

TPLF'S VIRULENT HATRED AND ITS GENOCIDAL CRIME AGAINST THE AMHARA PEOPLE

RESEARCH RESULT

February 2023

Bahir-Dar, Ethiopia

Copyright © Forum for Higher Education Institutes In Amhara Region. All rights reserved

Forum for Higher Education Institutions in Amhara Region - First Edition

ISBN 978-99944-3-742-9

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the authors.

Cover and Interior Designer: Abebe Worku

Mob: +251983321193

E-mail: abebewgs2016@gmail.com

Citation: Adane et al. (2022) TPLF's Virulent Hatred and its
Genocidal Crime Against the Amhara People. 1st ed. Forum for
Higher Education Institutions in Amhara Region

Authors:

Dr. Adane Tesfaye (Bahir-Dar University) • Dr. Asmare Dejen (Wollo University) • Dr.
Abiyot Yenealem (Bahir-Dar University) • Dr. Amare Tariku (University of Gondar) • Mr.
Andualem Eshete (University of Gondar) • Dr. Aragaw Eshetu (University of Gondar) • Dr.
Haile Mekonnen (Bahir-Dar University) • Dr. Kasu Mehari (Wollo University) • Dr. Deneke
Bitew (Bahir-Dar University) • Mr. Mulat Kiros (Amhara National Regional State) • Mr. Amare
Dagnew (Ethiopian statistics Service Bahir Dar Branch)

Memorial

May this book be a memorial to the innocent Amhara's who were killed unjustly without any participation in the war, who were disabled, forced to rape, and suffered humanitarian crises and psychological damage

Table of Contents

Acknowledgment	i
Abstract.....	ii
Chapter 1.....	1
1.1. Background and Justification	1
1.2. Objectives of the Study	2
1.3. The Importance and Significance of the Study	3
1.4. Scope of the Study	3
1.5. Limitations of the Study.....	4
Chapter 2	5
Methodology of the Study	5
2.1. Description of the Study Areas.....	5
2.2. Multilateral Involvement in the Study.....	6
2.3. Design of the Study	7
2.4. Scope of the Study and Sampling Techniques.....	7
2.4.1. Data Management and Analysis	8
2.4.2. Sampling Methods.....	10
2.4.3. Data Collection Methods	10
2.4.4. Data Collection Procedures	10
2.5. Method of Data Analysis	11
2.6. Ethical Considerations	11
Chapter 3.....	12
Materials and Infrastructure Damage Due to Armed Invasion of TPLF Invading Forces	12
3.1. Damages on the Mental, Psychological, and Social	12
3.1.1. Mental Health and Psychological Damages	13
3.1.2. Post-Traumatic Stress Disorder (PTSD)	20
3.1.3. Damage to Social Dynamics and Interaction.....	28
3.1.4. Mental Health Problems and Humanitarian Crises Accompanying Psychological Breakdown.....	31

3.2.	Damage Extent and Magnitude of Humanitarian Crisis.....	39
3.2.1.	The Overall Damage the Invasion Incurred at The Household Level.....	39
3.2.2.	Major Human Right Violations and Crimes Against Humanity	43
3.2.3.	Incidents of Humanitarian Damage in Terms of Different Variables	44
3.3.	Damage to Materials and Infrastructures	94
3.3.1.	Individual and Household Level Material Damages	94
3.3.2.	Damage to Governmental Institutions and Vehicles	108
3.3.3.	Destruction of Non-Governmental Organizations.....	122
3.3.4.	Destruction TPLF Armed Invasion in the Education Sector	122
3.3.5.	Destruction of Agriculture During TPLF Armed Invasion.....	133
3.3.6.	Damage of Agricultural Institutions	135
3.3.7.	Destruction of Irrigation Development Sector	206
3.3.8.	Destructions in Health Sector	207
3.3.9.	Destruction Occurred in the Work and Training Sector.....	218
3.3.10.	Destruction Cost in Industrial Sectors.....	226
3.3.11.	Destruction Occurred in Investment Sectors.....	234
3.3.12.	Damages Costs in the Tourism Sector	236
3.3.13.	Destruction Cost of Religious Institutions	238
3.3.14.	Damage to Roads and Bridges.....	240
3.3.15.	Destruction of Drinking Water and Water Infrastructure	242
3.3.16.	Damage on the Business and Economic Development Sector.....	249
Chapter 4.....	253	
Conclusion and Recommendations.....	253	
4.1.	Conclusion	253
4.2.	Recommendations	254
4.2.1.	To Help the Victims Recover From the Damage Done to His Psychology, Mental Health and Social Interaction	255
4.2.2.	Recovering or Re-Establishing Material Damages.....	258
References	262	
Annex 1	264	
Annex 2	265	

Acknowledgment

THE TEN FEDERAL UNIVERSITIES operationalizing in the Amhara National Regional State (ANRS) with their forum) in collaboration with concerned ANRS sector offices and Ethiopian Statistical Service (ESS), have made it possible to document this unimaginable violence, cruelty, and abuse, as well as the act of Amahra race cleansing, by conducting research in this way so that it can be a lesson edlearned documentation and used for historians and the next generation. Thanks to t to these institutes for their important contribution to documenting andsharing the right and timely reliable data.

In the process of data collection and preparation of this research output, Mr. Seyum Mekonnen, the social cluster coordinator at the rank of deputy president of the regional\government, deserved great thanks for his daily monitoring and help that made the study successful. We also give \thanks to Mr. Anmut Belete, Head of the Planning and Development Bureau of the ANRS, who facilitated the field workon the regional government side to make the research results successful at the regional level.

Finally, Dr. Abate Getahun, General Manager of ARRFO, and Dr. Ayenew Belay, Operation and administrative coordinator ARRFO ., deserve to thank for their tireless efforts develop the book and take its current form. Last but not lest the Forum for Higher Education Institutions in Amhara Region appreciates ARRFO and ANRS finance and development bureau for sponsoring the translation of the document from Amharice to English version.

Abstract

THE 1976 MANIFESTO OF the Tigray People Liberation Front (TPLF) publicly declared that the people of Amhara were its arch-enemy. As a result of this political declaration, the TPLF-dominated coalition designed and implemented a shrewd policy and strategy to see the fruits of discord and hate on the Ethiopian people in general and on the people of Amhara in particular. Immediately after being forced to give up their administrative powers due to popular protests in 2018, TPLF started mobilizing the Tigrayan people for an invasion and attacked the Northern military Command on the evening of November 03, 2020, with an illusion that it would easily prevail in an armed confrontation. On the same day, the invading forces also operationalized a full-scale offensive in the central Gondar Administrative Zone in a town called Qerakir in the Amhara National Regional State. Equally as conniving, the TPLF began to churn out a misinformation campaign to get the backup of the international community.

After the federal government of Ethiopia declared a unilateral ceasefire and secession of hostilities on June 2021, the Tigrayan invading forces disregarded the olive branch. They invaded part of the Amhara and Afar National Regional States, more specifically, in the Amhara National Regional State, where this research focused, seven zonal administrations and one city administration of the Amhara National Regional State were ultimately left with humanitarian, material, and psychological catastrophe and internal scars that cannot be measured. As a result of this invasion, 1,411,313 were displaced and stayed in temporary shelters, and 10,824,143 civilians became severely malnourished.

In line with the above-stated realities, this large-scale study was, aimed to uncover the humanitarian crisis, the invasion incurred, the material loss, and the economic burden of the people of Amhara and their suffering. This scientific document is intended to be used as a baseline. Furthermore, it aims to direct or influence the policy decisions of government and non-governmental agencies, to build awareness for the international community about the results of the humanitarian crisis, to bring focus on

the psychological scar and material loss incurred on the people of Amhara, and to enlighten the scientific community.

The large-scale study has shown that, due to the Tigrayan invading forces, people living in those Seven zonal administrations and one city administration of Amhara National Regional State suffered tremendously and have experienced immense humanitarian, economic, and psychological losses. The hostile forces from Tigray were indiscriminate in their shelling of innocent people. The research has gained evidence that suggests that hundreds of thousands of innocent civilians were killed (which constitutes signs of genocide and crimes against humanity). In addition to this, physical abuse and rape were carried out in a systematic manner. Especially many women and adolescent girls were brutalized and taken advantage of during the aforementioned time. In many instances, married women were raped in front of their husbands, raped in front of their priests, and raped in front of their family members, who aimed at ultimately humiliating and inflicting maximum suffering and psychological trauma. This study has also shown that many women were gang-raped by groups of invading forces with complete disregard for their morals and dignity. This was a regular occurrence.

The objectives of the study were:

Investigate and document the total damage that occurred in psychosocial, humanity crises, materials, and infrastructures of the invaded areas Amhara National Regional States and communicate the reality of the incident to the global community; and determine and catalog the specific kind and magnitude of the humanitarian crisis, psychological terror, decimated public infrastructures, and material loss that the invading forces incurred at both individual and organizational levels;

The study has the following significance

- Help the Amhara people to rehabilitate resiliently from the psychological and humanitarian trauma, materials, and infrastructures damage, inform policymakers in setting the strategies to deter such invasions from happening in the future and serve as a baseline for any future studies;
- Help to raise awareness to the international community of the holistic crisis that the people of Amhara incurred as the result of the Tigrayan

invading forces and ;

- Help to have a database regarding the kind and magnitude of the and psychological damage of the humanitarian, psychological, and materials and infrastructures.

The scopes of the study were- The study was conducted in Seven administrative zones and one city administration of the Amhara National Regional States, which were under the invasion of the Tigrayan forces, constituting in total 87 woredas and 945 Kebeles from December 16, 2021, until May 8, 2022. Different professionals were involved in conducting and facilitating the research work, including the Amhara Public Federal Universities Forum, the Ethiopian statistics agency, and other concerned regional government organs, to mention a few.

The was conducted using the census method. Subsequently, ranges of quantifiable data were collected from the entire population at the household level and analyzed accordingly via a quantitative approach. However, apart from the census-based quantitative method, the study also employed qualitative methods intending to be acquainted with the nature and type of the damage caused, particularly concerning the violation of human rights and related atrocities. To this end, the study employed in-depth interviews (key informant interviews), checklists, Focus Group Discussions (FGDs), and field observation data coupled with photos and videos to obtain the qualitative data.

The census was done only in the areas (North and South Wollo, Oromo especial zone, North Shewa, North and South Gondar, and Waghimra zone of the Amhara region) liberated from the Tigrayan invading forces (constituting 87 woredas and 945 Kebeles). Thus, this study didn't cover the area under occupation in those eight zonal administrations).

Additionally, the results of this study did not include the damage incurred on the federal institutions, such as financial institutions, ukombucha dry ports, train stations, aviation, and airport facilities. The civilian logistical cars and trucks robbed by the invading forces were not covered.

As this study couldn't set the price, the to historical and cultural heritage damage were not calculated.

The prices and costs of the endemic animals killed or the overall value of the parks was not included. Last, but not the least, the overall budgetary costs the Amhara regional state used to avert the invasion was not part of

this study.

The Major findings of the study: The damage caused on the Amhara people due to the invasion can be widely categorized as humanitarian, material and psychological, and are identified at both individual and institutional levels. Despite the overall economic and psychological damages generally incurred by the Amhara people, in total 837, 687 (424,206 men and 413,471 women) innocent civilians were directly affected by the Tigray aggressor. When we look at the rate in terms of sex and age, among the total victims, 449,655 are adults (18 – 59 years old), 312, 531 are children (<18 years old) women, and 75501 are elders (>59 years old).

The following sub-sections briefly explain the type, nature, and magnitude of the specific damages incurred by the Amhara people due to the aggression according to the aforementioned categories of damage: humanitarian, psychological and material.

Due to the large-scale invasion of the Tigray invading force, the Amhara people incurred a myriad of humanitarian damages. Crimes against humanity and war crimes have been committed in the occupied territories, where a total of 240,236 persons were identified to be the subject of brutal human rights violations. Killings of civilians, minor and major bodily/physical injuries, rape, beating/torturing, forced labor (forcing civilians to make fortifications or forts for defense as well as loading the same with guns and equipment in war time), abduction or disappearance of persons, use of local people as a human shield, ethnic-based abuses and insults, intimidations, and the like were evidenced.

When the Tigrayan invading forces invaded lands in the Amhara National Regional State, it systematically kidnapped 7,462 individuals (4622 in urban areas and 2840 in rural areas) whose whereabouts were unknown and still to this day have not been discovered.

Looking at the extent of the damage separately: for example, some 7003 civilians were killed. Of those killed, 2815 were direct shot, 579 were beaten to death, 1541 due to medicine absence and 271 died of starvation. According to the census data, 1,797 persons were victims of genocide. Similarly, the qualitative data obtained from field observation, in-depth interviews, and focus group discussions reaffirmed the existence of these acts of genocide. Chena, Kewot, (two mass graves), Menz Gera (two mass graves), Antsokiya Gemza (six mass graves), Agamisa, Kombolicha, and Merssa are found to be the sites of their genocidal crimes.

Rape: Raping local residents was among the major war crimes committed by the Tigray invading forces in relation to which 1,782 persons were reported as victims. The existence of rape incidents committed by a man against another man (29 men were victims of sodomy), group rape, and rapes made against religious leaders wife's and before one's own spouse or family particularly exhibit the extremely immoral nature and inherent cruelty of the Tigray invading force. It particularly shows how far this force may go to humiliate and embarrass the Amhara people as an expression of its old-age hatred.

Tigrayan invading forces have attacked the moral and societal fabric of the Amhara people. This large-scale study has shown that there were widespread attempts to create a horrifying and chaotic atmosphere by exposing the people to war, using them as human shields, having them suffer agonizing deaths, having them forcibly displaced, creating family separation, and contributing to their overall despair. All these were done to degrade the people of the aforementioned areas. All of these have led to mental health issues that will have long-lasting cognitive complications, according to some moderate predictions. In the census, it was shown that 429,443 people were living with psychological and mental scars. Among those psychological survivors, 73.6% of them exhibited two or more psychological problems. For example, 70% of the survivors suffered from anxiety, 64% from depression, 55% from hopelessness, 50% from post-traumatic stress disorder, and 34% from suicidal tendencies. Among the people with post-traumatic stress disorder (PTSD) (total being 213,694), 128,622 (which is 87%) have had either attempted suicide or suicidal intentions. In general, this study has shown that the people of Amhara suffered emotionally, mentally, and behavior-wise, which will have a long-lasting effect.

During the Tigray invading forces expansion, a number of household assets, government and non-governmental organizations, private organizations, companies, and infrastructure were outright destroyed. According to the finding's calculations, the damage in monetary value 291,194,267,044 birrs. Among these damages, an estimated 3,293,323,178 birr is recorded from residence house damage, 53, 727 671 319 birrs recorded from crop loss and damage, 1,239 909 627 recorded from livestock damage and losses, and over 232,933,292,920 birrs is recorded on governmental institutions and infrastructural damage. The extent of the devastation is widespread and indiscriminate. Plainly speaking, people have lost their livelihoods, and the entire region has been utterly ruined.

Chapter 1

1.1. Background and Justification

THE AMHARA NATIONAL REGIONAL State is bordered by various regions and neighboring countries in Ethiopia, whilst the Afar region in the east, Tigray region and Eritrea in the north, Sudan in the west, Benishangul Gumz National Regional State in the south west and Oromia National Regional State in the south. Amhara National Regional State has thirteen zonal administrations and eight metropolitan cities, one hundred and forty-one rural districts, and -seventy-seven city administrations.

The People's Liberation Front of Tigray (TPLF) was removed from the federal seat in an all-out uprising of the whole country. It was known that after being taken down, it went to the Tigray region and prepared for war. Consequently, TPLF committed a horrible massacre the Ethiopian defense forces' Northern Command on 3 November 2020, protecting the country's border. On the same day, the invading force invaded the Karakar area of the central Gondar administrative zone of the Amhara region. It tried to do it and came back defeated, militia and Special Forces of the Amhara region. Federal, the government, continued to enforce the law and the invading force of Tigray left Mekele and went to Tenben Caves.

However, the federal government allowed farmers in the Tigray region to farm during the time and gave a grace period time to rethink and reconsider bad game of war for the invader June 2013. When the national defense force left the Tigray region by declaring a ceasefire, the invader has carried out large-scale raids on the people of the Amhara and Afar regions. During the large scale invasion of Amhara region, the invaders were occupying eight Zones, 89 districts and 979 local administrations (Kebeles, in Amharic) from June to December 2021. During its large-scale invasion, TPLF caused enormous humanitarian crises, psychological damage and materials destruction.

As a result of this invasion, 2.3 million people were displaced from their

villages. Of these, 1,411, 313 individuals were sheltered in temporary shelter camps; and the rest by renting a house, and others were forced to spend time with relatives. In addition, more than 10,824,143 citizens had forced to leave in their home with worse food shortage.

As a result, it was highly important to study in scientific ways so as to know the types, extents and depths of the damage on the Amhara people by TPLF invaders. Therefore, this study was carried out to investigate the large-scale damage in the eight zones of the region where the invading forces of Tigray invaded. The scientific study was carried out to properly know the large-scale destruction at individuals, institutions, and infrastructures level using scientific data collection and analysis methods. Thereafter, the amount, scope and severity of destruction were documented qualitatively and quantitatively. In addition to this, the study will further study the destruction of our region

Therefore, as a result of the invasion, many citizens suffered serious humanitarian crises, psychological damage, and material destruction. Apart from the large-scale invasion material and psychological damage, many innocent civilians who did not participate in the war were killed, massacres, beat and raped have been committed. Some of the crimes were a way that deviated from the Ethiopian culture and values, the group raped, and the priests' wives raped, and men as well raped. In addition, this invading force caused destruction even to places of worship sites like churches and mosques that showed how deep-rooted the hatred of the Amhara people s.

1.2. Objectives of the Study

General Objective

The general objective of this study was to search for the overall psychological damage, human crises, social and economic destruction, and its political implications.

Specific objectives

- To count and document the humanitarian crises, destruction of materials, and economic as well caused by the invading forces of TPLF
- To organize evidence-based documents on the depth, types, and extent of damage on, individual and institutional levels of humanitarian,

psychological, economic, social, and material damage.

1.3. The Importance and Significance of the Study

- To design policies and strategic directions that allow the people to recover from the scars of the invasion and prevent such problems from happening again
- To create a proper understanding of the overall crisis that the Amhara people have experienced by making it accessible to the international community
- To develop a strong and tangible database on the extent and severity of damage and destruction during the invasion
- It will be used as a resource of information for other studies and research works

1.4. Scope of the Study

The study was conducted in the administrative zones and City Administration where the invasion took place and was freed later, namely; in North Showa, Oromo administration, South Wollo, North Wollo, South Gondar, North Gondar; and Waghimra zones of Amhara regional state. Therefore, the study included eight zones, eighty-seven districts, and 945 local administrations, Kebeles. The study included the destruction and damage that occurred only from June to December 2021. All the public and private institutions in the areas where the study was conducted were included. Areas occupied by the invading forces during the study were not included in the study. These areas were Tsagbigi, two Kebeles in Sekota Zuria, six kebeles in Ziquala district, all kebeles in Abergele district, Wefla, Korem, Zata Raya Zebo, and partly Adiarkay districts. The study did not include the conflict and destruction in Wolqait, Setit Humera, and West Gondar bordering Sudan. It did not include casualties caused by conflicts with rebels from the qimant ethnic group in the central Gondar zone. The people and government of the region and other allied peoples and governments came out to reverse the invasion.

The damage and destruction frequently occurred with Oromo Liberation Front-Shene (OLF-Shene) on Ataye and Showa Robit in the North Showa zone were not included in the study

The costs associated with the war, both from the federal government and Amhara regional state were not included in the study. The losses of material, vehicles, and other related damages due to direct or indirect involvements of the federal government as well as regional governments were not included in the study.

1.5. Limitations of the Study

The study did not include the looted various cars that were on the frontline, which were brought from outside the invaded area. Historical relics were not estimated. Rather each antique was listed in number. Injured and displaced rare animals in the parks that were damaged due to the invasion are valued were not included in the study;

The study did not include the investment holdings of federal institutions and certain investors. For example The destruction of financial institutions, dry port, railway, Lalibela Aviation, and similar institutions in the survey are not included.

Chapter 2

Methodology of the Study

2.1. Description of the Study Areas

THE STUDY WAS CONDUCTED in seven administrative zones and the City Administration of the Amhara National Regional State, which were under the invasion of the Tigrayan invading forces, constituting of 87 woredas and 945 Kebeles from December 16, 2021, to May 8, 2022. Different professionals were involved in conducting and facilitating the research work, including the Amhara Public Universities Forum, the Ethiopian Statistics Service, and other concerned regional government organs; to mention a few.

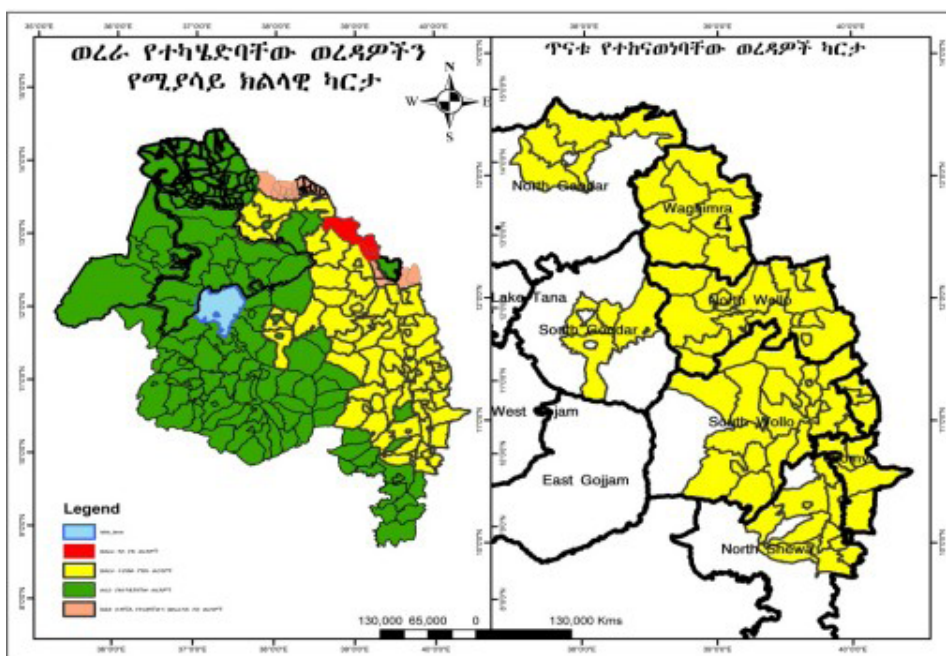


Figure 1. The map of Amhara regional state indicating the areas which were occupied, liberated and non-occupied areas

2.2. Multilateral Involvement in the Study

The study was carried out in collaboration with the Amhara public University Forum in the Amhara region, the Ethiopian Statistical Service, and the relevant regional institutions (Appendix 3). Experts from universities and regional institutions involving scientists in the area of disaster risk management and food security, agriculture, engineering, psychology, psychiatry, law, community health, geo-spatial, history, economics, statistics, civics, political science, management, and journalists.

In general, six regional coordinators, 800 data quality control supervisors, and 3837 data collectors were engaged in collecting the data at the household and sector levels. There were hierarchical structures from study preparation to the final analysis (Figure 2).

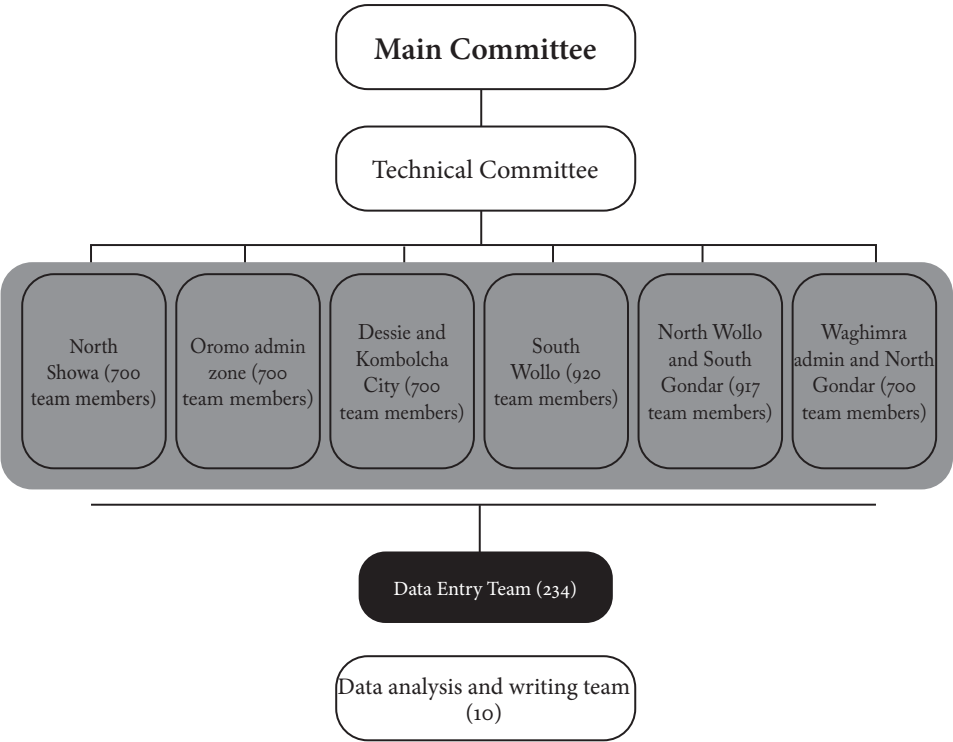


Figure 2. *The organization of the study group and the number of participating researchers*

2.3. Design of the Study

This study was basically conducted using the census method. Subsequently, ranges of quantifiable data were collected from the entire affected population at the household level and analyzed accordingly via a quantitative approach. However, apart from the census-based quantitative method, the study also employed qualitative methods intending to be acquainted with the nature and type of the damage caused, particularly concerning the violation of human rights and related atrocities. To this end, the study employed in-depth key informant interview, checklists, Focus Group Discussions (FGDs), and field observation data coupled with photos and videos to obtain the qualitative data.

