in development contexts, and could potentially refer to numerous actors, including local research institutes, national or international organizations, universities, or corporate partners (USAID 2021). Overall, U.S.-led development engages minimally with farmer knowledge through the agricultural development process. This limited engagement with farmer knowledge extends to the role of women in agriculture, as U.S.-led development policies regularly overlook their contributions.

3.2.1.3.2 USG Policy and Women's Agricultural Knowledge

In U.S.-led development, women's agricultural knowledge and their role in local agricultural systems are largely overlooked. However, USG programmatic material frames this as a universal condition, stating that across East Africa, "women's contributions to agriculture and economic growth are largely undervalued and unrecognized" (Benjamin and Meyers 2016, 21). While participants and policy documents acknowledge the importance of women in agriculture, such perspectives were not commonly emphasized. One participant contended that it is essential for agricultural development programs to involve women because of the important role they play in agriculture: "I don't see how any development project could succeed without participation of women" (R4). However, this was an uncommon perspective among U.S.-based participants, who typically did not highlight women's roles in farming.

In general, USG programmatic documents approach gender in agriculture by focusing on disparities in resources rather than recognizing women's roles and agricultural knowledge. USAID's country strategy for Ethiopia states that "women in Ethiopia are much more likely than men to face economic and social constraints," with contributing factors including limited "access to and decisions on credit and leadership" (Feed the Future 2018a, 4) and having "less access to land, credit, additional labor, and extension services" (Feed the Future. 2018a, 5).

A USAID assessment argued that women have lower levels of agricultural productivity "due to unequal access to agricultural inputs such as land," improved seeds, fertilizer, and notably, less access to "knowledge" (Benjamin and Meyers 2016, 26). Furthermore, an FtF report describes women as providing

"the majority of the agricultural sector workforce" but having low "participation in decision making" (Feed the Future 2019a, 21).

U.S.-led development claims to address these inequalities through research and advocacy. USAID initiatives focused on trainings aimed at "inform[ing] women how to reach leadership roles," along with promoting "greater participation in agribusiness" (Benjamin and Meyers 2016, 45). Policy documents call for "locally led and contextualized research" to create "gender-responsive, socially-inclusive, and transformative adaptation strategies that take Indigenous and local knowledge systems into account" (Carr et al. 2023, 20). These points were also discussed at a BIFAD meeting, where a participant advocated for "research on indigenous local knowledge systems, their gendered elements," but also recommended "housing such a research effort at a new FtF Innovation Lab" (BIFAD meeting Sept. 11, 2023). FtF further advocated "for women and youth to access agricultural technologies that save time and reduce their work" (Feed the Future 2019a, 22). Programmatic documents argued that within USG agricultural development programs in Ethiopia, it is "not enough to simply target larger numbers of female beneficiaries" (Feed the Future 2018a, 19). Rather, policies should "address the underlying factors and social norms that result in inequity and disempowerment for women" (p.19). This commitment to gender equity also extends to education, where "about 40 percent of women in the country are literate" compared to "about 70 percent of men age 15-49" (Feed the Future 2018a, 5). However, equating intelligence and knowledge with formal education was an issue noted by a U.S.-based participant. He observed that development agencies often conflate intelligence with literacy or schooling, which limits their engagement with local knowledge and perceptions (R1). These perspectives highlight a critical gap in U.S.-led agricultural development: while gender disparities in resources are acknowledged, women's agricultural expertise and roles in farming systems remain largely unrecognized.

3.2.2 Ethiopian Development Perspectives

3.2.2.1 Framing Ethiopia: Development Narratives and Geographies

3.2.2.1.1 "The Three Ethiopias"

Understanding how Ethiopia is framed in development discourse is essential to examining U.S.-led interventions in northern Ethiopia. Ethiopian development practitioners frequently use specific regional categorizations, which shape how development programs and research are designed and interpreted. While opinions vary on how different areas and populations should be classified for development purposes, practitioners commonly refer to "the three Ethiopias": the highland, the drier, and the lowland pastoral regions. Participants described regularly using these three categorizations (R2, R12), which are increasingly reflected in recent policy documents (CASA 2024). On a more local level, development practices in Tigray use additional categorizations, often incorporated into joint U.S.-led projects. At a TARI workshop, a development practitioner explained how AGP supports "agricultural productivity and commercialization" of smallholder farmers by "focusing on high agricultural potential areas to address some of the key constraints to agricultural growth and thereby contribute to overall economic growth and transformation" (Belay et al. 2019, 1). Three zones in Tigray—Southern, North Western, and Western—were "identified for AGP intervention" due to their "high agricultural potential" (Belay et al. 2019, 1). These characterizations contrast with the more common approach among Ethiopian development practitioners, who typically prioritize geographical characteristics over administrative areas selected for production potential.

At a conference near Addis, interventions were often framed using these geographical descriptions. For example, in "the highland, productive safety net beneficiaries unintentionally benefited from community-based health insurance—their food security was maintained during the drought," but "there was no actual intentional targeting in the lowlands" or in "pastoral areas" (DREAM II conference March 16, 2022). Conference participants emphasized the importance of "understanding of the needs for the development of the lowland" (DREAM II conference March 16, 2022) and stressed that development

policy should be constructed "based on the region specific(ally), as well as (at) the woreda level" (DREAM II conference March 16, 2022). Ethiopian development practitioners offered further critiques of these categorizations, questioning their effectiveness in designing interventions that address local realities.

3.2.2.1.2 Arguments Against Categorizations

Development practitioners described the inherent challenges that arise when projects and programs are transferred from one area to another, even when those areas have similar characteristics. One development practitioner described how, in the higher elevation areas of the Afar region "we are copy-pasting many other approaches, you know highland approaches, that were not in agreement with the context of that area" (DREAM II conference March 18, 2022). Another participant expressed a similar concern:

> *"if you take Ethiopia or even if you take Tigray, it's not the same across the board; dryland woredas, highland woredas, midland woredas crops (is) nonsense. If you take variety and plant it in all types of agroecological conditions, and we expect equal product, will the response be the same? Because a rainfall pattern, the distribution and all that varies a lot, even in dryland or highland woredas" (R5).*

A participant in a USAID-EIAR workshop acknowledged these challenges, emphasizing that the "model to follow should address local thinking" (EIAR 2019). Other participants highlighted a gradual shift in how development efforts engage with communities. One noted that development practitioners and the Government of Ethiopia (GOE) are slowly learning from past mistakes. For example, "there was a big push to settle pastoralists…like a commune system, and it failed. The communities were against it, so it never worked" (R12). These discussions underscore a growing recognition among development practitioners that applying uniform interventions to diverse contexts is counterproductive. This is particularly relevant in northern Ethiopia, where the region's agroecological diversity (Abbate et al. 2015) requires more context-specific development approaches, especially as the Tigray War disrupted agricultural programs and development efforts throughout the region.

3.2.2.2 Impact of Conflict in Northern Ethiopia

From 2020 to 2024, the Tigray War has disrupted development practices in northern Ethiopia. Ethiopian development practitioners described how the war exacerbated the impacts of climate change and the COVID-19 pandemic, disrupting farming activities at critical points in the season and hindering information exchange to support farmers. One participant noted that in Tigray and Amhara, "thousands have been displaced," and when "people migrate to new areas, their crop production, their seasonal patterns, (are) all impacted" (R2). He continued that, in addition to climate change, "you have a conflict," "COVID disrupting the supply chain," "the global food crisis," along with other global factors including the Ukraine war—"all these are factors that're making things difficult" (R2). Ethiopian development practitioners frequently cite the combined impact of these crises, with one highlighting concerns over "recurring drought in Ethiopia, and the impact of the Russia-Ukraine war on food security" (R12).

Another Ethiopian development practitioner described how COVID-19 and the war disrupted communication between all levels of government and development organizations, which he argued is essential to providing technical support to farmers. He explained that "we are lagging" due to these disruptions, and moving forward, "the government should be on the leading position and facilitating, as development partners we can provide the technical support, but unless we have this (government facilitation) in practice at the federal, regional and woreda level," "we'll be repeating our own mistakes" (DREAM II conference March 16, 2022). A participant also described ongoing tensions between regional and federal governments, which were both precipitated and exacerbated by the war. He noted that, "policy decisions that are just top down… don't work" but acknowledged some improvements, explaining that "regional governments can push back on certain policy issues." However, he stressed that policy-making "needs more consultation" between foreign development agencies, and federal and regional governments (R12).

The Tigray War severely hindered this coordination, particularly with Tigray, impacting TARI's ability to implement programs. A bibliometric analysis of agricultural publications using *Bibliometrix* (Aria and Cuccurullo 2017) and Web of Science, shows that, starting in 2020, the number of publications

from Tigray declined compared to other regions in Ethiopia. While agricultural research output from Tigray's capital, Mekelle, decreased after 2020, publication rates in all other Ethiopian provincial capitals continued to increase. These disruptions underscore how conflict, compounded by global crises, has not only hindered development efforts but also deepened existing structural challenges in Ethiopia's agricultural sector, particularly in Tigray.

3.2.2.3 Engagement with Local Agricultural Knowledge

Ethiopian development practitioners emphasized the different levels of understanding from national to local levels and how this impacts policies that affect agriculture. While noting the increasing interest in engaging with local development perspectives, a participant expressed deep concern that development approaches applied in southern Ethiopia are now being implemented in northern Ethiopia. This recent development strategy is the "cluster approach, where 15, 20 farmers join their land together, and they grow only one variety.…so they are told to grow wheat, wheat" (R3). These strategies do not engage with local perspectives or knowledge, which, according to another participant, is linked to the scale of governance. He explained that at "the regional level and the community level, the water administration seems to be more engaged, or more able to understand what's going on" and "they have those conversations" (R2). This level of engagement is illustrated in many policies and perspectives of regional agricultural research and development in Tigray.

3.2.2.3.1 Tigray Programs and Local Engagement with Farmers' Knowledge

TARI programs generally acknowledge the diversity of seeds and crops grown by smallholder farmers. They describe farmers' experiences with climate change, highlight the diversity of cultivated crops, discuss how these crops are used in farmers diets, and reflect on development processes that involve eliciting feedback from farmers. TARI practices demonstrate an interest in understanding the practices, food preparation, experiences, and perspectives of farming communities, as well as clear intentions to understand the context in which interventions are implemented. For example, in a TARI workshop, development practitioners described typical meals, noting what crops are required or included

in those meals, how those crops are processed, and how agricultural interventions could influence existing practices. They discussed ingredients commonly used in *shiro* (stew) and how *injera* (flat bread) is often composed of sorghum and t'ef, with an emphasis on the fact that, for a large majority of farmers, the ingredients for the food they eat is "from their own farm production" ("Southern Zone Tigray: Socioeconomic set up" 2019, 9-10).

TARI programs also seek to understand how farmers are experiencing climate change and how it's impacting their farming. In a workshop, development practitioners relayed the results of farmer group discussions, highlighting how "farmers expressed climate change" through a number of terms, including "rainfall fluctuation in intensity and distribution," and "loss of biodiversity" ("Western zone of Tigray: Rural institution and cross cutting" 2019, 64). TARI researchers also documented how farmers "get climate information from *kebele* (village) and district experts," "from radio," and "from their past experiences" ("Western zone of Tigray: Rural institution and cross cutting" 2019, 64).

TARI also emphasized various ways that development practitioners learn about farmer perspectives, including their views on the results of interventions. In a 2020 TARI workshop, a practitioner described how the information presented was based on farmer groups and that "one farmers' group in each selected kebele" facilitated "communication between researchers and community members" (Markos et al. 2020, 91). For example, a workshop participant described how "farmers in the Ayba kebele" observed the positive "effect of *vicia sativa* over sowing on pasture land to boost production and productivity," and therefore recommended "scaling up the practice" (Atsbha et al. 2020, 48).

TARI workshop participants also reflected on the processes used to access interventions. Regarding one proposed intervention, a participant described its "compatibility with a landholder's existing technologies, practices and resources," including "beliefs and values," but challenged whether it should be implemented since it would require farmers "to form group(s) to solve the problem of economi(ies) of scale," and therefore presents issues "of compatibility with existing socio-economic" conditions (Hadera and Tesfamariam 2019, 93). In reflecting on the development system, workshop

participants described how “the technology transfer methodology is mainly top-down…” (“Southern Zone Tigray: Socioeconomic set up” 2019, 8). Workshop organizers also argued that “since the decision on fertilizers comes from the center,” “nationwide collaboration and working together is vital,” and the next steps should be grounded in “lesson(s) learned from Tigray and the key issues identified during the workshop(s)” (Hadgu et al. 2020, 307).

While the Tigray government and agricultural offices actively engage with and promote local perspectives in agricultural research and development, there are also instances where farmer knowledge is overlooked in introducing interventions. For example, the head of Tigray’s natural resources bureau and a representative from Bayer seed toured to promote a new maize variety as part of a coordinated project with U.S. corporations John Deere, Corteva, and Bayer, targeting areas within Feed the Future’s ZOI (ACDI/VOCA 2021). The Tigray official endorsed the new seed variety, stating, “the crop is good every year”. However, some local farmers challenged this, expressing concerns that the crop would “betray us.” Others criticized the government for prioritizing externally sourced seeds over Tigray’s own agricultural research (Tigray Bureau 2024).

TARI does develop varieties, and a participant described long-standing efforts to create more productive barley varieties. However, she explained that indigenous varieties remain more productive, particularly under dryer conditions, than any developed by TARI (R11). These two different types of activities by the Tigray government reflect broader observations from development practitioners working across northern Ethiopia, who note two simultaneous but contrasting trends: While there is growing interest in incorporating farmers’ perspectives, large-scale projects often bypass local research and expertise and these larger projects are increasing in number and scale.

3.2.2.3.2 Ethiopian Development Perspectives and Women's Agricultural Knowledge

Development practitioners in northern Ethiopia indicate that they endeavor to learn from women's perspectives on agricultural interventions and consider their perspectives in the implementation phase. While TARI integrates women's perspectives in assessing the impacts of agricultural development interventions, women's agricultural knowledge is not effectively considered in the design or implementation phase of development programs.

An Ethiopian development practitioner who has conducted research across Amhara and Tigray argued that in farming, "the role of women is critical, but it is not given adequate recognition and value" (R10). This is because "women are the most knowledgeable (about seeds) because they are the ones doing the experimentation and also still cooking and feeding the family." She explained that women know what seeds should be planted concerning their use; "like t'ef is good for making red injera or porridge," and they know seed quality "for food, for drink, for livestock feed…women are custodians of seeds" and "are more responsible (for) seed treatment, storage, germination, testing…" (R5).

Agricultural researchers with TARI noted that group discussions with farmers illustrated that "men and women share different roles and responsibilities in farming, domestic and other activities" ("Southern Zone Tigray: Socioeconomic set up" 2019, 9) and that "women play key roles" and "participate in every aspect of crop production… starting from land preparation, seedling raising, transplanting, fruit propagation, weeding, harvesting, seed preparation and marketing…" ("Southern Zone Tigray: Socioeconomic set up" 2019, 9). This includes the fact that both women and men perform soil and water conservation practices ("North Western Zone Tigray: Socioeconomic set up" 2019, 37-38). Workshops that included agricultural researchers from across Tigray also noted a variety of gender roles in agriculture, even within the different zones. In the northwestern zone, "both men and women participate" in "crop production activities" that include "land preparation, weeding, harvesting, threshing, measuring yield and selling products" ("North Western Zone Tigray: Socioeconomic set up" 2019, 37-38). However, development practitioners from the western zone noted that "in midland areas, rain-fed and irrigation activities such as land preparation, weeding, harvesting…are performed by women," while in

other areas, land preparation is performed by men ("Western zone of Tigray: Socioeconomic set up" 2019, 60). Agricultural development researchers from three regions described similar characteristics of roles and ownership, noting that "live animals are equally owned" in the southern zone ("Southern Zone Tigray: Socioeconomic set up" 2019, 9), that "most of the agricultural products and land are owned and controlled by both gender categories" in the western areas ("Western zone of Tigray: Socioeconomic set up" 2019, 60), and that the "decision to sell of crop products and livestock is made through discussion and agreement…" in the northwestern ("North Western Zone Tigray: Socioeconomic set up" 2019, 37-38).

Through discussing this research and these perspectives in TARI workshops, development practitioners highlight how they see women in agricultural systems and affirm the belief that women should be included in development interventions. For example, when reflecting on a proposed intervention, one practitioner argued that women are in charge of "day-to-day management of food preparation," and the proposed intervention would support "their daily activities" (Tesfamariam et al. 2019, 78-9). Ethiopian development practitioners based in Tigray also reiterate this point, noting that since women are seen as controlling the home, seed storage, and food preparation, they generally have extensive knowledge of seeds, often higher than men (R11, R10, R5, R3). Overall, "women are more knowledgeable (about seeds) in our communities" and while "sometimes it's considered as an extension of the household duties," it's actually a "highly significant role—if women were not keeping good seeds, production will not continue," which has significantly contributed to "the maintenance of diversity for generations..." (R5).

A TARI researcher expressed that "understanding the gender context of agriculture will be central to successful interventions" ("Southern Zone Tigray: Socioeconomic set up" 2019, 9). However, other participants identified challenges to including women's perspectives in agricultural interventions. One participant explained that the way research is often conducted influences how women are perceived by development organizations, since this research regularly forms the basis for development recommendations. In research, such as household surveys, "you just ask one person from the household,"

usually the head of the household, and "the man will tell 'I am the one who is selecting seeds and keeping seeds,' so, you get that kind of information and leave" (R5). Therefore, researchers "easily conclude that women are not participating," but "it takes more attention to understand the reality" (R5).

The participant stated that over the past fifteen years, there has been an improvement in how agricultural research understands women's roles. This is evident in TARI activities, such as in a discussion of a proposed intervention, a development practitioner stated that the "perception of women participants confirms the relative advantages of the new technique…" (Tesfamariam et al. 2019, 73). However, Ethiopian development practitioners describe continued barriers in research to including women's roles. For instance, researchers that use translators may not understand gendered agricultural knowledge, and sometimes, women "in some cultures, they don't speak in public if men are around" (R10). Overall, while Ethiopian development practitioners acknowledge women's expertise in agriculture, structural and methodological challenges in research and policy implementation still hinder the full integration of their knowledge into development programs.

3.3 Discussion

3.3.1 U.S. Perspective on Development in Northern Ethiopia

U.S.-led development policy for northern Ethiopia reflects established critiques that development programs typically frame agricultural development "as a problem of geography versus demography" (Mitchell 2002, 209), reinforced by the early myths of "the precariousness of society–environment relations" in Africa (Weisser et al. 2014, 114). While participants described national self-sufficiency as a primary development goal, Agarwal (2014) contends that "national self-sufficiency goals cannot translate simply into local or household self-sufficiency goals" (1264). This disconnect is evident in how U.S.-led development prioritizes large-scale productivity and market integration, promoting standardized technologies, such as updated seeds and mechanization, while often overlooking northern Ethiopia's diverse agroecological conditions. These interventions are also particularly vulnerable to supply chain disruptions during crises. Furthermore, they rarely reflect smallholder farmers' knowledge and priorities,

overlooking their potential negative impact on local diets and failing to account for women's agricultural knowledge.

3.3.1.1 Impact of Crises on U.S.-led development Policy in Northern Ethiopia

The intersection of the Tigray War and the COVID-19 pandemic not only disrupted agricultural productivity but also severely constrained U.S.-led development efforts, limiting access to resources, such as fuel, food, and the national seed bank, along with other essential infrastructure in northern Ethiopia. These crises highlight the vulnerability of U.S.-led projects to disruptions. U.S.-led programs encourage farmers to regularly acquire updated seeds instead of using seeds saved from previous years, requiring ongoing seed purchases resulting in financial burdens, which USAID acknowledges as a constraint in Tigray (FAO 2020b). Similar patterns emerge with other interventions. An FtF project in Tigray included procuring tractors and training tractor operators (Feed the Future 2021a, 33), but the project stalled due to factors including bank closures and fuel shortages in Tigray during the war (Feed the Future 2021a, 6).

In northern Ethiopia, most smallholder farmers are already "operating at very low levels of productivity" and "highly vulnerable to shocks" (FAO 2020b), and a USAID study acknowledged that any impact on "the supply chain due to conflict or Covid-19…would have a significant impact on production and food availability" (Negassa et al. 2021, 72). At a global level, COVID-19 disruptions reveal the vulnerabilities of interventions dependent on external inputs and global supply chains (Montenegro de Wit et al. 2021). Leach et al. (2021) argue that COVID-19 created unprecedented challenges to market-oriented growth models that rely on "carbon-intensive industries and command-and-control planning regimes" (p.2). Despite these challenges, U.S.-led development continues to rely on these strategies. Overall, U.S.-led development interventions increase farmers' dependence on external inputs (e.g., fuel for tractors or banking for seed purchases), leaving already vulnerable farmers even more precarious when crises disrupt access.

3.3.1.2 U.S.-led Agricultural Development and Local Agricultural Knowledge

3.3.1.2.1 Engagement with Local Agricultural Knowledge

USAID's development frameworks, including "Productive Ethiopia" and "Hungry Ethiopia" (USAID 2019, 4), and ZOI (USAID 2021; Feed the Future 2018a), prioritize productivity potential over engaging with local agricultural knowledge and conditions. Economic growth-driven development, with a focus on agricultural commercialization, shapes policy decisions on multiple levels—from defining zones of influence, to selecting crops. For example, USAID identified the "six specific value chains" based on their "the potential income opportunities" (USAID 2012, 1). The underlying development logic assumes that increasing productivity in high-potential areas will support surrounding, less productive regions. These development strategies resemble colonial interventions in Africa, which were based on the "improvability" of the "target group" (Li 2007, 15; Wainwright 2008). This pattern persists in the practices of both national and international institutions, particularly in agricultural development and environmental conservation efforts (Nyantakyi-Frimpong 2020; Li 2007).

