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Synthesizing the impact of armed conflicts on food security, livelihoods and social dynamics in Amhara region, Ethiopia

Jemal Hassen Muhyie[1], Desalegn Yayeh[1], Seblewongiel Ayenalem Kidanie[2*], Wubshet Asnake Metekia[3] and Temesgen Tilahun[1]

Abstract

Background   Armed conflicts cause food insecurity and famine by triggering the disruption and destruction of food systems. The conflict that erupted in northern Ethiopia lasted from 2020 to 2022 and affected millions of people. This resulted in severe damage to the food security, livelihoods and social dynamics of communities in the Amhara region.

Objective   This study synthesized the impact of the conflict in northern Ethiopia on food security, livelihoods and social dynamics livelihoods in there zones, South Wello, North Wello and North Shewa zones of the Amhara Region. The conflict management response and the scope of humanitarian assistance are also analyzed.

Methods   The study used a qualitative case study design. Primary data were collected through semi-structured interviews, focus group discussions and observation. Data were collected from local authorities, representatives of displaced people, government and non-government officials who responded to the crisis and from the community members who were directly affected by the conflict. The primary data were supplemented by a review of reports from credible secondary sources. The research used thematic and narrative analysis techniques to synthesize the impact of armed conflicts on food security, livelihoods, and social dynamics in Amhara region, Ethiopia.

Results   Over 5.5 million people found to be affected by acute food insecurity and over half a million people were internally displaced due to the Northern conflict. The monetary value of the damage caused by the armed conflict is estimated at $500 million, due to the damage to basic services and the loss of 14 million quintals of agricultural production. The conflict has disrupted food systems by damaging agricultural infrastructure, causing market distortions and causing food shortages. Livelihoods were threatened by the loss of jobs and the destruction of private and municipal property. The destruction of the basic infrastructure such as health, water and sanitation, agriculture and market institutions inevitably have lasting negative impacts on the overall productivity of the community. Communities' religious and traditional values, informal social networks are affected by the impact of armed conflict, complicating communities' reconstruction efforts.

Conclusion and recommendation   The northern armed conflict has significant negative impacts on the food security, livelihoods and social dynamics of people in the Amhara region. Recognizing the multiple impacts of

*Correspondence:
Seblewongiel Ayenalem Kidanie
seblewongiel@gmail.com

Full list of author information is available at the end of the article

conflict livelihoods in the region is a critical step in developing effective responses. Government, non-governmental organizations, and community-based institutions should play a crucial role in building community resilience and support post-conflict reconstruction efforts. Future studies can capitalize on this qualitative finding and could design a large scale assessment using quantified data to further provide evidence on post-conflict reconstruction efforts.

Keywords Armed conflict, Displacement, Humanitarian needs, Peace-building, Social dynamics

Introduction

Food security is a dimension that has a direct and complex relationship with conflict [1]. Globally, millions of people are affected by food insecurity in the context of protracted crisis [2]. According to Holleman et al. (2017), 19 countries that FAO classified as being in protracted food crisis also experienced conflict and violence [3]. In 2016, the number of undernourished people was 815 million. Of which 60% reside in nations where violent conflict is prevalent [4].

According to the Integrated Food Security Phase Classification (IPC), millions of Africans are at risk level-3 and above category classification that shows severe crisis, emergency or catastrophic phases [5]. The Africa Centre for Strategic Studies (2023) indicated that 149 million people were estimated to face acute food insecurity problem in 2023. 82% of the total food insecure people are from countries that are experiencing conflict. More than 66% of the 38 African nations that suffer from severe food insecurity are found in five conflict-affected nations, including Ethiopia [6]. This indicates that conflict is one of the most important drivers of food insecurity.

Armed conflicts directly cause food insecurity and starvation by damaging production and increasing the exposure and vulnerability of livelihoods to catastrophes. Conflict causes the disruption of food systems, the reduction of the farming population, and the destruction of basic infrastructure. Social vulnerability was further exacerbated by distortions in the market and price structures [7]. The level of violence under conflict conditions disrupted peaceful food production and distribution [1, 8]. In addition, loss of income from agricultural production erodes motivation to work, as people develop risk-averse behavior [9]. Furthermore, agricultural declines can lead to social inequalities [9, 10]. By hampering agricultural activities and hastening the displacement of communities, conflict can perpetuate food insecurity and overall poverty, which in turn breeds and perpetrates conditions of conflict. The scarcity of essential resources such as food can exacerbate social tensions, trigger competition among groups, and lead to social unrest [2]. Conflict constitutes an immediate threat to life by compromising access to education, health, and law-and-order services [11], in which women and children are the most affected social segments [12, 13].