For the preparation of the questionnaire, researchers from all ten federal universities found in Amhara National Regional State, the Ethiopian statistical service, and the relevant institutions of the Amhara National Regional State actively participated. A previous study on South Gondar was also considered as an experience and lesson learned. As a result, twelve pages of questionnaires -, to assess the family and humanitarian damage, nine pages of questionnaires to assess economic and material damage data, and twenty twenty-five pages of questionnaires to assess the sectorial, public service and infrastructural damages (Appendix 2).

The data were obtained from the informants directly household heads were mostly interviewed or filled out the questionnaire to obtain, out family-related data. Data regarding institutions and businesses were collected by directly reaching the concerned parties.

Both quantitative and qualitative methods of data collection were used. The quantitative data was collected from survivors and surviving families and informants from institutions involved in rehabilitating the survivors. In addition, the humanitarian and psychological damages data was also collected using observation, primary and secondary-sourced photographs, video recordings, in-depth group discussions, and individual interviews in selected woredas and kebeles.

2.4. Scope of the Study and Sampling Techniques

Out es the people living in the invaded zones cities, and government and non-governmental officials filled out the questionnaires. Moreover, the level of damage to public infrastructures was observed by data

collectors. Therefore, the large-scale study involved all the people affected by the invasion damaging economic and public institutional facilities and infrastructures.

2.4.1. Data Management and Analysis

According to the information of the planning and development office of the Amhara national regional state, 89 districts (Woredas) are organized into 979 kebeles in those eight zones and city administration of invaded areas. Therefore, there are a total population of 8,314,863 living in the area. The census was conducted on 945 kebele administrations located in 87 Woredas, in which Tigray invading forces invaded, and war-related atrocities happened. In general, 231,152 households and 837,687 family members were surveyed. Among the surveyed population, 430,244 were living in cities, whereas the remaining 407,443 were from rural areas.

Zone	Number of Woredas and City admin's	Number of Kebele's	Population	Number of invaded and studied Woredas	Population living in those invaded woredas	Number of Kebele's invaded and studied	Number of Households		
							City	Rural	Sum
N. Gondar	8	177	911,264	5	753,322	50		6,896	21,126
Waghimra	9	136	568,838	6	535,979	89	3,207	3,810	7,017
S. Gondar	21	408	2,651,350	6	889,403	51	3,466	23,106	26,572
N. Wollo	18	313	1,813,765	18	1,813,765	266	35,890	22,683	58,573
S. Wollo	30	616	3,090,600	25	2,518,540	291	25,405	31,537	56,942
Dessie	5	26	285,530	5	285,530	26	18,888	-	18,888
Oromo Admin	9	130	599,922	9	599,922	83	11,651	4,672	16,323
North Shewa	32	445	2,174,911	13	918,403	102	21,976	17,965	39,941
Sum	132	2251	12,096,180	87	8,314,863	945	120,483	110,669	231,152
							430,244	407,443	837,687

Table 1. Demographic characteristics of the studied population

2.4.2. Sampling Methods

Data related to material destruction were collected using the census method. In addition, to collect physical, psychological, and humanitarian damages, in-depth questionnaires and group discussions were conducted per the guidelines prepared by the study committee before the data collection.

2.4.3. Data Collection Methods

The data were organized and collected by members of two research groups in two main themes: (a) family-level humanitarian and material damage data; (b) material and sectorial-level damaged data. The Federal Democratic of Ethiopia Statistical Service collected the data about urban households. The material and sectorial level damage and rural household data were collected by University staff within the Amhara University Forum and other regional government officers.

2.4.4. Data Collection Procedures

Under the coordination of the technical committee at the regional level, the list of the research protocol, the questionnaires/forms for collecting the data, the overall cost and guidelines for group and individual questionnaires have been presented to university presidents and research and community service v/presidents and final approval was granted. The training was given to the research team constituted in each sector at the regional level on the approved data collection materials and guidelines. This group provided training to the members who collected information on each zone or place of deployment.

The data collection process was prepared in two ways; (1) data from rural households and institutions were collected in hard copy, and (2) data from urban residents were collected in soft copy (tablets). For this, data collection was done using CSPro (Census and survey program). In order to ensure the reliability of the data, all the questionnaires were signed after filling in the data (Appendix 1).

Various methods have been used to estimate the type and amount of material damage, namely; such as the current local market value to estimate the destruction of materials and damaged goods; or by taking their current market value; or if they are not available in the market, the team estimation

was done by considering the price of the purchase and by having an expert view. Engineers were also consulted to be able to estimate the damage incurred to the houses/buildings.

2.5. Method of Data Analysis

The data collected from the cities were tabulated using tablets and were transferred for final analysis to SPSS and STATA software. Data collected using hard copy were screened and tabulated by technical staff of 10 universities under their Forum. University experts from eight universities prepared and entered the data into an Excel sheet template, which was craftand designed by the regional technical committee. After the first round of data was entered, the data was refined again with the support of the regional technical team and the team leaders who participated in the study.

The data entered in the Excel template were analyzed by experts from different universities using statistical tools like Excel, SPSS, and STATA. Based on the analysis results, a report has been prepared by synthesizing the various damages in tables and graphs in a cluster base analysis (zones and woreda).

2.6. Ethical Considerations

- Both the qualitative and quantitative data were collected strictly on voluntary bases.
- All the informants were informed about the strict confidentiality of the data they provided.
- The study was conducted in accordance with the culture, beliefs, values, and traditions of the Amhara people.
- Individual survivors (rape, psychological traumata, etc.) were notified to the relevant authorities to facilitate to get immediate help without violating their respect and dignity and in active consent with the survivor.

Chapter 3

Materials and Infrastructure Damage Due to Armed Invasion of TPLF Invading Forces

THE MAIN FINDINGS OF the present study were psychological, humanitarian, and material damages. The damages are here presented separately in three themes in terms of individual, organizations, and 'institutional damages. However, it is expected that the TPLF-led invasion caused a great psychological, mental health, humanitarian crisis, and social and economic catastrophes to the people of Amhara in general, the 837,687 people living in those invaded zones directly affected by the invasion. From this, 409,178 were women, and 263,328 were children.

Using both the qualitative and quantitative data, the psychological, humanitarian, and material damages (in type, size, and scope) in the Amhara region are presented.

3.1. Damages on the Mental, Psychological, and Social

The Amhara people, as a whole, faced multiple mental problems because of the invasion. Particularly, the social dynamics and fabrics of the residents of the eight invaded zones were considerably damaged. Shreds of evidence revealed significantly higher psychological scars and mental health problems. The Tigray invading forces have committed pervasive atrocities to break the people's psychological make-up and morale, to hurt the mental health of the people, and to make the social fabrics and interaction to be loose, and to have a perceived sense of victimhood. The invading force used to commit horrific murders, rape, racial insults, and cruel acts to create terror and fear in the community. Families were found to be less interactive, and developed hopelessness, anxiety, and post-traumatic stress disorders. For example, an informant during the in-depth discussion in Woldiya city,

Kebele 04, summarised the horror that unfolded due to the invasion of Tigrayan forces as follows:

“...there shall be houses that have not been robbed, but there are no people who are not psychologically damaged. We cannot count them in number; we can only count how many people have been injured or died? But if we ask how many of the people have been psychologically affected due to the invasion, there shall not be answers, as both the people left locked in the city of Woldia and those left the city were all affected. The people who had left the city were also in fear with continuous trauma about what could happen to their families. They were told that we were all dead. Like all of us in the city, they have been suffering from depression and psychological scars like any of us here. No one has been displaced and went somewhere outside the city unharmed like anyone in here”. The scare is too much.

3.1.1. Mental Health and Psychological Damages

From the surveys, focus group discussions, and in-depth interviews collected in both quantitative and qualitative data, the findings are presented here in thematic areas as mental health problems, psychological damage, and the damage to social dynamics.

Trauma and Anxiety

In a survey collected from 430,244 individuals living in cities, it was revealed that people have greatly suffered had, indicating that their psychological well-being was affected.

The survey, which included 430,244 individuals in the war-affected areas, illustrated considerable enimpairments in their psychological well-being. About 70% (301,115 people) were traumatized and suffered from an anxiety disorder. Among these, thirty percent were not directly affected by the tragedy, whereas 70% of the population manifested the symptoms (Table 2). The traumatic experiences that the people have shown were also accompanied by symptoms like emotional disturbance, feeling vulnerable or thinking that they might be attacked again (worrying), not being able to control the things that worry them, and not wanting to leave the house, imagining things that worry them when they are sleeping or sitting (flashbacks), worrying about their families were among the few. Additionally, they also experienced anxiety and panic attacks. These symptoms were wide

spread in all age groups and sexes. Particularly children and women were affected. Interviews and in-depth group discussions were conducted to further strengthen this research results. It has been confirmed that the signs and characteristics are widespread in the community.

Moreover, the qualitative findings documented a detailed and in-depth look at the people on the traumatic and anxiety disorders they have experienced. In addition to their own stress, depression, anxiety, and psychological trauma, parents were more troubled and disturbed by their children's stress or injury. One of the discussants living in Woldya city reinforces this idea as follows;

"... when the 'members of the Tigriyan invading force' dragging our friend to the road, to a gun point; he jumped into a tunnel. We asked him why did jump into, and his replies touched every one of us. He said that he didn't want his children to see him being shot. He was much worried about the psychological trauma and the aftermath of his children if they saw their dad being shot. You see, there is nothing more psychological than that."

Another group discussant from Woldya city explained his anxiety as:

"...when the invading forces occupied our village, I was two of my children. My children were watching while another man was being beaten to death, and she was extremely worried and asked, me what we should do baba? My wife suggested I hide our children in the eaves ramp shower room. I agreed, and she hid them in there. I stood at the door silent and confused about what to do next. Yet the children were very worried. And being in the eaves, the temperature made them very uncomfortable refused to stay in there and said, "Let us die here instead of dying with the heat coming from the roof."

A panelist who lived in Dahna Woreda of Waghimira Zone, who was sexually abused by the invading Tigray forces, described her abuse as follows:

"...the militant slapped me twice and made me kneel down. We all knelt on our knees. He took the elderlies to the kitchen so hey could not see what they would do on us. They made us kneel from 12:00 pm to 3:00 am. Won't you feel tired in here? We told him that we would never accept their demand to have sex with them and assured them that we preferred to die. I grabbed a knife and demanded that I leave

the children alone and if he wished anything, he could do that with me. But his replies shocked me from the bottom of my heart. He said that he would only turn to me after raping the children turn by turn. While fighting with one of the girls, his gun went off, and he dropped it to the ground. And we suddenly fought him off, and he left the house, although we all spent the night crying.”

Both the children and elderlies suffered. Elderlies were also tortured and killed. In an FGD held with the residents of Kurkur rural Kebele (012) in the Dessie city Administration, an informant gave his eyewitness what the Tigray invading forces did to the elderly:

“...an Islamic religious father had a small amount of money, and he was afraid that the militants would robe his money; he hid on the roof. However, they shot him killed in there. In addition, another panelist in the same kebele added that a religious elderly father had been killed while he was begging and telling them that he was elderly, disabled, and a religious father that he had nothing to do with the war. So they killed the father on the roof where he is hiding. His body stayed in there for three days.”

		Frequency	Percent
Answer	No	129,129	30.0
	Yes	301,115	70.0
	Sum	430,244	100.0

Table 2. Summary of the survey for the question whether they have had traumatic experiences and anxiety disorder

Depression

On the other hand, this study has revealed that people living in those invaded zones had depression. As Table 3 shows, 63.5 percent (273,239 people) said they suffered from severe depression. Former psychological studies noted that enpersistent psychological problems are associated with complicated psychological disorders, including suicidal ideation. Some of the symptoms uncovered were being easily upset, worrying about minor issues, changing their habits, losing hope, feelings of worthlessness, frequent thoughts of death, and suicidal thoughts were among the. The qualitative study findings revealed that the victims of the Tigray invading forces reported in the forth-mentioned signs. (this is discussed in detail in the next sub-heading).

		Frequency	Percent
Answer	No	157,005	36.5
	Yes	273,239	63.5
	Sum	430,244	100.0

Table 3. Summary of the survey on whether depressive symptoms existent or not

In addition to quantitative results, as shown in Table 3, the qualitative results have shown that people living in those invaded areas suffered from depression. For example, children, women and the elderly in North Gondar have suffered from severe depression and associated psychological problems. The Tigray invading forces committed a gruesome massacre (Chi'na Tekilehaimanot). In the group discussion held in Debarak, an Islamic religious father stated that the invading forces of Tigray had beaten and raped a mother who had given birth ten days before while calling her “Amhara Hadgi” (meaning Amhara is a donkey). They were insulting her in front of her other children's. In another interview conducted in Boza Kebele in Debarak woreda, a participant described the severity of the the psychological scar that the Tigray invading forces incurred as follows:

“...their extreme disrespectful behaviour caused pregnant women to miscarry. Women died as people fled from them in panic. There were people who were shocked by gunshots, and jumped into the river and died by flooding. Women were not hearing when we talk to them as they lost their awareness and sanity because they worry too much about their family. When there is a sudden gun shoot, children get scared and they really do not know what to do or behave. There are people who went lost their sanity and went to prayer with holy water”

Hopelessness

The other part of this study was aimed to measure the hope of the people living in those invaded zones. As shown in Table 4, 54.8 percent of the people (235,802 people) have had the feeling of learned hopelessness. According to psychological studies, this learned hopelessness would predict whether they would develop any other mental health disorder, such as depression and suicidal ideation. The evidence elaborated above shown that the Tigray invading forces intent to alter the entire fabric of the community in their psychological and social integrity. It was revealed that the people living in the areas occupied by the Tigray invading forces had lost their hope or their sense of the future (Figure 3).



Figure 3. Photo of an older woman and a mom with her daughter who was both raped by the Tigray invading forces

The above photos (image 03) were taken and credited to the Ethiopian Press Agency were taken in the North Showa zone in Shewa Robit town. The woman on the left was 85 years old and was raped while being for mercy in the name of God, while the one in the right was also raped in front of her daughter.

		Frequency	Percent (%)
Answer	No	194,442	45.2
	Yes	235,802	54.8
	Sum	430,244	100.0

Table 4. Summary of results on the learned helplessness

In addition to the quantitative finding on the learned hopelessness, the qualitative data provided additional insights about the negative effect of Tigray invading forces on the hope of the people living in those invaded zones.

In Adiarkay Woreda in mekachinika kebele, people prefer and tend to hold gun in their daily living, like farming and maintaining their family, showing that there are behavioral and social dynamics changes. The results suggested that the Tigray invading forces aimed to implement their long-term wish to dismantle social rest and stability for Amhara's people. The results showed that the psychological and mental health crisis unfolded resulted in unhealthy behavior in all ages and sexes. The behavior change

was directly related to the damage to their psychological well-being. One informant has stated this about the behavior change they see in their community:

“..The elderlies have seen their daughters raped, and as a result, whether they are alive or not, they are not happy. There have been women who were raped. The mind of our children is also altered into carrying a gun instead of going to school.”

In the same way, the in-depth interview and discussion in the Waghimira zone of Sekota woreda, kebele 02, revealed that the well-orchestrated plan and execution of the Tigray invading forces made them ask how worth they were. They discussants stated that they were in crisis, and their social fabric and living norms collapsed. In this woreda, a man working in justice has stated that:

“..The public facilities and services are destroyed, and the people, including children and women, have no hope about their future. We cannot provide public service in those institutions anymore”.

In Addition, health officers working in Amdework hospital summarised the psychological and mental health state of the people in this way:

“..Those women who are married or single, I do not know how they will live life anymore. It isn't easy to imagine. The psychological scare of the pregnant women who four militants raped is unimaginable. We cannot imagine the scar how the woman who was raped after being ordered to open the door in the middle of the night. She developed PTSD, and has a difficulty sleeping as she is struggling with flashbacks”.

The health officer in this hospital gave strong shreds of evidence that the people are living with multiple psychological disorders, including trauma, depression, hopelessness, and post-traumatic stress disorder. Another informant from Chila kebele stated how the member of the Tigray invading force incurred multiple scares on her sister in this way:

“...my sister has given birth ten days ago. She couldn't get fled when we fled to some other places, because she was unable to walk as she was bleeding. They killed her ten-day-old baby and raped her in a group. She has been sick for more than a month now. She went somewhere else now. And after rapping her in that way, they also went to another village and raped a pregnant woman who was about five

or six days from giving birth. They chose to rape pregnant women and chose children. They have no sanity.”

In general, the invading force of Tigray has done imaginable damage to despair their community to think, “we got no one who can help us.” In an interview in Buru Selassie of Dessie city, a survivor and a participant gave a summary of how the Tigray invading forces were insulting and humiliating the people:

“...the insults or mistreatment was unimaginable; the kills you from the inside when they humiliate you with insults like “Amhara is a donkey.” Donkey, your savior (meant to refer to PM Abiy Ahmed), will come soon; he will bomb us with a fighter jet. And when we go out from there, defeated, we will not live in peace. We are going slaughter you turn by turn. And that old ‘turtura’ old man (referring to Isayas Afwerki) will take us from the other side.

An elder and religious fathers discussant in Debre Sina city of North Showa stated that the invading forces repeatedly harassed them because of their Amharaness. They were telling the community in there that the people of Amhara had no choices than surrendering to them and be a servant. “... Amara has been defeated; they shall be subjects to us from now on. Amhara is humiliated. We made the Amhara people bow to us. We (referring to Tigray) have prevailed in all odds. We will perish you, and you are exhausted. Amhara is not human...”

Suicidal Ideation and Attempts

One of the other psychological issues that this large-scale study has seen the people intent whether there are suicidal ideations and/or attempts among the people living in those invaded zones. The results show that 34.2 percent (146,977 people) had thought about suicide or attempted suicide. The figure is the highest among the previous studies in any other country with civil war or other militant activities (Table 5). For example, during the civil war in Sri Lanka, suicide or suicidal ideation was only 11-14 percent. Studies have also shown that suicidal thoughts and suicide attempts are associated with hopelessness in life. The qualitative results also revealed that Tigray’s invading force showed high desperation for suicidal intention. People with established chronic seadiseases and disabilities were also victims of a multitude of sufferings. One of the study participants reinforces this idea as follows:

“...people with diabetes suffer from hopelessness and despair; children are at risk of depression and hopelessness, especially due to the closure of schools.”

		Frequency	percent
Answer	No	283,267	65.8
	Yes	146,977	34.2
	Sum	430,244	100.0

Table 5. Information showing the data regarding suicidal ideations and/or attempts

3.1.2. Post-Traumatic Stress Disorder (PTSD)

Among the 430,244 individuals who dwelled in the cities where the invasion took place, half of them reported that they had experienced PTSD. Table 6 shows that 49.7 percent (213,694 people) were diagnosed with post-traumatic stress disorder (PTSD).

		Frequency	Percent
Answer	No	216,550	50.3
	Yes	213,694	49.7
	Sum	430,244	100.0

Table 6. Table 6: Information on people with PTSD

According to the World Health Organization, an average of 52 people out of 100,000 Ethiopians are at risk of mental illness related to psychological trauma, but in the areas that were occupied by the invading forces of Tigray, this number was much higher.

The qualitative part of the larger study showed that the psychological breakdown and associated mental illness were much worse in children and women than in adults. In an interview in Boru Meda, a village in Dessie, an individual explained the extent and depth of the damage as follows:

“... although we all face multifaceted psychological problems, the damage is greater to women and children. People are terrified, and we are not yet stable and calm. Children get scared by very simple sounds linked with gunshots. Every time my children heard a murmur, they ran and tried to hide as they thought the militants would come to them and shoot. Now, we are a bit stable. Nobody moves around the city after four o'clock in the afternoon. They embarrassed us, and we cannot share our feelings with others like you (referring to the facilitator of the discussion). They terrified us to make us fearful and anxious.”

It can be understood from this interviewer that children have been the survivors to mental health problems due to the trauma, psychological distress, anxiety and PTSD in invaded areas. In addition, an in-depth group discussion with the residents of Kurkur rural kebele (012) of Desei city administration revealed the multi-faceted damage on their psychological health. The informant said:

“... There are almost no bad things the invading force did not do to our kebele. They killed the young and the old. They beat, and tortured our women, dared sisters, mothers, wives, and children... hyenashyenas ate the dead ate the dead we didn't have the chance even to bury them. ... many of the women who were raped don't tell or share their experience because of the perceived stigma.”

The study has revealed that there are multifaceted psychological and mental health complications. Women, children, and the elderly were suffering from grief, depression, mental illness, and associated hopelessness, which they usually linked to because of their psychological scars. In a group discussion, other resident of qurkur rural Keble (012) explained what the invading force of Tigray had done to their community. He explained that when a child was asked about his father's whereabouts, he replied, “The junta ate my father.”

Another informant from the Waghimira admin zone in Chila Kebele in Dahna woreda has summarized that the people are still in a state of trauma.

“...our morale has been greatly affected. Our minds have not recovered yet. Some people are still sick. Our people still think that Tigray's invading forces will return. We feel that we are still in danger”.

This study has shown that the general population of the Waghimra community suffers from mental health problems related to stress, embarrassment, and psychological damage. Despite this, the amount and type of damage does not differ by district or kebele, as all were living with some kind of psychological problem now.

In a neighborhood called Shisha Ber in the city of Kombolcha one elderly monk has experienced severe psychological and related damages. The group discussants explained that the monk was forced to rape his daughter. His daughter was with him at that moment to help him during his difficult time as no one could cook food for him. He was dwelling in a church named

Kombolcha medihaniyalem. They forcefully heat the monk, drag him, throw him on the bed, and force him to have sex with her. They threatened that they would kill both if they didn't comply with their demand. When the monk refused to abide, they began to attack them with weapons. As the invading forces member was all drunk, the monk believed they would be killed. As the monk saw the situation and preferred to die than obeying to their demand, he struggled with them, and very fortunately, fortunately, he was able to run out from the house and shout the villagers to come and save him.

Like what happened in the south Wollo the situation in the north Wollo was no different. People, including children, women and the elderlies, have been living with the psychological scar and extreme worry. The trauma that their children have experienced and the after PTSD, the children, developed was too much. People in their community have no clear thoughts anymore, and they also have harmful behavioral changes due to the invasion. One discussant in the group discussion has said this:

"I have a daughter who is two years and a half. Whenever she listens gunshots, she ran to me and said with extreme worry that "baba baba they junta (the invading forces of Tigray nickname) coming to us they are going to kill us...where can we hide?" As you heard from my daughter all the children's in our village are talking about the Tigray invading forces and their atrocities. Children worry too much."

All the discussant explained that the problem (the post-traumatic stress disorder they are experiencing) their community are facing resulted from the atrocities of the Tigray invading forces. They explained that their children's maladaptive thoughts and behaviors were worrisome to their family and village.

Like the other invaded zones, the Oromo admin zone has also experienced psychological scars leading up to PTSD. For the question 'what has been the damage to our psychological wellbeing?' one discussant from Kemissie city has said this:

"Our community has experienced psychological damage. Especially the damage to our children's, women's and the elderlies was very high. There was a shortage of food and electricity; the community has had a difficult time. Because the hospital was not functioning, pregnant women's were left with no choice but give birth on the flee or at home."

There have been women's who died as a result. There have been patients with HIV, diabetic and pressure who have died due to lack of medicine and attention from the doctors. Particularly the Amhara community living in here were facing too much pressure. They were living knowing that they will be killed today or tomorrow. They were traumatised. Children have got scared every time they hear a gunshot or anything similar. They have flashbacks every night.

It was revealed that the Tigray invading forces were rapping thirteen or above children. This was revealed from the survey they have been asked about what have been experienced as the result of Tigray invading forces occupation to their community. The children have experienced post-traumatic experiences as the result of rape and psychological harassment. One discussant from Dahina Woreda in the Waghimira admin zone said that:

“..The militants were drunk that night. One of their members approached a girl who was less than thirteen years of age that time. He demanded the girl for sex at gunpoint. We demanded why he is doing that with almost to a girl who can be his granddaughter and asked him if she wish ask her at least her willingness. His replies were “none of your business you donkey. We don't ask from permission from a donkey. As we were left with no choice we fight him back and we were able to won and saved that girl at least for that night. We snatched his gun and gave it to his chief as we think it could be good to give them some lesson”.