Across Ethiopia, the majority of smallholder farmers' production "is self-consumed by households," a pattern especially prevalent in northern Ethiopia (Negassa et al. 2021, 72). Additionally, in northern Ethiopia, "cultivated forages play a significant role in bridging the gaps in feed supply for the increasing livestock population" (Feed the Future 2020, 22). Shifting farmers from a model that includes a level of subsistence, to a market-driven, profit-driven system could have severe consequences. Promoting input-heavy strategies, such as synthetic fertilizers and single, high-yielding crops as "solutions" to smallholder agriculture can negatively impact farming communities (Mkindi et al. 2020; Altieri 2012; Scott 1998).

The commodification-focused strategies of U.S.-led development often contribute to the decline in those local food systems (Ferguson 2006; Bezner Kerr 2014), weakening smallholder farmers' capacity to adapt to environmental change and navigate resource scarcity (Kassie et al. 2013). Ethiopia has significant genetic and morphological crop diversity, including wheat varieties that vary between provinces and even villages (Pecetti and Damania 1995). For smallholder farmers in northern Ethiopia,

crop diversification is an adaptation strategy and a form of risk management, helping ensure at least some yield in unpredictable conditions (Kassie et al. 2013; Meze-Hausken 2004; Butler and D'Andrea 2000). However, the introduction of commercial grains, particularly bread wheat, has contributed to declines of traditional local varieties (Teklu and Hammer 2006; Tsegaye and Berg 2007).

Therefore, replacing local varieties with a single, updated variety undermines local food security strategies and disrupts farmers' methods of adapting to environmental change. When policies prioritize a single crop, they often overlook the broader roles crops play in farming communities' daily diets, and risk "erod(ing) farmers' knowledge about and ability to access local varieties," including "the benefits of different crops" and "why a mix of crops is important" (Bezner Kerr 2014, 590).

The disconnect between the development policies and local agricultural conditions is particularly evident in the process of developing updated seeds. Participants described how, despite the significant role of environmental conditions in determining seed effectiveness, seeds development rarely considers the diverse landscapes where these seeds will be introduced. Instead, most are developed at national or regional levels, focusing on specific traits with minimal farmer consultation. This presents a significant challenge in northern Ethiopia, where dramatic variations in elevation and climate create vastly different growing conditions. The Tigray plateau features a highly diverse topography, with stark elevation shifts--from high plateaus to lower riverine landscapes--over short distances (Abbate et al. 2015). The region's geology includes folded sediments, and diverse soil types, leading to highly variable farming conditions even within small areas (Billi 2015). Failing to account for these conditions remains a major limitation of development projects.

Development practitioners regularly communicated that they felt some of the biggest barriers to improving conditions for farmers and for intervention success was farmer education to increase the adoption of updated practices and/or inputs. This has been an issue noted in the literature on the Ethiopian highlands, where smallholder farmers' "general lack of spontaneous adoption" of introduced seeds and technologies "has been a major concern for researchers" (Mutyasira, Hoag and Pendell 2018, 12). This is evident in fertilizer use, where the number of farmers using chemical fertilizers has significantly declined,

and out of all regions, Tigray only makes up 4.3% of total fertilizer use (Negassa et al. 2021, 28). This illustrates U.S.-led development's limited engagement with local conditions and local environmental histories, particularly research that demonstrates the long-term negative impacts of previous extensive usage of chemical fertilizers. After the 1984/5 famine and through the 1990s, fertilizers were widely distributed to farmers across northern Ethiopia (Hoben 1995). This had lasting negative impacts on soil quality across northern Ethiopia, even decades later, including unevenness in the soil nutrients and limited agricultural production. Local crop varieties had particularly poor responses to synthetic fertilizers. (Abdulkadir et al. 2017; Tesfaye 1991; Nandwa and Bekunda 1998) These factors directly impact whether farmers adopt these interventions and whether they would negatively impact their farming.

In U.S. development discourse, there is little discussion when introducing an updated crop about the consequences of decreasing crop diversity or the role diversity plays in adapting to changing conditions. While Ethiopia is experiencing climate change through reduced rainfall and rising temperatures (Fazzini et al. 2015), the high local variability across the Ethiopian highlands (Seleshi and Demaree 1995) meaning that environmental change will likely manifest differently across the region (Alemayehu and Bewket 2017). In northern Ethiopia, climate change is expected cause periods of extreme resource scarcity due to "seasonal fluctuations," which often lead to "farmer communities fac[ing] seed shortage" (Tsegaye and Feyissa 2017, 10). Farmers have traditionally selected varieties based on anticipated growing conditions and adapted by planting multiple varieties to ensure some yield (Kassie 2013; Butler and D'Andrea 2000).

However, these adaptive practices are being disrupted by development interventions. Agricultural policy is increasingly shaped by climate change discourse, yet these policies often involve "political–economic interests" that exploit the expected increase in drought to promote particular seed varieties (Bezner Kerr 2014, 590; Weisser et al. 2014). This disregard for local adaptation strategies extends to the role of women in agriculture, as U.S.-led development policies often overlook their expertise and contributions, treating them primarily as beneficiaries rather than key actors in farming systems.

3.3.1.2.2 Women's Agricultural Knowledge and U.S.-led Development

Women's roles within local agricultural systems in northern Ethiopia are largely overlooked in U.S.-based development policy. Instead of recognizing women as sources of agricultural knowledge and key actors in farming systems, U.S.-led development approaches them primarily as beneficiaries or targets of intervention (Benjamin and Meyers 2016). This lack of engagement with women's expertise and roles can have significant consequences. For example, an FAO report found that in Tigray, women rely more on common spaces and resources, noting that "local informal access rules were pervasive" and "based on principles related to equity, age, and need, including deeply culturally embedded notions" (Howard and Smith 2006, 153). Such conditions are common, as agrobiodiversity and local farming knowledge often "are situated in material and gendered practices," and interventions need to attend to "gender, class, and other subjectivities at different scales that produce particular agricultural practices and knowledge in a given place" (Bezner Kerr 2014, 577).

U.S.-led development's promotion of market-based reforms (Ferguson 2006; Wainwright 2008; Mitchell 2002), can threaten commons resources in Tigray. In Tigray, "knowledge erosion and changes in CPR (Common Property Resources) access" are "threats to biodiversity and livelihoods" (Howard and Smith 2006, 67). When development initiatives fail to consider these dynamics, they can significantly reduce women's access to crucial resources. Development interventions have failed to acknowledge the customary institutions that protect commons resources in Tigray (Yohannes and Waters-Bayer 2007) and have impeded local protections of commons resources elsewhere in Ethiopia (Homann et al. 2008). This demonstrates how even though development involves "multiple scales of power and diverse players acting on local commons" (Robbins 2012, 54), U.S. development practice generally assumes a single, objective "reality on top of which different sets of "beliefs" accumulated" (Neely 2021, 4), rather than recognizing diverse ontologies and interconnections between local social structures, land management, and environmental conditions.

The absence of women's agricultural roles in U.S. development literature reflects this broader perspective. A report on women's knowledge and use of resources notes that "these factors [are] rarely

acknowledged" in the relevant literature on Tigray (Howard and Smith 2006, 153; Nigussie et al. 2024). When mentioned, women are typically framed through a deficit-based perspective, such as women have less access to "knowledge" (Benjamin and Meyers 2016, 26). This framing has significant policy implications. The lack of recognition of women's existing knowledge of decision-making roles (Belay et al. 2019) could have the opposite effect of what development programs intend. In the Amhara region of Northern Ethiopia, research has shown that "limited participation of women in decision-making often leads to the neglect of their needs, priorities and knowledge," this then "impedes their ability to act…" (Nigussie et al. 2024, 13). On a larger scale, evidence suggests that external interventions that attempt to reshape local environmental management practices have "resulted in more gender inequality, more dependency of women towards their male partners and their circumscription to domestic spaces" (Ojeda et al. 2020, 10). Ultimately, failing to acknowledge and integrate women's agricultural knowledge into development policy in northern Ethiopia risks exacerbating gender inequality, specifically uneven access to resources, and undermining the effectiveness of agricultural interventions.

3.3.2 Ethiopian Development Perspectives in Northern Ethiopia

The Tigray War not only disrupted development activities but also exacerbated food insecurity in northern Ethiopia, leading to famine conditions across Tigray (Nyssen 2024; FEWS NET 2021). These challenges highlight broader structural issues in development planning. Ethiopian development practitioners discussed the difficulties of designing interventions at scale, including diverse provincial objectives and relationships between local and federal governments. Development efforts led by TARI emphasize crop diversity, smallholder farming practices, and local agricultural knowledge. However, persistent gaps remain, as development interventions do not always align with farmers' needs and perspectives. Furthermore, while Ethiopian development practitioners increasingly recognize the importance of consulting women in agricultural interventions, their contributions remain underrepresented in development research, policy formulation, and implementation. This continued marginalization likely undermines interventions' effectiveness and ability to support smallholder farmers.

3.3.2.1 The Conflict in Northern Ethiopia

3.3.2.1.1 Consequences for Agricultural Development

Starting in 2020, the Tigray War not only threatened development activities but also jeopardized food security in northern Ethiopia, leading to famine conditions across Tigray (Nyssen 2024; FEWS NET 2021; de Waal 2021). It disrupted coordination between provincial institutions, the GOE, and international organizations, including TARI's collaboration with the federal government and Addis-based organizations like CGIAR. FtF reports describe "disrupted research and development activities" in Tigray and Amhara but also note that development workers continued to consult with national and regional levels of government in Ethiopia (Feed the Future 2022b, 18). However, these reports fail to acknowledge that the federal government at the time was not in communication with Tigray representatives (OCHA Ethiopia 2020; de Waal 2021).

There was also a decline in agricultural research produced from Tigray. With TARI research disrupted, there was reduced access to research reflecting local conditions and farmers' perspectives. Tigray reports also align more closely to the academic literature on agricultural development. Bibliometric and key-word analysis reveals thematic differences between academic literature and TARI reports. However, compared to USAID reports, Tigray-based projects demonstrate significantly greater alignment with academic research than those led by U.S. agencies.

3.3.2.1.2 Geography, Governance, and Food Security in Northern Ethiopia

Ethiopian development practitioners typically classify areas for interventions based on geographical characteristics—highland, dryland, and lowland. However, many questioned the effectiveness of basing development strategies on these broad classifications. First, these categories are too general to reflect actual conditions on the ground. For example, 'highland' environments are highly variable, with up to two thousand meters of variation, including dramatic elevation change over relatively short distances. Second, development strategies are often implemented at the regional or provincial level, and the geographical classifications cut across multiple regions, each with distinct development priorities

and relationships with the federal government. Participants described how U.S.-led development policies are influenced by the GOE, including one participant arguing that interventions would only be effective if the GOE actively facilitates these policies (R2, R3, R12).

However, the Tigray War revealed the precariousness of development policy that depends on political stability and national government coordination (Agarwal 2014; Dale 2021; Furtado and Smith 2009). The war disrupted interventions and worsened food insecurity (FEWS NET 2021), mirroring the dynamics of the1984/5 famine, where violence targeting Tigray's food systems played a more significant role in creating famine conditions than drought (Clay and Holcomb 1986; McCann 1987). The ongoing animosity between Ethiopian federal government and the province of Tigray continues to hinder critical systems, including access to the national seed bank, which is a key resource for TARI and for farmers experiencing scarcity (Feyissa et al. 2013). In northern Ethiopia, while development narratives often attribute resource scarcity to local mismanagement or acute events like drought, conflicts frequently serve as the primary drivers (Holt and Lawrence 1993; Shipton 1990)

Agarwal (2014) argues that "serious contradictions" can arise "between the goals of national and local food self-sufficiency; between promoting food crops and a farmer's freedom to choose…which crops to grow" (Agarwal 2014, 1247). In northern Ethiopia, these dynamics are impacted by how the international community perceives Ethiopia. While all participants emphasized the importance of Ethiopia's plant biodiversity, Mulesa (2021) contends that despite Ethiopia's reputation for "progressive" environmental governance, the GOE marginalizes "alternative development pathways," including "support for the farmers' seed systems" (p.16). These contradictions have significant implications for U.S.-led development in northern Ethiopia, particularly navigating partnerships with a country in civil war, where the GOE restricted critical food aid to Tigray (Nyssen 2024; de Waal 2021).

Overall, the tensions between geographic classifications and local and political realities, national goals and local needs, illustrate the need for development approaches to reflect the conditions of northern Ethiopia, where governance and food security are deeply entangled.

3.3.2.2 Engagement with Local Agricultural Knowledge

3.3.2.2.1 TARI and Local Agricultural Knowledge

Overall, TARI development activities recognize crop diversity, smallholder farming practices, and local agricultural knowledge. By incorporating descriptions of typical diets in their development activities—outlining the crops required, their inclusion in meals, and processing methods—TARI provides more explicit indications of how interventions interact with existing practices. However, significant limitations remain in how TARI engages with local agricultural knowledge. In general, development practitioners tend to base recommendations more on their own perceptions of farmers' experiences than on how farmers present and describe issues (Atsbha et al. 2020). Furthermore, Tigray-based development recommendations and research activities are influenced by GOE and U.S.-led development objectives. For example, the Agricultural Growth Program (AGP), which supports Tigray-based agricultural research, was formed through FtF and is currently a joint USG-GOE project (USAID 2012; Feed the Future 2018a; Negassa et al. 2021).

Tigray documents describes how AGP supports "productivity and commercialization" for smallholder farmers by "focusing on high agricultural potential areas," in Tigray (Belay et al. 2019, 1). Areas not identified as high potential were excluded from TARI research, reflecting a broader U.S. development approach for Ethiopia that prioritizes production potential over need through ZOI (Feed the Future 2018; Carr et al. 2023). Focusing only on areas deemed the highest potential has several consequences, including lessons learned from selected zones that are often applied to areas with different agricultural conditions (Atsbha et al. 2020), reinforcing existing inequities and introducing interventions poorly suited to local contexts. Despite greater engagement with local perspectives, development efforts in Tigray still struggle to align with farmers' needs. Studies on the Ethiopian highlands documented misperceptions of farmer practices and have raised concerns about smallholder farmers' "general lack of spontaneous adoption" of new agricultural inputs (Mutyasira, Hoag and Pendell 2018, 12; Meze-Hausken 2004; Hoben 1995). This misalignment is evident in how a development practitioner described what is required for farmers to adopt an intervention: "great care and continuous training and supervision is

needed" "to enhance the wider adoption" (Tesfamariam et al. 2019, 84). Such perspectives illustrate the ongoing challenges in bridging the gap between development strategies and farmers' actual needs.

3.3.2.2.2 Women's Agricultural Knowledge

Ethiopia-based development practitioners, specifically TARI, broadly recognize the importance of consulting with women regarding development interventions and acknowledge their critical role in farming systems. Also, TARI's inclusion of typical diets in their development assessments provides important insight into areas traditionally managed by women, which are significantly impacted by interventions that reshape crop cultivation. Although women typically do not plow, they "perform most other agricultural work" and "hold all of the knowledge and skills that are necessary to engage in own-account agriculture" (Howard and Smith 2006, 157). Additionally, women often possess greater knowledge of plant and crop varieties (Howard and Smith 2006).

Participants described how women's roles and essential agricultural knowledge are rarely represented, primarily due to gaps in research and extension activities (R10). This lack of representation has concrete consequences in development research. For example, Howard and Smith (2006) note that "gendered knowledge also in part explains the lack of fodder collection reported in the Household Survey CPR (Common Property Resources) module" (p.137). Women have significantly less access to extension services and are far less likely to be contacted by extension officers, which likely relates to the low number of agricultural extension workers who are women – only 14.8% in Amhara (Azanaw and Tassew 2017; Gebre et al. 2019). Therefore, despite the growing acknowledgment by Ethiopian development practitioners, the continued exclusion of women's agricultural knowledge in development research, policy formulation, and intervention implementation likely hinders the overall effectiveness of interventions.

3.4 Conclusion

This chapter has examined how U.S.-led agricultural development in northern Ethiopia is shaped by national economic growth priorities, regional classifications, and the broader geopolitical landscape. An analysis of development policies, practitioner perspectives, and institutional approaches highlights key

tensions that arise with externally driven interventions. U.S. development programs emphasize market integration, productivity, and the adoption of standardized agricultural inputs, often overlooking northern Ethiopia's diverse ecological conditions and smallholder farming practices. Furthermore, differences in how U.S. and Ethiopian development practitioners conceptualize agricultural development—particularly regarding the role of farmer knowledge, women's contributions, and locally adapted seed systems—have significant implications for the effectiveness of these interventions. This chapter answers my research questions in the following ways:

1) What are the motivations and intentions behind US development policies in Ethiopia's agro-pastoral landscapes? Specifically, between 2010 and 2024, how have development priorities been identified and discursively framed within US-based approaches, and in what ways do these priorities reflect or overlook local agricultural needs?

Between 2010 and 2024, U.S.-led agricultural development in northern Ethiopia has been primarily driven by agriculture-led economic growth, with USAID designating much of the region as a "Zone of Influence" to promote regional economic integration. These interventions prioritize the introduction of external agricultural inputs, particularly improved wheat seeds and chemical fertilizers. However, these development strategies often overlook northern Ethiopia's diverse geography, ecology, and climate, introducing agricultural products ill-suited to local conditions. Elevation changes and dryland environments create significant variability over short distances, yet interventions tend to promote standardized solutions rather than locally tailored approaches. Additionally, these programs have increased farmers' reliance on external inputs, making them vulnerable to global supply chain disruptions. Events such as the COVID-19 pandemic and Ethiopia's civil war have constrained the availability of essential inputs, limiting these interventions. These global crises also reshaped U.S. agricultural development priorities in northern Ethiopia, influencing program implementation. Ultimately, while U.S.-led agricultural development aims to enhance economic growth and market integration, it often fails to fully account for local agricultural needs and environmental realities, leading to challenges in program sustainability and effective support for smallholder farmers.

2) What conceptual differences exist between US and Ethiopian development practitioners' understandings of "development"? Specifically, how do these differences shape their respective agricultural development approaches in Ethiopia?

U.S. and Ethiopian development practitioners differ in their understandings of agricultural development, particularly regarding the role of women in local agricultural systems. U.S.-led interventions often overlook women's contributions to seed selection, crop diversity, and the cultural and nutritional significance of certain crops in northern Ethiopia. Development programs and extension services frequently fail to recognize women's expertise in local seed systems, resulting in interventions that do not fully integrate their knowledge. In contrast, the Tigray Agricultural Research Institute (TARI) acknowledges the diversity of crops grown by smallholder farmers and considers their cultural and nutritional importance. However, while TARI engages with women's perspectives and assesses the impact of development programs, it still does not fully incorporate women's agricultural knowledge into program design. Additionally, between 2020 and 2024, international crises—including the war in Ethiopia—have disrupted agricultural research and extension services, further complicating efforts to implement locally relevant interventions. These differing approaches highlight how U.S.-led development prioritizes standardized solutions over locally embedded knowledge systems, whereas Ethiopian institutions place greater emphasis on smallholder farming practices and the significance of crop diversity.

U.S.-led development's limited engagement with farmer knowledge and local conditions extends to the role of women in agriculture, overlooking the context-specific gendered agricultural knowledge. Understanding these dynamics is crucial for examining how agricultural interventions unfold in northern Ethiopia, where women play integral roles in farming and food systems. The ways Ethiopian development practitioners engage with women's agriculture knowledge illustrate "how gendered forms of knowledge production mediate the ways in which nature is conceived in political, academic, and everyday discourses" (Ojeda et al. 2020, 10).

The Tigray War weakened TARI's ability to support development actors who are more closely

connected to farmer knowledge and local agroecological conditions. While U.S.-led development activities often claim to rely on local actors and institutions such as TARI for research on local farming conditions (Carr et al. 2023; Feed the Future 2022a; USAID 2019), and funds TARI's research, there is little evidence that TARI's findings inform U.S.-led development planning. Policy and program documents rarely cite TARI or other provincial agricultural institutes' research (USAID 2019; Feed the Future 2021; Feed the Future 2018a). Integrating research from institutions like TARI would be a crucial first step toward more contextually relevant agricultural policy.

4 CHAPTER 4: RESEARCHING U.S.-LED AGRICULTURAL DEVELOPMENT: CHALLENGES AND CONSTRAINTS

4.1 Introduction

Examining the process of researching U.S. international development can provide important insights into the industry. While research has analyzed agricultural development projects in Ethiopia (Clay and Holcomb 1986; Holt and Lawrence 1993; Adnew Degefu et al. 2019), and there have been significant critiques of U.S.-led international development practices (McVety 2012; Escobar 2012; Wainwright 2008; Mitchell 2002), there has been limited research and reflection on the process of researching U.S.-led development itself. My research responds to growing calls for "methodological innovations" in how the social sciences approach development policy and institutions (Sultana 2021, 160; Green 2023; Johnson et al. 2020; Ferguson 2006). Drawing on critical development studies and political ecology, this chapter contributes to efforts to "complicate(s) state power" through attention to research practices and processes (Meehan et al. 2013, 9).

This chapter explores the nature of research into U.S.-led international agricultural development, and its implications for development discourse, policy, and academic inquiry. This study illuminates the processes in which narratives, rather policy grounded in current academic literature, can govern development decision-making (Hoben 1995), and how "success" is "socially produced" within the development industry (Mosse 2006, 940). It also engages with scholarship that urges academics to reflect on how power operates within government institutions and bureaucracies, and how those dynamics shape the conditions of research itself (Valdivia Ramirez et al. 2021).

This research draws on development conference meetings, documents, reports, and interviews with participants. All participants in this study are experts in agricultural development for smallholder farmers and have either worked directly for USAID in Ethiopia or a USAID-contracted NGO in Ethiopia. Each participant was assigned an alphanumeric identifier (e.g. respondent #4 is referred to as R4) to keep their identity confidential.