Armed conflict can shatter the vitality of key social fabrics at the family and communal levels by placing pressure on crucial institutions with which people can mitigate occasions of stress and trauma [14]. Social connectedness within the family, peers, wider community, and nation could be severely impacted during conflict. For instance, a study by Woldehanna and his colleagues reported the impact of the 2020–2022 conflict in Ethiopia and highlighted the extensive effects of conflict on young people's social capital [13]. Armed conflict also restricts the free mobility of people, with strong bearings on their psycho-emotional wellbeing and wider social interactions [15, 16].

The conflict in northern Ethiopia began in the Tigray region in November 2020 and expanded to the Amhara and Afar regions in July 2021. Although the Federal Government of Ethiopia announced a unilateral ceasefire by June 2021 to allow farmers in Tigray to carryout agricultural activities, with the assumption of preventing serious food insecurity, the conflict was intensified in the Amhara and Afar regions. Armed forces from the Tigray region launched attacks back and occupied districts in the North Wello, South Wello, and South Gondar zones of the Amhara region. This had caused the death and displacement of civilians, which is considered to represent the greatest number of casualties in Ethiopia. The conflict brought about the killing of thousands of people and the displacement of millions. Over 60,000 people had sought refuge in Sudan and that approximately 4 million were internally displaced [12, 17, 18]. Conflict has multidimensional impacts on the overall livelihoods and well-being of affected communities.

Thus, North Wello, South Wello, and North Shewa zones in Amahra region that are known for higher rate of food insecurity and affected by recurrent drought, found in a double jeopardize situation due to the expansion of the conflict. Even in the normal days, these zones are facing various crisis related to land degradation, drought, and other climate related disasters. A study reported that 42% of households in North Wello were found food insecure. South Wello zone experiences recurrent drought coupled with fragmentation of farmland, poverty, land degradation and other climate-induced crisis which resulted in deteriorating food security situation [19]. Another study in South Wello zone found that 79.1% of households were food insecure [20]. It is one of the zones in Amhara region that is considered as food insecure and dependent on food aid [21]. On the other hand, North Shewa zone has been experiencing drought since 1981

which adversely affected food security situation [22]. These empirical evidences show that, despite the productive potential, these zones were affected by drought, and other calamities that deteriorate food security and livelihoods. Thus, the northern conflict further aggravated the existing situation and put the people in worse circumstances.

Conflict coupled with food insecurity affects different communities differently given the specific place of residence. Usually, resource competition has been frequently leading to the occurrence of conflict in various parts of Ethiopia. However, the conflict occurred in the northern Ethiopia is unique by its dynamics hence the conflict was caused by power struggle coupled with ethnic based violence. Moreover, the involvement of strongly armed multiple regional and national strongly armed forces such as the Federal force of Ethiopia, regional forces of the Tigray Libration Front, and Amhara regional forces and Militias contribute for the devastating impact. So far, the destructive impact of the conflict upon food security, livelihoods and social dynamics has not been well documented. Specifically, the impacts of the armed conflict on household food insecurity in Amhara region are not sufficiently reported. Thus, this study synthesized the impact of the expanded conflict in northern Ethiopia on food security, livelihoods, and social dynamics in the Amhara region. The study also assessed the conflict management response and scale of humanitarian assistance.

Definition of key concepts

An established definition of armed conflict is "….is a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in one calendar year" UCDP 2020 as cited by [15]. Accordingly, this study is focused on the northern Ethiopia armed conflict impact on Amhara region. The conflict was involved multiple armed actors such as the Federal force of Ethiopia, regional forces of the Tigray Libration Front, and Amhara regional forces and Militias.

Livelihoods is defined and adapted from the DFID sustainable livelihoods framework [23]. It comprises the capabilities, assets and activities required for a means of living, through interaction in the socio-cultural environment and the vulnerability context, to achieve better standard of living. It also embraces the social and family support mechanisms where people rely on for a living and protection during crisis period.

Food security, as defined by FAO [24] refers to a situation where people are able to obtain sufficient, nutritious, and culturally acceptable food to support the physical growth and mental development of the body. It also encompasses sustainable availability, access and proper utilization of food.

Social dynamics refer to social interactions, trust, and cooperation between individuals or groups. The study has explored how the conflict affected the intimate relationships, informal social networks, religious values of families and communities in the conflict affected areas.

Materials and methods

Description of the study area

This research was conducted in the Amhara region, which has been affected by the northen Ethiopia conflict that was erupted in 2020. The study was conducted in South Wello, North Wello and North Shewa areas of the region where significant displacement, food insecurity, and livelihood disruption were reported. According to CSA (2021), the population of North Wello zone was 1,936,006 (M = 969,963; F = 966,043); South Wello was 3,289,390 (M = 1,630,127; F = 1,659,263); and North Shewa was 2,393,877 (M = 1,207,839; F = 1,186,038). Figure 1 below depicts location of Amhara region in Ethiopia) [25].