The other participants of the discussion also have said that:

“..In a Keble called Chila, one woman was raped by throwing her infant. They also raped pregnant women who were going to give birth within 5 days. She has had an abortion afterward”.

Multiple Psychological and Mental Health Complications

Another shocking result of this study was that 73.6 percent (316,873 people) had one or more overlapping psychological problems (Table 7). As can be seen from focus group discussions and the in-depth interviews, it was revealed that the Tigray invading forces have caused multiple psychological and mental illness complications. This was very common in children, women, and on the elderlies.

Answer	Frequency		Percent
	No	113,371	26.4
	Yes	316,873	73.6
	Sum	430,244	100.0

Table 7. *Multiple psychological and mental health complications*

Tigrayan invading forces have attacked the moral and societal fabric of the Amhara people. This large-scale study has shown that there were widespread attempts to create a horrifying and chaotic atmosphere by exposing the people to war, using them as human shields, having them suffer agonizing deaths, having them forcibly displaced, creating family separation, and, contributing to their overall despair. All these were done to degrade the people of the aforementioned areas. All of these have led to mental health issues that will have long-lasting cognitive complexations, according to some moderate predictions. In the census, it was shown that 429,443 people were living with psychological and mental scars. Among those psychological survivors, 73.6% of them exhibited two or more psychological problems. For example, 70% of the survivors suffered from anxiety, 64% from depression, 55% from hopelessness, 50% from post-traumatic stress disorder and 34% from suicidal tendencies. Among the people with post-traumatic stress disorder (PTSD) (total being 213,694), 128,622 (which is 87%) have had either attempted suicide or suicidal intentions. In general, this study has shown that the people of Amhara suffered emotionally, mentally and behavior-wise, which will have a long-lasting effect.

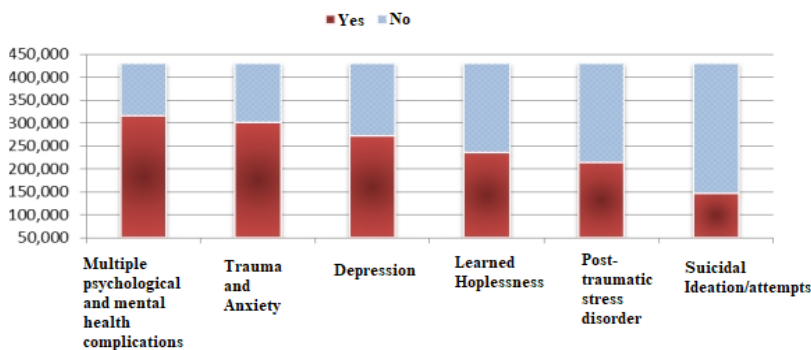


Figure 4. *Summary of the psychological and mental health damages*

As shown in Figure 4, a large proportion of the population, 73.6 percent, is revealed to have at least one or more psychological problems. This figure

indicates that the scope and depth of the damage caused by the invading force of Tigray was high.

The qualitative findings also re-affirmed that people living in invaded areas were exposed to two or more overlapping psychological injuries and mental illness associated with psychological scar/wounds. Trauma/anxiety and post-traumatic stress disorder were the most common psychological disorders that the community revealed to be having.

The following script was a government employee working in 02 kebele in Seqota Woreda of Waghemra zone. He explains that the invading forces of Tigray seriously injured the children, women and elderly people of Waghimra. He explained that the psychological damage inflicted by the Tigray invading force on women, children and the elderly has caused serious chaos in the society.

“...the invading forces have displace the people to the countryside and exposing them to various social problems, women were harassed on the streets, have had abortions, they deprived the elderly of medical treatment, we lost innocent human lives, inflicted psychological damage, looted and destroyed property so that the community lost its food and drink, and caused all services to be cut off.”

In an interview in Telemt Woreda in North Gondar Zone, one participant of the study explained the following about women who were harassed by the invading forces of Tigray:

“...There has been lots of psychological damage. Every time a bullet was fired, children and women panicked. They think that the junta will take our community once again, the elderly and mothers are shot; as a result of desperation to escape, mothers with children have no food and we become poor as the result of the combination of nature and the TPLF-led invasion. Everyone was trying to flee with great difficulty and on foot.”

The interviews mentioned above and in-depth group discussions in the areas of Waghimra and North Gondar revealed that the misery inflicted on the people by the invading force of Tigray has caused mental health problems associated with psychological wounds. It made them feel hopeless.

Residents of the North Gondar faced extreme damages to their moral and cultural heritages, social interaction, psychology, and related characteristics.

For example, one of the victims of the Ch'ina Teklehaimanot Kebele, one of the Kebeles where the massacre took place, described the bitter grief and psychological scars she suffered as follows:

"...i have lost my father, my uncle, my aunt's husband, my cousin's son; they killed them on Saturday. My father was buried on Sunday, my uncle was buried on Saturday, and my cousin's husband and son on Thursday. The family's psyche is much damaged! Those who are seated are for 'tezikar and edir'. We are six children at home with me. I don't know where they will be going now, as no one can help and hold my family together. There is no one to help them. Because no one cares. We are here helpless. My mom is living by selling and changing what she has. I was also employed, but now I live with my mother, unemployed as my mother is alone and helpless. I cannot leave her here with the death shadow and grief."

Although the community has shown no hatred towards the people of Tigray or other Ethiopian people, the study showed that the invading force of Tigray failed to understand this basic concept. As a result, their degrading and dehumanization has caused an irreversible psychological wound to the community. The community does not even know why they are doing this harm to them. An interview participant in Dahna Warada of Waghimra admin zone described the damage caused by the invading forces of Tigray as follows:

"I may cut off in the middle of my speech because the brutality that has happened makes me emotional. I never thought I would experience such a horrible thing in my life. I do not believe that such an act of cruelty has ever been committed in the world. I know many horrible things have happened in the world in my lifetime. Atrocities have been committed in many countries. No one has been the subject of such extreme atrocities like our people. The surprising thing is that we are the same in race and kinship. We (the people of Amhara and the people of Tigray) are not a different people. What makes them motivated to do the way they did to us. I don't understand. How can a man come to such cruelty his brother and sister."

The other participant of the group discussion also told how inhuman the Tigray invading forces in the following way:

"They have had a huge psychological impact on the community. The

psychological problems that have been inflicted on us are especially devastating in the case of rape. ...I asked a raped woman to come. She did not want to come because her morals don't allow her to talk. ... our people are really bad at keeping things private and may discriminate her. She was left alone. For example, let me share with you the rape of a woman. ...he forced her to dare, and it became too much for her. She begged him with the name of God at least to use a condom..she asked him with the name if his sister, if he had one..but his reply for her begging was..."I don't use a condom to have sex with a donkey. [He was crying while testifying]

Various international organizations have also included this insult and humiliation in their reports. For example, Amnesty International, in its report on November 2021, reported details of the psychological damage inflicted by the invading force of Tigray on the Amhara people. Furthermore, the chief of Amnesty International described the testimony of a woman from South Gondar in Nefas Mewucha city stated as follows:

**“
The testimonies we heard from
survivors describe despicable acts by
TPLF fighters that amount to war
crimes, and potentially crimes against
humanity. They defy morality or any
iota of humanity.**

Agnès Callamard, Amnesty International's

Secretary General

**“
They were saying 'Amhara is donkey', 'Amhara is
useless'. One of them told the others to stop insulting
me. He said, 'she is our mother; we don't have to harm
her'. They forced him to leave the house and three of
them stayed back at my home. Then they raped me in
turns**

Bemnet, a 45-year-old Nifas Mewucha resident

Similarly, it was revealed in the in-depth group discussion that the psychological and related cruelties that happened to the Wagghimra people were related to the invader's desire to take revenge. A resident of Dahna worda explained that the psychological damage they have done to them was revenge and linked to the federal government as follows:

“You said to them that for a mother who feeds you and gives you water, how dare you rape her; isn't our mother your sister by kinship, tell us what we have wronged you? Their reason was that ‘Isaias of Eritrea and your Abiy Ahmed conspired to rape our sisters, abused our wives, steal our property.’ So we asked them how this could be associated with the people of Wag and asked them to leave us alone.”

3.1.3. Damage to Social Dynamics and Interaction

All the areas that were occupied by the invading force of Tigray have been subjected to an attack on their way of living the implication may be seen in the near and far future, in addition to psychological and related mental illness that they are living now with. This attack on social interaction and values that bind together was associated with their psychological and related mental health problems. As it was seen in an interview conducted in Zarima Kebele, Adrakai Woreda in North Gondar, the Tigray invading forces incurred societal interactions (like edir and ekub) and their values were in crisis and despair: The discussant summarised this as follows:

“for our society to lose its hope of existence, the invading force of Tigray has beaten the cultural, religious, moral and value denominations with heavy weapons. Women were raped, and institutions have collapsed to the level they no more give services. Property was looted and taken away as our hopes.”

In addition, it was revealed that the main objective of the invading forces of Tigray was to embarrass the Amhara community and psychologically harass and degrade them. One interviewee described it as follows:

“..Pregnant women, HIV patients, diabetics, TB patients, and people with co-morbidities have suffered significant death and psychological damage due to lack of transport, doctors, and medicine. ...Children are in dire straits. Many children died of hunger and sanitary problems. The doctors were saying that they we cannot save people because there wawas no medicine, but they see people dying in front of them and cry like any of us.

As seen in an in-depth group interview in Woldia city, as soon as the invading forces of Tigray took control of Woldia, they committed violent acts against the local community with obscene insults and psychological harm. One of the participants explained degrading insults as follows:

“The people are very cruel barbarians. When they entered our region [to mean Woldia], they were shouting and calling Woldia a sheep thief repeatedly. “You are a sheep thief, Wollo is a thief, and you are a coward. They often shot in different directions, especially around the piazza, to scare civilians.”

Waghimra people also suffer from multifaceted social interactions that lead to social chaos. In an in-depth group discussion held in this zone, a participant stated that not only their wealth but also their psyche and thought processes were stolen in the following way:

“Does their act bring us together? How does the relationship last? It’s not just our property that they looted and destroyed, but also our minds. How would they react if Amhara said similar things to them? Even now, we have embraced many natives of Tigray, and we shelter them, but they gave us the name “Donkey.”

There is no question that the destruction of government facilities and the information about the community leads to higher social chaos. Their main aim was to make the local government and the community not to have a common understanding and/or distorted so as a longlasting social crisis would unfold. The study confirmed that this activity of the invader was also carried out in other zones. When asked why the invader wanted to carry out these long-lasting social challenges, the panelists in the same woreda said:

“Their main aim was to make Amhara not move independently and become a beggar. They want us economically and psychologically to be low. They used to encourage people living together to take the property of his own brother so that the community would fight against each other. They used to say that they want us to fight each other even if they don’t live there as Ethiopian. The other thing they were saying was that Amhara not live in peace.

The invading forces of Tigray tried to separate the communities living in the occupied areas by race and religion. Especially during their stay in the Oromo admin zone, they tried to the community have mistrust and weaken the solidarity between the Amhara and Oromo tribes. This was carried out with the active cooperation of a terrorist organization called OLF Shene, which operates in the Oromo admin zone. In an interview with a medical professional working in Kimisie Hospital, Shene was said to be persecuting the Amhara people, they had prepared and tried to massacre them. The

health officer stated that:

“OLF Shene was focusing on Amharic language speakers and attacking them. There would have been a racial massacre if it had lasted for two or three months. During their stay, they entered the community and inflicted a lot of abuse.”

This purposeful attack on social interaction and their societal fabrics has led to high psychological stress and anxiety especially for the Amhara who live in the community. This was confirmed by the above-mentioned medical expert. What needs to be paid attention to here is that if the invading forces succeed in creating psychological terror on the Amhara community, they would have carried out ethnic genocide and would have had clashes between two ethnic groups. That would have to fulfil his evil purpose.

The North Wolo zone was not different from other zones occupied by the invaders, as the invading force has been there for a long time, and the social damages and complications associated with the related psychological wounds and injuries have been found to be extremely severe. In the in-depth group discussion at Woldia City Kebele-04, one participant explained about the psychological damage and the related social interaction problem as follows:

“...there was a lot of degrading statements on Amhara for a long time. From what I remember, I can describe two of the statements they used:: A farmer from Jarsa was coming with his donkey carrying his goods the militants met him near Gondar Ber and they saw the farmer beating the donkey when the donkey refuses to go. What the member of the Tigray invading forces said to that farmer was too demeaning. He told him that “how can you beat your brother? What did he mean by saying that was to tell that poor farmer that Amhara is a donkey? And the second one: one of their members was driving a donkey carrying their logistics at around Maqare, and when they see a farmer nearby, they approached him and said, “What is this?” by showing the donkey. The conscious farmer knows what they are trying to say and replies “It is my brother. The insult was demeaning and degrading to an Amhara. They focus on the youth.”

This shows that the invading force of Tigray was working hard to demoralize the Amhara people, especially the youth, and make the people Amhara's future and social life distorted. Another abuse committed by

the invading forces of Tigray was the community developed mistrust of one another and to prevent social harmony. Here in Kebele, another participant said:

“...When someone says that I don’t have a weapon, they tell him that your s neighbour told them that he has a weapon. They exactly do the same for the other one. This has a great purpose; to make us to fight one another and our cohesion is weakened. Our people were not conscious of why they were doing this to them. Our younger generations are addicted to Khat and the like; they are too careless to know what the TPLF-led forces are doing to them. Sometimes the youth are complicit to them and do as they are asked. Well, sometimes, what do the member of the Tigray invading forces say? If they were our youth, they would not have done this. You are donkeys. You point out your own downfalls, they say. If we could learn, this should have been enough for us”.

This shows that in addition to the psychological and mental problems that the invading force directly inflicted on the people of Amhara, they were doing it to create a socially unstable and people; what exactly was written in their manifesto 1968, stating that their main mission for TPLF movement was with an ideology of “giving no social rest to the people of Amhara”.

3.1.4. Mental Health Problems and Humanitarian Crises Accompanying Psychological Breakdown

Psychological Breakdown is connected to mental health problems and disruption of social interactions that happen due to psychological trauma. Many psychological studies show that the living conditions of the society, the acceptability of the government and its system and, the civic understandings of the society, the future hope and vision of the society, access to education and health systems are some of the social foundations that the individual or society builds. This research has confirmed that the invading force of Tigray did invade and deliberately destroy all these infrastructures of the society to cause social degradation among people in the area. This was expressed by participants of an in-depth, focused group discussion held near Jento Ber, Woldya city. When reporting the situation, one of the discussants described the situation:

“They made us hate to live and do something that would make us hate life and to end it. You can’t eat food thinking of them and

whether they will come or not. There was no electricity, and it was unlikely to come back home once you were out of home night. We had no choice when we ventured out; we did not believe that we would return back to home. ... I managed my family by engaging in daily labor, and when they found me along the way, they gave me a lot of pain by insulting me with disgusting and bad words. So, the damage that has happened to us is psychological pressure..... We still fear that the same thing will happen in the future. No, one believes that the invasion remains reversed. The reason is that they are not far away now, and there is no reason why these people will not come tomorrow.”

The interviewee stated that society has acquired and experienced more than two psychological, mental health, and social interaction breakdowns. In addition, they explained that they are exposed to mental illness and despair that are associated with psychological wounds.

This study obtained in-depth information from institutional heads, elders, religious leaders and focus group discussants. Based on the information and shreds of evidenceshreds of evidence obtained from these sources, this study carefully analyzed the evil acts done the Amhara people by the Tigray invasion group. In addition to the preceding data sources, the research team collected the data by conducting discussions and observations with the affected institutions, individual businesses, public utility infrastructures, and individuals who were attacked. Individual and group discussions were also held with the affected sections of the society who were the targets of attacks. It were possible to collect the damage caused by the invading forces of Tigray.

The information obtained from all sections of the society indicates that the Tigrain invading group deployed for fighting and looting consists of men and women, ranging from children to the elderly, who have different professional experiences and skills. These members of the invading forces who are deployed for the invasion carried out the following actions as soon as they took control of the various areas—breaking the doors of individual residences and stealing food and clothes, silver, mobile phones, watches, gold, etc., robbing government institutions (sector offices, health institutions, schools, water, television, electricity, banks, etc.). Using private and government vehicles for transporting their wounded and dead fighters and for general logistics services, slaughtering and eating animals, especially chickens, sheep, and goats, without the owner's permission, forcing and

harassing individuals to show them their mobile phones, weapons and wanted people (government leadership, fano, militia, father's leadership), robbing and drinking beer and various alcoholic beverages from hotels and grocery stores, and shooting while intoxicated. Shooting and harassing people, insulting individuals by calling their national identities and calling them ``Amara donkeys'', carrying out mass burials in schools and some public entertainment places, raping women of different age groups, burning down various institutions, using government and private institutions for different purposes (for medical treatment, shelters, order centres, etc.) as a person and camp, killing and beating individuals with better consciousness, insulting government officials by name, forcing residents to give them food and water, creating fear and intimidation in the area, dividing people based on religion and language. Thus, they have caused significant damage to human life. In particular, the families of leaders, Fano, and the militia have been subjected to abuses ranging from murder to bodily suffering. They also destroyed their houses. They broke into locked individual houses and stole mattresses, clothes, food ingredients, and furniture. The humanitarian crisis they created by taking daily food from individuals is not easy. They killed the mentally ill, shot and wounded the innocent, and killed and raped.

As mentioned above, the TPLF invading forces deployed individuals with different professions as fighters, robbers, and murderers, so they committed looting, destruction, and violence against the government and individual institutions as well as individuals. The materials of health and educational institutions were almost completely looted. And those who could not were deliberately destroyed. Private and government vehicles were confiscated. They took a human life. They also mutilated their bodies. They looted religious institutions. They drank beer in the mosque, an act that Islam does not allow. According to Islam, this kind of act is completely obscene. Above all, The Amhara people have been subjected to severe psychological scars and mental illness associated with the psychological wounds.

The amount of looting and destruction committed by invaders of individuals and government institutions varies. The rate of looting and destruction of government institutions, especially schools, health, and various sector offices, is extremely high. The internal materials of these institutions were almost destroyed. They looted what they could. Doors, windows, ceilings, walls, tables, chairs, stationery, and other office furniture, were partially and destroyed. They beat, injured, and killed innocent people. Vehicles of private and government institutions were stolen and taken away.

Because the terrorists are addicted to robbing and destroying everything they find, they have caused enormous human and material destruction to government, private and commercial organizations. According to the information obtained, government institutions, private organizations, food grains, medicine and clothing, infrastructure facilities, churches, and other cultural values have been looted and destroyed.

The TPLF invading forces have deployed various professional skills and experience, from engineers to doctors, garage workers to prostitutes, and prostitutes for fighting, robbery, murder, and invasion. But all the invading members did not refrain from looting and destroying everything they found. Any member of the Tigray invading members was a direct participant in looting mobile phones, money, and clothes. In matters that require specific professional experience and skills, for example, Medical professionals and garage experts participated in looting and destroying health facilities and vehicles. Tigres who have been working in business and government for a long time in the area, and some gangs bought for profit have become accomplices in leading the way and looting.

The destruction of property in rural kebeles and towns where invasions were carried out was done in different ways. In the kebeles, where war was fought, the destruction was caused by war. In particular, the Werebabo district is said to be the birthplace of General Mohammed Tesema. They beat the people saying that General Mohammed would come and save them. They tortured them. In addition, many properties of government and private institutions were destroyed due to looting and deliberate destruction. In a kebele called Bokekxa in the Werebabo district, a war was fought for three days, causing serious damage to the people. They used to build a fort in the farmer's crop land. The farmer's crop was destroyed by the feet of invaders and by heavy weapons. Homes, commercial, and government offices were also destroyed with heavy weapons. And properties have been looted and vandalized in the areas where the war did not take place.

In addition to robbery, killing and displacement, destroying institutions, abusing women, and torturing the residents to give them food and drink have been widely practiced. They forced the house and family of the leadership, militia, and Fano to report to them. They beat and killed those who refused. Invoking the name of the people's identity and insulting and harassing them, caused a lot of psychological pressure. Shooting in front of children, performing obscene acts in private and government institutions,

for example, defecation, and using school chairs and tables for cooking, are examples of destroying institutions. The picture below shows that the Tigray invasion forces used the schools as graveyards.



A) Robit secondary school in Raya Kobo
Woreda



B) Geriba Al-Nejashi Secondary School in
Kalu Woreda

Figure 5. A partial view of the school grounds in the North and South Wolo Zones were used as graveyards (a and b).

The members of Tigray's invading forces committed robbery and violence against all sections of the society, but the families of the leadership, militia, and Fano were more vulnerable. During the invasion, the displaced and non-displaced Tigray invaded group faced various problems depending on the situation. Many sections of the community have not left their areas. The main reason they were able to survive when TPLF invaded was by giving them food and drink. In addition to feeding and drinking, they carry insults and abuse. They were able to earn their living by sharing what they had and being cooperative to their questions. And people who are wanted in special circumstances. They tortured them by hiding in houses and areas far from the line or in busy areas. Not leaving the house did not save them from harm reduced the potential for violence. Electricity and water services have also been cut off, putting a lot of pressure on the community. Therefore, most of the individuals passed this difficult period by eating grains and going to far places to get water mill services. They used to travel 20-30 km on donkeys and camels or carry them in sacks to get water and mill services. But the queue used to arrive in a week, sources said.

The members of the invading force of Tigray have invaded, looted, destroyed and attacked the Amhara nation, which has been with them for many centuries and has shared the good and the bad with them. It was possible to collect a wide range of information from all over the place, from where they started, how and why they were able to do this act. The answer to this question is; Ethnic politics gave birth to prejudice, to destroy Amara to destroy Ethiopia. From the very beginning, the Amhara people were raised as the main enemy, so they raided to rob and humiliate Amhara people. The research participants explained that it to weaken the Amhara people and destroy Ethiopia.

War always puts pressure on society. It is true that there is loss of human life and destruction of property. However, it was understood from discussions and interviews that the invading groups of Tigray deliberately humiliated Amara and destroyed Ethiopia and made Tigray a country, so they worked in cooperation with foreign forces that had an anti-Ethiopian stance. Therefore, they caused a lot of psychological problems in the areas they invaded. Because their actions are inhumane and barbaric, it has created a lot of psychological stress, especially among pregnant women, nursing mothers, the elderly, and the disabled.

Since the invasion caused massive human and material destruction, short, medium, and long-term planning and work are needed to restore things to normal. Because of the total devastation and crisis in the occupied areas, there is a need for psychological support, food, clothing, and medical support. The sound of heavy equipment has caused a lot of psychological problems (fear, shock and anxiety, fear and anxiety), especially in children, so psychological counseling is needed. Many government institutions and public facilities have been looted and destroyed, so there is a need for short, medium, and long-term support and planning to restore the institutions. Completing the internal materials and starting work can be classified into short and medium plans. Reconstruction of destroyed buildings, development, and investment activities will be a long-term plan. Therefore, in order to provide short, medium, and long-term support, it is necessary to provide financial and kind support from investors, charitable organizations, and individuals as well as from the government.

Finally, what is better for Amara to protect itself and Ethiopia as a country? The question raised as; Creating an organized society, creating a political environment that requires listening and understanding, building an army

with a strong sense of nationalism, building a system that is transparent and accountable, limiting nationalistic politics, and ensuring that law and order are respected, taking legal action against groups that harm the country's interests, binding Ethiopianism. It is necessary to strengthen the political system, build a system that expands equality, get rid of god addiction, create responsible and competent leadership, adjust the principle of diplomacy, limit the government's excesses, and make the government take immediate action against groups that harm the country and the people.

In summary, the damage done by the invading force of Tigray caused great damage to the mental health, psychology, and social interaction of the Amhara people in the zones where the invading force was once occupied.

This trauma has shown that the number of people who have suffered trauma, stress and mental health problems related to psychological breakdown is high. This study showed insults, bullying in front of a relative or husband, and saying that you are like that (threats and intimidation). It has been shown that the main purpose of this violation of human rights is to erode and provoke the community's mind and cause-related mental chaos. The actions and behavior of Tigray's invading forces in all the zones they occupied by invasion had a historical spirit of hostility. They stated that they came to 'settlement'; on the contrary, the community that invaded them did not understand why all these abuses. It can be seen that it is a community that has no enmity with the people of Tigray and no desire for revenge. Regarding this, a participant in a deep group discussion said:

"...Is it a Gojam farmer? Is it a Gondar farmer? Is it Wollo farmer? Who benefits from it? I have participated in "Ediget Beheberet," which means we can progress in union, and I have known it since the student movement. As I told you, there was a feudal system with its own people. However, there is nothing that has harmed the people of Tigray. My family has not harmed Tigray but itself. Where did you go? What caused us to fight in our family was that they were taking care of it without doing anything, and we were not seeing it from a distance but up close. What land did they have, and who went to them and caused problems? They have come with us, but our family has never been bothered by them."

In all zones, beatings and labor were psychological and identity-affecting with insults (for example, insulting the occupying force by carrying weapons and food, saying 'donkey' like your brother) and in all zones where in-depth

interviews and group discussions were conducted.