Research Question

The research in this chapter was guided by the following question:

> What are the concerns that development practitioners have when participating in research, and how do these concerns shape the discourse and transparency around U.S.-based agricultural development interventions?

In tracing the methodological, ethical, and institutional complexities of this research, this chapter highlights the barriers and insights that emerged when studying U.S.-based international agricultural development. Overall, the research process itself—shaped by restricted access, development practitioners' heightened professional fears, and institutional power structures—offers valuable insights into the policy discourse and contradictions within U.S. international agricultural development.

4.2 Results

4.2.1 U.S.-based Development: Research Participation

4.2.1.1 Conditions of Ethnographic Research

The conditions of ethnographic research in this study offer insights into the U.S.'s international agricultural development industry and its accessibility to social science research. This study's ethnographic research focused on—and was shaped by—how development practitioners perceived their careers, their work, and the development industry, particularly within the context of recent political conditions. Overall, there was widespread hesitancy among agricultural development professionals to participate in ethnographic research. Common concerns included fear of professional repercussions. Individuals who participated in this research study provided similar statements to: "People already know what I think," including because "I'm retired and I'm not looking for more work."

Despite extensive outreach and expressed interest, few individuals became formal participants. Potential participants were identified based on preliminary conversations with agricultural development professionals in 2022 and 2023. Over the course of the research, forty-one interviews were conducted with expected participants, however only twelve individuals consented to be participants in the study. Of

the remaining twenty-nine, twenty-two still contributed valuable information, including answering interview questions, providing documents, and sharing conference and workshop materials, including transcripts. How development practitioners interacted with this study highlights both the barriers to accessing development information, and the informal pathways through which ethnographic data can emerge.

4.2.1.2 Reasons for Hesitation and Non-participation in Research

4.2.1.2.1 Hesitation Expressed by U.S. participants

Concerns about anonymity and professional risk emerged as major themes in conversations with development professionals. Participants repeatedly emphasized the sensitive nature of expressing personal opinions within their field, or sharing insights into the development process, even in confidential settings. Professionals in the U.S. international agricultural development industry expressed concerns over anonymity, even though they were told that their responses would be anonymized, including stripping their answers of all personally identifiable information. Seven individuals provided a version of this statement: "even if I am not quoted and the information is anonymized, my opinions are well-known, and if I tell you what I think, people will know that it is me and will be offended." Despite the potential contradiction that exists within concerns about participation—namely their beliefs that their views were already widely known—these responses illustrate an underlying sentiment: concerns about being associated with particular beliefs, or ideas within the industry.

Individuals expressed their hesitation in other ways, including using phrases such as "not on the record" to convey concerns about anonymity regarding the information shared. Across the forty-one conversations, fifteen individuals used some version of the phrase "not on the record," signaling that they did not want to be personally connected to the information they shared. Participants also highlighted the increasing politicization of development work. Industry professionals noted the broader politicization of bureaucratic processes within development work. Four prospective participants specifically mentioned

that, over the last decade, routine bureaucratic practices have been politicized, further contributing to hesitancy around open participation in research.

4.2.1.2.2 Reasons Given to Decline Participation

Political uncertainty and perceived professional risks led individuals to withdraw from formal participation in this study. Individuals who initially expressed interest in participating in this study, and then declined, gave several reasons for doing so. A recurring theme among these prospective participants was concern about political uncertainty. During 2024, six individuals mentioned the former president's statements that there would be retributions against civil servants if he returned to office (Price and Riccardi 2023). These concerns were often connected to Executive Order (EO) 13957, "Schedule F", which was signed on October 21, 2020 (Ogrysko 2020), but was not implemented at the time due to the change in administration. Seven prospective participants cited this EO, which would have removed civil servants' employment protections (Davidson 2024). In early 2024, news outlets reported that EO Schedule F posed a more significant threat to civil servant protections than was previously understood in 2020 (NTEU 2024). These developments heightened fears of professional vulnerability and potential consequences of being publicly associated with certain policies or programs. Prospective participants also linked this political uncertainty to the perception that U.S. international development work functions as a direct extension of the foreign policy agenda of the executive branch. This close association with presidential priorities, along with persistent budgetary instability—such as continuing resolutions—were frequently cited as contributing to hesitancy. Participants' reluctance to participate due to political concerns was compounded by unease around IRB protocols.

Despite IRB protocols designed to protect participants' identities and data, legal vulnerabilities in academic research created substantial concerns about anonymity among prospective participants. All prospective participants were informed that this study complied with IRB protocols designed to protect their data and ensure anonymity. However, four prospective participants expressed concern that a legal challenge could override these protections. This was confirmed by CSU-IRB's legal office, which

clarified that, if ordered by a court, this study "would be compelled to produce the requested documents," which could include participants' personally identifiable information. Furthermore, since CSU is a public university, this study could also be subject to a Freedom of Information Act (FOIA) request. These overlapping legal and political uncertainties contributed to participants' significant concerns about anonymity, ultimately shaping their decisions to decline formal participation in the study.

4.2.2 Access to Development Data and Institutions

4.2.2.1 Barriers to Accessing Development Information

4.2.2.1.1 Challenges Obtaining U.S. Public Information

Accessing information that was identified as publicly available posed challenges during this study due to limited databases and non-functional government websites. Although prior academic research into USAID significantly relied on the platform "explorer.usaid.gov" (Carpenter 2020; Morefield 2019), this site was never active during the timeframe of this study. In 2020, USAID's Foreign Aid Explorer started a multi-year long process of being consolidated with the Foreign Assistance dashboard (USAID 2020). As a result, information was unavailable from online platforms during the 2022-24 research period. For instance, project design documents were not easily accessible, as they were not uploaded, and frequently, all reports for a given project were missing from the platform. Other key USAID data platforms were also inaccessible during the research period, including USAID's "The GreenBook" (https://2012-2017.usaid.gov/developer/greenbookapi) and USAID Economic Development and Data Services (EADS). Although this study was in correspondence with a USAID archivist for documents, limited USAID website functionality likely restricted the discovery of relevant materials.

These access limitations contrast regulations requiring public availability of U.S. government international development data. The Office of Management and Budget (OMB 2012) and Foreign Aid Transparency and Accountability Act (U.S. Congress 2016) mandate that information on "United States foreign assistance programs" be "publicly available" in a "comprehensive" format, "published or updated

on the appropriate website" at least quarterly (U.S. Congress 2016, 669). This includes award-by-award data, county-level and regional assistance details, and access to key planning and evaluation documents (U.S. Congress 2016, 669). On its websites, USAID presents its development data as "assets for USAID, its partners, the academic and scientific communities, and the public at large" (USAID 2024c, 1). However, in practice, this study found that public access to such data was inconsistent, fragmented, and at times entirely unavailable, despite its legal classification as public information and mandated quarterly reporting requirements.

4.2.2.1.2 Lack of Transparency Among USG Development Partners

The role of U.S.-based partner organizations in international agricultural development has expanded in recent decades, shaping implementation practices and access to information. The USG has increasingly relied upon contracts and U.S.-based partner organizations to implement development programs (Corson 2010; Roberts 2014; Green 2023). However, these development partners do not necessarily need to follow the same reporting and transparency regulations as U.S. government agencies. One of the largest USG development partners in Ethiopia is The Bill & Melinda Gates Foundation (BMGF). The BMGF has a "open access policy," which states that it provides "unrestricted access and reuse of research funded, in whole or in part, by the foundation, including any underlying data sets" (BMGF 2024). However, this stated policy does not extend to program development, implementation, or evaluation documents, which are not available on the foundation's website. Current and former BMGF employees contacted for this study were unwilling to provide such information and no one agreed to participate.

U.S.-based participants in this study discussed the lack of mandated public transparency for many USG partner organizations. This lack of required disclosures creates barriers to understanding and evaluating U.S.-led agricultural interventions in Ethiopia. According to one participant, these restrictions to research access contribute to a lack of adaptation and change in major development institutions: the lack of change in development is related to difficulties in researching the industry "is a really important point." The participant continued that "There's been quite a lot of critiques of Gates [Foundation] but, it's

mainly in civil society, [the critiques] very rarely gets out to mainstream media," that "the Gates approach is not necessarily a good approach for Global South" (R4). In particular, participants pointed to concerns about newer professionals entering the field without historical or critical context: major issues arise when young professionals start "working for the Gates Foundation without [understanding] the history, [without] having some understanding of critique of traditional development approaches, including the Gates Foundation and their technological top-down approach" (R4, R5). These insights underscore how the lack of transparency among USG agricultural development partners—particularly high-profile private foundations—contributes to limited accountability and constrains effective evaluation of U.S.-led international development practices, including research conducted in this study. Beyond the lack of transparency among USG development partners, institutional research priorities within U.S. organizations also shape—and often constrain—the scope of research into development practices.

4.2.2.2 Institutional Interests and Research Limitations

4.2.2.2.1 Investment and Promotion of Specific Crops

The research priorities of U.S. institutions involved in international agricultural development can create structural limitations for independent research into international development practices. Participants highlighted how the political economy of crop-specific research and funding shapes the international development industry. Participants described how different crops used in international development interventions have their own international communities researching and supporting them, and these respective communities have different focuses, motivations, and levels of financial support. For example, the "international community that works on millet" includes people across North and South America, Europe, etc., but does not receive as much funding. Grains like wheat have "such a large stake-holding, there's a lot of money behind [it] here in the US, as well as internationally." In terms of the "percentage of the American agricultural system," crops like millet or sorghum do not "make up nearly as much as corn or soybeans or other crops" (R7, R6). Participants presented an agricultural research

environment characterized by competition for funding and lobbying for specific crops, influencing how particular grains are prioritized in international development strategies. This dynamic—where emphasis is placed on select crops—limits research access and information sharing and creates a competitive environment that undermines different approaches to agricultural development.

4.2.2.2.2 Institutional Interests and Mutual Benefits

Institutional interests in preserving funding streams can also impede research into international development practices. Development practitioners place significant value on international development work that provides mutual benefits for all stakeholders and partners. USAID defines "local stakeholders" as "partner country governments, beneficiaries, civil society (including faith-based organizations), the private sector, multilateral organizations, regional institutions, and academia" (USAID 2021, 13). At a meeting of The Board for International Food and Agricultural Development (BIFAD), an advisory board to USAID, the meeting moderator contended that BIFAD's development activities should follow the U.S. Department of Agriculture's "model," in which all partners "get mutual benefits," since, he argued, development "partnerships don't work unless there are mutual benefits" (BIFAD Meeting Oct. 12, 2010).

Over the past two decades, U.S.-led agricultural development consistently mentions the close association between USDA and USAID work, emphasizing the "mutual benefits" of working together and "leveraging strengths" within international agricultural development work (BIFAD meeting Oct. 12, 2010; Feed the Future 2019, 36). A notable instance of USDA's role in agricultural development in Ethiopia was their 2020 report regarding the Government of Ethiopia's changing position to allow GMO seeds, such as maize, into the country. The USDA report emphasized the significance it placed on GOE's new position because it would "have positive influence on the acceptance of this technology in the region. Especially considering that a decade ago the country was at the forefront of the anti-GMO movement in Africa" (USDA 2020, 2). One participant argued that the report illustrated how the USDA was working for the corporate agricultural interests in the U.S. rather than supporting agricultural development in

Ethiopia (R3). This example underscores how U.S. development actors, particularly the USDA, often prioritize advancing U.S. agribusiness interests abroad.

Significant agricultural research for international development is conducted at U.S. land-grant universities (Collins 2012; Lacy et al. 2021), and one way that these mutual benefits are realized is through funding U.S. land-grant universities via international development programs. At another BIFAD meeting, a member noted that "the capacity of the land-grant system…is underused and underfunded," and argued that USDA's working relationship with land-grant universities should be referenced "to try to improve capacity funding" for theses universities through international agricultural development activities (BIFAD Meeting Oct. 14, 2008). This strategy continued to be discussed by U.S. development practitioners. At another BIFAD meeting, a member summarized meeting discussions as: "One major point that emerged was the idea of win-win both for the U.S. and partner countries. The Soy Innovation Lab specifically demonstrated the benefits to U.S. soy producers…" This includes USAID's Innovation Labs, which are based in twenty-four U.S. universities (BIFAD meeting Oct. 14, 2014).

Participants noted that, in general, the main "motivating factor" for U.S. universities involved in international agricultural development is the research money received from USAID, while for researchers, the "motivating factor is helping the farmers" (R7, R1). These U.S. land grant universities have had significant influence on U.S.-led agricultural development in Ethiopia, including the development of Ethiopia's agricultural research institutions. An Ethiopian participant described how Iowa State University, in particular, played a significant role "in establishing Ethiopian higher institutions," including the initial "training of agriculture students" (R3).

The emphasis on mutual benefits, such as funding for U.S. land-grant universities, illustrates how international development priorities are shaped by U.S.-based institutional interests, which can create barriers to accessing information on international development activities. A few participants described how it is in the interests of these institutions to protect information about their work that does not directly support USAID's mission to promote a foreign country's "journey to self-reliance" and eventually end "the need for foreign assistance" (USAID 2021, 11). This funding-driven structure that includes an

emphasis on international development activities providing benefits to U.S. institutions, increases the financial incentive for these U.S. institutions to maintain the current system, making them more resistant to sharing information that could portray their role in a negative light (Hoben 1995; Edwards 1989; Corson 2010; Escobar 2012). For example, when a university receives funding from investments in a particular crop as a development solution, the university may be disincentivized from critically evaluating whether that crop is actually appropriate for the region where it will be introduced. Ultimately, institutional self-interest embedded in development partnerships can obstruct transparency, hindering research into U.S.-led international agricultural development.

4.3 Discussion

4.3.1 Challenges in Researching U.S.-based Agricultural Development

4.3.1.1 Ethnographic Constraints: IRB Concerns, Confidentiality, and Ethical Considerations

Institutional unfamiliarity with academic research protocols—particularly IRB procedures—posed a significant barrier to formal participation in this study. While a few development practitioners that I communicated with as part of this study were familiar with ethnographic research processes, including IRB, the vast majority were not. Overall, the hesitation among prospective participants to formally participate in this study increased significantly when presented with IRB-dictated language. It was at this point in the pre-interview process that the majority of prospective participants, who first indicated a willingness to participate, declined formal participation and instead chose to answer questions and provide material without being officially included as a participant. This was despite hearing the IRB processes this study had in place to protect their identity and anonymize their responses, including removing any personally identifiable information.

In general, prospective participants balked at the idea that the study was mandated to record their names, due to the legal avenues that could compel the study to disclose participant identities. Due to these concerns—expressed by those who declined and those who agreed to participate—this study had an obligation to be particularly careful to protect participant identities, including those who did not formally

contribute but still offered information. Overall, most prospective participants were uncomfortable with the idea of formally consenting to be interviewed, instead opting for informal conversations. Their unfamiliarity with academic ethnographic research—especially IRB processes—combined with their knowledge of U.S. court systems, their perceived legal vulnerabilities, and the broader political climate threatening civil servants (Davidson 2024; Price and Riccardi 2023) created conditions in which development practitioners expressed immense caution and hesitancy to formally participate in this study.

4.3.1.2 Scholarship: Power and Communities

The way that many development practitioners interacted with this study highlights gaps in understanding between social science research—particularly ethnographic approaches—and the expectations of development practitioners. Many expected journalistic-style interviews focused narrowly on programmatic objectives, with protections for their anonymity similar to those granted to sources in journalism, rather than questions on personal perspectives and protections for their anonymity based in IRB protocols. This misalignment in research expectations contributes to a broader culture of caution among development practitioners, particularly regarding how their perspectives might be represented or interpreted. This reflects existing critiques that anthropology has been slow to adopt research strategies suited to studying communities with power dynamics that differ from those traditionally researched.

In general, IRB protocols and standard ethnographic practices were designed to prioritize the studied communities, including protecting them from potential abuses of power by researchers who are often more financially privileged, backed by powerful research institutions, and may possess more civil rights due to their country of origin—which is often the case in research involving Indigenous communities (Green 2023; Li 2007; Gupta and Ferguson 1997; Ferguson 1997). Therefore, anthropological research ethics continue to prioritize the protection of studied communities, even when participants are affiliated with powerful institutions (Wedel et al. 2005; Tate 2020). However, there have been calls by anthropologists to expand the idea of ethical considerations when research participants "are more powerful" than the researcher (Wedel et al 2005, 42).

4.3.2 Institutional and Political Dynamics in Development Research

4.3.2.1 Development Practitioners and Decision-Making Within Institutions

The ways development practitioners engaged with this study illustrate their concerns about being publicly associated with particular ideas or approaches within the industry. Development researchers previously identified similar dynamics within the development field. Development work inherently involves "compromise, translation, and negotiation" amongst a multitude of actors (Luetchford 2006, 128; Desai 2006), and practitioners may not fully agree with all aspects of a development intervention. Yet Mosse (2006) describes how "project workers (including consultants) hide their own contingent actions and the wider politics of aid" (p.944), allowing their expertise absorbed into the dominant logic of development, and enabling "history to be arranged as the unfolding of a locationless logic" (Mitchell 2002, 15). This tendency reflects how individual practitioners, who may hold diverse perspectives, priorities or critiques, often must align their work with dominant institutional narratives and policy frameworks. As a result, the diversity of views, internal debates, and political negotiations that occur within a development project or program are typically obscured (Mosse 2006). Such processes mask internal contestations and present development interventions as cohesive and unified, projecting a singular vision of expertise even when they as shaped by negotiation and institutional constraint.

Another likely factor contributing to practitioners' caution about being associated with particular programs or policies is the close-knit nature of the international development industry, where many professionals operate within a relatively small and interconnected network (Green 2023, 120). As a result, differing opinions and perspectives are more likely to be well-known within the industry. This dynamic is likely compounded by the increasing politicization of bureaucratic work—particularly international development—in the U.S. (NTEU 2024; Davidson 2024). Valdivia Ramirez et al. (2021) identify these underlying dynamics in U.S. federal government work, emphasizing the importance of understanding that U.S. government institutions are operated "by bureaucrats who are humans; whose feelings…influence the process of decision-making" (p.6). These dynamics—concern over professional visibility, internal

disagreement, and the emotional factors of working within politicized institutions—demonstrate how professional risks influence how development practitioners engage with research on their development process.

4.3.2.2 Funding and research priorities: How financial incentives shape institutional focus

U.S.-based institutional interests can impede research into international development practices, particularly when transparency may challenge dominant development narratives or funding priorities. U.S. land-grant universities have played a long-standing role in U.S. international agricultural development strategies (Oyer 1986; Lacy et al. 2021). These institutions, along with other U.S.-based contracting and partner organizations, have benefited from the emphasis on providing mutual benefits for U.S. stakeholders involved in international development work (Corson 2010; Roberts 2014; Green 2023). This arrangement sustains a system in which the priorities of U.S. institutions—such as securing research funding and contracts—are closely aligned with broader development agendas.

At the same time, the international development industry has been characterized as having "hidden transcripts" and opaque development practices (Luetchford 2006, 128; Rossi 2006; Escobar 2012; Scott 1990). Development consists of a mix of "concealed personal, community, and institutional" objectives, which exist alongside "public transcripts" and support the creation and preservation of "social and professional identities and structures of power and authority" (Mosse and Lewis 2006, 16; Scott 1990). Within these conditions, research into development can provide value by not only investigating the impact of specific development projects, but also by examining "how 'success' is socially produced or constructed" (Mosse 2006, 940).

Participants' critiques of the Gates foundation are emblematic of these dynamics. While the Gates foundation has claimed successes, including its role in co-founding the Ethiopia's Agricultural Transformation Agency and increasing the adoption of agricultural inputs (FAO 2020), other research suggests that these outcomes are not adopted by smallholder farmers. Instead, increases in the adoption of agricultural inputs and agricultural productivity can be largely attributed to increased land under cultivation in large holdings rather than a transformation of smallholder farming practices (Mkindi et al.

2020). This illustrates how U.S. international development institutions and policies often "manage the circulation of discourse" in ways that seem neutral and universally applicable (Klenk 2004, 74).

These dynamics are further reinforced by the insular nature of development industry. Green (2023) argues that the "continuity of organizational structure and professional identity" in international development industry has led to "a relatively small network of practitioners…," and therefore many "prevailing professional practices and foundational assumptions are largely taken for granted" (Green 2023, 120). As a result, transparency and critical reflection can be discouraged when they threaten institutional interests and established partnerships within the industry. Together, these factors demonstrate how the preservation of institutional interests and a narrow professional culture can constrain research into development practices, especially when findings may challenge dominant narratives or expose contradictions within U.S.-led initiatives.

4.3.3 Recommendations for Social Science Research on International Development

4.3.3.1 Expanding Methodologies

Social scientists have called for "methodological innovations" that account for "intricacies and scalar patterns," while also attending to "situated knowledges and partial truths" (Sultana 2021, 160). There is particular stress on anthropology "to justify and rethink its methodological arsenal" (Bierschenk 2014, 91), especially in ethnographic research on development. This rethinking involves incorporating methodologies beyond "the conventional modalities of anthropological fieldwork" (Green 2023, 123). Green (2023) emphasizes that anthropological research should approach development not only as policy, but as a set of institutionalized practices that require continual critical reflexivity. This could help address concerns raised by Ferguson (2006), who warns that anthropology's traditional focus on "the field" and a singular community can "localize and depoliticize our understandings of global inequity…" (Ferguson 2006, 51).

While the concept of "methodological populism" (Mosse and Lewis 2006) is not new, research on development—particularly by anthropologists—has tended to rely on relatively narrow set of

methodologies (Green 2023; Tate 2020). However, a growing number of studies, including this one, demonstrate a shift towards more diverse methodological approaches. Interviews, newspaper articles, conference transcripts, government documents, and quantitative data are increasingly being used to trace the "entire policy chain" and examine the "internal logic" of development programs (Bierschenk 2014, 75; Wedel et al. 2005, 41; Green 2023; Gupta and Ferguson 1997). This shift reflects an expanding "methodological arsenal" in research on development institutions and interventions, with scholars drawing from sociological, historical, and ethnographic approaches to better understand the complexity of development processes (Bierschenk 2014, 91; Des Chene 1997).