Research approach and design

The research used a qualitative case study design to capture the experiences of communities in Amahra region affected by northern Ethiopia during 2020–2022.

Study Population and Sampling.

The study was conducted in the three cities of North Wello (Woldiya), South Wello (Harbu), and North Showa (Debre Birehan). The population of the cities is Woldiya (98,911), Harbu (240,778) and Debre Birhan (139,724) [25]. Purposive sampling was used to identify key informants and FGD respondents based on exposure to the conflict, experience and participation in response efforts during the conflict. Three focus group discussions (FGDs) were conducted, one FGD in each cities, with a total of 40 participants, with 12 discussants in each groups and 4 moderators. Among the participants 10 persons were from IDP representatives and 30 persons from affected communities who were not displaced. Participants were drawn from farmers, community leaders, conflict resolution committees, and youth representatives. Moreover, ten key informants, three from each zonal cities and one regional expert were interviewed from food security office, disaster and risk management office, natural resource management office, land administration office, and non-governmental development agents.

Data collection techniques and procedure

Semi-structured interview and group discussion guideline were developed based on review of literature to collect qualitative data from key informants and group discussants respectively (Attached as a supplementary
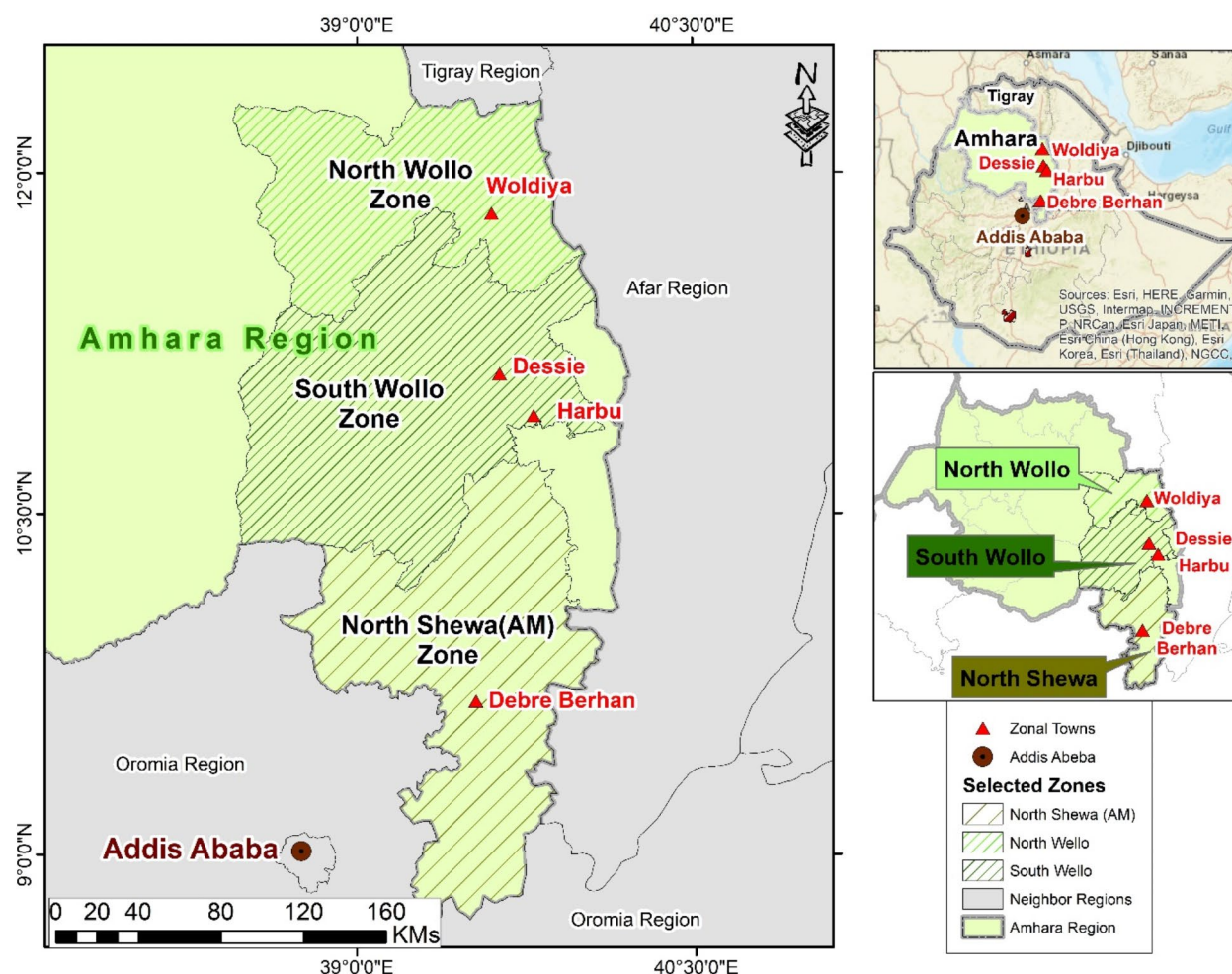
Fig. 1 Map of the study area; South Wello, North Wello and North Shewa zones of the Amhara region, Ethiopia. Source: adapted from CSA 2012 [26]