As shown in Table 8 below, the invading force of Tigray has done a serious job of affecting the community's psychology and mental health related to psychological wounds. This table shows the type of damage in rural and urban areas and the zones where the invader was. In general, 29,008 people were beaten, 33,537 people were forced to carry weapons and food or cook food, 103,721 people were subjected to violence and threats, 7460 people were made to lose their addresses or their whereabouts were unknown, and 35,320 people were also; They were subjected to various types of trauma (for example, being forced to participate in combat or being shot in the face).

From the in-depth group discussion and interview, it was seen that carrying weapons and food was not only labor exploitation for the invading forces of Tigray. Instead, the racial insults they received while carrying food and weapons were frightening. In many areas where the invasion took place when a donkey was being loaded, they used to embarrass the people they found in the area by saying, 'Help your brother (meaning the loaded donkey).' This blasphemy was in all areas of the zone occupied by the invader. Table 8 summarizes that the Tigray invader's exploitation, insults and humiliation, and beatings were aimed at multiple categories and were mainly psychological damage done to diminish the Amhara people as a people and create a society that is not proud of itself.

Zone	Residence	Degrading insults	Exploitations	Threatened	Missing	Others
N.Wollo	Urban	4,727	4,012	23,823	773	6,331
	Rural	4,259	2,852	13,869	603	19,118
	Sum	8,986	6,864	37,692	1,376	25,449
S.Wollo	Urban	1,392	197	12,676	97	1,478
	Rural	7,671	8,421	22,575	1,962	1,364
	Sum	9,063	8,618	35,251	2,059	2,842
N.Showa	Urban	1,228	4,240	5,295	1,997	1,537
	Rural	2,742	4,181	6,842	92	1,027
	Sum	3,970	8,421	12,137	2,089	2,564
Oromo Admin	Urban	245	502	5,336	58	416
	Rural	312	198	925	10	123
	Sum	557	700	6,261	68	539
Dessie City	Urban	1,002	1,774	5,913	1,659	3,134
Waghimira	Urban	397	118	1,347	30	168
	Rural	1,055	825	2,305	52	119
	Sum	1452	943	3652	82	287

S.Gonder	Urban	169	34	187	8	89
	Rural	220				
	Sum	389	34	187	8	89
N.Gonder	Rural	3,589	6,183	2,628	119	416y
Grand sum	Urban	9,160	10,877	54,577	4,622	13,153
	Rural	19,848	22,660	49,144	2,838	22,167
	Sum	29,008	33,537	103,721	7,460	35,320

Table 8. *Violation of human rights and its implication on mental and psychological health*

3.2. Damage Extent and Magnitude of Humanitarian Crisis

3.2.1. The Overall Damage the Invasion Incurred at The Household Level

As a result of the massive invasion committed against the Amhara Regional State by the Tigray Aggressors (led by the TPLF_ the Tigray people Liberation Front) in collaboration with other few individuals and armed/rebel forces, particularly the Oromo Liberation Front (locally named “Shene”), various humanitarian, material and psychological catastrophe and internal scars have been incurred at the household level. Despite the overall economic and psychological damages generally incurred by the Amhara people, especially those adjacent to -prone areas because of their proximity to occupied territories, 837,687 innocent civilians were directly affected by the Tigray aggressor (Table 9).

This present section explains the statistics of the overall damages incurred in the Region and the rate of its distribution across the zonal administrations, which were under occupation, the residence (as urban vis-à-vis rural), sex and age s well as disability conditions of the victims.

When we look at the zonal distribution of the harm incurred, one can understand that even if all of the eight zonal administrations under invasion were affected, a considerable difference has been exhibited among them in terms of the number of victims affected and incidents of damages incurred. Accordingly, the highest rate is in particular recorded in three zonal administrations, where intensive battles have been carried out under the occupation of the aggressor for several days, if not months, namely North Wollo (26%), South Wollo (25%) and North Shewa (17%). The incidents of damage incurred in these three zonal administrations cover 68% of the total damage at a regional level (Table 9).

Notwithstanding others, the rate of damage incidents recorded in Dessie

City Administration also deserves special attention. Even if the rate is slightly lesser than that of South Gondar (10%), constituting only nine percent of the total damage, which is indeed considered insignificant compared to North Wollo, South Wollo, and North Shewa, the damage incurred in Dessie still remains larger in relation to the Oromo Nationality zone (7%), Wagheamra (3%) and North Gondar zones (3%). Although Dessie is just a city administration, the number of victims recorded thereto is more than double that of the Wagheamra and North Gondar zone. This shows how far the City was considered to be a crucial site for the aggressors in terms of military significance in marching towards a Capital (Table 9).

When we look at the rate in terms of place of residence regardless of the type, nature or magnitude of the damage incurred, one can understand that both rural and urban dwellers were almost equivalently affected as a consequence of the invasion, although the rate of victims from urban (51%) was slightly greater than that of rural areas (49%) (Table 9).

Names of the zonal administrations under invasion	Residence of victims		Total numbers of damage incidents (or victims)	Percentage (100%)
	Urban	Rural		
North Wollo	123,283	94,050	217,333	26%
South Wollo	89,097	123,745	212,842	25%
North Shewa	72,600	71,544	144,144	17%
Oromo Nationality Zone	44,915	12,738	57,653	7%
Dessie City Admin.	77,079	--	77,079	9%
Wagheamra	11,078	14,730	25,808	3%
South Gondar	12,192	69,510	81,702	10%
North Gondar	--	21,126	21,126	3%
Total	430,244 (51%)	407,443 (49%)	837,687	100%

Table 9. *The total incidents of damage the invasion incurred by location and residence*

In terms of sex, as shown below, among the total number of victims, 424,206 (51 %) and 413 471 (49 %) were men and women, respectively (See Table 10). From this, one can understand that almost both sexes were indiscriminately and proportionately affected by the invasion, notwithstanding that the significance of the damage incurred may vary based on the type or nature of the harm coupled with the existing situations, exposure, and vulnerabilities of the victims.

Sex	Number	Percentage (%)
Man	424,206	51%
Woman	413,471	49%
Total	837,687	100%

Table 10. *The total incidents of damage the invasion incurred by sex*

Furthermore, when we look at the rate of damage by age, the majority of victims (449,655) were from the energetic and productive section of society (youngsters and adolescents) and were found between the age of 18 to 59 years old (54%). This shows how far the invading forces have focused on such portions of the population with the potential to change the social, political and economic fabrics in the Region. As will be discussed in the subsequent section, the majority of victims of humanitarian damage are also found in the same age group. Therefore, although all sections of the community in occupied territories have suffered damage as a result of the invasion, apart from the quantitative data, the data obtained from interviews and focus group discussions similarly confirm the fact that the humanitarian casualties have been committed targeting young peoples (Figure 6).

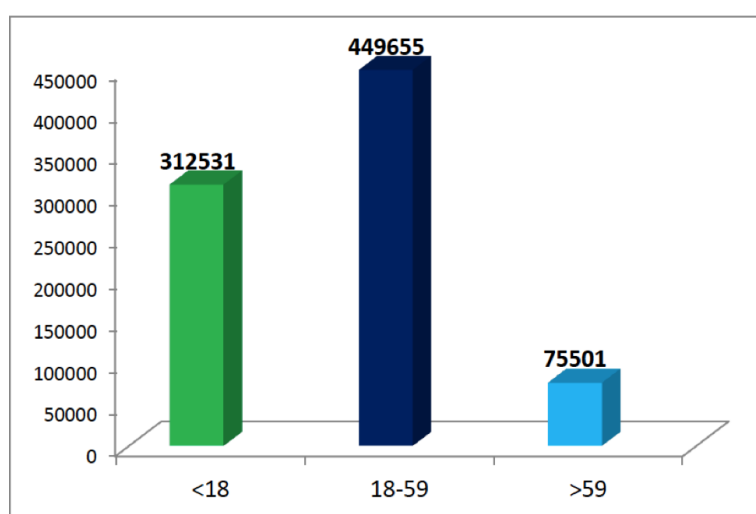


Figure 6. *The total damage rate the invasion incurred by age*

Following young and adult victims, the incidents of damage suffered by children under the age of 18 years (312, 531) take the next rate, which constitutes 37 percent of the total damage the invasion incurred at the regional level. Similarly, regarding humanitarian damage, the number of victims under 18 also holds 31 percent of the total damage incurred in this regard. According to the data obtained from qualitative sources, the psychological pressure and trauma imposed on children were particularly horrific and devastating.

The above figure further portrays 75,501 of the victims were above 59 years old, weak and senile to defend themselves, covering nine percent of the

generally affected persons. Similarly, as explained in detail in subsequent sections, among the total 242 744 persons who suffered from humanitarian damage, eight percent were above fifty-nine years old.

The qualitative data also further confirms that a number of old persons (oldsters and grannies), including religious leaders, have been brutally assaulted, humiliated, and killed by the Tigray aggressing force. Due to their weak physical strength and courage to flee, majorities of elders were not displaced from their homes in the occupied territories. Therefore, apart from the humanitarian and material damage they incurred, old persons were left to witness the civilian casualties committed in the occupied territories with their naked eyes. Consequently, one can imagine how serious the psychological pain and anxiety they might have gone through compared to other persons who have been displaced.

Finally, as people with disabilities are among the most vulnerable member of the population like women, children, and elders, looking at the rate in terms of the victims' disability condition is imperative to understand the extent of causalities brutalities committed. In this regard, the statistical data reveals, among the total victims, 29852 were persons with a sort of disability, of which 7751 were visually impaired (blind), 3464 (deaf), 6451(handicapped or crippled), and 5588 were insane or persons with mental development deficiencies, respectively. The rest 6598 victims are also associated with other kind of disabilities other than the specified once (Table 11).

	The Kinds of Disability					Total Number
	Visually impaired	Deaf	Handicapped	Mental development deficiency	Other kinds of disability	
Number of victims	7,751	3,464	6,451	5,588	6,598	29,852
Percentage (%)	26%	12%	22%	19%	22%	100%

Table 11. *The rate of damage suffered by persons with disability*

In particular, the visually impaired (26%), handicapped (22%), and insane persons (19%) were among the highly affected persons with disabilities. Similarly, as discussed latter, 15,139 cases of human rights violations are also associated with this group of persons. Therefore, from this, one can understand that the Tigray invading force have never showed a mercy for those persons who are even unable to move or defend by themselves (due to physical defects) or incapable of understanding the nature or consequences of their act owing to insanity or deterioration of their mental faculties (Table 11).

3.2.2. Major Human Right Violations and Crimes Against Humanity

Due to the large-scale invasion of the Tigray force, the Amhara people suffered a myriad of humanitarian crises and catastrophes. Excluding millions of people who have been displaced 242 744 cases of serious human rights violations were identified in the occupied territories, including war crimes and crimes against humanity. In this regard, the indiscriminate killing, forced eviction and mass displacement of civilians, rape, physical assault and torture, forced labor (forcing civilians to build forts for defense, to carry armaments and rations in war time), abduction and disappearance of local persons, ethnic-based insults, humiliation, and abuses were evidenced.

The Tigray invading force was also responsible for various civilian casualties, war crimes, and immorality. In this regard, using locals as a human shield and obliging them to be at a frontline with their empty hands, launching heavy ammunition at residential areas, towns, and buildings, and using private homes as a fort, graves, and toilets were among the archetypal examples. Particularly, local residents were also forced by the Tigray force to commit robberies against the government and public properties in different instances while being recorded. Some respondents argued that the Tigray force was recording such video shreds of evidence as a means of their false propaganda and with the intention of misleading the international community to have a wrong perception that public property in the occupied territories was looted by the local people while pretending them as innocent.

Therefore, the Tigray invading force was generally responsible for various civilian casualties committed in the occupied territories against major international human rights and humanitarian laws. In this regard, the violations of specific human rights conventions concerning the rights of women, children, and persons with disability are prominent. In addition to the -mentioned specific international instruments, all civil, political, social, economic, and cultural rights, as well as those of civilians recognized under international humanitarian law of the Geneva Conventions, have been clearly violated in the course of the invasion.

The following sub-sections critically examine the rate, significance, and magnitude of the humanitarian damage as their conditions of execution,

taking different variables as a unit of analysis. To this effect, quantitative and qualitative data have been used in the analysis for triangulation. Particularly, the qualitative data obtained from key informant interviews and focus group discussions have been used widely to understand and visualize the situation and to better appreciate the real pains the victim suffered in the occupied territories.

3.2.3. Incidents of Humanitarian Damage in Terms of Different Variables

Examining the general incidents of humanitarian damage incurred in all occupied territories and its proportion in relation to different variables has significance importance for better understanding of the extent and magnitude of the civilian casualties, the special cases and conditions of their commissions as well as to identify the special focus points or targets of the invading force and to find out the possible implications thereto, thereby enabling to appreciate the degree of the brutalities committed and providing the baseline in designing and implementing appropriate intervention and rehabilitation mechanisms in the future.

Consequently, this section aims to critically examine the rate and proportion of humanitarian damage generally incurred in terms of location (Zonal administrations and Districts), place of residence (as urban vis-à-vis rural), sex, age, educational status and occupation of victims and their disability conditions as well as the particular type/nature of damage incidents and the perpetrators responsible thereof.

Human Right Violations by Location (Zones and Districts) and Place of Residence

Notwithstanding that all occupied territories incurred humanitarian damage of some kind, the rate and significance of the damage considerably vary among the respective Zonal administrations and the constituting Districts (Woredas) thereto. Accordingly, when we look at the rate in terms of the number of incidents of damage that occurred without considering other factors, such as the type or magnitude of the damage, the total area coverage or the population size of zonal administrations as well as the duration, intensity or level of the invasion therein, the majority of damage incidents were recorded in North Wollo, (88,432), South Wollo (67,845) and North Shewa (36,517). Among the total 242,744 incidents, 192, 796 (79%) were incurred within the occupied territories of these three Zonal

administrations (Table 12).

Names of the zonal administrations under invasion	Residence of victims		Total numbers of damage incidents (or victims)	Percentage (100%)
	Urban	Rural		
North Wollo	42,762	45,669	88,431	36%
South Wollo	16,791	51,057	67,848	28%
North Shewa	17,680	18,837	36,517	15%
Oromo Nationality Zone	6,977	1,859	8,836	4%
Dessie City Administration	14,810	0	14,810	6%
Wagheamra	2,247	6,940	9,187	4%
South Gondar	731	622	1,353	1%
North Gondar	0	15,762	15,762	6%
Total	101,998 (42%)	140,746 (58%)	242,744	100%

Table 12. *Total Incidents of humanitarian damage incurred by location and place of residence*

When we look at the rate of damage in terms of place of residence, the number of victims (or incidents of damage) recorded in rural areas (58%) was relatively larger than in the corresponding urban areas (42%). Similarly, in terms of locations, excluding Dessie City Administration and North Gondar Zone, where all of the identified victims remained urban residents, in the rest of other zonal administrations, the majority of damage incidents have been associated with rural areas except the case of Oromo Nationality and South Gondar Zones.

Similarly, as in the case of zonal administrations and places of residence, the number of incidents recorded within each Zonal administration also varies considerably across different Districts (or Woredas). If we take South Wollo, for example, there is a big difference among Districts in victimization rate, where the number of reported incidents generally ranges from a minimum of eight in Mekdela District to a maximum of 12,236 in Werebabu District (figure 6).

In South Wollo Zone, among the seventeen Districts generally affected by the invasion, Worebabu and Tehuledare were particularly prominent to incur above 10,000 incidents of humanitarian damage each, followed by Ambasal and Kombolcha Districts. The rate of civilian casualties and violations reported in the above four Districts (41,491) generally amounts to 61.2% of the damage incidents incurred in South Wollo (67,848). Next, Legambo and Kalu (with above 5000 incidents each), Kutaber, Dellanta, and Dessie Zuria (above 2000 incidents each), and Woraellu, Tenta, Jamma, and Hayik (with above 1000 incidents) can be mentioned among the moderately affected Districts of the South Wollo (Figure 7).

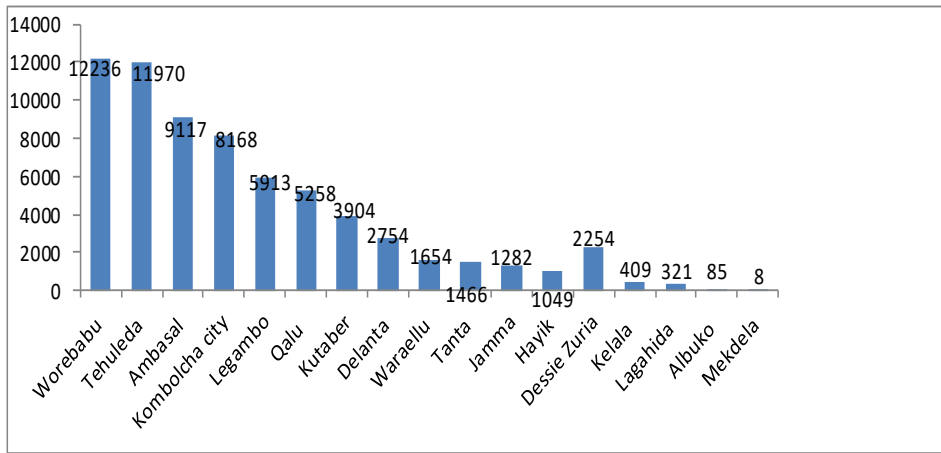


Figure 7. The victimization rate among the occupied Districts of the South Wollo Zone

When we look at the numerical distribution of humanitarian damage incurred across the affected districts of North Wollo, out of the fifteen Districts (Woredas) of the Zone which incurred damage, six of them (Wadlla, Habru, Meket, Woldia, Guba Lafto, and Lalibela) were particularly prominent to incur above 7000 incidents of damage each (Table 13).

	Affected Districts (Woredas) in North Wollo Zone															Total
	Bugna	Raya Kobo	Gidan	Meket	Wadla	Mersa city	Guba Lafto	Habru	Woldya city	Iasta	Dawnt	Ga za	Angot	Kobo	Lalibela	
No.	6,636	2,786	2,077	9,217	9,885	6,577	8,414	9,418	8,723	4,252	1,229	5,335	6,317	454	7,111	88,431
Perc (%)	7.5	3.2	2.3	10.4	11.2	7.4	9.5	10.7	9.9	4.8	1.4	6	7.1	0.5	8	100

Table 13. Reported humanitarian damage across affected Districts in North Wollo Zone

In a case of North Shewa, as shown in the Table below, among affected 11 woredas, Efrata ena Gidim District (13,461) incurred the highest rate of a humanitarian damage (Table 14).

	Affected Districts in North Gondar Zone											Total
	Antsokiya Gemza	Efrata ena Gidem	Menz mama gidem	Tarma Bare	Moja ena wodera	kewot,	Menz Qeya	Shewa Robit	Ataye	Mehale Meda	Menze Gera	
No.	4,834	13,461	848	2,748	1,070	2,944	178	3,296	4,749	1,777	612	36,517
(%)	13.2	36.9	2.3	7.5	2.9	8	0.5	9	13	4.9	1.7	100

Table 14. Reported humanitarian violations across affected woredas in North Shewa

Five woredas in North Gondar Zone were affected, among which Adirkay woreda (8,618) is particularly prominent, incurring more than half of the damage incidents, followed by Debark and Dabat woredas (Table 15).

	Affected Districts in North Gondar Zone					Total
	Adirkay	Janamora	Debark	Dabat	Telemt	
Number of incidents of damage	8,618	6	3,535	2,793	810	15,762
Percentage (%)	54.7%	0.03%	22.4%	17.7%	5.1%	100

Table 15. *The rate of humanitarian damage across Districts in the North Gondar Zone*

As we can see from the table below, among five Kebeles identified to be affected by Dessie City Administration, 75% of damage incidents were recorded in relation to three Kebeles, namely Menafesha, Arada, and Buanbua Wuha (Table 16).

	Affected Kebeles within Dessie City Administration					Total
	Menafesha	Bunaba wuha	Hote	Arada	Segno Grbeya	
Quantity of damage	5,306	2,878	1,783	3,424	1,419	14,810
Percentage (%)	35.8%	19.4%	12%	23.1%	9.6%	100

Table 16. *The rate of humanitarian damage incurred in the Dessie City Administration*

When we look at the rate across affected Districts of the Oromo Nationality Zone, the highest incidents of damage have been reported in Jile Timuga and Artuma Districts, consisting of 3,556 (40.24%) and 2,808 (31.8%) numbers victims, respectively, followed by Kemisse District. The damage incidents that occurred in the above-mentioned three Districts generally amount to 90% of the total damage recorded at the Zonal level (Table 17).

	Affected Districts in Oromo Nationality Zone								Total
	Dawa Chefe	Bati	Jale Timuga	Artuma		Dawa Hrawa	Kemisse	Baty town	
Number of damage incurred	185	105	3,556	2,808	-	173	1,604	405	8,836
Percentage (%)	2.09%	1.2%	40.24%	31.8%	00.0%	1.96%	18.1%	4.6%	100%

Table 17. *Incidents of humanitarian damage in the Oromo Nationality Zone across affected woredas*

Finally, with respect to Wagheamra Zone, among the four Districts affected by the invasion, relatively large number of persons were affected in the District of Dahana (5236) and the Zuqala District ranked second (2725) (Table 18).

	Affected Districts of the Zone				Total
	Zuqala	Dahana	Gazbela	Sekota	
Number of incidents of damage	2,725	5,236	604	622	9,187
Percentage (%)	29.6%	57%	6.6%	6.8%	100

Table 18. *The rate of humanitarian damage incurred in the Wagheamra Zone*

The Rate of Victimization by Sex and Age

When we look at the rate in terms of sex, among the total number of victims who have suffered humanitarian damage, 131,627 (54%) and 111,117 (46%) were men and women, respectively. However, since women are especially vulnerable to different sexual abuses and attacks in war, the number of women victims reported in this regard is significant, notwithstanding that men victims are slightly greater than women victims (Table 19).

Similarly, when we look at the rate in terms of age, among the total number of civilians who have suffered humanitarian damage, more than half of the victims (148,484) were between the age of 18 to 59 years (61%), 74,727 were children below 18 years (31%), and 19,533 (8%) were above 59 years old (Table 19).

Sex	Age Category			Total (number)	Percentage (%)
	<18	18-59	>59		
Man	38,521	81,349	11,757	131,627	54%
Woman	36,206	67,135	7,776	111,117	46%
Total (Number)	74,727	148,484	19,533	242,744	100%
Percentage (%)	31%	61%	8%	100	

Table 19. *Victims of humanitarian damage by sex and age*

From the above discussion, it can be understood that the invading forces have committed most of the human rights violations and atrocities towards targeting men, young and productive portions of the population, possibly with a view to retard the development of the Region and create a favorable condition to accelerate the pace of the invasion.

The Rate of Damage by the Educational Status and Occupation of Victims

When we look at the total rate of humanitarian damage suffered at the Regional level in terms of the educational status of the victims (by considering only victims above five years old), among the concerned 221,829 affected persons, the majorities either do not have a formal education (39%) or taken elementary education up to Grade eight (36%). Such victims with no or

elementary level of education generally constitute above 70% of the total victims who have suffered humanitarian damage at the regional level. Given the most of Ethiopia's rural residents are uneducated, the present finding can be used to consolidate the previously identified fact that confirmed the majority of the victims were from rural areas.

On the other hand, among the total number of persons reported to suffer humanitarian damage, victims educated from nine to twelve Grades (19%) and those having a certificate, diploma, degree, or above level (9%) generally cover 28% of the total victims recorded in this regard. Therefore, given the relatively few numbers of persons educated at high school, college, and university level coupled with their potential role towards raising the political views and awareness of the society, it can be said that these portion of the population were subject to the focus of the invading force (figure 8).

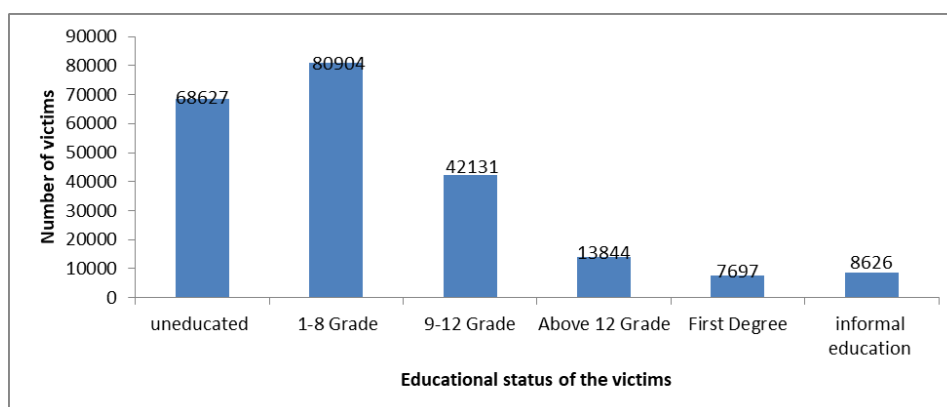


Figure 8. *The rate of humanitarian damage by the educational status of the victims*

Likewise, when we look at the rate of humanitarian damage in terms of the type or fields of occupation of the victims, the majorities were farmers/peasants (31%) and students (21%), holding more than half of the total damage incidents incurred in the occupied territories. Therefore, from this, one can understand how far farmers and young students have been the central focus of the invading force as far as the rate of humanitarian damage is concerned (figure 9).