Specifically, research should reflect the "varied materialities" of each development context; the specific resources, industries, institutions, or policies involved "necessarily shape [the researcher's] methodological choices and fieldwork experiences" (Johnson et al. 2020, 385). In this study, the conditions of the U.S.-based agricultural development industry directly influenced the ethnographic methods used. These study conditions also illustrated the need for research to be "grounded in place and time," and to account for its "consequences for people's lives" (Coddington 2017, 318). The increasing concerns about professional risk expressed by development practitioners through the course of this study led to a broader methodological approach, incorporating more archival material and other forms of ethnographic data. This shift reflects how methodological innovation can emerge from recognizing research is "situated in political, social, and institutional contexts" (Catungal and Dowling 2021, 18). Overall, incorporating adaptive, critically reflexive, and interdisciplinary methods offers a way forward for research into international development.

4.3.3.2 Engagement Between Social Science Researchers and Policymakers

There have been calls for political ecology to engage more with policy, including greater coordination among political ecologists, policymakers, and those responsible for executing policy (Sultana 2021, 2023; Walker 2006; McCusker 2015). In particular, social science research can play a major role in making connections between local and global scales (Crate 2011). Conducting ethnographic research into development can be seen as a "situated intervention," rather than "disinterested" research

(Gupta and Ferguson 1997; Mosse 2006, 952). Scholars have also argued that anthropological research should help "disentangle the outcomes" of policymaking to help understand "how and why they often contradict the stated intentions of policy makers" (Wedel et al. 2005, 44). This research contributes to these efforts by tracing the incongruities between policy intentions versus policies themselves, through the perspectives of development practitioners and by critically examining the institutional constraints, political pressures, and professional risks that shape how policy is both understood and enacted.

Research into development can also "highlight gaps in understanding" within policymaking, such as around environmental governance or development narratives (Sultana 2023, 733; McCann 1997; Hoben 1995; Fairhead and Leach 1996). This research can also help challenge larger arguments within development, such those surrounding "globalization," which is often presented as inevitable (Massey 2005, 5), and help counter ineffective "dichotomous frameworks" in policymaking, such as "local versus global" that can "obfuscate" the "workings of policy processes" (Wedel et al. 2005, 43). Another approach to engaging with development policy involves not just communicating new information, but "forging links between different knowledges that are possible from different locations" (Gupta and Ferguson 1997; Mosse 2006, 950). This is especially relevant to development research, such as this study, that includes both U.S.-based development practitioners and those in countries targeted for interventions.

Ultimately, social science approaches that critically engage policy can illuminate the layered contradictions and underlying narratives of development interventions, contributing to more reflexive development practices. However, the research challenges experienced through this study—particularly practitioners' increasing professional insecurities and the institutional interests—highlight likely barriers to increased engagement with policymakers. Understanding these barriers is essential to develop more effective strategies for engaging with policy and policymakers.

4.3.3.3 Investigative Approaches into Powerful Institutions

Research involving powerful institutions requires researchers to reflect on and potentially adopt different ethical and methodological approaches than those used when studying traditionally marginalized communities. Powerful institutions can influence all aspects of the research process, including

"recruitment and participation, the collection and interpretation of data, and the circulation and influence of results," and researchers can encounter significant "barriers to access" (Catungal and Dowling 2021, 19).

Effectively studying a U.S. government agency as an anthropologist can be particularly challenging, as federal civil servants are "typically interviewed by journalists but not anthropologists" and often expect journalistic methods and ethics (Wedel et al. 2005, 42; Tate 2020). Therefore, when researching "powerful institutions and actors," anthropologists may need to incorporate aspects of the "ethical code and practices of journalism," such as approaching participants as journalists would approach their "sources" (Wedel et al. 2005, 42; Tate 2020). In such cases, "informed consent is not always possible or ideal" (Catungal and Dowling 2021, 34), requiring collaboration with the university's IRB office to develop appropriate procedures for managing participant information to safeguard their anonymity.

While ethnography and journalism share certain techniques—such as conducting interviews and writing about human perspectives and experiences—they differ significantly in purpose, methodology, and ethical approach (Des Chene 1997; Gupta and Ferguson 1997; Catungal and Dowling 2021). Ethnography prioritizes long-term engagement, critical reflexivity, and theoretical interpretation, whereas journalism is oriented toward timely reporting that informs the public (Malkki 1997; Wedel et al. 2005). However, as Wedel et al. (2005) and Tate (2020) note, when studying powerful institutions or actors, anthropologists may need to strategically adopt certain journalistic practices—such as source protection—in order to ethically and effectively conduct research in these contexts. Ultimately, when researching powerful institutions, methodological flexibility and ethical reflexivity are essential for navigating challenges related to access, accountability, and participant protection.

4.4 Conclusion

This chapter provides a critical reflection on conducting social science research on U.S.-led agricultural development in Ethiopia. The research barriers encountered during this study were rooted in a shifting national political landscape, the increasing politicization of routine bureaucratic practices, and the

entrenchment of institutional interests. These challenges not only disrupted aspects of the data collection process but also revealed deeper tensions around transparency within the agricultural development industry. They also prompted a reconsideration of research methods and ethics when studying powerful institutions. In navigating restricted access, heightened professional anxieties among participants, and an entrenched development discourse, these research findings underscore how methodological innovation is not only strategic but essential when examining the institutional logics and contradictions of U.S.-based agricultural interventions. This illustrates the importance of contextualizing the concerns development practitioners have about participating in academic research, and how those concerns shape the discourse and transparency surrounding development. This chapter answers my research question in the following ways:

> What are the concerns that development practitioners have when participating in research, and how do these concerns shape the discourse and transparency around U.S.-based agricultural development interventions?

Development practitioners expressed a range of concerns, particularly around professional risk and the potential consequences of being directly associated with specific projects or programs. Practitioners were highly conscious of anonymity, and while many showed a strong interest in sharing information, the majority declined to formally participate. These conditions reveal how development work is embedded within broader institutional and political structures, which discourage open critiques. Consequently, this ethnographic research process prompted a reflection on the importance of methodological flexibility and ethical reflexivity, including the use of alternative forms of data collection and participant protection. Practitioners' concerns ultimately both reflect and shape how development interventions are discussed, and how institutional interests and the maintenance of mutual benefits for U.S.-based development organizations often mediate discourse around U.S.-led agricultural initiatives.

This study demonstrated how neither research nor the researcher can be detached "from broader societal structures, norms, and discourses" (Catungal and Dowling 2021, 19). Adopting critically

reflexive and interdisciplinary methods offers a way forward for research into international development. These approaches enable researchers to trace development across policy networks, institutional logics, and the documents that mediate them—helping to better uncover the dynamics shaping international development practices. Together, these understandings point to the need for ongoing critical engagement with both the institutions that shape international development and the research practices used to study them.

5 CHAPTER 5: CONCLUSION

5.1 Summary of Results

In this dissertation, I examine U.S.-led agricultural development directed towards smallholder farmers in Ethiopia through a discourse analysis that draws on the perspectives of both U.S. and Ethiopia development practitioners, as well as development reports and related documents. I investigate how development actors conceptualize key aspects of development, the extent to which smallholder farmer perspectives and knowledge systems are engaged, and how the process of researching the development industry itself informs methodological approaches and deepens understanding of the development industry. In the following sections, I briefly summarize the key findings from each chapter, highlighting how they collectively contribute to a greater understanding of development discourse, conceptual frameworks, and research methodologies. I then present lessons and recommendations for development practice based on this research, followed by a discussion of study limitations and suggested directions for future research.

Chapter 2 examines U.S. development perspectives, focusing on how the Locally-Led Development (LLD) initiative is defined and operationalized within U.S. policy. It identifies the five most frequently co-occurring policy objectives and defines key terms like “co-creation” and “local actor”. The chapter highlights how U.S. development approaches often rely on standardized approaches, limiting the effective tailoring to local food systems, livelihoods, geographies, and community capacities. This standardization hinders the adaptation of technologies and practices to local needs, particularly regarding land scarcity and nutrition challenges. In contrast, Ethiopian development practitioners conceptualize 'development' primarily through the lens of climate resilience and supporting local livelihoods, rather than through the development discourse common in U.S. approaches. They emphasize working with customary institutions, supporting farmer-led initiatives, and preserving local seed systems and biodiversity through efforts like seed banks and farmer networks. Overall, Chapter 2 analyzes U.S. LLD

policies, how "local" has been conceptualized within USG policy over time, the relationship between U.S. actors, NGOs, and local institutions, and contrasts these with Ethiopian practitioners' approaches to local food systems and sovereignty.

Chapter 3 explores U.S. perspectives on agricultural development in northern Ethiopia, focusing on how geographic framings and population categorizations shape development strategies. U.S.-led interventions often promote increased reliance on externally sourced agricultural inputs, which has heightened farmers' vulnerability during crises like the COVID-19 pandemic and the Tigray War. Ethiopian practitioners also discuss geographic framings and categorizations used in development, but also critique these categorizations, arguing for more nuanced understandings of regional differences. The chapter further examines the impacts of conflict on development, the importance of engaging with local agricultural knowledge, and the critical role of women's expertise in farming systems.

Chapter 4 reflects on the methodological challenges of conducting research within a politicized development landscape and how these conditions provide insights into the U.S. development industry. It details the conditions of ethnographic research in this study, including reasons for practitioners' hesitation or decision not to formally participate due to concerns over professional risk and institutional repercussions. Practitioners emphasized the importance of anonymity, reflecting how development work is embedded within institutional and political structures that discourage open critiques. This chapter also discusses barriers to accessing development information, such as challenges in obtaining U.S. public data, and limited transparency among U.S.-based international development partners. These research conditions underscore the need for methodological flexibility, the use of alternative forms of data collection strategies, and heightened participant protection. Ultimately, practitioners' concerns not only mirror but actively shape the discourse around U.S.-led agricultural development, revealing how institutional interests mediate narratives and limit critical engagement.

5.2 Relevance of Conceptual Frameworks

The integration of critical development studies and political ecology provided an effective conceptual foundation for analyzing the complex power relations embedded in U.S.-led agricultural

development projects. These frameworks helped illuminate how knowledge production, resource access, and decision-making authority were unevenly distributed among actors. While the chosen frameworks proved essential for understanding structural dynamics, future research might benefit from incorporating theoretical approaches that more explicitly engage with decolonial theory. Overall, this dissertation critically drew upon political ecology and critical development studies, while also noting the need for theoretical flexibility to better capture the multi-scalar and evolving nature of development discourse and practice.

5.2.1 Critical Development Studies

In analyzing U.S.-led agricultural development in Ethiopia, I drew heavily on insights from critical development studies to interpret and contextualize development dynamics. Scholars such as Escobar (2012), Ferguson (2006), Mitchell (2002), Li (2007), and Scott (1998) provided a foundation for questioning the assumptions and power structures embedded in development practice. Rather than treating development as a neutral technical enterprise, it can be seen as an extension of foreign policy interests (McVety 2012) and a continuation of colonial and neoliberal logics (Wainwright 2008; Ferguson 2006). As Mitchell (2002) argues, 'development' is typically framed "as a problem of geography versus demography" to be fixed by technical interventions (p. 209). Building on Mitchell's observation that USAID presents "itself as a rational consciousness standing outside" a country while being central to the "configurations of power" within it (p.233), I examined how U.S. development efforts in Ethiopia, particularly during famine conditions in Tigray, maintained engagement with the federal government. This analysis reveals that U.S. development policy reinforces centralized authority, complicating the rhetoric of "locally-led development" (LLD) in politically divided contexts.

My research builds on critiques that highlight how development actions often prioritize donor country interests over those of the target populations (Mitchell 2002; Escobar 2012). USAID's explicit focus on "mutual benefits" and close ties to USDA programs illustrate how agricultural development efforts are aligned with U.S. economic and strategic goals, rather than being driven purely by humanitarian concerns and USAID's stated objective of promoting Ethiopian "self-reliance" (USAID

2021, 11). Drawing on Wainwright's (2008) critique, I traced how development institutions reproduce colonial logics through their metrics of "progress," and rely on comparable forms of population categorization to legitimize their interventions (Li 2006). Ferguson's (2006) observation that anthropological and development discourses can "localize and depoliticize" poverty (p.51) further informed my analysis of how U.S.-led interventions in Ethiopia often obscure the roots of food insecurity and underdevelopment, presenting technical solutions to problems that have a multiplicity of causes, including political factors.

In my research process, I also drew on conceptual frameworks that critically interrogate development discourse. Mosse's (2006) research reflection on "how 'success' is socially produced or constructed" within development (p.940) informed my research by emphasizing the need to critically examine the discursive frameworks that legitimize and sustain development. Following Wedel et al. (2005), I approached policy ethnographically, seeking to "disentangle the outcomes" of policymaking and understand "how and why these outcomes often contradict the intentions stated by policy makers" (p.44). Finally, I was guided by Green's (2023) call for anthropological research to treat development not only as a set of written policies but as a set of practices, shaped by shifting power relations and requiring continual critical reflexivity. This broader critical lens guided me to trace how development interventions are embedded in larger geopolitical landscapes.

Building on this critical tradition, my work contributes new empirical evidence on how development interventions reproduce existing inequalities under the guise of reform. My findings suggest that truly "locally-led" development requires a much deeper reckoning with questions of political representation, sovereignty, and power than current U.S. approaches allow. Additionally, my research highlights how methodological constraints—both in academic research and within development institutions—shape what kinds of knowledge are produced and prioritized. Greater reflection on the processes through which development knowledge is produced is essential.

5.2.2 Political Ecology

My dissertation is also grounded in political ecology and informed by feminist political ecology, which I used to analyze how U.S.-led agricultural development programs in northern Ethiopia reinforce structural inequalities under the guise of technical assistance. These frameworks emphasize that knowledge production, access to resources, and development policies are shaped by power relations that are often obscured or made invisible within dominant development narratives (Klenk 2004; Robbins 2012; Haraway 1988; Massey 2005).

U.S. agricultural development practices often present themselves as neutral and universally beneficial. However, this claim of neutrality obscures how development institutions privilege specific forms of knowledge—typically scientific, bureaucratic, and centralized—while dismissing local knowledges and customary practices (Foucault 1977; Klenk 2004). As Massey (2005) notes, the concentration of knowledge creation in exclusive places strengthens claims to universal expertise while marginalizing situated, community-based practices.

For northern Ethiopia, U.S. development programs frame agricultural progress through individual farmer adoption of new seeds and techniques, often attributing a lack of success to farmers' lack of education or unwillingness to adopt interventions. This focus on individual behavior, rather than collective systems such as seed networks, reflects neoliberal assumptions about individual production and efficiency (Mikulewicz and Taylor 2020; Elmhirst 2015), echoing Haraway's (1988) critique of disembodied, decontextualized knowledge, and her call to focus on communities rather than solely on individuals (p.50). By centering on adoption at the individual level, broader political, social, and economic constraints on farmers become less visible, and community-centered resilience strategies are undermined.

Drawing from Nagar and Raju's (2003) discussion of the expanding role of international NGOs, I also examine how crises like the COVID-19 pandemic further expose the ways neoliberal development models constrain local food security strategies (Montenegro de Wit et al. 2021; Leach et al. 2021). Reflection on engagement between political ecologists and policymakers (Sultana 2021; Walker 2006;

McCusker 2015) also informs this critique. Through political ecology I demonstrate how development interventions created for northern Ethiopia are not just technical projects but political and cultural processes that reshape landscapes, livelihoods, and knowledge systems in ways that reinforce international hierarchies.

5.2.2.1 Development and Gendered Agricultural Knowledge

Political ecology, including contributions from feminist political ecology, provides a critical framework for examining how agricultural development interventions reflect and reproduce structural inequalities, including the marginalization of gendered knowledge systems. In U.S.-led agricultural programs designed for Ethiopia, gender equality is often highlighted in U.S. government documents, yet it is typically addressed only at the implementation stage, focusing narrowly on individual empowerment and decision-making (Benjamin and Meyers 2016; Nigussie et al. 2024). As a result, deeper systemic barriers—such as the exclusion of women's agricultural knowledge from policy design—remain unaddressed.

In northern Ethiopia, women's agricultural expertise is central to farming systems, especially in managing agrobiodiversity and communal resources. However, U.S. development policies promote market-oriented strategies that prioritize privatization and commercialization, often eroding the communal systems and resources (Howard and Smith 2006; Yami et al. 2013; Ashenafi and Leader-Williams 2005). These shifts disproportionately affect women, who depend more heavily on communal spaces for their livelihoods.

Drawing on insights from FPE, particularly Ojeda et al. (2020), I frame these development dynamics as examples of how gendered forms of knowledge production shape, and are shaped by, political and institutional discourses about nature and development. These dynamics are embedded in the broader institutional logics of U.S. development that treat ecological and social systems as uniform and universally governable. As Neely (2021) argues, development actors often operate as if there is a single "reality on top of which different sets of 'beliefs' accumulated" (p.4), reinforcing the dominance of

Western technical knowledge while marginalizing local understandings and management of agricultural and ecological systems.

While some well-intentioned development initiatives aim to improve the status and well-being of women (Benjamin and Meyers 2016; Nigussie et al. 2024), they can inadvertently deepen inequalities when they fail to acknowledge women's agricultural expertise and fail to challenge the neoliberal structures that prioritize privatization and commercialization and therefore reduce access to common resources (Ojeda et al. 2020; Bezner Kerr 2014; Nagar and Raju 2003). By situating these dynamics within a political ecology framework, my analysis highlights how agricultural development programs often overlook the diverse agricultural knowledge systems on local levels.

5.2.2.2 Development and Neo-Malthusian Narratives

Political ecology provides a critical lens for analyzing how neo-Malthusian narratives continue to shape development and climate policies in Ethiopia and across Africa. These narratives often draw on long-term misconceptions about the instability of environmental conditions and societies in Africa (Weisser et al. 2014), reinforcing simplistic explanations that "naturalize scarcity, inequality, and conflict" (Ojeda et al. 2020, 3). Rather than acknowledging the political, economic, and historical processes specific to local conditions and livelihoods, development discourses frequently frame challenges such as resource scarcity as the result of population growth, environmental mismanagement, or climatic variability (Ojeda et al. 2020; Hoben 1995; Meze-Hauksen 2004; Clay and Holcomb 1986).

This framing is evident in USAID-led initiatives and policy reports in northern Ethiopia, where resource and population pressures are emphasized (FAO 2020), while systemic drivers of food insecurity, such as conflict, are overlooked. Political ecology critiques underscore how these framings obscure the roles of conflict, governance, and structural inequalities in producing resource scarcity and environmental degradation, which then are used to justify technocratic interventions that can exacerbate existing inequalities. Feminist political ecology contributes to this critique by highlighting how such framings not only obscure political-economic drivers, but also mask the differentiated impacts of these interventions—

particularly on women and marginalized communities (Ojeda et al. 2020; Nelson, Faxon, and Ehlers 2024; Nagar and Raju 2003; Bezner Kerr 2014).

Additionally, climate change discourse has increasingly been used to justify expanded interventions (Campbell 2022) and technocratic policies, such as genetically modified crops that are promoted to be drought-tolerant (Bezner Kerr 2014; Nyantakyi-Frimpong and Carlson 2024). These policies are often at the expense of supporting community knowledge systems and collective land governance. These interventions reinforce the idea of an abstract, global "commons" requiring technocratic management (Ojeda et al. 2020; Havukainen 2022). In my research, I use PE frameworks to examine how development actors cite climate urgency to legitimize greater control over land and agricultural practices, often sidelining community-led responses and exacerbating existing inequalities.

5.2.3 Alternative Frameworks

While my research primarily drew on critical development studies and political ecology, future work could also benefit from applying postcolonial studies, decolonial theory, and specifically decolonial feminist political ecology (FPE). Decolonial FPE emphasizes a more explicitly historical and spatial approach to understanding how modern "colonialities" are continuously reproduced through academic scholarship and development practice (Sultana 2021). This framework highlights the need to decolonize environmental politics, climate activism, and alliances with Indigenous and local communities by navigating and critically engaging with complex, layered power relations (Sultana 2021; Sundberg 2014). Using decolonial theory could provide a deeper interrogation of how colonial legacies shape contemporary development discourses and could offer additional strategies for centering alternative epistemologies in agricultural development work.

5.3 Implications for Development

5.3.1 U.S.-Led Agricultural Development in Northern Ethiopia

U.S.-led agricultural development efforts in northern Ethiopia should critically reassess their assumptions, approaches, and frameworks to more effectively support smallholder farming communities. Drawing from my dissertation findings, several key implications emerge:

First, development interventions must engage more deeply with local seed systems and non-equilibrium ecological dynamics. Northern Ethiopia's agricultural landscapes are shaped by recurring droughts and highly variable environmental conditions (Meze-Hausken 2004; Billi 2015). Rather than imposing static models of agricultural "improvement," development programs should be designed as non-equilibrium systems—capable of adapting to unpredictability, rather than assuming a return to a fixed baseline of productivity. Farmer seed systems and high levels of cultivated diversity have evolved in response to these conditions (Butler and D'Andrea 2000; Pecetti and Damania 1996; Meze-Hausken 2004; Feyissa et al. 2013). Current approaches that prioritize certified commercial seed distribution risk eroding these systems. Participatory based programs like the USAID-funded participatory rangeland management program in Oromia in 2009, which included a "do no harm" evaluation, provide a useful model (Flintan et al. 2019). By working with local land management systems and institutions, development efforts can be more effective and support farmer resilience.