file). Data were collected over a period of six months from July to December 2023. The interviews and focus group discussions were conducted in the Amharic language. Data were collected by the researchers and trained facilitators. FGDs took an average of 90 min and key informant interviews took an average of 50 min. In addition to the face-to-face group discussions and interviews, phone-based interview was administered with one regional expert to collect data from key informants in inaccessible areas during data collection.

Techniques of data analysis

The research used thematic and narrative analysis techniques to organize and interpret the data based on identified themes and integrated with narrative analysis in order to capture stories as experienced and described by research participants [27]. Stages of thematic analysis, including familiarization with the data, coding, theme development, and reviewing themes were followed. The process was iterative, with themes highlighting the relationship between conflict, food security, livelihoods, and social dynamics refined as more data is analyzed. The findings are presented under the themes of destruction of agricultural products and PSNP services; impact of the armed conflict on food security and livelihoods of communities in Amhara region; impact of the conflict on infrastructure and basic services; and conflict management response and scale of humanitarian assistance.

To ensure the data trustworthiness of the study, the following strategies were employed. First data collection tools were prepared and administrated using the local language. Data collection tools consistence were checked by interviewing 2 community members and revision was made accordingly. After data collection, triangulations of the data were made by comparing data from different participants. For the sake of member checking 3 key informants were asked to review the interview transcripts and preliminary findings to ensure that their views are accurately capture. Additionally, maintaining a

detailed audit of the research process was maintained to ensure the study's trustworthiness.

Results and discussion

This study was conducted in three zones, South Wello, North Wello and North Shewa zones of the Amhara region, which were severely affected by the conflict under consideration. Even after the signing of a peace agreement between the Ethiopian government and the Tigray People's Liberation Front (TPLF) in South Africa in 2022, conflict still rages in the region. However, this study focuses primarily on the impact of the 2020–2022-armed conflict on food security and livelihoods of urban and rural areas in the three zones where the impact of the conflict was widespread. The following section presents the conflict's devastating impact on agricultural products, food security and livelihoods, community social dynamics, basic infrastructure, and the conflict management response and scale of humanitarian assistance.

Destruction of agricultural products and disruption of PSNP services

In 2021, Ethiopia projected to cultivate 13.2 million hectares of land and capture 374 million quintals of agricultural production. Although the Ministry of Agriculture estimated that 12.5 million hectares of land were cultivated during the harvest season, about 50% of the land remained uncultivated due to the conflict in eight zones of the Amhara region [28]. Even those who cultivated their farmland in Gondar and South Wello zones were unable to harvest their crops as they were displaced during the harvest season and left their homes fearing persecution and in search of safety.

An interview with an expert from directorate of Crop Development at the Ministry of Agriculture (MoA) on November 2021, indicated that the expansion of the armed conflict from Tigray to the Amhara region has cost the region estimated damage in Amount of $500 million in basic services. This damage includes an estimated loss of agricultural yields amounting to 14 million quintals. This damage not only impacts agricultural production, but also distorts the commodity market, demonstrating the multifaceted impact of the crisis on food availability and access [29]. A study by Muriuki et al. [1] in Ethiopia and Malawi, it was highlighted that disruption of agricultural activities was the main source of vulnerability as most households rely on agriculture for their livelihoods.

As eye witnessed discussants revealed "Farmers simply had no opportunity to harvest as their crops were destroyed prematurely and they were not allowed to engage in agricultural activities." In addition, the interview with the natural resource management officer showed that 70% of sesame production is expected to come from conflict areas, which could have a negative impact on the country's economy. Regardless of the situation of food availability in the central market, small farmers are more affected as families do not have food until the next harvest.

As the interview with Productive Safety-Net Program (PSNP) revealed, farmers who rely on PSNP were affected by the disruption of food distribution due to safety concerns as well as the looting of resources at the PSNP warehouse. The most important feature in this context is the looting of food aid stored in Kombolcha. FGD discussants shared that even after the eviction of TPLF forces from most of the South and North Wello zones of the Amhara region, thousands of people remain displaced and it is not possible for these vulnerable communities to purchase food as they have no means of income; As their livelihoods are destroyed and stolen, they are dependent on limited assistance.