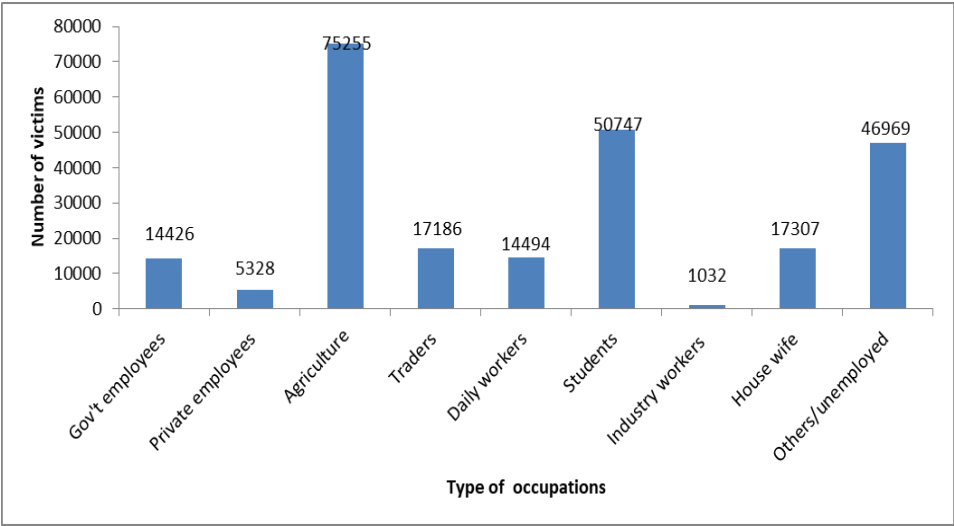


Figure 9. *The rate of humanitarian damage incurred by the occupation of victims*

Following the highest victimization rate incurred in relation to farmers and students, housewives (7%), traders (7%), and government employees (6%) were also among such victims that largely incurred various incidents of humanitarian damage in occupied territories. In addition to these, even 14,494 daily workers and 1032 industry workers were subject to different human rights violations and abuses as a result of the invasion.

Finally, when we look at the rate s victims engaged in teaching and health, 488 school teachers and 51 health workers have been killed, assaulted, and injured and were subjected to forced disappearance.

The Rate of Humanitarian Damage Caused by the Victims' Condition of Disability

Persons with disabilities were among the vulnerable portions of the population who suffered a lot during the invasion. In this regard, a total of 15 139 persons with (both physical and mental) disabilities were victims of humanitarian damage, among which visually impaired (3584), handicapped (3376), and persons with mental illness or deficiencies (2225) were particularly prominent. In addition to these, 1637 deaf (11%) persons and 4317 persons with other types of disability were victims of humanitarian damage by whatsoever means (Table 20).

	Types of Disability					Total
	Visually impaired	Deaf	Handicapped	Mental illness/ deficiencies	Another kind of disabilities	
Number	3,584	1,637	3,376	2,225	4,317	15,139
Percent (%)	24%	11%	22%	15%	29%	100%

Table 20. *Number of Persons with a disability who incurred a humanitarian damage*

Therefore, from this, one can understand how far the invading force has attacked everyone indiscriminately, even including those who need help and cannot escape by themselves. In this regard, similarly according to the qualitative data, there were instances where different persons with (physical and mental) disabilities have been brutally killed, assaulted, and injured by the invading force. For example, in the South Wollo zone, Lagambo District Chiro Kebele, the Tigray invaders entered the house of a deaf person. They killed him brutally, simply resulting from verbal miscommunications. Similarly, other insane persons living on the street were also murdered without mercy by this force, knowing that such persons are normally the ones who are unable to appreciate the consequence of their actions because of their mental illness.

The Rate of Humanitarian Damage by Type of Damage

Due to the Tigrayan invading forces, people living in the aforementioned eight zonal administrations of the Region suffered tremendously and have experienced an immense humanitarian and psychological catastrophe. In this regard, the death and killings of civilians, assaults and inflicting major and minor bodily injuries, cases of rape, making locals subject to forced labor and slavery-like situations, humiliating, undignified, and degrading ethnic-based insults and abuses, intimidations, as well as the abduction and disappearance of people, are among the prominent types of humanitarian casualties, human right violations and abuses (Table 21).

Zone	Death due to war	Major bodily injury	Minor bodily injury	Rape	Assault and beating	Forced Labour	Insult & Intimidation	Abduction & Disappearance	Unknown Damage	Others	Total	Percentage
North Wollo	2,326	1,165	2,181	758	8,986	6,864	37,692	1,376	1,760	25,323	88,431	36%
South Wollo	2,400	1,592	5,272	418	9,063	8,618	35,251	2,059	309	2,866	67,848	28%
North Shewa	1,029	2,074	848	118	4,114	8,472	13,005	2,091	853	3,913	36,517	15%
Oromo Nationality Zone	203	106	172	29	557	700	6,261	68	210	530	8,836	4%
Dessie City Administration	115	123	181	183	1,002	1,774	5,913	1,659	727	3,133	14,810	6%
Waghemra	310	116	2,161	148	1,452	943	3,652	82	41	282	9,187	4%
South Gondar	194	118	107	80	389	34	187	8	79	157	1,353	1%
North Gondar	426	245	2,035	48	3,589	6,183	2,628	119		489	15,762	6%
Total	7,003	5,539	12,957	1782	29,152	33,588	104,589	7,462	3,979	36,693	242,744	100%
ገጽጽ(%)	2.88%	2.28%	5.34%	0.73%	12.01%	13.84%	43.09%	3.07%	1.64%	15.12	100	

Table 21. The rate of humanitarian damage the invasion incurred by location

As can be understood from the above table, notwithstanding a few instances in which the specific type of damage was either unknown or not identified (1.64%) coupled with other unspecified kinds of damages (15.12%), among the total victims who have experienced humanitarian damage, more than 80% were generally associated with an abusive, humiliating and undignified ethnic- based insult (43.09%), forced labor and slavery-like situation (13.84%), physical assault (12.01%) and other unspecified incidents of damage (15.12%) (Table 21). However, given the nature and significance of these kinds of damages coupled with the magnitude and level of the substantial risk that may possibly entail, the degree of importance associated with the above-specified incidents of damage is incomparable with such instances with devastating consequences, such as incidents of death and bodily injury, rape cases, the kidnapping, abduction, and disappearance of civilians. In this regard, 7003 civilians were reported dead due to different reasons related to the invasion or the resulting war situations. Apart from 18,406 persons who have incurred minor and major bodily injury, 1939 women were brutally raped, and 7462 were forced into abduction and disappearance, whose addresses are yet unknown (Table 21).

Therefore, although the rate of the victims who have been killed (2.88%), injured (7.62%), and raped (0.73%), as well as those whose addresses are unknown being the subject of abduction and disappearance (3.07%) seems few in terms of numbers; generally humanitarian damage of such kind should normally obtain greater weight compared to others (Table 21).

Human Rights Violations and Abuses by Perpetrators

Although the Tigray invading force led by the TPLF was the principal actor in the invasion committed against the Amhara people, there were also other different organized groups, armed/rebel forces and individuals who can be taken with the status of accomplice owing to their apparent involvement in inflicting damages in the course of the invasion in support of the Tigrayan force. In this regard, despite the apparent differences in terms of the scope of their participations in the course of the invasion as well as the rate of violations they are attributable thereto, the rebel force organized in Oromia National Regional State appealed itself to be the “Oromo Liberation Army” (locally known as “Oneg shene”) and the so-called opposition party of the Wagheamra Zone known as “Agew Shengo” were prominent.

Accordingly, when we look at the rate of humanitarian damage by perpetrators, the Tigray invading force was responsible for inflicting the

majority of damage incidents incurred in all occupied territories across eight zonal administrations. Generally, more than ninety percent of the humanitarian--related damages and civilian casualties occurred directly or indirectly due to the Tigray invading force. (Table 22).

Affected Zonal administrations	Tigray invading force	Oreg Sheine	Agaw Shengo	Tigrayans live with the community	Locals other than Tigrie descendants	Unidentified perpetrators	Other perpetrators	Total	Percentage (%)
North Gondar	15,606	0	0	1	3	24	128	15,762	6%
North Wollo	83,888	285	0	170	290	528	3,269	88,430	36%
South Wollo	66,284	153	0	372	198	147	694	67,848	28%
North Shewa	30,974	4,060	0	48	50	325	1,060	36,517	15%
Wagheamra	9,075	0	51	0	18	2	41	9,187	4%
Oromo Nationality Zone	6,913	1,499	0	23	9	144	248	8,836	4%
Dessie City Administration	13,969	28	0	8	26	16	763	14,810	6%
South Gondar	1,264	4	0	0	1	2	82	1,353	1%
Total (Number)	227,974	6,029	51	622	595	1,188	6,285	242,744	100%
Relative rate by perpetrators (%)	93.9%	2.5%	00.	0.3%	0.2%	0.5%	2.5%	100	

Table 22. *Human right violations and abuses by perpetrators*

For example, when we take the damaged rate attributable to “Agaw Shengo” it was responsible for fifty-one incidents limited only to Wagheamra Zone. Although the rate of damage inflicted by “Agaw Shengo” appeared to be higher compared to the rest of the other perpetrators, among the total 9187 damage incidents reported in Wagheamra Zone, the Tigray invading forces is still ranked first being responsible for 9075 incident.

Totally in the perspective of the eight Zonal administrations affected by the invasion, the Tigray invading force particularly caused immense humanitarian damage in relation to North Wollo, South Wollo, and North Shewa Zones. Among the total damage incidents inflicted by this force at a regional level, 79.5% have been incurred in these three Zonal administrations. Following the three Zonal administrations mentioned above, relatively large damage incidents have been recorded in North Gondar (6.85%) and Dessie City Administration (6.13%). Whereas South Gondar (0.6%) and Oromo Nationality (3%) are among the zonal administrations which are said to . A,suffer relatively low incidents of damage due to the Tigray invading force.

Likewise, the Tigray invading force ranked first and was principally responsible for inflicting the serious type of humanitarian damage and violations, such as the death of civilians and rape incidents. In this regard,

for example, among the total 7003 death of civilians, more than 96% (6736) of the incidents are directly or indirectly associated with the Tigray invading force. Similarly, this force was responsible for 97% of rape cases incurred in occupied territories.

Therefore, it is important to note that the rate of humanitarian damage inflicted by another type of perpetrators is generally insignificant compared to the Tigray invading force. Consequently, it can be argued that other perpetrators were involved in the course of the invasion, basically with accomplice status.

Nevertheless, unlike the case of “Agew Shengo,” “Oneg Sheine” ranked second for inflicting a number of human rights violations and abuses across all invaded Zonal administrations of the Amhara Region except the case of North Gondar and Wagheamra Zones, which are not invaded by this force. Although the rate of the damage attributed to this force appears to be insignificant compared to the corresponding damage inflicted by the Tigray invading force, generally, 6029 cases of human right violations have been evidenced related to “Oneg Sheine”, constituting 2.5 percent of the total incidents of damage at Regional level. In this regard, despite the apparent differences among zonal administrations, this force was responsible for various serious human rights violations against innocent civilians (including murder and rape cases), the rate of which ranges from a minimum of 4 cases in South Gondar to a maximum of 4060 cases in North Shewa. Particularly, North Shewa and Oromo Nationality Zones were prominent to have incurred the highest rate of damage as a consequence of Oneg Sheine. Among the damage incidents generally inflicted by this force, 5559 cases (92%) have been reported within the aforementioned two zonal administrations.

In addition to statistical data, the qualitative data also indicate that “Oneg Shenie” has been attacking various areas in the Oromo ethnic zone, especially targeting Amharic language speakers. For example, the data obtained from in-depth interviews and group discussions confirmed that the militants of this force in Khemise town had gone around and harassed the Amhara ethnic groups, technically with a desire to displace them from the place. By making other ethnic Oromo local residents identify and locate their fellow Amhara brothers, the rebel force was working to develop a sense of hostility and mistrust between the two ethnic groups. In this regard, a local resident who was interviewed said: “If the terrorists had not left the zone suddenly,

they would have been prepared to carry out ethnic massacres by identifying the Amhara people.”

Apart from the above-mentioned organized forces, some native Tigrie and other locals living in the occupied territories were also responsible for casing humanitarian damage to the Amhara people. In total, these two forces have inflicted 1217 cases of humanitarian damage, which covers 0.5% of the overall damage incurred at the Regional level. However, among the total 1217 incidents, 622 (0.3%) of them have been incurred directly owing to ethnic Tigrie local residents who have been residing for centuries in the occupied territories of the Amhara Region.

In the course of the invasion, these individuals have been supporting the invading force in different ways. Particularly, it can be understood from the qualitative data that these perpetrators have caused immense humanitarian damage to their fellow ethnic Amhara comrades who have lived with them for centuries sharing good and bad times, by giving information to the invading force from the inside and making suggestions for potential arrest of local persons identified as government supporters, and even lining up on the side of the invader in war fronts.

In addition to robbing and looting the properties of private and public institutions as insider informants; the qualitative evidence confirms that they have been responsible for the torture and killings of many innocent civilians, suggesting that they had weapons, family members or supporters of the national defense force or “Fano”.

At the same time, some local residents who are not from ethnic Tigrie, besides taking part in the looting, took advantage of the opportunity to take revenge and harmed their own fellow brothers due to some other similar personal cause. In this regard, the following extracts taken directly from study participants during the interview will help to understand the situation.

“Some ethnic Tigrie and greedy local residents who have been working for years in occupied areas were accomplices in looting government properties and leading the way in the course of the invasion. There were also some ethnic Amharas who betrayed their own people and have now fled and disappeared after following the invaders. They have done espionage work for them.” (Dessie town)



“...the pointer woman accusing us was from Tigray who lived with us in the same village for about forty years, and she knows my daughter and me then by pointing to my daughter, this woman told them that she will tell you the truth when you take her daughter away. I saw Fano members coming to her home at night, she said. Her husband [who is ethnic Amhara] was with her. Then they took my daughter and me away, and we suffered a lot of abuse” (Dessie town).



“...the Tgrie woman was their insider informant giving them names of individuals to take revenge, hence responsible for the arrest of many locals... the names of more than hundred persons who are going to be murdered later have been already listed and identified ...The captain read the list of such persons to us....But, before implementing their plan, suddenly, our soldiers entered and saved us. The woman was living in Kebele’s house and married the Amhara man, but sadly her husband was also her accomplice in harming us.... Out of the twenty-eight poor houses, she gave the name and photograph of only one woman to the Tigray soldiers to make her not be arrested and killed...” (Dessie town)



“...as one of my neighbors had a dispute with a Tigre woman, she pointed and got him murdered. When the Tigray force captured the city, many residents of ethnic Tigrie blew up their car trumpets in public to express their joy. But, since we were scared, we couldn’t get closer to identify and find out who they are” (Dessie City).



“There were also government officials who let the enemy loot and abuse the people. Of course, local persons have been serving by giving information and providing food and drinks to the invading force, locating whoever had a weapon, loading looted property...they served them. They said we defeated Amhara’s hero with Amhara’s gluttony...” (Legambo)



As stated above, in addition to ethnic Tigrie residents, some of the residents were also somewhat involved in inflicting damage. However, it can be understood from the qualitative data that most residents worked with religious leaders and elders to prevent the property from being looted and to return the stolen property. Finally, in addition to the above-mentioned perpetrators, a total of 7473 victims (3%) were injured by other unspecified forces (2.5%) and unknown persons who cannot be identified (0.5%).

The Extent and Scope of Major Civilian Casualties Caused by the Invasion

As stated above, the indiscriminate death and killing of innocent persons, rape, forced eviction and mass displacement of civilians, physical injuries, beatings, torture, forced labor, and enslavement (forcing civilians to build forts for defense, to carry armaments and rations in war time), kidnapping and abduction, ethnic-based insults, humiliation, and abuses are among the archetypal humanitarian damages caused by the invasion in occupied territories of the Amhara Region.

These are presented in detail as follows with reference to the quantitative and qualitative data of the study in a way that mirrors the significance and magnitude of the devastating civilian casualties caused by the invasion and their conditions of implementation. In this regard, qualitative data obtained from in-depth interviews and group discussions are widely used to support the statistical data and better understand the severity of the injuries and the existing conditions thereof.

The Death and Murdering of Innocent Civilians

The statistics reveal that in total, 7003 civilian death have been evidenced as a result of the invasion, among which 5755 cases (82%) occurred in South Wollo (2400), North Wollo (2326), and North Shewa (1029) Zonal administrations. Given the scope of the invasion and the length of period to which they sustained damage under the control of the invading force, unsurprisingly, the highest death rate was incurred within the aforementioned Zonal administrations (Figure 10).

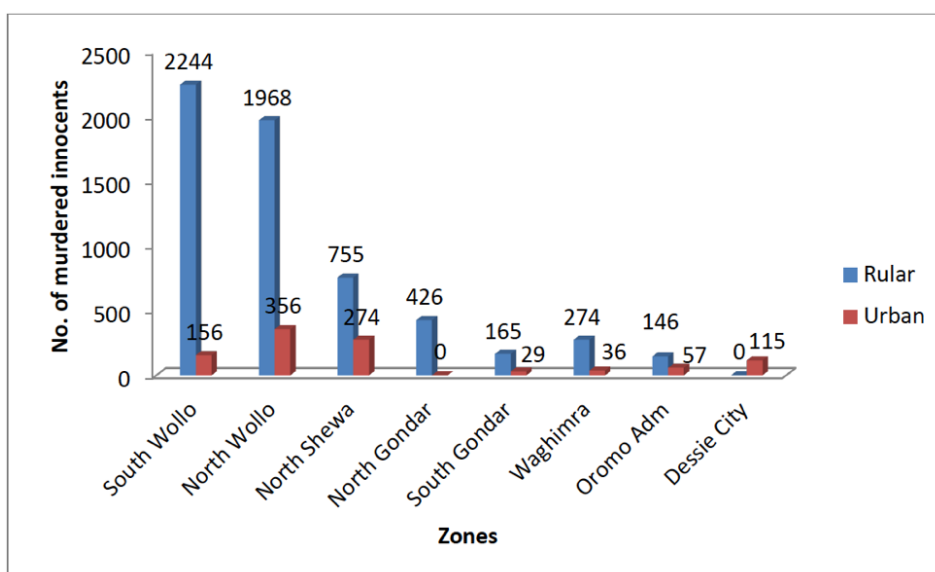


Figure 10. Victims of murder by location and place of residences

When we look at the rate of death in terms of place of residence, among the total number of persons killing due to the invasion, 5973 were rural residents (85.3%). In this regard, since the war was widely conducted in rural areas, it should also be noted that in addition to those who , the direct action of the invaders has killed, a number of rural residents were dead because of sporadic bullet fires and heavy ammunicions launched against towns. Accordingly, among the 2818 who have been killed due to sporadic bullet fires, 2452 (87%) were also rural inhabitants (Table 23 and Figure 11).

Place of residence	Causes of Death						Total
	Stray bullets	Assassination executions	Excessive beating	Starvation	Lack of medicine	Other causes	
Urban	363	394	49	8	131	80	1025
Rural	2452	1403	530	263	708	622	5978
Total	2815	1797	579	271	839	702	7003
Percent (%)	40%	26%	8%	4%	12%	10%	100%

Table 23. Causes of Death by place of residence

Therefore, most of the deaths occurred related to stray bullets. This is especially because the invading force fired heavy weapons at cities and residential areas while using residents as human shields and personal houses and religious institutions as a stronghold.

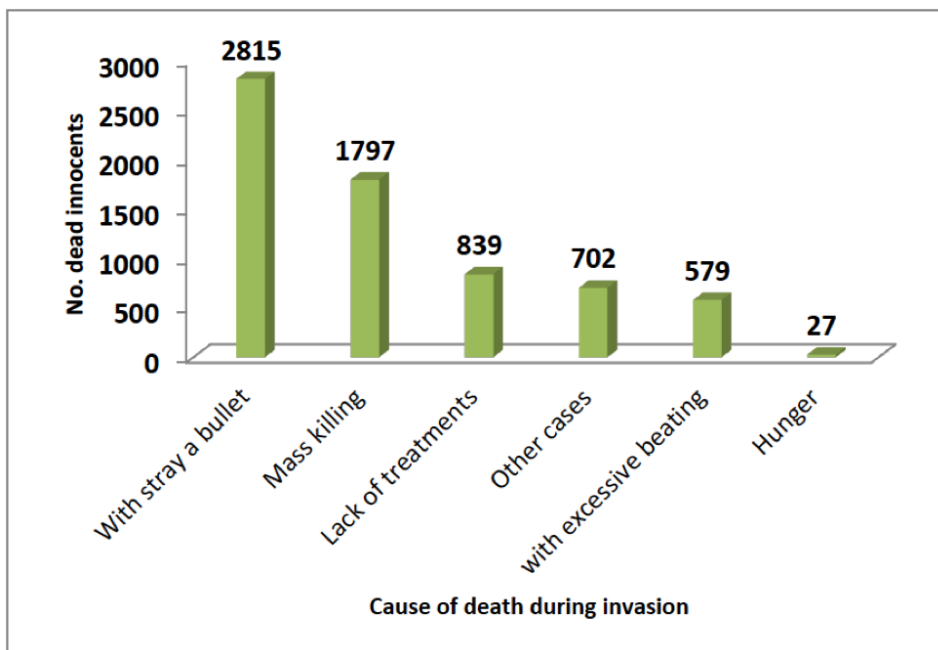


Figure 11. *The causes of death the invasion incurred*

In addition to those who died from stray bullets, the Tigray invaders killed many innocent people by direct attack (by gunshot and beating) in all occupied territories, even in areas where they stayed for hours. Accordingly, the four2376 innocent people were killed in the direct attack (including 171 teachers and 4 four health workers), among which 1797 were shot, and 579 were beaten to death. Among them, four health professionals and 171 teachers are found. Of those people who were shot and killed by direct attacks or excessive beating, more than 95 percent have been attributed to the Tigray invading force.

In addition to those killed by direct attacks, 271 died of starvation, 839 due to lack of health treatment and medicine, and 702 died of other similar causes. Especially given that the number of people who died due to lack of medicine and treatment are more than those who died due to beatings or starvation, it can be understood how much the invasion caused devastating damage in the region's health facilities and medicine supply (Figure 12). Overall, though the number of deaths from stray bullets appears to be higher, on a closer level, a large number of people also lost their lives in the direct attack taken by the Tigray invading force.

When we look at the rate of the people killed by direct attacks and their age ratio, 70.9 percent are between the age of 18 to 59 years (1684). This

shows the invading force has been killing young and productive citizens in focus. Similarly, it can be understood from the qualitative data that youths, investors and influential people, government officials, security and police forces, and other armed individuals were the central focus of the invading force.

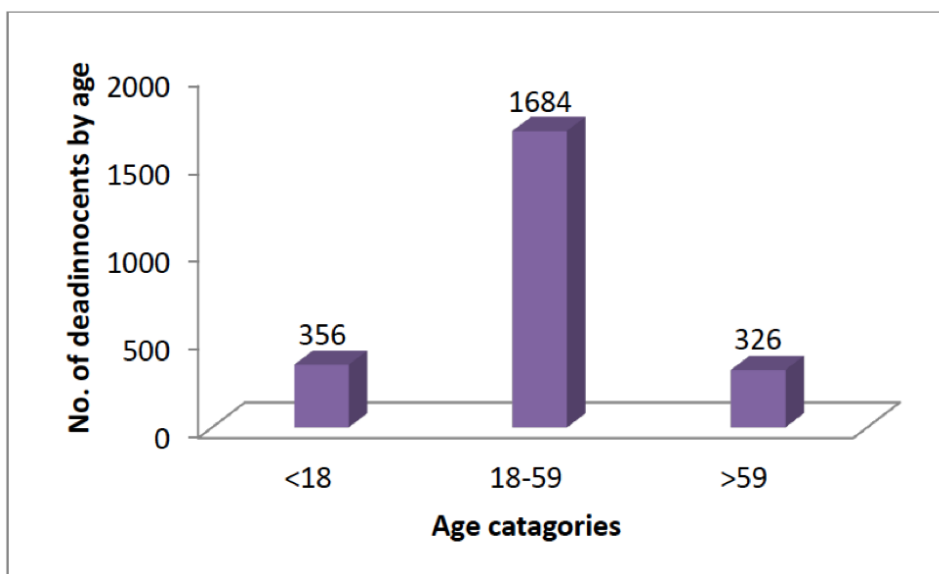


Figure 12. *Death due to direct attack at the age*

Next to young and adult victims, 366 children under the age of 18 years (including a four- year-old child) (15.4%) and 326 elderly and infirm persons over 59 years of age (13.7%) were killed by this force. Similarly, in terms of gender, among the total persons deliberately killed by this force, 1650 are men (69%), and 726 are women (31%).

Therefore, especially the killing of 366 children under 18 and 726 women due to the direct assault shows the brutal nature of this force and its bitter hatred and revenge to the Amhara people in general (Figures 12 & 13).