Second, greater reflection is needed on the generalizability of agronomy research. While U.S.-based development projects often rely on standardized technical packages, my research highlights the importance of asking how expertise travels and transforms across contexts (Weisser et al. 2014; Ferguson 2006; Mitchell 2002), such as how seeds developed in the U.S. are then introduced in diverse geographical contexts in Ethiopia. Also, concepts like "climate resilience," have been widely adopted by Ethiopian development practitioners, but local understandings of resilience may differ substantially from Western framings. Following Klenk's (2004) critique, interventions must ask not just how to engage local communities, but whose voices and knowledges are recognized as legitimate, and how those

understandings shape what "development" means.

Additionally, the locally-led development (LLD) initiative has fallen short. Although local communities are emphasized rhetorically in LLD, practical implementation rarely centers the worldviews of Ethiopian practitioners or farmers. Engaging local actors necessarily involves going beyond consultations or surface-level partnerships; it requires shifting decision-making power and re-evaluating assumptions about what successful development looks like (Scott-Villiers 2011; Bohensky and Maru 2011; Mkindi et al. 2020). A small yet crucial step in this direction includes utilizing in-country research in policy construction (Chapter 3).

Similarly, concepts like food security should be rethought through a localized, participatory lens. Metrics for food security, such as those proposed in Feed the Future-East Africa plans (Feed the Future 2019) are often developed through a high-level "co-creation process" with international research partners like CIMMYT (p.26). While these efforts attempt to adapt indicators to regional realities, they often continue to privilege externally defined measures of success. More effective forms of co-creation would center farmers' definitions of security, sufficiency, and well-being, rather than adjusting external metrics. Overall, the future of U.S.-led agricultural development in northern Ethiopia should involve confronting the epistemological and political divides between donor institutions and the communities targeted by development. Development practice should move away from imposing technical solutions, and toward approaches that are flexible, participatory, and accountable and responsive to local knowledge systems and institutions.

5.3.2 Broader Implications for Development

The findings of this dissertation not only illuminate narratives used by U.S.-led agricultural development in Ethiopia but also highlight persistent challenges and contradictions within the broader development industry. McVety (2012) argues that development's entanglement with U.S. foreign policy undermines its stated goals. Similarly, Corson (2010) points out that development actors often perceive overseas communities as politically less empowered, allowing interventions to proceed without

significant accountability. This dynamic was evident in my findings: smallholder farmers had negligible influence over or feedback mechanisms in response to agricultural policy, even as local empowerment rhetoric permeated official documents.

Despite decades of research and critiques by scholars and civil society (e.g. Edwards 1989; Escobar 2012; Scott 1998; Gingerich and Cohen 2015), the development industry has remained remarkably resistant to substantive change. Agencies generally absorb criticisms without altering their fundamental practices, creating a system that adapts rhetorically while maintaining existing structures (Edwards 1989; Weisser et al. 2014; Mikulewicz and Taylor 2020). However, change can occur, even if it is incremental. For example, a 1993 USAID panel meeting on agricultural transformation in Africa discussed the importance of economic growth over environmental concerns, with a practitioner stating that "in the long term there is little trade-off between environment and growth because without growth, we will be environmentally worse off" (Seckler 1993, 183). By the 2010s, this type of disregard for environmental consequences had largely disappeared from USAID discourse, showing that while slow and often incomplete, transformation within large bureaucracies is possible. Although LLD fell short of its ideals, even its imperfect attempt represents a step in the right direction.

A key contribution of this dissertation is emphasizing the value of engaging with in-country development partners. Overall, these development partners possess a deeper understanding of local conditions, place greater emphasis on farmer perspectives, and conceptualize development in more diverse and context-specific ways than U.S.-based practitioners. However, engagement with these development practitioners should complement, not replace, direct engagement with local communities.

Finally, this research raises questions about the very term "development". Rather than presenting interventions as part of a broad, transformative project—a framing often rooted in colonial assumptions—there is value in presenting initiatives according to their specific focus. For example, projects should be categorized by the specific issues identified by local communities, regional governments, or national institutions, such as in agriculture, health, or education, etc. While such initiatives would still be subject to the political and economic pressures of neoliberal agendas and foreign policy priorities, they would no

longer be obscured by the aspirational but misleading language of ‘development.’

5.4 Study Limitations and Recommendations for Future Research

While this study provides important insights into U.S.-led agricultural development interventions in northern Ethiopia, it also faced several limitations. First, the research was conducted during a time of heightened political unrest in the U.S., leading to increased anxieties among U.S. development practitioners. Conducting this research a few years earlier likely would have resulted in a larger number of participant interviews. However, this constraint led to a greater reliance on transcripts from development meetings and conferences, which ultimately strengthened the study’s longitudinal approach. This longer-term perspective allowed for a deeper reflection on development processes—an element often lacking in the development industry (Green 2023). The political climate also provided an opportunity to examine the protective mechanisms within the development industry that limit scrutiny and shape discourse.

Second, future research would benefit from extended engagement within local communities targeted by interventions. A longitudinal, community-centered approach—combined with policy discourse analysis—could provide a fuller understanding of shifting narratives, evolving local responses, and broader development dynamics. Future studies should deepen their focus on women’s expertise in farming systems and the roles of customary institutions.

As development activities increasingly shift from the federal government to civil society actors, Nagar and Raju’s (2003) question becomes more urgent: “Can or should NGOs act as 'change agents'?” (p.3). Future research should critically examine how civil society organizations operate, investigate their transparency mechanisms, and consider how to better monitor those that do not have the same public reporting requirements as governments.

Development interventions often proceed based on externally constructed narratives, such as generalized notions of food security or resilience, with little attention to how these concepts are understood locally. Future research should ask: What does “food security” mean in the specific

communities targeted by interventions? And how is "drought" experienced and understood beyond its meteorological definition? Additionally, future studies should prioritize participatory and co-productive research methodologies (Klenk et al. 2015), therefore moving beyond extractive models of research and providing clearer understandings of local concepts and priorities.

Ferguson (1994) contends that "'development' institutions generate their own form of discourse…" and that interventions are organized based on "this structure of knowledge, which, while 'failing' on their own terms," still produce impacts (p.xiv). This dissertation examined the forms of discourse generated by U.S. agricultural development institutions; however, because this discursive process is dynamic, these narratives and their resulting policies and interventions are constantly shifting, and therefore always warrant further study. Overall, while this dissertation provides a critical reflection on the discourse and practices of U.S.-led agricultural development in Ethiopia, it is clear that the field of development and research into it must continue evolving. Addressing methodological limitations, centering local knowledge systems, and critically examining shifting development narratives that are used to justify interventions are crucial steps toward more accountable and equitable development practices.

REFERENCES

Abbate, E., P. Bruni, and M. Sagri. 2015. "Geology of Ethiopia: A Review and Geomorphological Perspectives. In *Landscapes and Landforms of Ethiopia*, edited by Paolo Billi. World Geomorphological Landscapes, Springer Netherlands. Pp. 33–64.

Abebe, S. 2018. "The Developmental State Model in Ethiopia: A Path to Economic Prosperity or Political Repression?" *Social Evolution & History* 17(1): 123–139. https://doi.org/10.30884/seh/2018.01.07

Abraham, A. 2013. "Toward a workable biosafety system for regulating genetically modified organisms in Ethiopia." *GM Crops & Food* 4(1): 28-35. DOI: 10.4161/gmcr.24375

Abdulkadir, B., S. Kassa, T. Desalegn, et al. 2017. "Crop Response to Fertilizer Application in Ethiopia: A Review." In *A Review of Soil Fertility Management and Crop Response to Fertilizer Application in Ethiopia: Towards Development of Site- and Context-Specific Fertilizer Recommendation*, edited by Lulseged Tamene, Tilahun Amede, J. Kihara, Degefie Tibebe, and S. Schulz. CIAT Publication No. 443. International Center for Tropical Agriculture (CIAT), Addis Ababa, Ethiopia. pp. 65-75. http://hdl.handle.net/10568/82996.

ACDI/VOCA. 2021. *Alliance to Accelerate Agricultural Growth Project (3AG)*. Agricultural Cooperative Development International (ACDI)/Volunteers in Overseas Cooperative Assistance (VOCA).

Adnew Degefu, M., Assen, M., Satyal, P., and Budds, J. 2019. "Villagization and access to water resources in the Middle Awash Valley of Ethiopia: implications for climate change adaptation." *Climate and Development* 12(10): 899-910. DOI: 10.1080/17565529.2019.1701973

Adomako, M. and M.J. Cohen. 2023. *Funding the Localization Agenda: Measuring Progress of United States Development and Humanitarian Assistance to Local Organizations*. Oxfam.

Advisory Committee on Voluntary Foreign Aid (ACVFA). 2024. *ACVFA Report on Maximizing USAID's Effectiveness: Improving Locally Led and Inclusive Development.* United States Agency for International Development (USAID).

Agarwal, B. 2014. "Food sovereignty, food security and democratic choice: critical contradictions, difficult conciliations." *Journal of Peasant Studies* 41 (6): 1247–1268.

Alemayehu, A., and W. Bewket. 2017. "Local Spatiotemporal Variability and Trends in Rainfall and Temperature in the Central Highlands of Ethiopia." *Geografiska Annaler: Series A, Physical Geography* 99(2): 85–101.

Altieri, M.A. 2012. *A Contribution to Discussions at Rio+20 on Issues at the Interface of Hunger, Agriculture, Environment and Social Justice*. SOCLA's Rio+20 position paper.

Aria, M., & Cuccurullo, C. 2017. "bibliometrix: An R-tool for comprehensive science mapping analysis." *Journal of Informetrics* 11(4): 959-975.

Ashenafi, Z.T. and Leader-Williams, N. 2005. "Indigenous common property resource management in the Central Highlands of Ethiopia." *Human Ecology* 33: 539–563.

Atsbha, T., S. Wayu, K. Degf, H. Kidane and G. Abreha. 2020. In *Improving the Productivity of Pasture Land through Demonstration of Forage Over Sowing: The Case of Ayba pasture land, southern Tigray*, edited by Embaye Kidanu, Teferi Aregawi, Hintsa Libsekal, Zeray Siyum, Haftu Kelelew and Desalegn Emuru. Workshop Proceeding for Completed Research Activities on Pre-extension Demonstration of Agricultural Technologies; Tigray Agricultural Research Institute and Agricultural Growth Program-II, 21-24 November 2020, Geza Gerlasse Hotel, Wukro, Tigray, Ethiopia. p.40-51

Azanaw, A., and Tassew, A. 2017. "Gender equality in rural development and agricultural extension in Fogera District, Ethiopia: implementation, access to and control over resources." *African Journal of Food, Agriculture, Nutrition and Development* 4(17): 12509–12533. doi: 10.18697/ajfand.80.16665

Balée, W. 2006. "The Research Program of Historical Ecology." *Annual Review of Anthropology* 3: 75–98.

Becker, B. 2020. "Colonial Legacies in International Aid: Policy Priorities and Actor Constellations". In *From Colonialism to International Aid: External Actors and Social Protection in the Global South,* edited by Carina Schmitt. Springer International Publishing. Pp.161-186.

Bekele, A. E., Dries, L., Drabik, D., and Heijman, W. 2020. "Large-Scale Land Investments, Household Displacement, and the Effect on Land Degradation in Semiarid Agro-pastoral Areas of Ethiopia." *Land Degrad Dev*. 32: 777–791. https://doi.org/10.1002/ldr.3756.

Belay, Tesfay, Tsegay Gebreselassie, Haftu Kelelew, Teferi Aregawi, Bereket Haileselassie (eds.) 2019. Participatory Agricultural Production Constraints Appraisal: Implication for Research and Development Interventions in Southern, North Western and Western Zones of Tigray. Tigray Agricultural Research Institute and Agricultural Growth Program-II, Proceedings of the Workshop held 09-15 November 2018, Capital Hotel, Wukro, Tigray, Ethiopia

Benjamin, J. and L. Meyers. 2016. *USAID/Kenya and East Africa Gender Analysis for Regional Development Cooperation Strategy 2016-2020*. Gender Analysis Report Prepared by Banyan Global. United States Agency for International Development (USAID)

Berkes, F. and M.K. Berkes. 2009. "Ecological complexity, fuzzy logic, and holism in indigenous knowledge." *Futures* 41: 6-12.

Bezner Kerr, R. 2014. "Lost and Found Crops: Agrobiodiversity, Indigenous Knowledge, and a Feminist Political Ecology of Sorghum and Finger Millet in Northern Malawi." *Annals of the Association of American Geographers* 104 (3): 577–593.

Bierschenk, T. 2014. "From the Anthropology of Development to the Anthropology of Global Social Engineering." *Zeitschrift für Ethnologie* 139(1): 73–97.

Biggs, S. 2008. "The lost 1990s? Personal reflections on a history of participatory technology development." *Development in Practice* 18 (4-5): 489–505. https://doi.org/10.1080/09614520802181228

Bill & Melinda Gates Foundation (BMGF). 2024. *Bill & Melinda Gates Foundation Open Access Policy.* Accessed August 2, 2024. https://www.gatesfoundation.org/about/policies-and-resources/open-

access-policy

Billi, P. 2015. “Geomorphological Landscapes of Ethiopia.” In *Landscapes and Landforms of Ethiopia*, edited by Paolo Billi. World Geomorphological Landscapes. Springer Netherlands. pp. 3–32.

Billo, E., and A. Mountz. 2016. “For Institutional Ethnography: Geographical Approaches to Institutions and the Everyday.” *Progress in Human Geography* 40(2): 199–220. doi:10.1177/0309132515572269.

Bohensky, E. L., and Y. Maru. 2011. “Indigenous Knowledge, Science, and Resilience: What Have We Learned From a Decade of International Literature on "Integration"?” *Ecology and Society* 16(19).

Bridge, G., J. McCarthy, and T. Perreault. 2015. “Editors’ Introduction.” In *The Routledge Handbook of Political Ecology*, edited by Tom Perreault, Gavin Bridge, and James McCarthy. Routledge. pp.3-18.

Butler, A., and A.C. D’Andrea. 2000. “Farming and Famine: Subsistence Strategies in Highland Ethiopia.” In *Living on the Margins: The Archaeology of Dry Lands*, edited by G. Baker and D. Gilbertson. Pp. 180– 200. Routledge.

Campbell, T. 2022. “Climate Change Policy Narratives and Pastoralism in Ethiopia: New Concerns, Old Arguments?” *Nomadic peoples* 26(1): 106–133.

Catungal, J.P. and R. Dowling. 2021. "Power, Subjectivity, and Ethics in Qualitative Research." In *Qualitative Research Methods in Human Geography,* edited by I. Hay & M. Cope. Oxford University Press. pp. 18-39.

Capital. 2019. “Corteva Agriscience Enters Ethiopia.” Capital Newspaper. https://capitalethiopia.com/2019/04/29/corteva-agriscience-enters-ethiopia/

Carpenter, C. L. 2020. “USAID’S Assured Assistance: USAID’s Humanitarian Aid in Latin America and the Caribbean 2001- 2019.” *Revista Internacional de Cooperación y Desarrollo* 7(2): 163-176. 10.21500/23825014.4689

Carr, E.R., Diro, R., Naeve K., Hamel R., Beggs M., Benson C., Caldwell, B., Mbevi L., Hall T., Zook D., Aldredge H., Liming K., Allognon L., Crocker T., and Mukupa N. 2023. *Operationalizing USAID’s Climate Strategy to Achieve Transformative Adaptation and Mitigation in Agricultural and Food Systems*. Tetra Tech under the United States Agency for International Development (USAID) Board for International Food and Agricultural Development (BIFAD) Support Contract.

Central Statistics Agency-Ethiopia (CSA). 2021. *Household Income, Consumption and Expenditure Survey (HICE)*. https://ethiopia.opendataforafrica.org/ (accessed 2 August 2024).

Consultative Group on International Agricultural Research (CGIAR). 2021. *CGIAR Financial Report: Highlights and Dashboards*. Consultative Group on International Agricultural Research (CGIAR).

Chaudhary, S., A. McGregor, D. Houston, and N. Chettri. 2015. “The Evolution of Ecosystem Services: A Time Series and Discourse-Centered Analysis.” *Environmental Science & Policy* 54: 25–34

Chignell, S. M. 2023. “A Missing Link? Network Analysis as an Empirical Approach for Critical Physical Geography.” *The Canadian Geographer* 67(1): 52–73. https://doi.org/10.1111/cag.12767

Chignell, S.M., T. Satterfield. 2023. “Seeing beyond the frames we inherit: A challenge to tenacious conservation narratives.” *People and Nature* 5: 2107–2123.

Child, B., & Barnes, G. 2010. “The conceptual evolution and practice of community-based natural resource management in southern Africa: past, present and future.” *Environmental Conservation* 37(3): 283-295.

Chipango, E. F. 2018. “Reinterpreting energy poverty in Zimbabwe.” *Journal of Political Ecology* 25: 206-220.

Clay, J.W., and B.K. Holcomb. 1986. *Politics and the Ethiopian Famine, 1984-1985*. Cultural Survival.

Climate Adaptation Support Activity (CASA). 2024. Climate Change Risk Profile: Ethiopia. United States Agency for International Development (USAID)

Coddington, K. 2017. “Voice under scrutiny: Feminist methods, anticolonial responses, and new methodological tools.” *The Professional Geographer* 69(2): 314-320

Corson, C. 2010. “Shifting Environmental Governance in a Neoliberal World: US AID for Conservation.” *Antipode 42*(3): 576–602. https://doi.org/10.1111/j.1467-8330.2010.00764.x

Crate, S.A. 2011. “Climate and culture: anthropology in the era of contemporary climate change.” *Annual Review of Anthropology* 40: 175-94.

D’Andrea, A. C. 2008. “T’ef (Eragrostis Tef) in Ancient Agricultural Systems of Highland Ethiopia.” *Economic Botany* 4(62): 547–566.

D’Andrea, A. C., and H. Mitiku. 2002. “Traditional Emmer Processing Technology in Highland Ethiopia.” *Journal of Ethnobiology* 22(2): 179–217.

Dahir, A.L. 2020. “Fleeing Ethiopians Tell of Ethnic Massacres in Tigray War Tens of Thousands Have Sought Safety in Sudan, Where They Gave Accounts to Times Journalists of a Devastating and Complex Conflict That Threatens Ethiopia’s Stability.” *The New York Times,* December 9th, 2020. https://www.nytimes.com/2020/12/09/world/africa/ethiopia-tigray-sudan.html?action=click&module=Top%20Stories&pgtype=Homepage

Dale, B. 2021. “Food sovereignty and the integral state: Institutionalizing ecological farming.” *Geoforum* 127: 137–150. DOI: 10.1016/J.GEOFORUM.2021.10.010

Davidson, J. 2024. “Trump’s plan to gut civil service protections was harsher than estimated.” Washington Post. February 28, 2024. https://www.washingtonpost.com/politics/2024/02/28/trump-plan-omb-schedule-f-nteu/

de Waal, A. 1991. *Evil Days: Thirty Years of War and Famine in Ethiopia*. An Africa Watch Report: Human Rights Watch.

Dejene, A. 1991. *Environment, Famine, and Politics in Ethiopia: A View from the Village*. Rienner.

Des Chene, M. 1997. "Locating the Past." In *Anthropological Locations: Boundaries and Grounds of a Field Science,* edited by A. Gupta and J. Ferguson. University of California Press. pp.66-85

Desai, B. 2006. "Inside Out: Rationalizing Practices and Representations in Agricultural Development Projects." In *Development Brokers and Translators: The Ethnography of Aid and Agencies*, edited by D. Moss and D. Lewis. Lynne Rienner.

Devereux, S. and S. Kapingidza. 2020. "External Donors and Social Protection in Africa: A Case Study of Zimbabwe". In *From Colonialism to International Aid: External Actors and Social Protection in the Global South*. Edited by Carina Schmitt. Springer International Publishing. Pp.273-302.

Dittmer, J. 2010. "Textual and Discourse Analysis." In *The Sage Handbook of Qualitative Geography*, edited by D. DeLyser, S. Herbert, S. Aitken, M. Crang, and L. McDowell. Sage. pp.274–286.

Edwards, M. 1989. "The Irrelevance of Development Studies." *Third World Quarterly* 11(1): 116-135.

EIAR. 2019. *ILRI/CGIAR and EIAR partnering together–experience sharing workshop*. Ethiopian Institute for Agricultural Research EIAR/ILRI/CGIAR-Hiruy Hall, Addis Ababa, Ethiopia

Elmhirst, R. 2015. "Feminist political ecology." In *The Routledge Handbook of Political Ecology*, edited by Tom Perreault, Gavin Bridge, and James McCarthy. Routledge. pp.519-530.

Engels, J. M., Hawkes, J. G. & Worede, M. (Eds.). 1991. *Plant Genetic Resources of Ethiopia*. Cambridge University Press.

Eriksen, S.H., Nightingale, A.J. and H. Eakin. 2015. "Reframing Adaptation: The Political Nature of Climate Change Adaptation." *Global Environmental Change* 35: 523-533

Escobar, A. 2012. *Encountering Developing: The Making and Unmaking of the Third World*. Princeton University Press.

Fairclough, N. 2003. *Analysing Discourse: Textual Analysis for Social Research*. Routledge

Fairhead, J. and Leach, M. 1996. *Misreading the African Landscape: Society and Ecology in a Forest-Savanna Mosaic*. Cambridge University Press.

Famine Early Warning Systems Network (FEWS NET). 2021. *Ethiopia Food Security Outlook Update*. FEWS NET - World Food Programme (WFP). https://fews.net/east-africa/ethiopia/key-message-update/january-2021

FAO. 2020a. *Ethiopia: Revised Humanitarian Response Coronavirus Disease 2019 (COVID-19)*. May–December 2020 (Vol. 2019, Issue December). Food and Agriculture Organization of the United Nations (FAO).