Impact of the armed conflict on food security and livelihoods of communities

Ethiopia has faced one of its worst crises since 2016 and is in greatest need of aid in 2021. In northern Ethiopia alone, an estimated 5.5 million people suffer from acute food insecurity. The country faced numerous threats, exacerbated by desert locust infestations and the COVID-19 pandemic. The armed conflict that began in the Tigray region spread to neighboring Amhara and Afar regions, displacing more than half a million people. This has led to disruption of livelihoods, including agriculture, which is responsible for the resulting devastating food insecurity [30].

The FAO's Global Information and Early Armed Conflict System on Food and Agriculture (GIEWS) [31] stated that the Amhara region accounts for 30% of national grain production. According to the key informant from BOA, the conflict has had a significant impact at both regional and national levels, affecting production, displacing or killing people and destroying basic livelihoods. FGD discussants shared that during the conflict, livestock was the main target, with animals being looted and deliberately killed.

As the expert from office of food security in North Wello shared, worsening food insecurity posed greater risks to vulnerable communities such as pregnant and nursing mothers, the elderly and children under five. The risk of malnutrition is increasing so much that these vulnerable groups are exposed to opportunistic diseases such as cholera and typhoid. These factors further worsen malnutrition because the body's immune system is weakened [32]. A study prelude to the testimony on the prevalence and determinants of malnutrition among pregnant and lactating in Ethiopia's war-affected areas of North Gondar Zone, Ethiopia [33]. According to this

study, more than one-third (34.3%) of pregnant and lactating women were severely malnourished.

As to FGDs and key informants from disaster and risk management office, livestock, agricultural equipment and grain storage facilities are looted in many conflict areas. Many households that rely on labor for their livelihoods are affected as most productive economic activities have been damaged by the conflict. The harvest season is below expected average as agricultural activities are affected by farmers being displaced from their farmlands due to the frustrating environment that the conflict has created for agricultural activities.

Hence the conflict was occurred during the harvest season in the Amhara region, communities were forced to flee their homes and abandon their ripe crops almost at the harvest stage. Group discussants in North Shewa and South Wello said that "the armed forces were consuming immature crops directly from the farm. and the remaining were damaged after because farmers were unable to harvest the crops on time." As the expert from disaster and risk management office explained "thousands of farmers, whose food and livelihoods depend exclusively on agriculture, were displaced to urban areas such as the towns of Dessie and Kombolcha and forced to go for days without food aid."

Rain-fed farming is dominant in the region, so farmers would take some time to start harvesting in the next few months. This requires the security of their home villages from the threat of armed conflict to ensure the return and resettlement of life back home. An expert from bureau of agriculture said that "given the looting of food supplies in Amhara by TPLF forces and the fact that the international community, including humanitarian actors, had given little attention to the dire situation for several months, there was no sufficient food and cash support to meet the food needs of the displaced community."

Impact of the conflict in the asset and local economy

The armed conflict also resulted in immense destruction of human capital, public and private assets, including the killing of livestock, damage of agricultural land, looting and burning of agricultural equipment, damage to basic services, as well as indirect impacts that have a negative impact on the market. For example, oxen are one of the very important farm animals in the farming community. As group discussants witnessed, "When parts of South Wello, North Wello, North Shewa areas were controlled by TPLF forces, farm animals were deliberately killed to break the morale of farmers who resisted the occupation. In addition, they slaughter farmers' livestock to feed their militias." The incident, in addition to its short-term impact in terms of loss of vital assets, will create a bottleneck for small farmers as cattle are important for plowing agricultural land.

A key informant from North Wello said that the forces used to come to farmhouses or local markets to ask for livestock, including goats, sheep and oxen, for a lot of money. The farmers had no choice between selling or withdrawing from the transaction. Victim households had only one choice: sell assets at a price set by armed groups. However, the armed groups came the next day and demanded the same farmer return the money they had received. As interviews with key informants showed, during the period when TPLF troops controlled most of the Wello area, the group used the old currency to purchase food and non-food items from residents of *Genete* town in the South Wello zone. This has left small businesses economically damaged.

A key informant who witnessed the tragic consequences of the armed conflict said that the armed forces forcibly asked small business owners for food and non-food items without paying for them. In most cases, they even looted the shops mercilessly and physically and mentally abused the shop owners. The groups and individuals involved in such actions were not only those officially involved in the armed conflict, but also opportunistic robbers who stole public and private property. A similar study from the Tigray region [7] reported that high levels of food insecurity may be due to a lack of physical and economic access to sufficient food in the communities studied due to armed conflict and siege. Due to the high cost of food and the persistent high levels of war-related poverty, food remains out of reach for people.

Supported finding also showed that farmers may be forced to abandon their fields, reducing food production and ultimately affecting access to adequate nutrition and food supplies [1]. In such situations, basic infrastructures damaged including health, farmer field schools as well as livestock and agricultural products could be stolen, warehouses destroyed and distribution networks set up. This has a direct and negative impact on food transport and distribution networks and farmers and their families health [34].