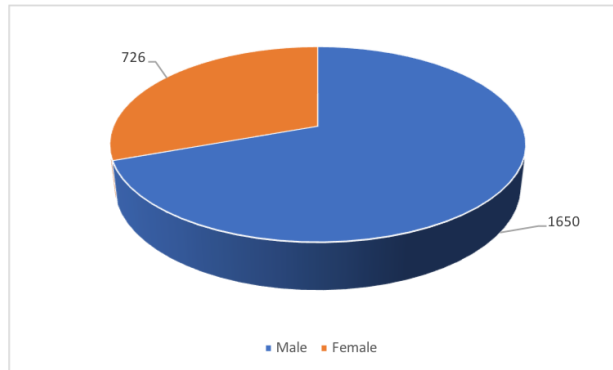


Figure 13. *The death rate by gender*

Although this force has targeted young people and men, it can be understood from the qualitative data that this force has gone around every house asking for money and food, and have brutally murdered many innocent persons of all level for no reason, alleging that they are supporting the Fanon, national defense or prosperity party, or hide weapons. For example, in an interview given by an eyewitness who was a resident of Kombolcha city, he stated that “... they wrote “Tigray Tseer” on the asphalt road, and if anyone who crossed that road incidentally stepping on it, they will shot him in the back.” Similarly, in North Gondar, Tigray’s invading force shot and killed a mother just because she said, “Why are you hitting my son?” Thus, we can understand how many residents have been killed by the invading forces without any excuse and justified cause.

The Tigray invading forces generally killed many innocent people in various areas. They brutally massacred brothers, fathers/mothers, and sons from one family, including disabled persons. For example, in South Wolo-Legambo district, Chiro Kebele, they broke into someone’s house and killed a deaf person just because they did not communicate. Moreover, in the same kebele, they brutally killed two persons cutting off their hands and gouging out their eyes.

Among those statements taken directly from the respondents who were interviewed and participated in group discussions, the following may be used to demonstrate the extent and severity of the massacre.

“...As we tried to count, I know that around 86 local people, both men and women, sick and healthy, were killed... We counted 86 corpses in Woldia city alone...” (Woldia city).



“As soon as the terrorist entered, they started to plunder government institutions. Then, they entered into every individual’s houses and killed young men who are suspected of being soldiers by removing their clothes and looking for a scar on shoulders as a means of proof ...” (Waghemra, Dehana District)



“Many people have been lost in our town, there where about is unknown; they took them... A man lost his two sons at a time, and now his wife is sick. What they did to us was horrible...” (Borumeda District).



“...the boy was kneeling and asking them for mercy saying, I’m returning after fetching water, I’m a father of children, I didn’t do anything, so please don’t kill me ... he was on his knees, but they shot him at his back with four bullets...it was very hard...”



“Normally, the war is carried out between soldiers, one against the other armed forces. But these people were killing unarmed innocents, beating them, robbing their property, humiliating their dignity... Thanks to God and our bishop, we survived because of their presence..., the time we passed during the invasion was not just five months, it looks beyond that much longer than five years, we’ve no sleep, it was really horrible “ (Woldya City)



In addition to the above, in various areas they invaded, the Tigray terrorist group brutally murdered innocents, including religious fathers/leaders, local elders, infirm and disabled persons, children (including a four-year-old boy), and even mentally ill and insane persons living on the streets. At this juncture, participants of group discussions which were held in various places in South Wolo described the horrific situations as follows;

“...they killed so far a number of people without any justified cause. The first one they killed was a mentally ill person in Mugad town ...they have been killing anyone, including insane persons,... at that

time, he was saying 'kill him'...' kill him' because he always used to say that word in normal days, but when he said that word, they shot him to death.."



"He was a deaf person that could not speak; they killed him, and his body was left for a hyena. The other was a mentally ill person, when he said, 'You can't defeat Abiy,' they came back and put out his eyes with a muzzle" (Kurkur Rural Kebele, Dese City Administration).



"...when asking the imam of a mosque many questions, he told them that he did not know anything, then they pretended as if they had left him, and when he started praying, they shot from behind and killed him while he was praying. They did this deliberately to give the issue a religious dimension and thereby used to divide the society".



"We lost our religious father (Alim) named Sheih Muhe; he was disabled and ill, and they killed him... We asked them for permission to bury him, and we [ten persons] buried him in the middle of the night in the dark. They told us to keep silent; they did not allow us for prayer so that no sound could be heard; they prevented us from crying.."



"A religious (Muslim) father had some money; since he was afraid, he tried to hide in the cornice, but they shot him such an old- disabled religious leader while he was there. His body was there for three days since he died, we buried him after three days...."



Above all, the invading force did not allow the corpses of most of the people they killed to be buried with dignity according to the culture and tradition of the community. Thus, the corpses were often left unburied for days, making them rot and eaten by hyenas. To this effect, the invading force chased the local youths not to pick up the injured and bury the bodies of the dead persons. On the contrary, this force buried the bodies of their own soldiers even within privately owned houses and residential homes.

This created great psychological pressure on local residents who returned home after the end of the war. As a result, most of the local residents were afraid to go back to their homes and were forced to prefer to live outside.

In this regard, the following statements directly quoted from the testimonies of study respondents are helpful in explaining the situation at that moment.

“We were not allowed to bury a dead person; 19 corpses were buried together in mass graves; when they entered, the first thing they did was to kill tired members of the Defense Force and those who were trying to abscond were afraid of them. I mean, they even killed patients who have been sleeping in health centers and hospitals” (Dessie City).



“It was not possible to bury a dead person. It was forbidden. In fact, they prevented us from burying the body of one of my cousins who died of an illness in Mersa, claiming that he was a member of the prosperity party. He died suddenly of an illness. He died of hypertension...”



“...Even though I don’t know the exact number so far, many innocent people were deliberately killed by the Tigray invading force. Because of the prohibition they imposed, most of the bodies were left unburied and eaten by hyenas” (Legambo District).



“...a mother who intended to lift her child, instead of a child she picked up and took a pillow in worry. Even a dead person could not be buried according to our culture”. (Kelela District, Liguamba Kebele)



“...beating and shooting innocents was rampant... they were killing everyone found on the street and throwing corpses in nearby rivers to take them away so that no relatives can find them...” (North Gondar, Adarkai district; taken from a group discussion with participants from Zarima, Nebra, Meka Kebeles)



In addition to innocents who have been shot and beaten to death by direct attacks, a number of people also died from anxiety and panic, hunger, lack of treatment and medicine as well as pregnant mothers caused to miscarry prematurely. In most places, given the destruction of health facilities in occupied territories coupled with the looting of existing medicines by the invading force, a number of people, including children and pregnant mothers, died due to a lack of treatment and medicines. This is true, especially with respect to those who are supposed to take medicines regularly, such as diabetes, hypertension, and HIV patients.

In this respect, the direct quotes taken from survey respondents are presented as follows with a view to demonstrate and better understand the sufferings of the people.

“...an HIV patient woman died from lack of medicine; children died due to malnourishment, fear and anxiety. Untreated patients were exposed to disease and died notwithstanding that they are wealthy enough to buy their medicines.”



“...Pregnant women gave birth at home; as a result many newly born children fell ill and died. Many people in particular diabetic patients died of anxiety and due to lack of medicine. I myself is diabetic, there was a lot of trouble because I couldn't find pills...” (Kelella District, Tirtira Kebele)



“...when they heard gunshots, children get worried and told us to go to sleep; many patients died due to lack of medicine and medical assistance; children suffered a lot from stress and lack of food. I myself assisted a pregnant woman to give birth in a traditional way without my experience...” (Leganbo district, Genete Kebele)



In addition, in violation of the international law of war, the Tigray invading force fired heavy weapons at residential areas and cities as well as used religious institutions, agricultural fields, and even individual homes as strongholds. Consequently, apart from property damage, many people lost their lives resulting from stray bullets and heavy weapons fired by the Tigray invading force. In this regard, for example, respondents from the

Boru Meda area of Dese city and Telemt District of North Gondar described the then situation as follows:-

“...15 people have been killed in my Kebele alone, and three in my vicinity. Two of the three persons who died in my vicinity are from the same family; the first died while one of his legs amputated, whereas the other was hit on the head with a heavy weapon and died instantly. Since the battle has lasted for eight days, the corpses are buried after eight days.” (Boru Meda, Dese)



“...the invading force often used religious institutions (Woykel Kidane Mihiret Church, for example) as a fortification, and thereby inflict human casualties, immense material and humanitarian damage, looted historical and religious relics.... Above all religious leaders, monks, and nuns were humiliated and killed...” (Telemt, North Gondar)



In addition to the killings of innocent civilians, domestic animals were also shot to death and burnt in their cages by this force. Looking at the testimony of some of the study participants in this regard may help to understand the brutal nature of the invading force and their intentions behind the action.

“...we are the neighbor over there. About 12 cattle as well as donkeys, cows and calves, have been burned to bray while they were at their cage. After they are burned, the invading forces hung corn and roast it on top of them.”



“...they shot four cattle, while they are about to strip away their skin, the defense force arrived, and they left the slaughtered for dogs. They also shot and killed including a pregnant cow as well as mules and donkeys” (Debarak District, North Gondar).



Although it is known that the invading force snatched away all edible animals from local inhabitants for consumption (from small chicken to big oxen), they usually shot cattle when they were defeated in the war and left

the area. Therefore, it can be understood that, like humans, this force is used to take revenge against ignorant animals to calm down anger after their defeat.

Moreover, given that other animals, which are not eatable in the Ethiopian culture, such as donkeys and mules, were also shot and killed, it can be understood that the invaders were slaughtering animals with a purpose that goes beyond food consumption. Since eating animals like a donkey is a taboo in Ethiopian culture, the invading force killed such animals not for consumption but with a desire to take revenge and thereby distorted the livelihoods of the people with the idea that “If I don’t eat, let it get rid of.” In addition, the invading force shot animals to death as if they have an “ethnic” identity, with the intention expressing its bitter hatred against the Amhara people.

B) The threat of Genocide and Ethnic Cleansing

As stated in the previous section, 1797 innocent civilians were shot and murdered during the invasion. Among those persons shot dead, it can be understood from group discussions and in-depth interviews that some of them have been massacred. In this regard, the mass graves discovered during field observation based on local residents’ suggestions can be used to reinforce the fact that mass killings were committed. Particularly the mass killings and mass graves found in Dabat District and its surroundings, Gerba Alnejash Secondary School in Kalu District, Robit Secondary School in Raya Kobo District, Kombolcha Hospital, Dese Referral Hospital, as well as Dese Teachers College, are noticeable (Figure 14)



a) China Massgrave (Dabat woreda)



b) Gerba Alnejash secondary school mass grave (Kalu woreda)



c) Robit secondary school mass given



d) Dessie referral hospital mass grave

Figure 14. Photo showing mass killings and graves in different invaded areas (a,b,c & d)

Especially in this regard, some mass graves have been purposely done in public entertainment areas and school compounds to make the local community not forget the injustice done to them and make them angry while looking at the graves. For example, in North Wolo Zone, Meket District, the invading force killed people and buried them in mass graves in the compound of Debrezebit primary School and Kombolcha Polytechnic College. One can easily notice the psychological pressure this may create on local residents, especially on students and teachers.

Qualitative data shows that while the Tigray invading forces marched to capture areas, they were killing everyone they met on their way, lined up young men and shot from behind. In this regard, the following statements taken directly from the study participants confirm mass killings and graves have been carried out in various places. Especially they pointed out that there was a threat of race-based genocide against the Amhara people, especially in Kamise city of the Oromo Nationality Zone.

“...when the federal force attacked them with heavy bombardment and air strike, they will torture and kill public servants believing that they are providing information and serving as op for the federal government...They have killed sixteen youths for nothing...buried the dead in mass graves within school compounds and open public places...” (Delanta District, Wogel Tena City)



“...in Guba Lafto town, they have been entering into everyone’s house and asking for money; I saw five young men who complained about being taken and killed by the invading force.” (Guba Lafto)



“...they ordered five young men to lineup, but they later managed to escape them... when they first entered, they tried to deceive and buy the hearts of the community with propaganda...but when they left the place by force, they have killed five brothers while returning home from the market.” (For Gambo District)



“...when the sufferings become more severe, the local people stand for a demonstration to resist them. When they realize the people are opposing them, they ito begin to shoot anyone found on the street” (Woldya City).



“...especially they were looking for members of Fano, Minisha, police or security officials and their families ...if they manage to identify these bodies, they used to threaten, beat and kidnap them, asking for the where about of their sons and locate the place where hide weapons... But when they were kicked out of the place being defeated, they have killed locals indiscriminately” (Adarkai District, Zarima Kebele)



“...when they feel angry following their defeat in battle, they take revenge and shot everyone walking on the street, alleging that you hide weapons or government soldiers. This force has massacred members of the National Defense Force who were tired and cut down.” (Kemise).



“... They left the zone suddenly, but if they had stayed for two or three months, they would have been prepared to massacre the Amhara people living therein...” (Kemise)



Rape Cases and Other Related Sexual Violence

Raping local residents was among the major war crimes committed by the Tigray invading forces, in relation to which a total of 1,939 cases were reported across occupied territories. These constitute 1799 women, 140 children, and 29 men. In this regard, although the crime was committed in all Zonal administrations under the invasion, it was particularly predominant in North and South Wollo Zones, where a total of 1259 rape cases were reported. The number of rape cases recorded in these two zonal administrations generally over 70 percent of the total number of rape victims (Table 24).

No.	Zones	Districts	Raped women and children		
			Women	Children	Total
1	Oromo nationality zone	5	16	7	23
2	South wollo	15	572	35	607
3	North wollo	15	607	45	652
4	South wollo	2	89	-	89
5	North Gondar	4	45	12	57
6	Kombolcha	1	35	2	37
7	North shewa	7	83	15	98
8	Waghiemra	7	136	7	143
9	Dessie city	8	216	17	233
	Total	59	1799	140	1939

Table 24. *Women and children who were sexually assaulted and raped by the Tigrayan invading force*

Gender	Zonal administrations								Total
	North Gondar	North Wollo	South Wollo	North Shewa	Waghiemra	Oromo nationality Zone	Desse city	South Gondar	
Men	0	22	1	2	1	2	1	0	29
Women	57	652	644	98	143	23	233	89	1939
Total	57	674	645	100	144	25	234	89	1968
Percent (%)	0.03%	42.5%	23.5%	6.6%	8.3%	1.6%	10.3%	4.5%	100

Table 25. *Number of rape victims by zone and gender*

Like the case of killings, although all women were raped by this force regardless of their age and status, it can be understood from the qualitative data, particularly wives of militias, Fano, and Kebele leaders have been the central targets of the invading force. In this regard, for example, one survey respondent said:

“They have been abusing and raping wives of the militia; threatening to bury them alive; forcing to point out the where about of their respective spouses” (Telemet District, North Gondar Zone).

The data further confirm that some of the women who have been raped and got -committed pregnant suicide out of regret.

Above all, the invading force raped 29 men, of which 22 have occurred in the North Wolo Zone (Table 25). Therefore, despite the existence of victims of sodomy, looking into the circumstances of the crimes and the victims' identity has significance to understanding the severity of the problem.

In this regard, it can be understood from the qualitative data that some of the rape cases are committed in a very disgraceful manner. Women, including old mothers, spouses of religious leaders and nuns were brutally raped even in a group, in front of their families, husband, and children in a way that revealed the extent of immorality and bitter hatred of the invading force against the Amhara people.

In order to better understand the psychological pressure, misery, and pain that the people have gone through in this regard, the core issues raised by study participants (including victims) are presented as follows without disclosing the respondents' identities for the sake of privacy.

“When the TPLF fled being defeated, they used to take revenge against us by destroying the property; killing, and rapping innocents.”
(Debarak District, North Gondar Zone)



“...They used to commit rape mainly at night; girls were shouting every day. The women who were being raped were crying for help all over the place...Married couples, fiancées and girls who did not run away for various reasons have been sexually assaulted and brutally raped by this force” (Waghiemra Zone, Dahna District)



“During the period of invasion, girls were tired of being raped; they knock on doors day and night and take girls to commit horrible sexual violence; mothers and children are being raped in the group. Especially wives and daughters of local militia and security members are being raped and killed. The injustice they done to us [the Kozba community] were beyond once conscience”. (Waghiemra Zone, Dehana District, Kozba Kebele)



“They threw her five-day-old newborn baby on the ground and raped her [the mother]. Even they raped a nine-month pregnant woman who left a week period to give birth; she made to abort the child...” (Waghiemra Zone, Dehana District Chila Kebele)



“...I am one of the persons who have been attacked. Not only me; the people who fled from Sokota and sheltered in my house have also incurred damage; among them, one was a nine-month pregnant woman, and they raped her. As a result, the fetus was miscarried, and now she is seriously ill and being treated in Ebinat hospital.” (Waghiemra, Dehana District, Chila Kebele)



“Being raped by four men while pregnant is a scar that will never be forgotten. Being called to open the door at five o'clock at night and being killed and raped is horrific,... they still feel afraid if someone knocks on the door; their fear hasn't gone away...” (Waghkhmra Dahna district)



“...They forced and raped even underaged girls. They threw the ten-day-old baby out of bed and raped the mother in the group of four. In Awaz, a nun was raped; they throw babies to the toilet saying that they will stab us when we allow them [Amhara child] to grow up” (North Gondar, Debarq district).



“When he forced her too much, she said to him don't you have a sister? Please at least to use a condom, but he said, “What's the need for a condom for a donkey?”



“We found a junta approaching a girl under the age of 13 and holding a weapon to her chest. We said, ‘what are you doing? She is not your age; if she wants, we said, ask her properly. But, he shouted and said this is none of your business, you donkey? You don't need to ask for a donkey...” (Waghiemra Zone, Dahana District)



“...that same night, a junta came with weapons and told us to lineup. I said to him, what do you want? He said you all will enter one by one ... He slapped me twice, and I fell on my knees. We all knelt down... then he took the elders to the kitchen so that they wouldn't see his deed [rape]...” (Waghiemra Zone, Dahna District)



“...they commit group rape, against married women including priest's wife, they raped nuns. As a result, many innocents have been exposed to HIV virus. In fact, they said in their own words that they had a group of HIV infected rapist who came prepared to infect local peoples and thereby spread the disease....” (Debark District, Boza Kebele).



“Three women were rapped from the same family alone. They raped wives in front of their husbands;...Many of them tried to kill themselves... There are many women who were raped at the age of 13 or 14” (Legambo District, South Wollo Zone).



“Rape victims don't expose themselves. They don't want to go to the media because they are afraid of stigma and isolation, but many have been raped;... for example, a worker at Kombolcha Polytechnic College was raped in front of her child...” (Kombolcha)



“It is hard for women to say they were raped because it is a shame in our society. But, since experts are creating awareness, women have gradually started to register, saying that they have been raped....One woman said that seven junta members raped her at different times” (China, North Gondar).



“...he was a Bajaj driver; when he went out with his friend, and they asked them for a ride, they planned to rob them. When he returns home, he meets his wife's little sister and takes her home. But when they went home, they found the girl and raped her in front of him.

They thought she his wife. But she is his wife's younger sister. Then, they took him and his friend and killed them both.” (Woldya City)



“...they raped women in the group; for example, a displaced woman was raped in front of her husband, a child raped in front of her father, they raped even an old woman. Seven of them raped three girls in the group. What they have done to us was hard...” (Lega Hida)



“...there was group raping; their many girls have been raped but most of them don't want to release the information because of the psychological pressure... let God count the number of girls raped who keep silent being ashamed of the community...” (Kombolcha)



From the above speeches, it can be understood that the Tigray invading force raped many girls, children, and old mothers in groups and in front of their children without mercy with a desire to take revenge. Particularly, the instances of raping wives before their husbands, making the father see his daughter being raped before his own eyes, reveal that the invading force intended to rape and humiliate and embarrass the Amhara people.

Therefore, given the conditions under which the crimes were committed, which were horrific and disgraceful, one can understand the immense psychological pressure and irreparable scars inflicted on rape victims and their families. Consequently, as it can be understood from the qualitative data, some of the victims raped in such a disgraceful manner (especially those raped in front of their husbands) have committed suicide or at least attempted suicide.

Above all, the following statements, which are taken directly from the speeches of study participants (including the victims themselves), confirm that the invading forces were torturing and beating women while raping them. In particular, this force even shot and killed a girl if she refused and struggled to escape.

“...they have been torturing and abusing women, letting them go undressed, barefooted, and kneeled; they even raped women disgracefully by inserting muzzle of a firearm into their genitals and

mouth... they raped one girl for three, and now she becomes a fistula patient” (Kelala, South Wollo).



“...I saw a woman who was shot because she refused and admitted to hospital, but she died later” (Woldiya City).



“...The most outrageous thing the rape committed against that girl at Woldia High School. There were six women in the house, and they raped five of them, but the sixth one was a virgin who had never had sexual intercourse... It is not known why he wanted to shoot her, but he shot her; perhaps he got upset because he could not take her virginity...and of course, they were intoxicated and drugged.” (Woldiya City)



“We have no quarrel with Amara; we don’t have a problem; they said. But they are the ones who commit rape, torture women, and kill innocents. The girl was a virgin; he was rude, and apart from rapping her, he slapped her so much. How dare you beat a little girl like that....” (Woldya)



In addition, from an interview made with a woman who was raped in Boru Meda, we understand the extent of the brutality of the invaders and the uncountable psychological trauma that rape victims may incur.

“...they stole my property and assaulted me as a woman. like everyone else. I used to say “Thank God” just because I survived, but what they did to me is unforgettable;... I am broken-hearted, and my inner disappointments will never be repaired... Right now, I can’t even get rid of their smell from my house. I have been disturbed every day by remembering what they did to me. How dare you ask me for money after I give you what I have... I thought that I was going to die. I did not say that they would leave me in this way. ...I can’t explain her address right now, but I heard the story of a girl who was raped by them and implanted a bottle in her womb; when I heard this, I calmed down ... I was tested for HIV before and I was negative... on January

16, it becomes three months since I have tested after the incident, I'm worried about what the result of my test could be... sometimes even I saw them in my dreams; despite others, particularly their smell didn't get out of my house..." (Boru Meda)



Similarly, in addition to committing sodomy against men, the following stories told by study respondents further confirm that the invading force had an organized "rapist group" composed of HIV-infected men, receiving the mission to commit rape with the intention to contaminate the people and spread the virus across occupied territories.

"...the boy was herdsman when he gets out from home; they found him...after doing many things to him [sodomy], they killed him. His body was returned to us. The sad thing is his mother was almost 80 years old; she took her son's body and buried it without telling him what they did to him to his brothers and sisters " (Woldya City).



"There was a group arranged for committing rape against HIV carriers... When she said she is HIV positive; he called his friend to rape her and said I found what fits you" (Legambo District, Genete Kebele)



"They have HIV-infected rapists who are supposed to rape women. When he asked a woman, she told him that she an HIV patient; then he called another man with him to rape her..." (Kelella District, Leguam Kebele)



"...according to the evidence we have, 36 women, including the wife a priest, were raped so many persons have been exposed to HIV virus. hey said in their own words that they had people who prepared to infect us with the virus..." (Debark District, China).



Above all, raping women, children, and men by themselves was not sufficient. There was even an incident that the invading force soldiers forced a monk, who was living in Kombolcha city around the Shishaber

area, to rape his daughter. This, shows the extent of injustice this force was doing against civilians in occupied territories. A person who witnessed the incident describes the situation as follows;

“...the old man was in his home with his daughter; after the incident, he told me that when they found he is a monk, they forced him to have sex with his own child. They assaulted, drag and threw him to the bed, forcing him to rape her. They beat and threatened them both with weapons, asking the monk to rape his child; half of the invading Tigre soldiers were drunk, and the monk, who understood they are going to kill him, ran and took the weapon of one of the invading soldiers and started shouting. When the junta soldier failed on the ground, the monk immediately ran outside with his daughter and shouted for help; then the neighbors and the TPLF soldiers around arrived...”
(Kombolcha City, Shisha Ber).

Finally, in addition to the Tigray invading force, similar rape attacks were also committed by other forces such as “Oneg Sheine.” For example, a friend of the raped girl who was interviewed in Kemmisse explained the situation as follows;

“Soldiers of the rebel force came to our hotel at night firing guns threatening us to leave the hotel. In the meantime, they took the girl with them to rape her, and when she returned in the morning, she immediately took off her clothes and burned them. As a result, she had not slept, nor ate, nor slept noreaten food for five days in a row and was suffering from severe mental stress and anxiety. Eventually, she left this place and went to her family, far from here”(Kemmisse, Oromia Nationality Zone).

D) Mass Displacement of Local People

The displacement of residents, is one of the major humanitarian crises the invasion incurred. According to the information obtained from the Amhara Regional Disaster Prevention and Food Security Office, 1,411,313 people were displaced from their homes and were forced to live in temporary shelter camps. Moreover, about 10 824 143 people were in serious food shortages, seeking their daily meals from others.

Likewise, as it can be understood from qualitative data, except for a few people who didn't leave their village due to their disability, illness, old

age, or for some other reasons, most of the youth, women, and children have been displaced from their homes, being frightened by the heavy weapons fired against towns coupled with rumors of terror inflicted by the invading force. Worst of all, the evictions in some places were carried out taking into account race and religion.