———. 2020b. *Ten years of the Ethiopian Agricultural Transformation Agency. An FAO evaluation of the Agency's impact on agricultural growth and poverty reduction.* Food and Agriculture Organization of the United Nations (FAO). https://doi.org/10.4060/cb2422en

Faria, C., M.A. Caretta, E. Dever, and S. Nimoh. 2021. "Care In/through the Archives: Postcolonial Intersectional Moves in Feminist Geographic Research." *Emotion, Space and Society 39*:

100768–

Fazzini, M., C. Bisci, and P. Billi. 2015. "The Climate of Ethiopia." In *Landscapes and Landforms of Ethiopia*, edited by Paolo Billi. World Geomorphological Landscapes. Springer Netherlands. Pp. 65–88.

Feed the Future. 2010. Feed the Future E-Newsletter 1, June 15, 2010. http://www.feedthefuture.gov/ftfnews/ftfnews_01_061510.pdf

———. 2016. *The Agriculture Knowledge, Learning, Documentation and Policy Project: Annual Report October 2015 – September 2016.* United States Agency for International Development (USAID).

———. 2018a. *Global Food Security Strategy (GFSS): Ethiopia Country Plan*. United States Agency for International Development (USAID).

———. 2018b. *Feed the Future Ethiopia – Livelihoods for Resilience Activity*. United States Agency for International Development (USAID).

———. 2019a. *Global Food Security Strategy East Africa Regional Plan 2019-2024*. Feed the Future: The U.S. Government's Global Hunger & Food Security Initiative.

———. 2019b. *U.S. Government Global Food Security Strategy Implementation Report For (FY) 2019*. United States Agency for International Development (USAID).

———. 2019c. *Global Food Security Strategy Ethiopia Country Plan 2019 – 2023.* Feed the Future: The U.S. Government's Global Hunger & Food Security Initiative.

———. 2019. *Snapshot: Feed the Future innovation labs.* Feed the Future: The U.S. Government's Global Hunger & Food Security Initiative. https://www.feedthefuture.gov/resource/snapshot-feed-the-future-innovation-labs/

———. 2020. *Global Supporting Seed Systems for Development Activity FY20 Annual Report: October 2019 – September 2020.* Feed the Future: The U.S. Government's Global Hunger & Food Security Initiative.

———. 2021a. *Feed the Future Ethiopia – Livelihoods for Resilience Activity: Narrative Report.* United States Agency for International Development (USAID).

———. 2021b. *Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet: Annual Performance Report FY 2021*. United States Agency for International Development (USAID).

———. 2022a. *U.S. Government Global Food Security Strategy: Fiscal Year 2022-2026*. United States Agency for International Development (USAID).

———. 2022b. *Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet: Annual Performance Report FY 2022.* United States Agency for International Development (USAID).

Ferguson, J. 1994. *The Anti-Politics Machine: "Development," Depoliticization, and Bureaucratic Power in Lesotho*. University of Minnesota Press.

Ferguson, J. 2006. *Global Shadows: Africa in the Neoliberal World Order*. Duke University Press.

Feyissa, R., Gezu, G., Tsegaye, B., and Desalegn, T. 2013. "On-Farm Management of Plant Genetic Resources Through Community Seed Banks in Ethiopia." In *Community Biodiversity Management- Promoting Resilience and the Conservation of Plant Genetic Resources*, edited by W. Simon de Boef, A. Subedi, N. Peroni, M. Thijssen, and E. O'Keeffe. Routledge. pp. 26–31.

Flachs, A. 2020. "Political Ecology and the Industrial Food System." *Physiology & Behavior* 220: 112872.

Flintan, F., Ebro, A., Eba, B., Assefa, A., Getahun, Y., Reytar, K., Irwin, B., Yehualashet, H., Abdulahi, M., Gebreyohannes, Z. T., Awgichew, S. and Gudina, D. 2019. *Review of Participatory Rangeland Management (PRM) Process and Implementation*. Rangelands Research Report 2. International Livestock Research Institute (ILRI).

Foucault, M. 1977. *Power/Knowledge*. Pantheon Books.

Fox, J. and J. Hallock. 2024. "Open Government and US Development Co-operation in Colombia: Lessons for Locally Led Development." *Development Policy Review* 42: e12796. https://doi.org/10.1111/dpr.12796

Furtado, X., and J. Smith. 2009. "Ethiopia: Retaining Sovereignty in Aid Relations." In *The Politics of Aid: African Strategies for Dealing with Donors*, edited by L. Whitfield, 131–155. Oxford University Press.

Gamedze, A. and S. Ayalew. 2021. "Contingencies, Contradictions and Struggles for Black Freedom and Emancipation: Adwa and Decolonisation Today." *Ethiopian Journal of the Social Sciences and Humanities (EJOSSAH)*17(1) DOI: 10.4314/ejossah.v17i1.6

Gebre, G. G., Isoda, H., Rahut, D. B., Amekawa, Y., and Nomura, H. 2019. "Gender differences in agricultural productivity: evidence from maize farm households in southern Ethiopia." *GeoJournal* 86: 843–864. doi: 10.1007/s10708-019-10098-y

Gebreegziabher, Z., J. Stage, A. Mekonnen, and A. Alemu. 2016. "Climate Change and the Ethiopian Economy: A CGE Analysis." *Environment and Development Economics* 21(2): 205–225.

Gerring, J. 2007. *Case Study Research Principles and Practices*. Cambridge University Press

Gingerich, T. R., & Cohen, M. J. 2015. *Turning the Humanitarian System on Its Head.* Oxfam America. https://www.oxfam.org/en/research/turning-humanitarian-system-its-head

Godebo, T. R., M. A. Jeuland, C. J. Paul, D. L. Belachew, and P. G. McCornick. 2021. "Water Quality Threats, Perceptions of Climate Change and Behavioral Responses Among Farmers in the Ethiopian Rift Valley." *Climate (Basel)* 9(6): 92-

Green, M. 2011. "Calculating Compassion: Accounting for Some Categorical Practices in International Development." In *Adventures in Aidland: The Anthropology of Professionals in International Development*, edited by David Mosse. Pp.33-56. Berghahn.

———. 2023. "Privileged Observers and Colonial Continuities: Institutional Economies of Expert

Knowledge in Anthropology and International Development." *American Ethnologist* 51: 118–125

Guest, G. 2014. "Sampling and Selecting Participants in Field Research." In *Handbook of Methods in Cultural Anthropology,* edited by Bernard, H. R., & Gravlee, C. C. ProQuest Ebook Central.

Guest, G., A. Bunce, L. Johnson. 2006. "How Many Interviews Are Enough? An Experiment with Data Saturation and Variability." *Field Methods*, 18(1): 59–82

Gupta, A. and J. Ferguson. 1997. "Discipline and Practice: "The Field" as Site, Method, and Location in Anthropology." In *Anthropological Locations: Boundaries and Grounds of a Field Science*, edited by A. Gupta & J. Ferguson. University of California Press. 1-46

Hadera, D. and T. Tesfamariam. 2019. "Popularization of engine operated maize sheller to selected maize growers of Tigray Region, Ethiopia." Teferi Aregawi, Haftu Kelelew, Tsegay Gebreselassie, Tesfay Belay, Bereket Haileselassie and Desalegne Emuru (eds). Workshop Proceeding for Completed Research Activities on Pre-extension Demonstration of Agricultural Technologies, Tigray Agricultural Research Institute and Agricultural Growth Program-II, 09-15 November 2018, Capital Hotel, Wukro, Ethiopia. pp.85-95

Hadgu, Fisseha, B. Haileslassie, H. Libsekal, S. Dargie, A. Girmay and M. Haile. 2020. Way-Forward. In Fisseha Hadgu, Bereket Haileslassie, Hintsa Libsekal, Sofonyas Dargie, Abbadi Girmay, and Mitiku Haile (eds.) 2020. Proceeding of national workshop: The Role of Blended Fertilizers in Enhancing Productivity and Quality of Crops in Ethiopia, 07-08 June 2019, Axum Hotel, Mekelle Ethiopia. Tigray Agricultural Research Institute and Agricultural Growth Program-II, Mekelle, Ethiopia. p.305-307

Hadgu, G., and K. Tesfaye. 2013. "Trend and Variability of Rainfall in Tigray, Northern Ethiopia: Analysis of Meteorological Data and Farmers' Perception." *Academia Journal of Environmental Sciences* 1(8): 159–171.

Hammersley, M. 2015. "Sampling and thematic analysis: a response to Fugard and Potts." *Int J Soc Res Methodol*. 18(6): 687-688.

Haraway, D. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14(3): 575–599. https://doi.org/10.2307/3178066

Harvey, D. 2005. *A Brief History of Neoliberalism*. Oxford University Press

Havukainen, M. 2022. "Global Climate as a Commons — From Decision Making to Climate Actions in Least Developed Countries." PhD diss., Lappeenranta-Lahti University of Technology LUT. LUT University Press.

Herzfeld, M. 2021. *The social production of indifference: exploring the symbolic roots of Western bureaucracy*. Routledge.

Hoben, A. 1995. "Paradigms and Politics: The Cultural Construction of Environmental Policy in Ethiopia." *World Development* 23(6): 1007-1021

Holt, J., and M. Lawrence. 1993. *Making Ends Meet: A Survey of the Food Economy of the Ethiopian North-East Highlands*. CABDirect, Save the Children.

Homann, S., B. Rischkowsky, and J. Steinbach. 2008. "The effect of development interventions on the use of indigenous range management strategies in the Borana lowlands in Ethiopia." *Land Degradation and Development* 19: 368-387.

Howard, P. and Smith, E. 2006. *Leaving Two Thirds Out of Development: Female Headed Households and Common Property Resources in the Highlands of Tigray, Ethiopia*. Livelihoods Support Programme (LSP) Sub-programme: Food and Agriculture Organization of the United Nations (FAO).

Human Rights Council. 2023. *Report of the International Commission of Human Rights Experts on Ethiopia. United Nations General Assembly.* Fifty-fourth session 11 September–6 October 2023. September 14, 2023. https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/chreetiopia/A_HRC_54_55_AUV.pdf

Hunduma, T. 2020. "Commentary: Ethiopia's acceptance of GMOs turns decades of pan-African environmental leadership on its head." Addis Standard.

Ingold, T. 2014. "That's enough about ethnography." *HAU Journal of Ethnographic Theory* 4(1): 383–395. https://doi.org/10.14318/hau4.1.021

Johnson, O. E.A., Zalik, A., Mollett, C.S., Sultana, F., Havice, E., Osborne, T., Valdivia, G., Lu, F., & Billo, E. 2020. "Extraction, entanglements, and (im)materialities: Reflections on the methods and methodologies of natural resource industries fieldwork." *Environment and Planning E: Nature and Space* 4(2): 383-428. https://doi.org/10.1177/2514848620907470

Johnson, J.T. and B. Murton. 2007. "Re/placing Native Science: Indigenous Voices in Contemporary Constructions of Nature." *Geographical Research* 45(2): 121-129.

Juma, C. 2015. *The New Harvest: Agricultural Innovation in Africa*. Oxford University Press.

Kassie, B. T., H. Hengsdijk, R. Rötter, et al. 2013. "Adapting to Climate Variability and Change: Experiences from Cereal-Based Farming in the Central Rift and Kobo Valleys, Ethiopia." *Environmental Management* 52(5): 1115–1131.

Keen, D. 1994. *The Benefits of Famine: A Political Economy of Famine and Relief in Southwestern Sudan, 1983-1989*. Princeton University Press.

King, E.G., R.R. Unks and L. German. 2018. "Constraints and Capacities for Novel Livelihood Adaptation: Lessons From Agricultural Adoption in an African Dryland Pastoralist System." *Regional Environmental Change* 18: 1403–1410. https://doi.org/10.1007/s10113-017-1270-x.

Klenk, R.M. 2004. "'Who is the Developed Woman?': Women as a Category of Development Discourse, Kumaon, India." *Development and Change* 35(1): 57–78.

Klenk, N., K. Meehan, S. Lee, F. Mendez, P. Torres, and D. Kammen. 2015. "Stakeholders in climate science: Beyond lip service?" *Science* 350: 6262

Koch, N. 2023. "Event Ethnography: Studying Power and Politics Through Events." *Geography Compass* 17(12). https://doi.org/10.1111/gec3.12729

Lacy, W., Merilus, J., Liu, X., and Lacy, L.R. 2021. "U.S. Agricultural Colleges' International Strategic Partnerships: Leadership's Critical Insights and Recommendations." *International Journal of Sociology of Agriculture and Food* 27(2): 23-38. https://doi.org/10.48416/ijsaf.v27i2.446

Lähdesmäki, T., E. Koskinen-Koivisto, V.L.A Ceginskas, A.K. Koistinen. 2020. *Challenges and Solutions in Ethnographic Research: Ethnography with a Twist*. 1st edition. Routledge. doi:10.4324/9780429355608.

Lanckriet, S., B. Derudder, J. Naudts, H. Bauer, J. Deckers, M. Haile, J. Nyssen. 2015. "A Political Ecology Perspective of Land Degradation in the North Ethiopian Highlands." *Land Degrad. Develop.* 26: 521–530

Lawson, M.L., N. Cook, and R. Schnepf. 2016. *The Obama Administration's Feed the Future Initiative*. Congressional Research Service. https://www.congress.gov/crs_external_products/R/PDF/R44216/R44216.12.pdf

Leach, M., MacGregor H, Scoones I, et al. 2021. "Post-pandemic transformations: how and why COVID-19 requires us to rethink development." *World Development* 138: 105233.

Li, T. M. 2007. *The Will to Improve: Governmentality, Development, and the Practice of Politics*. Duke University Press.

Leta, G., Kelboro, G., Stellmacher, T., Hornidge, A. 2017. "The agricultural extension system in Ethiopia: Operational setup, challenges and opportunities." ZEF Working Paper Series, No. 158, University of Bonn, Center for Development Research (ZEF).

Luetchford, P. 2006. "Brokering Fair Trade: Relations between Coffee Cooperatives and Alternative Trade Organizations—A View from Costa Rica." In *Development Brokers and Translators: The Ethnography of Aid and Agencies*, edited by D. Moss and D. Lewis. Rienner.

Markos, S., K. Yisak, K. Atsbaha, T. Mekonnen, G. Maru, G. G/kidan and S. Tesfahun. 2020. Demonstration of Urea Treatment Technology in Selected Kebeles of Western Zone of Tigray. Kidanu, Embaye, Teferi Aregawi, Hintsa Libsekal, Zeray Siyum, Haftu Kelelew and Desalegn Emuru (eds.) 2020. Workshop Proceeding for Completed Research Activities on Pre-extension Demonstration of Agricultural Technologies; Tigray Agricultural Research Institute and Agricultural Growth Program-II, 21-24 November 2020, Geza Gerlasse Hotel, Wukro, Tigray, Ethiopia. Pp.88-100

Massey, D. 2005. *For Space*. Sage Publications.

Malkki, L. H. 1997. "News and Culture: Transitory Phenomena and the Fieldwork Tradition." In *Anthropological Locations: Boundaries and Grounds of a Field Science*, edited by A. Gupta & J. Ferguson. University of California Press. Pp.86-101

McAdoo, Quak, M., Gnyawali, K. R., Adhikari, B. R., Devkota, S., Rajbhandari, P. L., & Sudmeier-Rieux, K. 2018. "Roads and Landslides in Nepal: How Development Affects Environmental Risk." *Natural Hazards and Earth System Sciences* 18(12): 3203–3210. https://doi.org/10.5194/nhess-18-3203-2018

McCann, J. C. 1987. “The Social Impact of Drought in Ethiopia: Oxen, Households, and Some Implications for Rehabilitation.” In *Drought and Hunger in Africa: Denying Famine a Future*, edited by Michael H Glantz. Cambridge University Press.

———. 1995. *People of the Plow: An Agricultural History of Ethiopia, 1800-1990*. University of Wisconsin Press.

———. 1997. “The Plow and the Forest: Narratives of Deforestation in Ethiopia, 1840-1992.” *Environmental History* 2(2): 138-159.

McCusker, B. 2015. “Political Ecology and Policy: A Case Study in Engagement.” In *The Routledge Handbook of Political Ecology*, edited by McCarthy, J., Perreault, T., Bridge, G. pp.210–219. Routledge.

McVety, A.K. 2012. *Enlightened Aid: U.S. Development as Foreign Policy in Ethiopia*. Oxford University Press.

Meehan, K., I. G.R. Shaw, and S.A. Marston. 2013. “Political Geographies of the Object.” *Political Geography* 33: 1–10.

Meze-Hausken, E. 2004. “Contrasting Climate Variability and Meteorological Drought with Perceived Drought and Climate Change in Northern Ethiopia.” *Climate Research 27*(1): 19–31.

Mikulewicz, M., & Taylor, M. 2020. “Getting the Resilience Right: Climate Change and Development Policy in the ‘African Age’.” *New Political Economy 25*(4): 626–641. https://doi.org/10.1080/13563467.2019.1625317

Mitchell, T. 2002. *Rule of Experts: Egypt, Techno-Politics, Modernity*. University of California Press.

Mkindi, A., Maina, A., J. Urhahn, J. Koch, L. Bassermann, M. Goïta, M. Nketani, R. Herre, S. Tanzmann, and T.A. Wise. 2020. *False Promises: The Alliance for a Green Revolution in Africa (AGRA)*. Rosa-Luxemburg-Stiftung, Biba, Bread for the World, FIAN Germany, Forum on Environment and Development, INKOTA-netzwerk, IRPAD, PELUM Zambia, Tabio, and TOAM

Montenegro de Wit, M., Shattuck, A., Iles, A., et al. 2021. “Operating Principles for Collective Scholar-Activism: Early Insights From the Agroecology Research-Action Collective.” *Journal of Agriculture, Food Systems, and Community Development* 10(2): 1–19. DOI: 10.5304/jafscd.2021.102.022

Morefield, H. 2019. “Developing to Scale: Appropriate Technology and the Making of Global Health.” PhD diss., Johns Hopkins University.

Mosse, D. 2006. “Anti-social anthropology? Objectivity, objection, and the ethnography of public policy and professional communities.” *The Journal of the Royal Anthropological Institute 12*(4): 935–956. https://doi.org/10.1111/j.1467-9655.2006.00371.x

———. 2011. “Introduction: The Anthropology of Expertise and Professionals in International Development." In *Adventures in Aidland: The Anthropology of Professionals in International Development*, edited by David Mosse. Pp.1–31. Berghahn Books.

Mosse, D. and D. Lewis. 2006. "Theoretical Approaches to Brokerage and Translation in Development." In *Development Brokers and Translators: The Ethnography of Aid and Agencies*, edited by D. Moss and D. Lewis. Lynne Rienner. Pp.1-26.

Mukai, S. 2023. "Collective Resource Management and Labor Quota Systems for Sustainable Natural Resource Management in Semi-Arid Ethiopia." *Land* 12, 1702. https://doi.org/10.3390/land12091702

Mulesa, T. H. 2021. "Politics of Seed in Ethiopia's Agricultural Transformation: Pathways to Seed System Development." *Frontiers in Sustainable Food Systems*, *5*. https://doi.org/10.3389/fsufs.2021.742001

Mulesa T.H., Westengen O.T. 2020. "Against the grain? A historical institutional analysis of access governance of plant genetic resources for food and agriculture in Ethiopia." *J World Intellect Prop*. 1: 82–120. https://doi.org/10.1111/jwip.12142

Mussa, S. 2010. "How Does Food Aid Impact Agricultural Production and Household Supply to Agriculture in Ethiopia?" PhD diss., ProQuest Dissertations Publishing.

Mutyasira, V., Hoag, D., and Pendell, D. 2018. "The Adoption of Sustainable Agricultural Practices by Smallholder Farmers in Ethiopian Highlands: An Integrative Approach." *Cogent Food & Agriculture 4*(1). https://doi.org/10.1080/23311932.2018.1552439

Nagar, R., and Saraswati Raju. 2003. "Women, NGOs and the Contradictions of Empowerment and Disempowerment: A Conversation." *Antipode* 35(1): 1–13.

Nandwa, S. M, and M. A Bekunda. 1998. "Research on Nutrient Flows and Balances in East and Southern Africa: State-of-the-Art1Paper Contributes to EC INCO-DC Project IC18-CT96-0092 (Spatial and Temporal Variation of Soil Nutrient Stocks and Management in Sub-Saharan African Farming Systems)." *Agriculture, Ecosystems & Environment* 71(1): 5–18.

NTEU. 2024. "Schedule F Threat Broader, More Severe Than Previously Known." National Treasury Employees Union (NTEU). February 27, 2024. https://www.nteu.org/media-center/news-releases/2024/02/27/ombschedulefrelease

Neely, A. H. 2020. "Entangled agencies: Rethinking causality and health in political-ecology." *Nature and Space* 0(0): 1–19.

Neely, A. H. 2021. *Reimagining Social Medicine from the South*. Duke University Press.

Negassa, A., Haile, S., Bane, J., Olana, G., and Hodjo, M. 2021. *Final Report: USAID-Ethiopia Bellmon Crop Availability and Market Analysis for 2021/22*. Food Security Service Center II. International Development Group LLC (IDG) under Feed the Future: United States Agency for International Development (USAID) contract.