Impact of the conflict on infrastructure and basic services

Affected by this conflict are agricultural research institutions whose mission is to develop and multiply improved agricultural technologies to improve food security. In addition, district and zonal bureaus of agriculture and disaster and risk management, veterinary services were also among the basic private and public facilities affected. This will impact the vitality of the region's agricultural and livestock sectors in the coming years in the short and long term [31]. In order to renovate them and make them functional again, very large investments are required. The required investments will not be easy to secure as other essential services have been destroyed by armed conflict,

such as schools, health facilities and industrial parks. In this case, agricultural research institutions, which form the basic infrastructures for the development and dissemination of technologies to increase productivity and production, will suffer for the foreseeable future, which will affect the revival of crop and animal production.

The market system was disrupted. Access to the market was severely affected. In some cases, although there was access to markets, there were supply shortages, inadequate access to cash as livelihoods were destroyed, and the armed forces' mishandling of market forces affected the functionality of market centers. Communities were also not interested in going to the market for fear of attacks that could lead to injuries, killings and abuse. Food accessibility has been significantly affected by the destruction and restriction of local open markets. As FGDs revealed "the TPLF combatants had laid restrictions upon communities not to go to open markets and make exchange of goods. They would also come to the markets and collect the money from farmers who have sold their crops and livestock".

Water and sanitation infrastructure was damaged by this conflict. Most of these facilities are out of service for several reasons. The main causes include looting, intentional damage and lack of maintenance services during the period of conflict. In addition, the health system has been under serious strain as health facilities have been looted and damaged and health workers have left the workplace for fear of persecution, where disease is prevalent and children, mothers and other vulnerable community members are unable to access health services. These factors impact the utilization component of food security, as disease and poor nutritional intake place vulnerable groups at risk of malnutrition. The damage to schools, market and communication facilities, roads, health, and water and sanitation facilities directly and indirectly impact food security and livelihoods of communities by affecting the ability of communities in the affected area to access basic services.

Impact of armed conflict on social dynamics

The armed conflict and subsequent violence led to a persistent damage of social dynamics such as the interaction, trust, cooperation within the affected communities and with others. The psychological damage that these communities have to endure over a long period of time impacted their trust towards the government and institutions. In particular, as the expert from disaster and risk management office said, internally displaced people faced the most tragic consequences of armed conflict due to a lack of meaningful support from the government and aid organizations. IDPs use negative coping mechanisms such as begging for food, which is culturally sensitive and affects their sense of dignity.

Social and religious values have also been undermined as a result of armed conflicts. FGDs reported that some fertile lands were used as cemeteries. This will make matters even more complex as cultivation in cemeteries is considered culturally inappropriate in communities in the Amhara region. This impacts households as means of production are reduced where food availability is at risk. Fetching water and growing crops in a cemetery are considered culturally unacceptable in the region. Communities in the Amhara region often choose designated religious areas as cemeteries. The purpose of the culture in the region is to open cemeteries only for the burial of corpses.

One of the effects of armed conflict is the disruption of the local interaction mechanisms of the communities. Moreover, the deliberate network blockages and the lack of access to communication channels affected the exchange of goods and services. Communication often helps poor people by facilitating the social interaction that would have enabled poor people to deal with the negative effects of the crisis. It would allow the free flow of information across the armed forces, identifying markets that are functioning well, the safest routes to market, and relatives seeking refuge and comfort with relatives and friends.

The traditional social support mechanisms that Ethiopians have demonstrated for decades were the main sources of support for displaced communities in various IDP centers during the escalation of the armed conflict. However, such traditional support mechanisms were disrupted by the immense displacement and lack of resources.

The interconnectedness between conflict, food security, livelihoods, and social dynamics

In this study, the relationship between conflict, food security, livelihoods, and social dynamics is found to intricate and interconnected, with each element influencing and being influenced by the others. As the interconnectedness of conflict, food insecure, livelihoods, and social dynamics revealed in this study; these elements created feedback loops where each factor reinforced or exacerbated the others. Conflict can led to food insecurity, which in turn fuelled social tensions and further conflict.

The conflict in the disrupted the food production, distribution, and access, and lead to displacement, destruction of infrastructure, and loss of livelihoods, which in turn resulting in food insecurity. The production of agriculture was disrupted by the conflict, affecting crops, livestock, and access to markets. This disruption led to food shortages and increased prices.

Regarding to the relationship between food security and livelihoods, hence many people were dependent on

agriculture and related activities for their livelihoods, food insecurity aroused when these livelihoods were disrupted, affecting income and access to food. Cyclical relationship was unfolded when food insecurity had further weakened livelihoods by reducing productivity and income, creating a cycle that is hard to break without external assistance.