Moreover, the refugees and evacuees have experienced different challenges in their journey. For one thing, they have to pass serious checkpoints established over, over short distances for security purposes; for another, in some areas, there was also a prohibition against refugees at both entrance and exit points of cities, thereby forcing them to be locked. Thus, the situation resulted in congestion and food shortages. Apart from this, the displacement of residents in some areas was particularly horrific. For example, in Sekota, since the Tigray invaders took control of the city suddenly at night on New Year's Eve, the residents were preparing to celebrate a holiday the next day. But unfortunately, they left their warm houses open and started to flee a long distance by foot from Sekota to Amdework (80 km) in the middle of the night.

It should also be noted that some people are even displaced repeatedly, more than once, at different times, from a city the Tigray force is about to capture to another city in a row finding for safe places which are at far distance from the war zone. In this regard, a notable example is the frequent displacement of persons from Kobo to Woldya, and then from Woldia to Mersa.

Therefore, it can be understood that the refugees experienced challenging conditions during their displacement. Consequently, in this process, many women, mothers and children have been exposed to severe abuse, hunger, and disease. Many women gave birth on their journey, among which some died, and many are also injured and killed due to explosions of heavy weapons and stray bullets.

Since it was beyond the government's capacity to provide the necessary assistance to all evacuees after entering refugee camps due to their large number, many people were subjected to abuse and starvation. In this regard, if the public Universities in the region, other donor individuals and organizations, as well as the local people had not been involved and organized in helping them, even worse problems would have occurred displaced persons.

In general, the following statements taken directly from survey respondents will help to understand the scope and severity of the problem.

"...the entire population of the city was displaced; only 54 households were left in the city, they fired heavy weapons and terrorized the people to get out of the city..." (Legambo District, Akesta Kebele)



"All of the residents in this Kebele have been evacuated except for the elderly, mentally ill and disabled persons, and those without families and daily workers. The officials have already left the city due to the invader's propaganda...the security structures were also destabilized and withdrawn ten days before the invaders captured the city." (Legambo District, South Wolo Zone)



"The Tigray invading force plundered properties in well studied and organized manner. To this effect, they have a group of fighters who fought in frontlines, there was also a flock used to terrorize local people and spread false rumors, thereby forcing residents to leave their homes, be displaced, and fled" (Kemisse, Oromo Nationality Zone)



"... Well, there is a proverb that goes; "warriors get defeated by a rumor than a sword"; we have seen this in practice. Many people were displaced due to rumors of terror, meaning the people were disturbed and broken already with the propaganda, and left the city, leaving his house open many days before the arrival of the invading force... But the persecution that the displaced persons passed through was terrible...refugees who came from Kobo again move to another place; the stress and congestion was terrible." (Woldiya City)



"Thousands of people have been displaced...many people were in trouble because they were prevented to enter into Addis Ababa and Bahardar cities." (Kombolcha)



"How a person, who is displaced from his home, can survive by

receiving aids from the government?; Let's not assume that a farmer who cannot satisfy himself by farming his own land will be satisfied with the government's wheat [aid]. Their property is being looted, their cattle are being slaughtered...how many families have been displaced and sheltered in this city, being assaulted and tortured alleging by them that they are members of militia..." (Woldya City)



"There was looting and displacement in this area. Particularly, the Amhara people and Christian Oromos have been abused. Many people were displaced to the countryside, Afar regional state, Addis Ababa, and Debreberhan due to fear of invasion. There are many who have been exposed to sexual abuse, hunger and car accidents... many people incurred injury resulting from blasts of a heavy weapons during their journey... children, pregnant women and old-aged persons suffered a lot;... There were also women who gave birth while they are fleeing". (Kemisse, Oromo Nationality Zone)



"...they consider the Amhara people as their enemy and firmly believed that it should be destroyed for their sake. In particular, soldiers of the so-called Oneh Sheine humiliate and harass the Amhara people so that ethnic Amharas should leave the area,... they forced the Amhara to be evacuated from this area..." (Kemisse, Oromo Nationality Zone)



Therefore, from the above extracts, it can be understood that the invading force deliberately made local residents to be evacuated and leave their villages by firing heavy weapons and by spreading rumors of terror so that they could plunder what they wanted and move forward without any hurdles and possible resistance. At the same time, they tortured and harass residents who had not been displaced for different reasons, alleging that they are not evacuated because they intend to spy and provide military information for the government forces.

"...they harassed me because I am not displaced, as if I am here to spy on them and give information to the government forces; ...I told them that I'm not working for the government, I am here while

everyone runs away because I am weak, sick and poor so that I can't afford to flee.... I incurred a lot of pain and abuse day and night; they leave now and come in a minute again asking for food. Where can we get it? We are hungry for ourselves, I don't have any. They asked me again and again why I am here; I have no reason except that I am weak and poor to run away; how do I go?, but they don't want to hear you..." (Hayik City)



"...everyone, whether displaced or not, incurred damage as a result of the invasion depending upon the existing situation. ...The only reason that the people who had not left their homes were able to survive, was because they provided them with food and drinks. Despite feeding and drinking them, the people should also tolerate unjust insults and humiliating statements of the invading force. They survived by giving what they had to the invaders and say yes for all of their questions." (Hayik City)

Finally, since most of the displaced people were sheltered in public schools, it is important to note that the teaching-learning process has been disrupted for months even in areas which were not under the occupation of the invading force.

E) Cases of Abduction and Kidnapping

According to the quantitative data, in total 7,462 citizens were victims of abduction or disappearance due to the invasion. When we look at the rate of damage in terms of place of residence, it can be understood that the majority of the victims were from urban areas (4622 persons). Likewise, although the incident occurred in all occupied territories, North Showa, South Wolo, Dese City and North Wollo zonal administrations were particularly prominent to sustain high cases of abduction or forced disappearance (Figure 15).

Moreover, it can be understood from the qualitative data that the Tigray invading force was kidnapping local peoples, focusing on youths, local investors, persons alleged to be members or supporters of the Prosperity party or the Amhara National Movement (ANM) party, other armed individuals, retired soldiers, and military personnel, members of the militia and police forces as well as local government officials/leaders and their families. Furthermore, this force was also busy abducting family members of the "Fano" militant group and taking them away from their home day

and night to unknown places. In addition, since most of the displaced persons were traveling long distances by foot in remote places crossing through dangerous -prone areas, many persons have been dead during their journey due to stray bullets and being attacked by wild beasts.

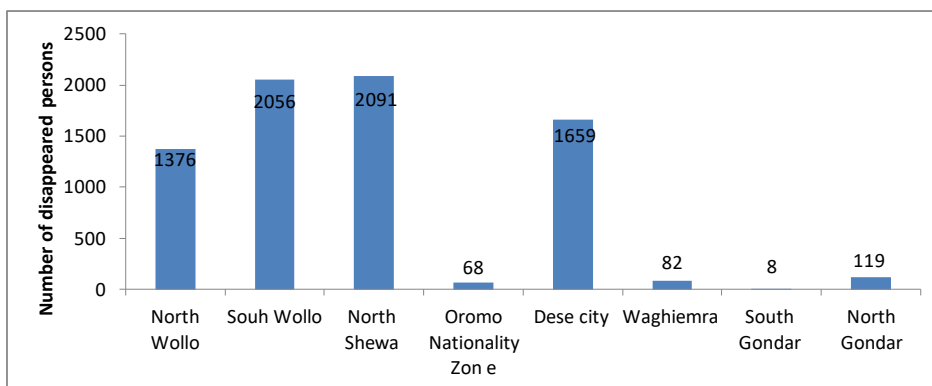


Figure 15. *Victims of abduction, forced disappearance and kidnapping*

In this regard, some of the direct responses of study respondents obtained from interview and group discussions are presented as follows.

“...when we ask them to release persons who have been arrested, first they agreed; but they never told us the exact places where they arrested them;... there are still many persons who are lost and have not been returned....I know many persons who have disappeared...for example, here in Gobye, at the outskirts of Woldia, many local residents, including my own relatives, have been missed...” (Woldya City)



“In addition to those who have been killed and wounded, many persons have been disappeared. Of course, they took these persons away..., especially the youngsters; I know at least six persons whose address remained unidentified.” (Woldiya City)



Although whether such persons are alive or dead or taken as hostages remains unclear, they are more likely to be murdered by the invading force or dead as a result of war.

F) Cases of Forced Labor and Enslavement

There were instances of enslavement, labor exploitations and abuses

across all occupied territories by the Tigray invading forces. The invaders used to make local residents as servants and forced them to do different works in slavery-like situations while insulting and humiliating them. In one way or another, a total of 33,588 persons have been enslaved, exploited and abused by the invading force, among which 67.6% of victims (22,711 persons) were rural residents (Figure 16).

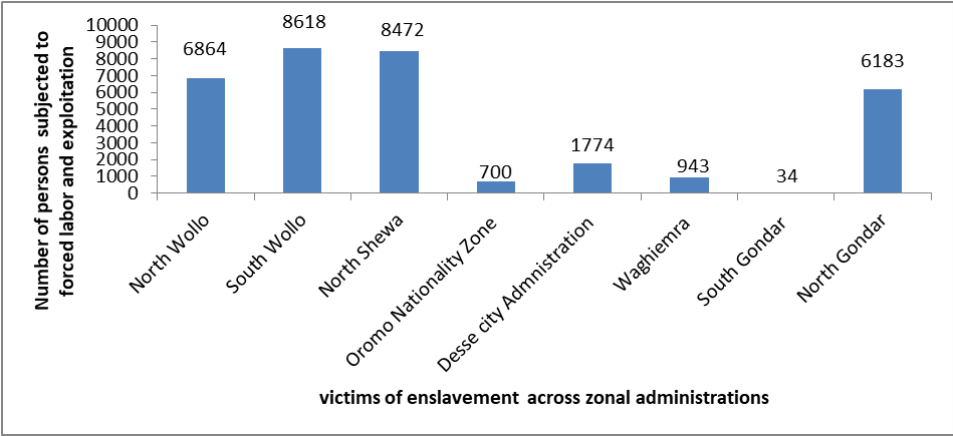


Figure 16. *Numbers of people subjected to labor exploitation and oppression by zone*

Particularly, South Wolo, North Showa, North Wolo, and North Gondar zonal administrations are at the forefront of incurring large cases of labor exploitation and abuse (Figure 16).

Similarly, the qualitative data confirm that the invaders were compelling both male and female residents who were not displaced from their villages to do simple to heavy work, letting them to serve as enslaved people while insulting and humiliating them. In particular, despite forcing women to draw water and chop firewood to prepare and deliver food to their fort, the invaders compelled men to build forts, dig graves, carry and bury corpses, and lead pathway at waterfront by carrying ration and weapons.

Since most of the residents who stayed at home were old-aged, weak, sick and infirm, some of them suffered serious injuries and pain as a consequence of the hard work they were compelled to do. Besides oppressing local residents and using them as servants under slavery-like situations, the invading force also compelled the youth to plunder government and public property and to carry and load the same onto their cars while recording the on video, thereby inflicting irreparable psychological damage to residents. Furthermore, despite taking and slaughtering the goats and sheep that

belonged to farmers, the invading force committed a double sin by forcing them to collect and chop firewood, fetch water from the river, cook food, and feed them standing.

People who participated in interviews and group discussions expressed their feelings about the aforementioned unjust situations, oppression, and abuses.

“...particularly persons who were not displaced from their villages incurred a lot of damage. They are made to be servants for the invaders; even men were forced to leaven the dough and fetch water... Generally, people have been exploited and abused. As a result, seven residents have been seriously injured.” (Debarak District, North Gondar)



“...they ordered me to carry 50 Kg of flour to deliver it to a town that far six kilometers distant. But, I refused them and said ‘you can kill me if you want’; because had it been the case (if I am capable of carrying 50 Kg load), I would have gone like anyone else... since most of the residents who didn’t displace are disabled, sick or infirm, my wife was pleading them to carry the thing herself and let me go....but I have been beaten and forced to carry the thing all the way to their fort.” (Dahana District, Wagheimra Zone)



“...they made us to dig a ground for burial;...even to carry and buried corpse ...they were compelling us to bury the bodies of their dead soldiers.” (Kombolcha)



“...they were loading plundering goods overnight using 57 trucks, but when it comes beyond their capacity, they began to force the people to load by themselves before sunrise so that the rest of the people may not observe what they did... when the loaders finished loading, they took some quintals of what they have finished... The invaders exploited the labor of the Kombolcha youth; they were digging burials and loading things all the time...” (Kombolcha).



“As farmers, they slaughtered our sheep...; they slaughtered my

sheep and made me to fetch water for cooking it. They threatened to kill me and said, 'you must serve us; as you serve Abiy'. They don't have a conscience to think..." (Lagambo District)



"They took and ate all of my sheep and chickens... even worse when I came home, they made me collect wood and cook for them. (Lagambo)



G) Bodily Injury, Torture, and Manipulation

In addition to those innocents who were beaten and shot to death, the invading force was responsible for causing major and minor injuries to 5,539 and 12,957 persons, respectively. This means in total, 18,496 persons suffered bodily injuries due to the invasion, constituting more than 7.6 percent of the total humanitarian damage incurred at the regional level. In addition, 29,152 persons have been assaulted, tortured, and humiliated by the invading force in occupied territories, notwithstanding that they didn't incur bodily injury (Figure 17).

The invading forces were nagging local residents to provide food and money and to point out the houses of militia members and government officials. The people have been beaten and harassed by the invaders, being alleged of hiding weapons or shunning government soldiers. While drinking alcohol and getting intoxicated, the invading forces used to drag, beat and humiliate anyone they found on the street without any just cause.

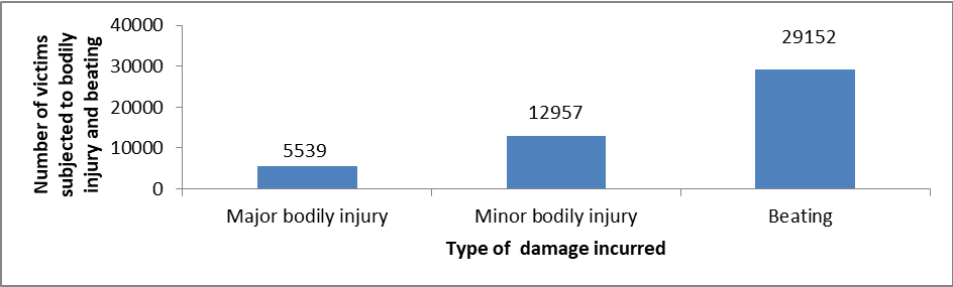


Figure 17. *Cases of bodily injury and beating*

In this regard, although all local residents who were not displaced from the occupied territories suffered damage indiscriminately by the invading force, it can be understood from the qualitative data that the beating, abuse,

and harassment were specially carried out focusing against the youth, local investors, government leaders, ex-soldiers, armed individuals and their families. Particularly, with a view to distinguish a person who was a soldier from a non-soldiers, the invading force often takes the clothes of young and adult men and looks at their shoulders to find out a scar mark caused by hanging a weapon for a long time. The invading force also used to inflict revenge against the residents of particular areas identified as the hometowns or birthplaces of well-known federal government officials or military commanders.

The testimonies of victims and eyewitnesses in this regard are presented as follows.

“...they were tormenting and torturing the people, forcing us to locate the home and families of the militia and prosperity party members and officials. Everyone was abused and beaten being alleged that he hides a weapon.”



“When they entered, no one was allowed to leave the house.... ‘If you come out, I will beat you, you donkey’, they said. They were asking the people to point out soldiers, local militias or government cabinets. If they suspect someone is a soldier, they take off his cloth and look at his shoulder.”



“... since I was an ex-soldier (Derg soldier), they threatened, beat and harassed me, seeking for a weapon...; ‘The people called Amhara are untrustworthy, barbaric and cruel’; they said. One of their soldiers is holding me here with a pincer, and I was asking them to leave me as I am weak and sick. Even if I was a Derg soldier, I don’t have anything. If I had some, I would not stay here; I would rather run away like everyone else...finally they left me when they saw my ID card showing that I am a retired soldier...”



“They claim men bring weapons while arresting families or wives. They stripped [the son of a wealthy person] his cloth and tortured him. His mother is now mentally disturbed.”



“...Especially in Werebabo district, which is the birthplace of General Mohammed Tesema, they beat the people and tortured them, saying let us see if General Mohammed come and save you. Even they shot people saying why you saw me.” (Worababu District)



“...they were forcing and abusing the local people to show them homes of wanted people (government leaders, Fano, militia, ANM party leaders);... by robbing and drinking beer and various alcoholic drinks from hotels and groceries, they fired bullets and smashed beer bottles on the street; sometimes they would even throw it at people. When they entered Kombolcha, they abused and beating anyone they met on the street. They beat them saying bring weapons, food, money.” (Kombolcha)



“... every young man was unable to walk in front of them; you have to hide, if not, you will be robbed, beaten, or required to point out someone with a weapon. some betrayers were pointing at you from a distance; then, they will come and take you to the University...that's where they will whip you...” (Woldiya City)



As mentioned above, although the invading force mainly inflicted beating and bodily injuries against the youths, ex-soldiers, militia families, and armed individuals, many women, children, mothers, disabled persons, elders, and even religious fathers have been beaten and abused by this force without any reason. Many innocent people have been wounded, sickened, and incurred bodily injuries due to the kicking, stabbing, whipping, and shooting. The invaders also repeatedly ransacked houses, detained individuals, forced residents to kneel, and verbally abused them using unjust or ethnic-based insults.

“...they come in small numbers and search your house repeatedly, more than five times a day. They steal honey; if the bees beat them while eating honey, they would take revenge and beat anyone they found” (Legambo, South Wolo).



“...cases of beatings are uncountable... the people came out to say that the electricity was stolen, the person who was hit was still disabled.



“...they went into every house, and handcuffed and stabbed us with knife asking for money and to point out rich persons. many may have been paralyzed. The physical disability is high, and I am now looking to go to the examination; I got a kidney infection and feel, sick right now”.



“They made the people kneel; there was a lot of banging seeking weapons. They harass women and children by grabbing and twisting their ears. There are some whose ears cannot hear now because they shot them to speak...They entered the mosque and humiliated prayers. Even they killed a dog barking at them. se people were shocked and get sick.” (Lagambo District)



“...they abused and made me stand up, sit down, kneel down, and do sports for about an hour in the field like a soldier; The terrorist group will pick up the one they left behind in five minutes”.



“They killed, beat and tortured young and old people, beat, maimed and killed innocent people and stripped them of their clothes and flogged them... They always beat us seeking food, money, information....”



“...‘Amhara, who is Amhara? Amara is donkey’; they said....they abused women so much ...they hit the body part that hurts the most.... it’s hard to talk about them.”



“...they beat and arrest your family and make you bring weapons.... we have been tortured and insulted....they often called us donkeys.”



H) Unjust Insults, Intimidation, and Menacing/ Threatening

The quantitative data confirm that, 104,589 persons incurred damage due to unjust insults, threats, and intimidations, which account for 43 percent of the overall humanitarian damage caused by the invading force.

In relation to this, the invading force made local people feel embarrassed and humiliated while insulting the Amhara ethnic group in general and writing down disgraceful statements on school walls and blackboards to dishonor and degrade the Amhara people.

The following extracts help to understand the abuses, insults, and intimidations made against residents during the invasion.

"... they raped the girl in front of his eyes; they thought washe was his wife, but shewas his wife's little sister. Then, they said to the girl, 'we played with this donkey Amharas; your men are like this'; how dare one forget this; it is really difficult..." (Woldiya City)



"...they were especially focused on the youth; they kneeled them in groups and individually. They were asking you about your ethnic identity, and if you replied saying Amhara, they would beat you to tell the truth, and say I am a 'donkey'....the pressure was very high. They kneeled, beat and abused us... that's how they do."



"...In our town, while a farmer was herding cattle, they kicked his donkey by car; then the farmer asked them what was better for him; but they said 'you are mourning because you lost your brother; you donkey, your brother is dead'".



"...they wrote various articles on the museum [Desse Museum] wall that hurt the Amhara's dignity as people and humiliate Ethiopia as a country....They tried to psychologically harm the community by writing ugly statements on the walls of the museum." (Desse City)



"...They say that we have no intention to take power and rule the country again, we came here to destroy you [the Amharas]. When we

take something under their permission, they say, 'Amhara is a donkey, but now have turned into a hyena'...." (Desse City)



"... they gave us a name called 'hadgi', meaning donkey in Tigrie language, this was a number one insult they used against us... they have old-aged hatreds towards Amhara;.... even a child from the invading force insulted us by saying, 'you son of donkey [hadgi]'...; he got this moral because they have trained and convinced themselves that the Amharas are their enemies."



Furthermore, it can be understood from the qualitative data that the invading force threatened local residents by holding guns and firing against them, saying, "We should kill you." The participants of the study described the situation as follows.

"...were shouting our oxen from the door and saying we bought them. After driving for a while, they threatened to kill us. In addition, no one is allowed to leave the house on Saturday, Sunday, and Monday. They all said that if you come out, I will beat you, you donkey."



"...your father will come soon; This budget will crush us. We are going to get you out here too. And when we go there, there is this Turtur [Isaiasan] elder, who will receive us from there; Therefore, we have to take care of you. The Amharic they speak is very difficult..." (Desi City)



"...entering individual homes with money, property, and then; Terrorism. If you don't bring this, we will kill you. If you don't do this, we will do this to you. By saying that, they have deprived the livelihood of our local people on a large scale. Our conscience is bleeding. I'm going to church..."



In addition to the Tigray invading forces, it can be understood from the group discussion participants in Kemisse (in the Oromia Nationality

Zone) that the “Oneg Sheine” soldiers were insulting and threatening local residents taking into account their religion and ethnicity, especially against the Amhara people. This rebel force called ethnic Amharas “hybrid” and demanded that they get out of the Zone. Generally, ethnic Amharas who reside in Oromo Nationality Zone had a lot of trouble even going to church. They have been abused because of their religion.

I) Other Inhuman and Obscene Activities

In addition to the above-mentioned humanitarian damages, 36,693 people have also incurred damage owing to the invading force's other inhuman and obscene activities. In this regard, lining up local residents in the frontlines without weapons and using them as human-shield is the most prominent one, resulting in the disappearance, casualties and killings of many innocents in battlefields.

The Tigray invading forces also carried out other disgusting, morally and culturally unacceptable deeds that mainly intended to inflict psychological damage. In this regard, using residential homes as toilets, defecating on food tables, and forcing Muslims to drink alcohol and dance are the prominent obscene acts of the invading force. The following extracts from interviews and focus group discussions can be used to evident the obscene acts of the Tigray invading force.

“...they looted and destroyed our properties; after eating the food, they also insert excrement to it. They defecate at home; they use toilets in offices, they put used sanitary napkins on bread [enjera], even they defecate on food plate...” (Legaida District, South Wolo)



“...beyond the looting, beating and killings of civilians, defecating on dough and flour that they could not take, and tethering mothers with rope and raping them before their children are among the most unconscionable and atrocious acts they committed ...”



“They have been committing obscene acts in private and government institutions, for example; they used classrooms for toilet, chop school chairs and tables for cooking;... partly manifesting their interest for destructing public institutions.” (Delanta District, Wogeltena City)



“...Muslims were forced to drink alcohol and dance....they dig up and drink beer in mosques, which is totally contrary to Islamic dogma. According to Islam religion, such act is obscene.” (Lagaeida, South Wolo)



“...a lot of properties have been destroyed by the invading force, including religious books. For example, they tore my Holy Qur’an. I am a religious father, but they used to drink beer and dance in my house. They splayed all, thanks to my Christian neighbors, they collected pieces of my Qur’an [Kitab]and kept it for me.”



Moreover, they have done various things to inflict suspicion and make the people conflict, thereby affecting the mutual trust and security of the community. For example, the invaders tried to create a rift within the community, inter alia, by forcing local residents to loot public and private property, making one point out another and telling the identity of the informant to the former, and letting them be accused of plotting. To understand the situation in this regard, it would be sufficient to look at the following extracts taken from study participants.

“They tried most to divide the people; they were collecting and mixing up private properties and conspired to inflict conflicts among the local people ... to create fragmented society.” (Kombolcha)



“...above all, they compelled the people to loot what they broke and destroyed,, pretending as if the latter willingly participated in the burglary and looting activities... When we go around restoring looted property after their evacuation, we are able to understand this fact;... they are actually doing this not to benefit the people but to lead the community to conflict within the community and make the people fight each other after they left the city”. (Woldia City)



“...They [the invaders] were threatening and forcing young people to commit robbery, intimidating otherwise that they will send them

[the people] to frontlines... They made the people to loot, and those who refused will be beaten...." (Lagambo District, South Wolo)



"They were forcing the people to loot public properties... many have been compelled to do so. After taking what they wanted, the enemies forced residents to rob government and individual properties while filming the incident for their purposes; for their propaganda"



"... the local peoples are being arrested and abused due to revenge and wrong information; it should be scrutinized. The 'juntas' are misinforming our security officials by falsely implicating that someone had been an insider informant to inflict conflict among the local peoples; the government should be aware of this and take caution;... the Kebele peace committees should be empowered to examine the situation and facilitate towards restoring looted properties...." (Lagambo District; Genete Kebele)



3.3. Damage to Materials and Infrastructures

3.3.1. Individual and Household Level Material Damages

A. Individual-Level Material Damages Caused by TPLF Invading Forces

In eight invaded administrative zones of the Amhara Region, a total of 594,943 individuals' materials were damaged or looted. Among these, 320,897 were urban, while 274,046 were rural dwellers. In the North Wollo administrative Zone, 128,902 individuals experienced material damages, and 144,994 citizens have looted and destroyed their property. A relatively, an equal material damage was observed in urban and rural residents of the invaded zones. The quantitative study findings showed that 107,627 citizens living in North Shewa Zone experienced material damage. In South Gondar Zone, 87,698 citizens were victims of material damage, majority of the damage was reported among the rural residents (76,237). The household-level material damage was grossly reported at 59,986,794,784 ETB, of which considerably more serious damage was illustrated in the rural areas, i.e., 54,915,772,194 ETB (Table 26).