Nelson, I. L., Faxon, H. O., & Ehlers, M. H. 2024. "Feminist political ecologies of agrarian technologies: knowing the digital differently." *The Journal of Peasant Studies* 51(6): 1–28. https://doi.org/10.1080/03066150.2024.2308637

Nesbitt, M. and D. Samuel. 1996. "From staple crop to extinction? The archaeology and history of the hulled wheats." In *Proceedings of the First International Workshop on Hulled Wheats*, *21-22 July 1995, Castelvecchio Pascoli, Tuscany, Italy,* edited by Padulosi, S., K. Hammer and J. Heller. International Plant Genetic Resources Institute, Rome, Italy. pp.41-101

Nigussie, L., Joshi, D., Tsegaye, B., Admasu, W., and Abate, N. 2024. *Gender Equality and Social Inclusion (GESI) For Climate-Smart Water Management Practices: The Case of Upper Awash River Basin of Wollo and Lower Awash River Basin of Afar in Ethiopia*. Synthesis report prepared by the Prioritization of Climate-Smart Water Management Practices Project. International Water Management Institute (IWMI). 24p. https://doi.org/10.5337/2024.206

"North Western Zone Tigray: Socioeconomic set up". 2019. Participatory Agricultural Production Constraints Appraisal: Implication for Research and Development Interventions in Southern, North Western and Western Zones of Tigray. Belay, T., T. Gebreselassie, H. Kelelew, T. Aregawi, and B. Haileselassie (eds.). Tigray Agricultural Research Institute and Agricultural Growth Program-II, Proceedings of the Workshop held 09-15 November 2018, Capital Hotel, Wukro, Tigray, Ethiopia

Nyantakyi-Frimpong, H. 2020. "What Lies Beneath: Climate Change, Land Expropriation and Zai Agroecological Innovations by Smallholder Farmers in Northern Ghana." *Land Use Policy* 92: 1-11.

Nyantakyi-Frimpong, H. and A. Carlson. 2024. "Seed Sovereignty, Knowledge Politics, and Climate Change in Northern Ghana." In *African Perspectives on Agroecology: Why Farmer-led Seed and Knowledge Systems Matter,* edited by R. Wynberg. pp. 115-132. Practical Action Publishing http://doi.org/10.3362/9781780447445

Nyantakyi-Frimpong, H. and R. Bezner Kerr. 2014. "A Political Ecology of High-Input Agriculture in Northern Ghana." *African Geographical Review* 34(1): 13-35. http://dx.doi.org/10.1080/19376812.2014.929971

Nyssen, J., J. Naudts, K. De Geyndt, et al. 2008. "Soils and Land Use in the Tigray Highlands (Northern Ethiopia)." *Land Degradation & Development* 19(3): 257–274.

Nyssen, J., K. Descheemaeker, A. Zenebe, J. Poesen, J. Deckers, and M. Haile. 2009. "Transhumance in the Tigray Highlands (Ethiopia)." *Mountain Research and Development* 29(3): 255-264. http://dx.doi.org/10.1659/mrd.00033

Nyssen, J., 2024. "A Chronicle of the Tigray Tragedy (2020 – 2024)." *Zenodo* 360 p. https://doi.org/10.5281/zenodo.12591885

Oba, G. 2012. "Harnessing Pastoralists' Indigenous Knowledge for Rangeland Management: Three African Case Studies." *Pastoralism: Research, Policy and Practice* 2(1): 1-25. https://doi.org/10.1186/2041-7136-2-1

OCHA Ethiopia. 2020. *Ethiopia: Tigray Region Humanitarian Update Situation Report No. 2*. United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

Office of Global Food Security. 2023. *The Vision for Adapted Crops and Soils (VACS)*. U.S. Department of State. https://www.state.gov/the-vision-for-adapted-crops-and-soils/

Office of Management and Budget (OMB). 2012. Guidance on Collection of U.S. Foreign Assistance Data. BULLETIN NO. 12-01. September 25, 2012. Executive Office of the President: Office of Management and Budget.

Ogrysko, N. 2020. "New Executive Order Could Strip Civil Service Protections from 'Wide Swaths' of Federal Workforce." Federal News Network. October 22, 2020. https://federalnewsnetwork.com/workforce/2020/10/new-executive-order-may-reclassify-wide-swaths-of-career-positions-as-political-appointees/

Ojeda, D., Sasser, J.S. and Lunstrum, E. 2020. "Malthus's Specter and the Anthropocene." *Gender, Place & Culture* 27(3): 316–332. DOI: 10.1080/0966369X.2018. 1553858.

Oyer, E.B. 1986. "Integrating International Agricultural Development Activities in Land-grant Universities and Colleges." *HortScience* 21(3): 375–377 https://doi.org/10.21273/HORTSCI.21.3.375b

Palframan, A. 2015. "In Common Nature: An Ethnography of Climate Adaptation in the Lesotho Highlands." *Local Environment* 20(12): 1531–1546.

Pant, L.P. and J.J. Ramisch. 2010. "Beyond Biodiversity: Culture in Agricultural Biodiversity Conservation in the Himalayan Foothills." In *Beyond the Biophysical* pp. 73–97. Springer, Dordrecht

Pecetti, L. and A.B. Damania. 1996. "Geographic Variation in Tetraploid Wheat (Triticum Turgidum Spp. Turgidum Convar. Durum) Landraces from Two Provinces in Ethiopia." *Genetic Resources and Crop Evolution* 43(5): 395–407.

Pierotti, R. and Wildcat, D. 2000. "Traditional Ecological Knowledge: The Third Alternative." *Ecological Applications* 10(5): 1333-1340.

Pound, B., A. Tolera and H. Matsaert. 2015. *Report of the Internally-Commissioned External Review of the Africa RISING Project in the Ethiopian Highlands.* International Livestock Research Institute (ILRI).

Power, S. 2021. *Administrator Samantha Power on a New Vision for Global Development*. November 4, 2021. United States Agency for International Development (USAID).

Price, M. L. and N. Riccardi. 2023. "Trump's Intensifying Rhetoric Offers Insight into How He Might Govern Again as President." *The Associated Press*. October 4, 2023. https://apnews.com/article/trump-violent-rhetoric-retribution-authoritarians-2024-39e090680a33c0869312e79bcef106e8

Quayson, A. 2021. *Tragedy and Postcolonial Literature*. Cambridge University Press.

Rahmato, D. 2014. "The Perils of Development From Above: Land Deals in Ethiopia." *African Identities* 12: 26-44.

Raina, R. S., & Dey, D. 2020. "How We Know Biodiversity: Institutions and Knowledge-Policy Relationships." *Sustainability Science* 15(3): 975–984. https://doi.org/10.1007/s11625-019-00774-w

Radel, C., B. Schmook, L. Carte, and S. Mardero. 2018. "Toward a Political Ecology of Migration: Land, Labor Migration, and Climate Change in Northwestern Nicaragua." *World Development* 108: 263–273. http://dx.doi.org/10.1016/j.worlddev.2017.04.023

Regassa, A. 2021. "Self-Determination, multinational federalism and an emerging threat in Ethiopia: A decolonial approach." *Northeast African Studies* 21(2): 57-82.

Regassa, A., Y. Hizekiel & B. Korf. 2019. "'Civilizing' the pastoral frontier: land grabbing, dispossession and coercive agrarian development in Ethiopia." *The Journal of Peasant Studies* 46(5): 935-955. DOI: 10.1080/03066150.2017.1420060

Robbins, P. 2012. *Political Ecology: A Critical Introduction*. 2nd ed. Wiley-Blackwell.

Roberts, S.M. 2014. "Development Capital: USAID and the Rise of Development Contractors." *Annals of the Association of American Geographers* 104 (5): 1030–1051. https://doi.org/10.1080/00045608.2014.924749.

Rossi, B. 2006. "Aid Policies and Recipient Strategies in Niger: Why Donors and Recipients Should Not Be Compartmentalized into Separate "Worlds of Knowledge"." In *Development Brokers and Translators: The Ethnography of Aid and Agencies*, edited by D. Moss and D. Lewis. Lynne Rienner.

Russell, J., and Sadinsky, S. 2024. *Enhancing Local Voice in USAID Policy Development*. Save the Children.

Ryan, G.W. and H.R. Bernard. 2003. "Techniques to Identify Themes." *Field Methods* 15(85). DOI: 10.1177/1525822X02239569.

Scott, J.C. 1990. *Domination and the Arts of Resistance: Hidden Transcripts*. Yale University Press

———. 1998. *Seeing Like a State.* Yale University Press.

Scott-Villiers, P. 2011. "We Are Not Poor! Dominant and Subaltern Discourses of Pastoralist Development in the Horn of Africa." *Journal of International Development* 23(6): 771–781. https://doi.org/10.1002/jid.1809

Seckler, D. 1993. *Agricultural Transformation in Africa: A Round Table Discussion with Chris Ackello-Ogutu, Michael Carter, Kevin Cleaver, Chris Delgado, Elon Gilbert, Benjamin H. Kaestner III, Carl Liedholm, Mike Maynard, Pauline Peters, Tom Reardon, David Shan, Asif Shaikh, Peter Timmer, and Africa specialists of USAID and Winrock International*. D. Seckler, (ed.). EPAT/Winrock International.

Shackleton, C. M., T. J. Willis, K. Brown, and N. V. C. Polunin. 2010. "Reflecting on the next generation of models for community-based natural resources management." *Environmental Conservation* 37(1): 1–4. https://doi.org/10.1017/S0376892910000366

Shaw, I. G. R., and K. Meehan. 2013. "Force-Full: Power, Politics and Object-Oriented Philosophy." *Area* (London 1969) 45(2): 216–222.

Shewayrga, H., and P. A. Sopade. 2011. “Ethnobotany, Diverse Food Uses, Claimed Health Benefits and Implications on Conservation of Barley Landraces in North Eastern Ethiopia Highlands.” *Journal of Ethnobiology and Ethnomedicine* 7(1): 19.

Showstack, R. 2011. “Science Initiative for International Development.” *Eos* (Washington, D.C.) 92(29): 243–243.

Shipton, P. 1990. “African Famines and Food Security: Anthropological Perspectives.” *Annu. Rev. Anthropol*. 19: 353–394.

Shrestha, P. 2020. *Participatory Seed Security Assessment and Action Plan: A Guide*. SeedChange

Simpson, L.B. 2017. *As We Have Always Done*. University of Minnesota Press.

“Southern Zone Tigray: Socioeconomic set up”. 2019. Participatory Agricultural Production Constraints Appraisal: Implication for Research and Development Interventions in Southern, North Western and Western Zones of Tigray. Edited by Belay, T., T. Gebreselassie, H. Kelelew, T. Aregawi, and B. Haileselassie. Tigray Agricultural Research Institute and Agricultural Growth Program-II, Proceedings of the Workshop held 09-15 November 2018, Capital Hotel, Wukro, Tigray, Ethiopia

Sultana, F. 2021. “Political ecology I: From margins to center.” *Progress in Human Geography* 45(1): 156–165. DOI: 10.1177/0309132520936751

———. 2022. “Critical climate justice.” *The Geographical Journal* 188(1): 118–124. DOI: 10.1111/geoj.12417

———. 2023. “Political ecology III: Praxis - doing, undoing, and being in radical political ecology research.” *Progress in Human Geography* 47(5): 728–737. https://doi.org/10.1177/03091325231157360

Sundberg, J. 2014. “Decolonizing posthuman geographies.” *Cultural Geographies* 21(1): 33-47.

———. 2015. “Ethics, entanglement, and political ecology.” In *The Routledge Handbook of Political Ecology*, edited by Tom Perreault, Gavin Bridge, and James McCarthy. Routledge. pp.117-126.

Tadele, E. 2021. “Land and heterogenous constraints nexus income diversification strategies in Ethiopia: systematic review.” *Agriculture & Food Security* 10: 37. https://doi.org/10.1186/s40066-021-00338-1

Tate, W. 2020. “Anthropology of Policy: Tensions, Temporalities, Possibilities.” *Annual Review of Anthropology* 49(1): 83–99. https://doi.org/10.1146/annurev-anthro-010220-074250

Teklu, Y., and K. Hammer. 2006. “Farmers’ Perception and Genetic Erosion of Tetraploid Wheats Landraces in Ethiopia.” *Genetic Resources and Crop Evolution* 53(6): 1099–1113.

Tengö, M., E. S. Brondizio, T. Elmqvist, P. Malmer, and M. Spierenburg. 2014. “Connecting diverse knowledge systems for enhance ecosystem governance: The multiple evidence base approach.” *Ambio 43*: 579-591.

Tesfamariam, Taddesse, Desalegn Gebrezgi, Dawit Hadera Mekelle. Demonstration of improved small-scale processing technology. In. Teferi Aregawi, Haftu Kelelew, Tsegay Gebreselassie, Tesfay Belay, Bereket Haileselassie and Desalegne Emuru (eds). 2019. Workshop Proceeding for Completed Research Activities on Pre-extension Demonstration of Agricultural Technologies, Tigray Agricultural Research Institute and Agricultural Growth Program-II, 09-15 November 2018, Capital Hotel, Wukro, Ethiopia. pp. 73-84

Tesfaye, T. 1991. "Improvement of Indigenous Durum Wheat Landraces in Ethiopia." In *Plant Genetic Resources of Ethiopia*, edited by J. M. M. Engels, J. G. Hawkes, and M. Worede. Pp. 288-295. Cambridge University Press.

The Federal Democratic Republic of Ethiopia. 2018. *The Second Growth and Transformation Plan (GTP II) Midterm Review Report*. Addis Ababa, National Planning Commission.

The Government of Ethiopia. 2023. *Annual Development Cooperation Report of Ethiopia: Ethiopian Fiscal Year 2015 (2022/2023).* The Federal Democratic Republic of Ethiopia.

Toye, J. 2004. "Changing Perspectives in Development Economics." In *Rethinking Development Economics,* edited by Chang, Ha-Joon. Anthem Press.

Truman, H.S. 1949. "Inaugural Address (1949)." Presidential Message, January 20, 1949. https://teachingamericanhistory.org/document/inaugural-address-6/

Tsegaye, B. and T. Berg. 2007. "Genetic Erosion of Ethiopian Tetraploid Wheat Landraces in Eastern Shewa, Central Ethiopia." *Genetic Resources and Crop Evolution* 54(4): 715–726.

Tsegaye, B. and Feyissa, R. 2017. *Establishment of a Community Seed Bank and the Services Provided*. Ethio Organic Seed Action (EOSA): Addis Ababa

U.S. Congress-House. 2016. *Foreign Aid Transparency and Accountability Act OF 2016. HR 3766. 114th Congress Public Law 114–191—July 15, 2016.* U.S. Government Information. https://www.congress.gov/114/plaws/publ191/PLAW-114publ191.pdf

USAID. 2012. *Agricultural Growth Program - Agribusiness and Market Development (AGP-AGP-AMDE) Project: Baseline Report, Household Survey*. Submitted by ACDI/VOCA (Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance). United States Agency for International Development (USAID)-Ethiopia

———. 2018. *Stocktaking of USAID/KEA Activities Under the East Africa Feed the Future Multi-Year Strategy 2011-2015 (and 2016-2018): Report of a Stakeholder Validation Workshop.* United States Agency for International Development (USAID).

———. 2019. *Ethiopia: Country Development Cooperation Strategy 2011 – 2019.* United States Agency for International Development (USAID).

———. 2020. *U.S. Foreign Assistance Website Consolidation Fact Sheet.* U.S. Agency for International Development (USAID).

———. 2021. *ADS Chapter 201: Program Cycle Operational Policy*. United States Agency for International Development (USAID).

———. 2022a. *Moving Toward a Model of Locally Led Development: FY 2022 Localization Progress Report*. United States Agency for International Development (USAID). https://www.usaid.gov/sites/default/files/2023-06/FY%202022%20Localization%20Progress%20Report-June-12-23_vFINAL_1.pdf

———. 2022b. *Integrating Local Knowledge in Development Programming.* United States Agency for International Development (USAID).

———. 2022c. *Local Capacity Strengthening Policy*. United States Agency for International Development (USAID). https://www.usaid.gov/local-capacity-strengthening-policy.

———. 2023a. *Locally Led Programs Indicator*. United States Agency for International Development (USAID).

———. 2023b. *Sector Environmental Guideline: Livestock Production*. United States Agency for International Development (USAID).

———. 2024a. "USAID-DuPont Partnership Helps Hundreds of Thousands of Ethiopian Farmers Transform Production and Livelihoods." Press release: United States Agency for International Development (USAID).

———. 2024b. *Locally Led Partnerships: What is Locally Led Development?* United States Agency for International Development (USAID). https://www.usaid.gov/locally-led-partnerships#:~:text=Locally%20led%20development%20is%20the,make%20those%20solutions%20a%20reality

———. 2024c. *The Feed the Future Ethiopia Value Chain Activity.* United States Agency for International Development (USAID). Foreignassistance.gov. accessed September 2024

———. 2024d. *USAID Development Data: Functional Series 500 – Management Services.* The United States Agency for International Development (USAID). https://www.usaid.gov/about-us/agency-policy/series-500/579

U.S. Department of Agriculture. 2020. *Agricultural Biotechnology Annual*. ET2019-0010. Global Agricultural Information Network (GAIN).

U.S. Department of State. 2010. "2010 World Food Prize Joint Press Release." Office of the Spokesman U.S. Department of State. Press Release June 16, 2010. https://2009-2017.state.gov/r/pa/prs/ps/2010/06/143204.htm

U.S. Department of State. 2015. *Quadrennial Diplomacy and Development Review: Enduring Leadership in a Dynamic World.* U.S. Department of State and U.S. Agency for International Development (USAID).

Valdivia Ramirez, O.M., C. Faria, and R.M. Torres. 2021. "Good Boys, Gang Members, Asylum Gained and Lost: The Devastating Reflections of a Bureaucrat-Ethnographer." *Emotion, Space and Society* 38: 100758.1-8.

Vera, C.A. and Brusola-Vera, Ma. L. 2021. *Local Humanitarian Leadership: The View from Local Actors.* Oxfam Pilipinas. https://policy-practice.oxfam.org/resources/local-humanitarian-leadership-the-view-from-local-actors-621190/

Wainwright, J. 2008. *Decolonizing Development: Colonial Power and the Maya*. Wiley-Blackwell.

Walker, P. 2006. "Political ecology: where is the policy?" *Progress in Human Geography* 30(3): 382–395.

Walsh, D. and S. Marks. 2020. "Having Made Peace Abroad, Ethiopia's Leader Goes to War at Home: Prime Minister Abiy Ahmed, winner of the Nobel Peace Prize, began a sweeping military operation against one of his own regions." *The New York Times*, November 4th, 2020. https://www.nytimes.com/2020/11/04/world/africa/ethiopia-abiy-tigray.html?action=click&module=Latest&pgtype=Homepage

Waylen, K. A., A. Fischer, P. J. K. McGowan, S. J. Thirgood, and E. J. Milner-Gulland. 2010. "Effect of Local Cultural Context on the Success of Community-Based Conservation Interventions." *Conservation Biology* 24*:* 1119-1129

Wedel, J.R. 2001. *Collision and Collusion: The Strange Case of Western Aid to Eastern Europe*. Palgrave.

Wedel, J.R., Shore, C., Feldman, G., and Lathrop, S. 2005. "Toward an Anthropology of Public Policy." *The Annals of the American Academy of Political and Social Science* 600(1): 30–51. https://doi.org/10.1177/0002716205276734

Weisser, B., M., M. Doevenspeck, & D. Müller-Mahn. 2014. "Translating the "adaptation to climate change" paradigm: the politics of a travelling idea in Africa." *The Geographical Journal* 180(2): 111–119. https://doi.org/10.1111/geoj.12037

Weller, S.C., Vickers, B., Bernard, H.R., Blackburn, A.M., Borgatti, S., Gravlee, C.C., et al. 2018. "Open-ended interview questions and saturation." *PLoS ONE* 13(6): e0198606. https://doi.org/10.1371/journal.pone.0198606

"Western zone of Tigray: Rural institution and cross cutting". 2019. Participatory Agricultural Production Constraints Appraisal: Implication for Research and Development Interventions in Southern, North Western and Western Zones of Tigray. Belay, T., T. Gebreselassie, H. Kelelew, T. Aregawi, and B. Haileselassie (eds.). Tigray Agricultural Research Institute and Agricultural Growth Program-II, Proceedings of the Workshop held 09-15 November 2018, Capital Hotel, Wukro, Tigray, Ethiopia

"Western zone of Tigray: Socioeconomic set up". 2019. Participatory Agricultural Production Constraints Appraisal: Implication for Research and Development Interventions in Southern, North Western and Western Zones of Tigray. Belay, T., T. Gebreselassie, H. Kelelew, T. Aregawi, and B. Haileselassie (eds.). Tigray Agricultural Research Institute and Agricultural Growth Program-II, Proceedings of the Workshop held 09-15 November 2018, Capital Hotel, Wukro, Tigray, Ethiopia

Willig, C. 2014. "Interpretation and Analysis1." In *The SAGE Handbook of Qualitative Data Analysis,* edited by Uwe Flick. SAGE Publications Ltd. DOI: http://dx.doi.org/10.4135/9781446282243.

Woodward, P. 2016. *US Foreign Policy and the Horn of Africa*. Routledge.

Wutich, A., G. Ryan, and H.R. Bernard. 2014. “Chapter 17: Text Analysis.” In *Handbook of Methods in Cultural Anthropology*, 2nd ed. Edited by H. Russell Bernard and Clarence C. Gravlee. Rowman & Littlefield, pp.533-559

Yohannes, G. and A. Waters-Bayer. 2007. “Trees Are Our Backbone: Integrating Environment and Local Development in Tigray Region of Ethiopia.” Issue paper no. 145. International Institute for Environment and Development (IIED), London, UK. 38p.

Yin, R. 2014. *Case Study Research: Design and Methods*. Sage.