With respect to the relationship between livelihoods and social dynamics, prior to the conflict, livelihoods used to play a crucial role in shaping social dynamics within communities. Economic stability had its role in strengthening the social cohesion and resilience among the studied communities. However, vulnerability of livelihoods due to the conflict led to social tensions, competition for resources, and increased vulnerability to external shocks. Further, lack of grievance system and lack of opportunities to recover and rehabilitate from the conflict contributed to the disruption of the social dynamics. This in turn has caused social dynamics within communities to further exacerbated or mitigated conflict risks. Weak social networks and community cohesion contributed to affect the conflict resolution and peacebuilding efforts.

In conclusion, the relationship between conflict, food security, livelihoods, and social dynamics is complex and multifaceted. Addressing one aspect without considering its impact on the others may not lead to sustainable solutions. Effective interventions require a comprehensive understanding of these interconnections and a multidimensional approach to promote stability, resilience, and sustainable development.

Conflict management response and scale of humanitarian assistance

At the start of the displacement, when thousands of people fled the South Wello, North Wello and North Shewa zones, neither the government nor humanitarian organizations provided assistance. Displaced people use their social networks to access basic needs through family and friend networks and unorganized volunteer assistance from the host community. However, it took several months before organized aid failed to sufficiently reach the displaced communities. It was reported that relevant public and humanitarian actors did not fully appreciate the scale of the crisis and chose to politicize the need for humanitarian assistance. Through several advocacy efforts, humanitarian assistance, including food and non-food items, subsequently began to reach displaced communities in the cities where the IDPs were located. Although humanitarian assistance was provided in small quantities compared to needs, the aid only benefited a small proportion of those in need. A key respondent stated that the level of aid does not take into account the scale of the crisis or the psychological and material

damage caused by the armed conflict. With poor harvests, limited humanitarian aid, no functioning market system, and restriction of movement, one can imagine the devastating situation that communities have suffered for months.

Conclusion

The armed conflict in northern Ethiopia caused severe damage to food security, livelihoods and the social dynamics of the communities in Amhara region. The conflicts has reduced the availability, accessibility, use and stability of food and resulted in the displacement of people. As a result, farmers missed important farming seasons. In areas where farmers chose not to leave their homes, there were movement restrictions imposed by military groups that result in farmers being unable to carry out agricultural activities. The destruction and looting of basic agricultural infrastructures, jeopardized the four pillars of food security and impacted the long term community productivity. The use of old currencies, the frustration of market participants and the looting of productive assets have contributed to limiting food accessibility. The damage also results in a breakdown of the community's social assets such as trust, cooperation, and interaction. This has deteriorated the social dynamics that communities in Ethiopia used to live together peacefully. Given the conflict and drought-related disasters Ethiopia is facing, government capacity was too limited to provide sufficient support. Moreover, the limited recognition and attention paid by aid agencies to the crisis by the international community contributed on the severity of the crisis. This research can provide an insight about the impacts of the conflict and be used as a wakeup call for authorities and community structures to implement measures to minimize the adverse impact of the current wave of conflict and in reconstruction efforts for those affected previously.

Recommendations

Addressing food insecurity caused by conflict is a matter of fundamental human rights. Given the adversities the Amhara region faced in 2020–2022 and the complex impact of armed conflict on livelihoods, food security, and social dynamics of the affected communities, short- and long-term responses are required. The government and humanitarian organizations should recognize the enormous consequences of the armed conflict in the Amhara region and participate in providing lifesaving and recovery measures. While it is important to meet basic needs, investments in long-term measures to strengthen systems and build resilience are recommended. It is recommended that assistance should be based on an adequate understanding of the damage and the needs of the affected communities. Small farmers

should be supported to restore their productivity in agricultural production. It is also important to restore basic infrastructure through post-war reconstruction efforts. The government should take up the leading role in coordinating recovery and rehabilitation initiatives by mobilizing non-governmental organizations, the donor community, and community-based institutions to play a crucial role in building community resilience and support post-conflict reconstruction efforts as a matter of priority.

Recently, the second wave of armed conflict is also ongoing in Amahra region due which could limit the implementation, provision of adequate, safe and nutritious food to affected communities. The federal government and all armed groups involved in the conflict must be aware of the short and long-term impacts of the conflict on food security and livelihoods in northern Ethiopia. In order to understand the various consequences, they should start the peace dialogue as soon as possible.

Limitation of the study
This is a qualitative case study that analyzed the impact of conflict on three interlinked themes; food security, livelihood and social dynamics, from purposively selected few samples. Hence the damage of the conflict was devastating, a large scale study is recommended with some in depth and quantifying the gross impact on the community and assessing the success of post-conflict reconstruction initiatives by relevant stakeholders.