APPENDICES

Appendix 1: Participants

	Development Role/ Area of Expertise	Nationality/Country of Education
1.	Technical consultant for USAID projects in Ethiopia	United States
2.	Technical assistance to GOE and U.S. government agencies, including USAID	Ethiopia
3.	Expert on seed systems for GOE, and USAID-contracted NGOs	Ethiopia
4.	Farming systems specialist for USAID-contracted NGOs	United States
5.	Agricultural extension officer for GOE and USAID-contracted NGOs	Ethiopia
6.	Agronomist/geneticist conducting research for GOE and USAID-funded organizations	Ethiopia
7.	Agronomy/geneticist contracted for USAID projects	United States
8.	Agronomy/geneticist contracted for USAID projects	United States
9.	Agronomist researcher funded by USAID	United States
10.	Extension officer and technical advisor for regional and national-level projects	Ethiopia
11	Extension officer and technical advisor for regional and national-level projects	Ethiopia
12.	Technical advisor for U.S. government agencies, including USAID	Ethiopia

Appendix 2: Conferences/Meetings/Workshops

	Organization	Title	Date	Location
1.	Board for International Food and Agricultural Development (BIFAD) meeting	none	Oct. 18, 2006	Des Moines, IA, U.S.
2.	BIFAD meeting	none	Oct. 17, 2007	Des Moines, IA, U.S.
3.	BIFAD meeting	none	Feb. 27, 2008	Washington, D.C., U.S.
4.	BIFAD meeting	Global Food Prices and Policy Actions	June 17, 2008	Washington, D.C., U.S.

5.	BIFAD meeting	Higher Education on a New Stage in Global Agricultural Development	Oct. 14, 2008	Des Moines, IA, U.S.
6.	BIFAD meeting	none	July 29, 2009	Washington, D.C., U.S.
7.	BIFAD meeting	none	Oct. 12, 2010	Des Moines, IA, U.S.
8.	BIFAD meeting	The Next Generation: Global Food Security Through Human and Institutional Capacity Building	Oct. 11, 2011	Des Moines, IA, U.S.
9.	BIFAD meeting	Higher Education: A Critical Partner in Feed in the Future	June 24, 2011	Washington, DC, U.S.
10.	BIFAD meeting	BIFAD And New University Partnerships	April 13, 2012	Washington, DC, U.S.
11.	USAID Advisory Committee on Voluntary Foreign Aid (ACVFA) meeting	none	June 15, 2012	Washington, DC, U.S.
12.	BIFAD meeting	The Nexus of Agriculture, Nutrition, and Human Health	Oct. 16, 2012	Des Moines, IA, U.S.
13.	USAID ACVFA meeting	none	March 14, 2013	Washington, DC, U.S.
14.	BIFAD meeting	BIFAD and New University Partnerships	March 15, 2013	Columbia, MO, U.S.
15.	USAID ACVFA meeting	none	June 13, 2013	Washington, DC, U.S.
16.	BIFAD meeting	Higher Education –Partnerships, Policies and Programs	Jan. 30, 2014	Washington, DC, U.S.
17.	BIFAD meeting	Feeding the World in 2050: Agricultural Research Capacity and Youth Engagement	Oct. 14, 2014	Des Moines, IA, U.S.
18.	BIFAD meeting	none	Feb. 27, 2015	Washington, D.C., U.S.
19.	BIFAD meeting	none	April 9-10, 2015	Bozeman, MT, U.S.
20.	BIFAD meeting	Crossroads: Science, Innovation, Markets, and Policy for Feeding the World	Oct. 21, 2015	West Lafayette, IN, U.S.
21.	BIFAD meeting	Metrics for Accountability: Tracking Progress and Identifying Data Gap Development Investments	Oct. 12, 2016	Des Moines, IA, U.S.
22.	BIFAD meeting	Aligning Research Investments to the Global Food Security Strategy: A Three-Day AgExchange on Nutrition, Resilience and Agriculture-Led Economic Growth	April 18-20, 2017	Virtual
23.	BIFAD meeting	U.S. Government's Global Food Security Research Strategy: From Upstream Research to Development Impact	Sept. 12, 2017	Washington, D.C., U.S.

24.	BIFAD meeting	Building an Evidence Base for Resilience under the Global Food Security Strategy	Oct. 17, 2017	Des Moines, IA, U.S.
25.	USAID ACVFA meeting	none	Jan. 18, 2018	Washington, D.C., U.S.
26.	BIFAD meeting	Resilience Measurement and Analysis	May 9, 2018	Washington, D.C., U.S.
27.	BIFAD meeting	U.S. Benefits Leveraged from Strategic Investments in Developing Country Agriculture and Food Security	Aug. 8, 2018	Washington, D.C., U.S.
28.	BIFAD meeting	The Feed the Future Learning Agenda	Sept. 12, 2018	Washington, D.C., U.S.
29.	BIFAD meeting	Improving Nutrition Through Private Sector Engagement Across Food Systems	Oct. 16, 2018	Des Moines, IA, U.S.
30.	USAID Stakeholder Validation Workshop	Stocktaking of USAID/KEA Activities under the East Africa Feed the Future Multi-Year Strategy 2011-2015 (and 2016-2018)	Oct. 16, 2018	Nairobi, Kenya
31.	Tigray Agricultural Research Institute and Agricultural Growth Program-II	Workshop on Participatory Agricultural Production Constraints Appraisal: Implication for Research and Development Interventions in Southern, North Western and Western Zones of Tigray	Nov. 9-15, 2018	Wukro, Tigray, Ethiopia
32.	Tigray Agricultural Research Institute and Agricultural Growth Program-II	Pre-extension Demonstration of Agricultural Technologies Workshop	Nov. 9-15, 2018	Wukro, Tigray, Ethiopia
33.	USAID	Horn of Africa Resilience Workshop	May 13, 2019	Kampala, Uganda
34.	Tigray Agricultural Research Institute and Agricultural Growth Program-II	Proceeding of national workshop: The Role of Blended Fertilizers in Enhancing Productivity and Quality of Crops in Ethiopia	June 7-8, 2019	Mekelle, Tigray, Ethiopia
35.	EIAR/USAID	CGIAR and EIAR partnering together– experience sharing workshop	Aug. 7, 2019	Addis Ababa, Ethiopia
36.	BIFAD meeting	none	Oct. 15, 2019	Des Moines, IA, U.S.
37.	USAID Bureau for Resilience and Food Security	Meeting on Demystifying Market Systems Resilience	May 20, 2020	Virtual
38.	BIFAD meeting	Agricultural Growth, Economic Transformation, and the Journey to Self-Reliance: Implications for USAID Programming	Oct. 13, 2020	Virtual
39.	Tigray Agricultural Research Institute and Agricultural	Workshop for Completed Research Activities on Pre-extension Demonstration of Agricultural	Nov. 21-24, 2020	Wukro, Tigray, Ethiopia

	Growth Program-II	Technologies		
40.	Ethiopian Ministry of Agriculture/ GIZ/USAID	DREAM II Conference: Strengthening Drought Resilience ASAL	March 15-18, 2022	Adama, Ethiopia
41.	BIFAD meeting	The Global Food Security Crisis: Exploring the Evidence Base and Lessons from the Past to Strengthen Agricultural, Nutrition, and Food Systems in the Face of Shocks	May 23, 2022	Virtual
42.	BIFAD meeting	A Consultative Workshop on Systemic Solutions for Climate Change Adaptation and Mitigation in Agriculture, Nutrition, and Food Systems	Aug. 31, 2022	Virtual
43.	BIFAD meeting	Fed to Thrive: Accelerating Action on Nourishing Foods for Infants and Young Children	Oct. 19, 2022	Des Moines, IA, U.S. and Virtual
44.	BIFAD meeting	Transformative Pathways Toward a Climate-Resilient Agricultural, Nutrition, and Food System	Oct. 26, 2022	Virtual
45.	BIFAD meeting	BIFAD's Plans to Propose a Subcommittee on Minority Serving Institution Engagement and Leadership in USAID's Agricultural, Food Security, and Nutrition Policies and Programming	June 28, 2023	Virtual
46.	BIFAD meeting	Elevating Climate Change Adaptation and Mitigation in USAID's Agricultural, Nutrition, and Food System Programming to Inform Strategy Implementation	Sept. 11, 2023	Washington, D.C., U.S. and Virtual

Appendix 3: Development Documents Analyzed

Advisory Committee on Voluntary Foreign Aid (ACVFA). 2024. ACVFA Report on Maximizing USAID's Effectiveness: Improving Locally Led and Inclusive Development. USAID.
Benjamin, J. and L. Meyers. 2016. USAID/Kenya and East Africa Gender Analysis for Regional Development Cooperation Strategy 2016-2020, Gender Analysis Report Prepared by Banyan Global, Washington, DC, January 15, 2016.
Bittle, M., D. Humpal, New Markets Lab, Agri Experience, Dr. Y. Kebede, and Context Global Development. 2021. Seed Systems Assessment Tool (SeedSAT): *Country Assessment Results – Ethiopia.* DAI Global, LLC/Bill & Melinda Gates Foundation (BMGF)
Carr, E.R., Diro, R., Naeve K., Hamel R., Beggs M., Benson C., Caldwell, B., Mbevi L., Hall T., Zook D., Aldredge H., Liming K., Allognon L., Crocker T., and Mukupa N. 2023. Operationalizing USAID's Climate Strategy to Achieve Transformative Adaptation and Mitigation in Agricultural and Food Systems. Tetra Tech under the USAID BIFAD Support Contract.
Climate Adaptation Support Activity (CASA). 2024. Climate Change Risk Profile: Ethiopia. United States Agency for International Development
CIMMYT. 2000. The Eleventh Regional Wheat Workshop for Eastern, Central and Southern Africa.

Addis Ababa, Ethiopia: CIMMYT/EIAR.
Emuru, D. 2015. Forage Seed System Assessment: The Case of Eastern Zone of Tigray, Ethiopia. Tigray Agricultural Research Institute, Mekelle Ilala, Ethiopia
FAO. 2020. Ten years of the Ethiopian Agricultural Transformation Agency. An FAO evaluation of the Agency's impact on agricultural growth and poverty reduction. Rome. https://doi.org/10.4060/cb2422en
Feed the Future. 2010. Feed the Future E-Newsletter 1, June 15, 2010. http://www.feedthefuture.gov/ftfnews/ftfnews_01_061510.pdf
Feed the Future. 2016. The Agriculture Knowledge, Learning, Documentation and Policy Project: Annual Report October 2015 – September 2016. USAID.
Feed the Future. 2017a. East Africa: Regional Partnerships for Food Security. United States Agency for International Development.
Feed the Future. 2017b. Feed the Future Ethiopia Value Chain Activity: Six Month Progress Report. United States Agency for International Development.
Feed the Future. 2018a. Global Food Security Strategy (GFSS): Ethiopia Country Plan. USAID.
Feed the Future. 2018b. Feed the Future Ethiopia – Livelihoods for Resilience Activity. Year 3 Quarter 1 Quarterly Report (October – December 2018). USAID
Feed the Future. 2019a. Global Food Security Strategy East Africa Regional Plan 2019-2024. The U.S. Government's Global Hunger & Food Security Initiative.
Feed the Future. 2019b. U.S. Government Global Food Security Strategy Implementation Report For (FY) 2019. USAID.
Feed the Future. 2019c. Global Food Security Strategy Ethiopia Country Plan 2019 – 2023. Feed the Future: The U.S. Government's Global Hunger & Food Security Initiative.
Feed the Future. 2019d. Snapshot: Feed the Future innovation labs. https://www.feedthefuture.gov/resource/snapshot-feed-the-future-innovation-labs/
Feed the Future. 2020. Global Supporting Seed Systems for Development Activity FY20 Annual Report: October 2019 – September 2020. The U.S. Government's Global Hunger & Food Security Initiative.
Feed the Future. 2021a. Feed the Future Ethiopia – Livelihoods for Resilience Activity: Narrative Report. Year 5 Quarter 3 Quarterly Report (April – June 2021). USAID.
Feed the Future. 2021b. Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet: Annual Performance Report FY 2021. USAID.
Feed the Future. 2021c. Feed the Future Ethiopia – Livelihoods for Resilience Activity: Narrative Report. Year 5 Annual Report (1 October 2020 – 30 September 2021) and Year 5 Quarter 4 Quarterly Report (July – September 2021). USAID
Feed the Future. 2022a. U.S. Government Global Food Security Strategy: Fiscal Year 2022-2026. USAID
Feed the Future. 2022b. Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet: Annual Performance Report FY 2022. USAID
Garbero, A., Chichaibelu, B. B., 2018. Impact Assessment Report: Participatory Small Irrigation Development Programme I, Ethiopia. IFAD, EIAR.
Gulo Makeda Woreda Administration (GMWA). 2008 (E.C.), 2017. Short Report on the Achievements of planed objectives in Eastern Tigrai Zone, Gulo Makeda Woreda Administration. Gulo Makeda Woreda Administration.
Kirkby, R., E. Terry, T. Zeweldu. 2011. Evaluation of USAID/East Africa Support to the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). Revised Final Report. SFSA Evaluation of the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). USAID/East Africa. Produced for the United States Agency for International Development by DAI.
Levinson, J., B. Admassu, T. Trevors and A. Teshome. 2014. Empowering New Generations to

Improve Nutrition and Economic Opportunities (ENGINE), Ethiopia- External Mid-Term Performance Evaluation Report. Agriculture Knowledge, Learning, Documentation and Policy (AKLDP) Project: USAID.
Negassa, A., S. Haile, J. Bane, G. Olana, and M. Hodjo. 2021. Final Report: USAID-Ethiopia Bellmon Crop Availability and Market ANALYSIS FOR 2021/22. Food Security Service Center II. International Development Group LLC (IDG) under Feed the Future: USAID contract.
Office of Global Food Security. 2023. The Vision for Adapted Crops and Soils (VACS). U.S. Department of State. https://www.state.gov/the-vision-for-adapted-crops-and-soils/
Office of Management and Budget (OMB). 2012. Guidance on Collection of U.S. Foreign Assistance Data. BULLETIN NO. 12-01. September 25, 2012. Executive Office of the President: Office of Management and Budget.
Olana, G., N. Kedir, R. Abagodu, B. Dasgupta, W. Ambelu, F.O. Okello, and M. Magut. 2018. Bellmon Analysis: Crop Availability and Market Analysis in Ethiopia. Analyzing Crop Production, Availability and Market Functions for 2016/2017 and Estimations for 2017/2018. Ethiopia Performance Monitoring and Evaluation Service (EPMES) for USAID/Ethiopia Activity. USAID.
Oxfam America/Save the Children. 2016. The Power of Ownership: Transforming U.S. Foreign Assistance. The United States Agency for International Development.
Pound, B., A. Tolera and H. Matsaert. 2015. Report of the internally-commissioned external review of the Africa RISING project in the Ethiopian Highlands. International Livestock Research Institute/USAID.
Power, S. 2021. Administrator Samantha Power on a New Vision for Global Development. November 4, 2021. USAID.
Seckler, D. (ed.). 1993. Agricultural Transformation in Africa: A Round Table Discussion with Chris Ackello-Ogutu, Michael Carter, Kevin Cleaver, Chris Delgado, Elon Gilbert, Benjamin H. Kaestner III, Carl Liedholm, Mike Maynard, Pauline Peters, Tom Reardon, David Shan, Asif Shaikh, Peter Timmer, and Africa specialists of USAID and Winrock International. EPAT/Winrock International.
TARI. 2024. Crop Research Directorate: TARI Research Activities. TARI: Tigrai Agricultural Research Institute.
TARI. 2024. Mekelle Agricultural Research Center: Review of research practices. TARI: Tigrai Agricultural Research Institute.
TARI. 2024. Mekelle Soil Research Center: Research Activities. TARI: Tigrai Agricultural Research Institute.
TARI. 2024. Shire-Mytsebri Agricultural Research Center: Research Activities TARI: Tigrai Agricultural Research Institute.
The Federal Democratic Republic of Ethiopia. 2018. The Second Growth and Transformation Plan (GTP II) Midterm Review Report. Addis Ababa, National Planning Commission.
The Government of Ethiopia. 2023. Annual Development Cooperation Report of Ethiopia: Ethiopian Fiscal Year 2015 (2022/2023). The Federal Democratic Republic of Ethiopia
The Mitchell Group. 2005. Evaluation of Agricultural Cooperatives in Ethiopia (ACE) Program Activities for USAID/Ethiopia. United States Agency for International Development.
The World Bank. 2020. International Development Association Program Document for a Proposed Development Policy Credit in the Amount of SDR 136.4 Million (US$187.8 Million Equivalent) and a Proposed Development Policy Grant in the Amount of SDRR 226.8 Million (US$312.2 Million Equivalent) to the Federal Democratic Republic Of Ethiopia for the Second Ethiopia Growth and Competitiveness Programmatic Development Policy Financing. The World Bank: Second Ethiopia Growth and Competitiveness Programmatic
Tinsley, R.L. 2014. Best Management Practices for Grains – Koffele, Ethiopia. United States Agency for International Development.
U.S. Congress-House. 2016. Foreign Aid Transparency and Accountability Act OF 2016. HR 3766. 114th Congress Public Law 114–191—July 15, 2016. U.S. Government Information.

https://www.congress.gov/114/plaws/publ191/PLAW-114publ191.pdf
U.S. Department of State. 2010. 2010 World Food Prize Joint Press Release. Office of the Spokesman U.S. Department of State. Press Release June 16, 2010. https://2009-2017.state.gov/r/pa/prs/ps/2010/06/143204.htm
U.S. Department of State. 2015. Quadrennial Diplomacy and Development Review: Enduring Leadership in a Dynamic World. U.S. Department of State and U.S. Agency for International Development.
USAID. 2011. USAID Approach to Agricultural Research Under Feed the Future. United States Agency for International Development.
USAID. 2012. Agricultural Growth Program - Agribusiness and Market Development (AGP-AGP-AMDE) Project: Baseline Report, Household Survey. Submitted by ACDI/VOCA. USAID-Ethiopia
USAID. 2015. Capacity Development Strategy: Productive Safety Net Programme (PSNP 4). September 2015. https://www.usaid.gov/sites/default/files/2022-05/PSNP%20Capacity%20Development%20Strategy%20-%20Final_22%20Sept.pdf doc110
USAID. 2016a. Annual Meeting 2016 Horn of Africa Joint Planning Cell Meeting Report. Feed the Future: Building Capacity for African Agricultural Transformation Project (Africa Lead II) for the United States Agency for International Development. June 14th – 16th, 2016 – Radisson Blu, Addis Ababa, Ethiopia
USAID. 2016b. Semiannual Report to the Congress: *April 1–September 30, 2016* U.S. Agency for International Development Office of Inspector General
USAID. 2017. Real Impact: Ethiopia Productive Safety Net Program Plus https://2017-2020.usaid.gov/sites/default/files/documents/1865/PSNP_Plus_Real_Impact_Case_Example_030614_508.pdf
USAID. 2018a. Stocktaking of USAID/KEA Activities under the East Africa Feed the Future Multi-Year Strategy 2011-2015 (and 2016-2018): Report of a Stakeholder Validation Workshop. United States Agency for International Development.
USAID. 2018b. Private-Sector Engagement Policy. United States Agency for International Development.
USAID. 2019. Ethiopia: Country Development Cooperation Strategy 2011 – 2019. United States Agency for International Development
USAID. 2020. U.S. Foreign Assistance Website Consolidation Fact Sheet. U.S. Agency for International Development.
USAID. 2021. ADS Chapter 201: Program Cycle Operational Policy. United States Agency for International Development.
USAID. 2022a. Moving Toward a Model of Locally Led Development: FY 2022 Localization Progress Report. United States Agency for International Development. https://www.usaid.gov/sites/default/files/2023-06/FY%202022%20Localization%20Progress%20Report-June-12-23_vFINAL_1.pdf (d127)
USAID. 2022b. Integrating Local Knowledge in Development Programming. United States Agency for International Development. doc126
USAID. 2022c. Local Capacity Strengthening Policy. United States Agency for International Development. https://www.usaid.gov/local-capacity-strengthening-policy.
USAID. 2022. Final FY2022 Global Food Security Strategy (GFSS) Implementation Report. United States Agency for International Development.
USAID. 2023a. Locally Led Programs Indicator. United States Agency for International Development.
USAID. 2023b. Sector Environmental Guideline: Livestock Production. United States Agency for International Development.
USAID. 2023c. ADS Chapter 303: Grants and Cooperative Agreements to Non-Governmental Organizations. Functional Series 300 – Acquisition and Assistance. 10/24/2023 Partial Revision. United States Agency for International Development.

USAID. 2023. Locally Led Development Research. United States Agency for International Development.
USAID. 2024a. USAID-DuPont Partnership helps hundreds of thousands of Ethiopian farmers transform production and livelihoods. Press release: United States Agency for International Development.
USAID. 2024b. Locally Led Partnerships: What is Locally Led Development? United States Agency for International Development. https://www.usaid.gov/locally-led-partnerships#:~:text=Locally%20led%20development%20is%20the,make%20those%20solutions%20a%20reality
USAID. 2024c. USAID Development Data: Functional Series 500 – Management Services. The United States Agency for International Development. https://www.usaid.gov/about-us/agency-policy/series-500/579
USAID. 2024d. The Feed the Future Ethiopia Value Chain Activity. United States Agency for International Development. Foreignassistance.gov. accessed September 2024
USAID. 2024. Using The Locally Led Development Checklist to Shift Power Dynamics and Create True Partnership: Lessons Learned from the Local Works Malawi PAMODZI Project. The United States Agency for International Development. https://www.usaid.gov/locally-led-partnerships/locally-led-development-initiatives-stories/using-locally-led-development-checklist-shift-power-dynamics-create-true-partnership. Accessed September 2024.
USAID. 2024. USAID's Locally Led Development Initiatives: In the Local, Faith and Transformative Partnerships Hub. The United States Agency for International Development.
USAID. 2024. Local Capacity Strengthening Policy: Implementation Updates 2024. The United States Agency for International Development.
USAID. 2024. Locally Led Development Checklist: Facilitation Guide—Pilot Version. The United States Agency for International Development
USAID. 2024. Locally Led Development Checklist. The United States Agency for International Development. https://usaidlearninglab.org. Accessed September 1, 2024
USDA. 2020. Agricultural Biotechnology Annual. ET2019-0010. Global Agricultural Information Network (GAIN).