Appendix
Appendix 1: Checklist for data collection to understand the impact of the northern Ethiopia conflict on food security and livelihoods in Amhara region

Information to participants and consent for participation: this research entitled "*Synthesizing the Impact of Armed Conflict on Food Security, Livelihoods, and Social Dynamics in Amhara, Ethiopia*" is to understand the impact of the conflict on food security and livelihoods in your area. In addition, it assesses the impact of the conflict on basic services and social structures in the community. The research is for academic purpose which may also be used by policy makers and implementers once produced and publicized. The researcher confirms that the identity of interviewees will remain anonymous and will not be publicize.Therefore, I appreciate if you could provide realistic information which are accurate to the best of your knowledge in order to assist in producing reliable research paper.The researcher will not make any payment to research participants nor received any funding for the work from Government or any other entities. Therefore, your voluntary participation to the research is appreciated.

In light of the above, do you understand the purpose of the research and are you willing to participate by providing data? ☐Yes ☐No

- How local market is affected by the conflict? What supply and demand trends you have observed after the conflict? Has the impact of the conflict on market activities led to price escalation, and shortage of supply? Please elaborate.
- What are the major public and basic service infrastructures damaged or affected by the conflict? What is the implication of these damages on food security and livelihoods? *(hint: infrastructure could cover Agricultural research, Communication networks, Health facilities, Water systems, Electricity facilities, and others)*
- Could you provide the implication of the conflict on livelihoods activities? What was the impact of the conflict on business activities in general and how it affected them? *(hint: Job opportunities, Movement in search of livelihoods, and Banking services)*
- How do you understand the negative consequence of the conflict on the overall food system considering production, storage and distribution, retail and wholesaling, processing and consumption components of the food system?
- What are the human damages in terms of injury and death? How this affect poor households related to food security and livelihoods activities?
- Please provide how agricultural activities were affected during the onset of the conflict?Did this result in displacement?
- What were the different coping mechanisms deployed by affected communities?
- What kind of assistance from Government and NGOs was provided to displaced people at the IDP collection sites and people who are stranded by the conflict at the place of residence?
- How this affected social dynamics and fabrics within the affected community and what were the different rolls of social support mechanisms to manage and mitigate the impact of the conflict on food security and livelihoods?
- What do you think is the long-term consequence of the conflict on food security and livelihoods?
- What would you recommend ensuring food security and livelihoods are further deteriorated?

Thanks for your willingness and valuable contribution to the study!

Appendix 2. Profile of Key Informant and FGD Participants

Summary by age category	FGD	KII
18–29	12	0
30–49	12	4
50–69	14	5
70+	2	1
Total	40	10
Summary by gender	FGD	KII
Male	23	6
Female	17	4
Total	40	10
Summary by displacement status	FGD	KII
IDP representatives	10	N/A
Community mmebers (not displaced)	30	N/A
Total	40	N/A
KII summary by profession/experience category	FGD	KII
Zonal food security and disaster prevention office (DRM Taskforce members)	N/A	2
Land administration office	N/A	1
Non-governmental Organizations staff	N/A	4
Development agents	N/A	2
Community elder	N/A	1
Total	N/A	10

Abbreviations

FAO	Food and Agriculture Organization of the UN
FEWS NET	Famine early armed conflict systems network
GIEWS	Global Information and Early-Armed Conflict System on Food and Agriculture
ICRC	International Committee of the Red Cross
IDPs	Internally Displaced Persons
IFRC	International Federation for Red Cross
MOA	Ministry of Agriculture
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PSNP	Productive Safety-Net Programme
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations International Children's Emergency Fund
WFP	World Food Programme

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s40795-025-01013-5.

Supplementary Material 1

Data availability

Details of the qualitaitve data is provided in the manuscript. Transcription files could be provided upon request to the corresponding author, Seblewongiel Kidanie at email: seblewongiel@gmail.com.

Declarations

Ethics approval and consent

The study is conducted in accordance with the Declaration of Helsinki. The research proposal including the data collection tools (interview and group discussion guides), were submitted to the Research Ethics Committee of the Centre for Food Security Studies at Addis Ababa University. Informed consent of participants was taken by clearly outlines the purpose of the study, procedures, risks, confidentiality measures, and the voluntary nature of participation. All data collected is stored securely and identifiable information was removed from data before analysis to protect participants' identities. The data is presented in a manner that respects participant confidentiality and adheres to ethical guidelines.

Consent for publication

This paper doesn't include publication of identifying images or other personal or clinical details of participants, thus consent for publication is "Not Applicable."

Competing interests

The authors declare no competing interests.

Author details

[1]Centre for Food Security Studies, College of Development Studies, Addis Ababa University, Addis Ababa, Ethiopia
[2]Department of Social Work, Bahir Dar University, Bahir Dar, Ethiopia
[3]Ethiopian Ministry of Agriculture, Food and Nutrition Office, Addis Ababa, Ethiopia

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