Zone	Urban	Rural	Total
North Wollo	80,521	48,381	128,902
South Wollo	72,306	72,688	144,994
North Shewa	54,920	52,707	107,627
Oromia Special Zone	37,938	10,879	48,817
Dessie City Administration	62,269	0	62,269
Waghimra	8,831	7,790	16,621
South Gondar	11,461	76,237	87,698
North Gondar	0	5,364	5,364
Total	320,897	274,046	594,943

Table 26. Number of individuals who faced material damage by zone and residential areas

The Identity of the Perpetrators of Material Destruction by Zone

According to the victims of the attacks and robberies, almost all of the 199,271 injuries (94.6%) were caused by the Tigray invasion group. The remaining damages were committed by Oromo Liberation Front (OLF)-Shene, Tigrayans' and other non- Tigrayans citizens living in invaded areas and Agew Shengo (Table 27).

Destroyed Houses

The invading forces destroyed 5,934 houses, most of which were made of tin (82.1%). Among the totally destroyed main houses, 1,458 were thatched, 1,366 were made of tin, and 171 were made of blocks. Of the destroyed service dwellings, 11,712 were made of tin, while the rest, i.e., 745, were built of blocks and 482 of thatch (Figure 18).



a) House damage at kutaber woreda



b) House burnt at Habur woreda (Haro)



c) House Damage at Wadla woreda
(Gashena)



d) Houses damaged at laygaint woreda
(Nefas Meucha)

Figure 18. Destruction houses in various invaded woredas (a, b,c, and d)

Compared to the invaded administrative zones of the Amhara region, North (4471) and South (4372) Wollo and North Shewa (4459) Zones experienced extensive damage to the residential houses. Most of the completely damaged houses in South Wollo Zone were made of iron sheets, i.e., 396 and 3885 were main and service houses, respectively. The district-level analysis illustrated that Ambasel (1697), Tehuledere (743), and Legambo (690) experienced the highest level of destruction. Five hundred-twelve main or services houses were also destroyed in Haik city (Table 28).

Zone	Residential area	Tigray invading forces	Shene	Local Tigrean residents	Local residents, excluding Tigreans	Unknown perpetrators	Others not mentioned	Arew shengo	Total
North Gondar	Rural	15,071		1	3	24	128		15,227
	Urban	29,175	119	14	39	72	66		29,485
North Wollo	Rural	29,456	166	156	251	456	1,443		31,928
	Total	58,631	285	170	290	528	1,509		61,413
South Wollo	Urban	15,191	29	9	19	15	14		15,277
	Rural	46,221	124	363	179	132	371		47,390
	Total	61,412	153	372	198	147	385		62,667
North Shewa	Urban	12,454	2,246	3	36	114	50		14,903
	Rural	12,407	1,627	44	14	209	153		14,454
	Total	24,861	3,873	47	50	323	203		29,357
Waghimra	Urban	2,079			18	2		6	2,105
	Rural	6,576						45	6,621
	Total	8,655			18	2	51		8,726

Oromia Special Zone	Urban	5,101	1,218	10	8	103	10		6,450
	Rural	1,408	281	13	1	41	28		1,772
	Total	6,509	1,499	23	9	144	38		8,222
Dessie City Administration	Urban	9,753	28	8	26	16	36		9,867
South Gondar	Urban	1,765	4		1	2	3		1,775
	Rural	2,017							2,017
	Total	3,782	4		1	2	3		3,792
Total	Urban	75,518	3,644	44	147	324	185	6	79,868
	Rural	113,155	2,198	577	448	862	2,168	45	119,453
	Total	188,673	5,842	621	595	1,186	2,353	51	199,321

Table 27. Identity of invaders who caused damage by zone and district level

Zone	Completely destroyed houses by construction type							
		Main house			Service house			
	Districts	Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	Total
South Wollo	Mekdela	9	1		2	26		38
	Tenta		5			134		139
	Kutaber		8	2		15	1	26
	Ambase	21	7	1	9	1,659		1697
	Tehuledere	9	8	1		725		743
	Werebabo	6	7	1		282		296
	Kalu			4		3		7
	Albuko		12	1		5		18
	Dessie Zuria					2		2
	Legambo		132			558		690
	Kelela		108			1		109
	Wore Ilu		1	1		5		7
	Kombolcha		5					5
	Legehida		1				1	2
	Haik Town Admin		41	7	1	454	9	512
	Wore Ilu Town Admin		57	2		7	1	67
	Delanta		3	2		9		14
	Total	45	396	22	12	3885	12	4372
Dessie City Admin	Menafesha	2	89			25		116
	Buanbua Wuha		7			1	1	9
	Hote		3	1		2		6
	Arada		1	1		1		3
	Segno Gebeya		1					1
	Total	2	101	2	0	29	1	135

Table 28. Completely destroyed houses in South Wollo Districts and Dese city administration sub-cities

This study showed that 4,471 houses were completely destroyed in North Wollo Zone, of which 1009, 194 and 23 were made of taches, iron sheet and

blocks, respectively. Almost all (3063) of the destroyed services houses made of iron sheet while 25 were made of blocks. In Meket and Wadla districts, 599 and 308 main or service houses were completely destroyed (Table 29).

Completely destroyed houses by construction type							
Districts	Main house			Service house			
	Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	Total
Bugna		1					1
Kobo district	52	6	2	1	70	9	140
Gedan					14		14
Meket	20	54		8	517		599
Wadla	21	52	5		225	5	308
Mersa		26	1		5	1	33
Gubalafto	1	3	1	1	28	1	35
Harbu	878	30	1	131	2,059		3099
Woldia city administration	1	11	8		2	6	28
Lasta			2		2	1	5
Dawunt	1				11		12
Gazo	1		1		6		8
Angot	31	1	1	16	114		163
Kobo city		6			1	1	8
Lalibela	3	4	1		9	1	18
Total	1009	194	23	157	3063	25	4471

Table 29. Houses that were completely destroyed in North Wollo Zone Districts

The study showed that 4459 houses were destroyed in North Shwa Zone. Of these, 203, 420, and 117 were made from taches, corrugated iron sheets, and blocks. Considerable numbers (2895) of service houses made of corrugated iron sheets were destroyed. Relatively, extensive destruction of main homes was reported in Efratana Gidim (1354), Ataye (954), Shewa Robit (865) and Tarmaber (767) (Table 30).

The study confirmed that seven hundred and fifty-four residential and service houses were destroyed in Oromo Ethnic Administration Zone. the like different administrative zones, most of the destroyed main and service houses in the Oromo Ethnic Administration Zone were made of corrugated iron sheets. More than one-third of the destruction of and homes occurred in Jile Tamuga districts. In addition, substantial numbers of residential houses were destroyed in Dawa Cheffa district (152) and Kemisie city (138) (Table 30).

Zone	estroyed houses by construction type							
North Shewa		Main houses			Service houses			Total
	District	Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	
	Menz Gera	1	3	1	1	20	3	29
	Antsokia		2	1	1	41	1	46
	Efratana Gidim	117	17	67	98	791	264	1354
	Menz Mama	6				63		69
	Tarma Ber	32	156	6	10	470	93	767
	Wugena Wodera		4		6	287		297
	Keyword	1			1	38	1	41
	Menz Keya		4		8	6		18
	Shewa Robit	16	25	18	2	769	35	865
	Ataye	30	201	20	46	407	250	954
	Meha Meda		8	4		3	4	19
	Total	203	420	117	173	2895	651	4459
Oromia Special Zone	Dawa Chefa	5	62		2	83		152
	Bati Zuria	4			5	12	1	22
	Jile Timuga	57	25	2	10	182	1	277
	Artuma Fursi		58		8	18		84
	Dawa Harewa					5		5
	Kemisie			2	84	52		138
	Bati city	1	8		1	13	53	76
	Total	67	153	4	110	365	55	754

Table 30. Houses that were destroyed in North Shewa and Oromo Special Zones by districts

During the invasion, 763 houses in Waghimra Ethnic Administration were destroyed. Among the houses that were damaged, 659 service houses and 84 main houses were made of corrugated iron, respectively. The number of completely destroyed houses (623) in the Dehana district represented three-fourths of the total distractions in the Waghimra zone.

The survey showed that the invading force destroyed 958 residential houses in the North Gondar Zone. Eight hundred thirty-two destroyed houses in the zone were service houses, and 119 were main houses. When looking at the extent of the destruction at the district level, 444 houses were destroyed in the Adi Arkay district, and 339 were in the Debarak city administration. In the Dabat district, 155 main or service houses were destroyed. Twenty-two houses were destroyed in the South Gondar zone. Among the destroyed houses, 16 main and six service houses were made of corrugated iron sheets, respectively. One-hundred thirty-five houses were destroyed or looted by Dessie City Administration. , The majority of the

distraction seen Menafesha sub-city. One-hundred sixteen main or service houses were looted or destroyed in the sub-city, of which 114 were made of corrugated iron sheets (Table 31).

Zone	Completely destroyed houses by construction type							
Waghimra	District	Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	Total
	Zekuala	1	14			8		23
	Sekota city		39		1	3		43
	Dehna		24			599		623
	Gazbila		1					1
	Sehala	17				1		18
	Dessie Zuria		6			48	1	55
	Total	18	84	0	1	659	1	763
North Gondar	Adi Arkay	66		3	4	371		444
	Debark	41	1		15	282		339
	Dabat	5			8	142		155
	Telemt	2	1		2	15		20
	Total	114	2	3	29	810	0	958
South Gondar	Farta		6			2		8
	Lay Gaint		2					2
	Guna Begemdr		1					1
	Nefas Mewcha		7			4		11
	Total		16	0	0	6	0	22

Table 31. *Totally destroyed houses in Waghimra and North Gondar zones by district*

Partially Destroyed Houses

The study showed that 36,631 main and service houses were destroyed in the eight zones invaded by the Tigrayan invading forces. About one-fifth of the completely destroyed houses were built in the block. Among the partially destroyed main homes, 24019 were made from corrugated iron sheets and 1895 from the block. The significant number of partially destroyed service houses were made of the corrugated iron sheet (5382) and blocks (835). , The majority of the partially destroyed service houses, were observed in North (8981) and South (9208) Wollo and North (10029) Shewa Zones (Table 32).

Totally, 10029 service and main houses were partially destroyed in North Shewa Zone. Of the partially destroyed main houses, 4890 and 614 were made of corrugated iron sheets and blocks, respectively. Furthermore, the study confirmed that 1657 partially destroyed service houses were built with a corrugated iron sheet, and 283 were from blocks. In Ataye city, 4032 residential houses were destroyed or looted, corresponding to half of the

destructions in the zone. A total of 2272 residential houses were destroyed in Tarmaber district. Efratana Gidim (1719) and Shewa Robit (1518) were among the districts of the North Shewa Zone that experienced extensive destruction (Table 32).

The study shows that 9208 main and service houses in South Wollo Zone were partially destroyed. Of the partially destroyed main houses, 6615, 387, and 253 were made of corrugated iron sheet, blocks and Taches, respectively. In this zone, 1419 of the partially destroyed service houses were made of iron sheets and 125 were from blocks. Compared to districts of the South Wollo Zone, Haik city, Legambo and Kutaber districts experienced extensive destruction. In the Legambo district, 1530 residential houses were partially destroyed. Moreover, 1401 and 1226 houses in Haik city and Kutaber were partially destroyed, respectively. Similarly, 993 houses were partially destroyed in the Albuko district (Table 32).

North Wollo administrative Zone is one of the zones that experienced the worst housing destruction due to Tigray's invading forces. In this zone, 8981 residential houses were partially destroyed. In addition to the pervasive destruction to houses made of corrugated iron sheets, many main (431) and service (199) houses made of blocks were also partially destroyed. Among the districts under the North Wollo Zone, the worst partial distraction of houses was illustrated in Meket (2538), Wadla (1850), Kobo (1288), and Mersa (1160) districts (Table 33).

Zone	Partially destroyed houses by construction type							
		Main houses			Service houses			
	District	Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	Total
South Wollo	Mekdela	1	7	1		1		10
	Tenta	2	251	17	6	42	15	333
	Kutaber	108	996	36	14	63	9	1226
	Ambasel	1	278	3		31	3	316
	Tehuledere	1	158			52		211
	Worebabu	22	609	1		34	2	668
	Kalu	4	22	6		2		34
	Albuko	37	625	26		286	19	993
	Dessie Zuria	1	152	6	14	26	4	203
	Legambo	19	1,276	13	7	206	9	1530
	Kelela	3	158		183	256	1	601
	Jama	1	42	14		19	3	79
	Wore Ilu	2	21	3	181	31		238
	Kombolcha	11	261	49		41	21	383
	Legehida	2	15	2	1			20
	Haik Town Admin	4	1,094	102		174	27	1401

	Wore Ilu city	16	452	9		61	7	545
	Delanta	18	198	99	3	94	5	417
	Total	253	6615	387	409	1419	125	9208
North Shewa	Menz Gera	2	5					7
	Antsokia		2	2		1	1	6
	Efratana Gidim	978	712	19		10		1719
	Menz Mama	2	2					4
	Tarma Ber	103	1,571	67	3	472	56	2272
	Wujana Wodera		37					37
	Kewot	4	5	1				10
	Menz Keya	6	147	4		131	2	290
	Shewa Robit	5	783	146		447	137	1518
	Ataye	1,477	1,584	349		559	63	4032
	Mehal Meda	5	42	26		37	24	134
	Total	2582	4890	614	3	1657	283	10029

Table 32. *Partially destroyed houses in South Wollo and North Shewa zones by woredas*

In Oromia Special Zone, 971 main and service houses were partially destroyed. Of the partially destroyed main houses, 600 were made of corrugated iron sheets and 82 from blocks. In Jile Tamuga District and Bati City, 418 and 294 main and service homes were partially destroyed. Overall, this study confirmed that 461 houses were partially destroyed in the Waghimra Zone, the majority of which occurred in the Ziquala district (342) (Table 33). Four districts of North Gondar, four districts of South Gondar, and five sub-cities of the Desie City Administration had a large number of houses damaged to a high degree (Table 34). In Desie City Administration, 4637 houses were partially destroyed, and comparably the worst destruction was observed in Menafesha Sub-city. In the sub-city, 3361 main or service houses were partially destroyed. Similarly, 1708 houses in North Gondar and 636 houses in South Gondar were partially destroyed (Table 34).

Zone	Partially destroyed houses by construction type							Total
	District	Main houses			Service houses			
		Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	
North Wollo	Bugna	2	56	20		5	18	101
	Raya Kobot	325	597	48	36	229	53	1288
	Gidan	96	48	1	1	5	1	152
	Meket	10	2,054	18	1	443	12	2538
	Wadla	18	1,532	32	6	238	24	1850
	Mersa	8	983	67		88	14	1160
	Guba Lafto	5	358	49		54	16	482
	Harbu	32	309	90	3	63	12	509

	Woldia	21	120	48		56	19	264
	Lasta	3	7	2		3	4	19
	Dawnt	1	18			4	1	24
	Gaza	3	77	9		13	5	107
	Angot	32	249	6	3	45	2	337
	Kobo city		50	35		4	13	102
	Lalibela	2	27	6		8	5	48
	Total	558	6485	431	50	1258	199	8981
Oromia Special Zone	Dawa Chefa		52					52
	Gile Timuga	144	209	13		48	4	418
	Artuma Fursi		57	1		4		62
	Dewa Harwa	1						1
	Kemisie	47	29	61		5	2	144
	Bati city	3	253	7		29	2	294
Waghimra	Total	195	600	82	0	86	8	971
	Zikuala	22	175	61		64	20	342
	Dehana		52			17		69
	Gazbila	2	4	1		2		9
	Sekota Zuria		30	3		8		41
	Total	24	261	65	0	91	20	461

Table 33. Partially destroyed houses in North Wollo, Waghimra, and Oromo Special zones by woredas

Zone	Partially destroyed houses by construction type								
	District	Main houses			Service houses				Total
		Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks		
North Gondar	Adi Arkay	13	301	2	87	61		464	
	Debark	40	773		69	114		996	
	Dabat	4	121		74	28		227	
	Telemt	1	7		12	1		21	
	Total	58	1202	2	242	204	0	1708	
South Wollo	Farta	1	102	1		13	1	118	
	Lay Gaint		178			8		186	
	Guna Begemdr		23	12		3	3	41	
	Nefas Mewucha	3	177	7		101	3	291	
	Total	4	480	20	0	125	7	636	
Dessie city	Manafesha	18	2,686	182		360	115	3361	
	Buanbua Wuha	5	593	75		143	58	874	
	Hote	3	66	24		23	15	131	
	Arada	23	32	7		13	3	78	
	Segno Gebeya	73	109	6		3	2	193	
	Total	122	3486	294	0	542	193	4637	
Grand total		3796	24019	1895	704	5382	835	36631	

Table 34. Partially destroyed houses in Dessie City, North and South Wollo Zones by woredas

Complete Destruction of Houses in Monetary Terms

This study confirmed that the damage to the houses completely destroyed in the eight invaded zones was 1,774,433,049 Birr. The most extensive damages were observed in South Wollo (594,805,256 Birr), North Wollo (416,438,978 Birr), and North Shewa (574,262,015 Birr) zones. The level of destruction is about half a billion for each of zones. Compared to other districts of the South Wollo Zone, Haik city (105,323,960), Tehuledere (165,954,884) and Ambasl (210,046,343) districts had the highest level of housing destruction. Almost half of the complete house destruction seen in the South Wollo zone happened in Harbu district. The destruction at Harbu district was about 207,379,151 Birr. The total destruction in residential houses of the South Gondar Zone was also around 3535000 birr (Table 35).

The level of complete house destruction in North Shewa Zone was estimated at more than half a billion birr. Relatively, the highest level of destruction was illustrated in Ephratana Gidim (172780595) and Ataye (210506517) districts. The extent of the complete destruction of houses in Oromo Special Zone was about 99,924,415 Birr. Most of the destruction in this zone occurred in Jile Timuga (35735145 Birr) and Kemise (28918355 Birr) districts. A considerable amount of similar collapse was also reported in Desie City Administration (45,315,250 Birr) and North Gondar Zone (20,113,827 Birr) (Table 36).

Completely Destroyed Houses By Construction Type								
Zone		Main houses			Service houses			
	District	Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	Total
South Wollo	Mekdela	293920	103400		39930	1414052		1,851,302
	Tenta		728400			5722109		6450509
	Kuta Ber		3105000	2356160		2190273	750000	8,401,433
	Ambasel	1888546	1046150	26400	625174	206460073		210,046,343
	Tehuledere	1157420	1681790	925650		162190024		165,954,884
	Worebabu	199536	1150000	33624		5230842		6614002
	Kalu			66660		163350		230010
	Albuko		3600000	2400000		2400000		8,400,000
	Dessie Zuria					11550		11550
	Legambo		10078797			36486962		46565759
	Kelela		5313560			55000		5368560
	Wore Ilu		700000	2772		33726		736498
	Kombolcha		2000000					2000000
	Leghida		350000				750000	1100000
	Hayk city		12947000	20680000	36905	65634325	6025730	105,323,960
	Wore Ilu city		15380000	3020000		3050000	1500000	22,950,000

	Delanta		1300000	1177860		322586		2,800,446
	Total	3539422	59484097	30689126	702009	491364872	9025730	594,805,256
North Wollo	Bugna		120000					120000
	Kobo district	2309528	519450	101200	22000	4463420	456500	7872098
	Gedan					2054635		2054635
	Meket	516054	9415165		192885	63332760		73456864
	Wadla	763269	10401321	8019800		17892625	4170000	41247015
	Mersa		8950000	1500000		2900000	1500000	14850000
	Guba Lafto	33000	500000	2350000	55000	1231470	750000	4919470
	Harbu	64702671	5341973	33000	7723381	1.3E+08		207,379,151
	Woldia city	55000	2213000	20400000		1000000	4150000	27818000
	Lasta			6350000		800000	650000	7800000
	Dawnt	38830				565738		604568
	Gaza	41360		44000		179300		264660
	Angot	1911915	120000	38500	944858	9382244		12397517
	Kobo city		1100000			375000	650000	2125000
	Lalibela	380000	750000	7000000		4700000	700000	13530000
	Total	70751627	39430909	45836500	8938124	2.38E+08	13,026,500	416,438,978
South Gondar	Farta		1550000			775000		2325000
	Lay Gaint		375000					375000
	Guna Begemdr		175000					175000
	Nefas Mewcha		2245000			1290000		3535000
	Total		6,345,000			2,065,000		6,420,000

Table 35. Estimated cost of completely destroyed houses in South Gondar, North and South Wollo zones by woredas

Zone	Completely destroyed houses by construction type							
	District	Main houses			Service houses			
		Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	
North Shewa	Menz Gera	14575	373604	66000	372790	1397842	74800	2299611
	Antsokia		1050000	2000000	27830	1789810	50600	4918240
	Efrata Gedem	13149977	2009152	1764224	7660802	139034683	9161757	172780595
	Menz Mama	206800				4336640		4543440
	Tarma Ber	3210720	19741294	2899620	644100	17315837	2020590	45832161
	Weje Wodera		211200		260480	17167808		17639488
	Kewot	55000			36300	7388777	4411000	11891077
	Menz Keya		531610		348700	1441000		2321310
	Shewa Robit	1156925	6389500	29346800	46200	37634721	9845430	84419576
	Ataye	1569219	96264658	29395294	2262843	65912809	15101694	210506517
	Mehal Meda		2210000	9700000		950000	4250000	17110000
Total	19363216	128781018	75171938	11660045	294369927	44915871	574,262,015	
Oromo Special	Dawa Chefa	237490	4638325		169455	4607876		9653146
	Bati Zuria	247060			289652	713988	361900	1612600
	Jilena Timuga	3537960	3901415	5058080	677072	15731728	12100	28918355
	Artuma Fursi		6912964		64130	1301080		8278174
	Dawa Harwa					450450		450450
	ከጫሊ Kemisie			2500000	28221444	5013701		35735145
	Bati city	80000	1606050		30580	1370100	12189815	15276545

	Total	4102510	17058754	7558080	29452333	29188923	12563815	99,924,415
Waghimra	Zikuala	70000	2570000			2980000		5620000
	Sekota city		661925		11715	55770		729410
	Dehana		335060			9270686		9605746
	Gazbila		27500					27500
	Sahala	258445				16500		274945
	Sekota Zuria		100012			792935	12760	905707
	Total	328445	3694497		11715	13115891	12760	17,163,308
North Gondar	Adi Arkay	1084985		69960	84832	7402619		8642396
	Debark	793298	11550		292721	7553627		8651196
	Dabat	79145			119900	2342010		2541055
	Telemt	24860	12650		36190	205480		279180
	Total	1982288	24200	69960	533643	17503736		20,113,827
Dessie city	Menafesha	360000	23595250			9690000		33645250
	Buanbua Wuha		1310000			650000	650000	2610000
	Hote		635000	2350000		400000		3385000
	Arada		200000	5000000		200000		5400000
	Segno Gebeya		275000					275000
	Total	360000	26015250	7350000	0	10940000	650000	45,315,250
	Grand total	100427508	278833725	166675604	51297869	1097003667	80194676	1,774,433,049

Table 36. *Estimated cost of completely destroyed houses in North Shewa, North Gondar, Oromo Special and Waghimra Zones by district*

Partial Destruction of Houses in Monetary Terms

The study confirmed that the amount of partially destroyed houses in all eight zones was 1,473,544,677 Birr. The amount of destruction because of the partial demolition of residential houses was approximately half a billion in South Wollo (418,013,354) and North Showa (450,736,225) Zones. Such damages in North Wollo zone were estimated at 378,974,791 Birr (Table 37).

Zone	Partially destroyed houses by construction type							
		Main houses			Service houses			
	District	Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	Total
South Wollo	Mekdela	83600	458150	41800		103400		686950
	Tenta	40700	8262511	249500	185790	937805	183500	9859806
	Kutaber	2858378	27492375	833891	159717	2408064	164500	33916925
	Ambasel	220000	16497764	4400000		4990130	1841800	27949694
	Tehuledere	263450	21758957			12700160		34722567
	Worebabo	554935	26720664	100000		1266477	144019	28786095
	Kalu	81180	487707	149270		82500		800657
	Albuko	537220	13697570	404900		7515970	336900	22492560
	Dessie Zuria	5000	2336688	205000	133870	244664	88200	3013422
	Legambo	880900	71754172	318320	449460	16858070	336500	90597422
	Kelela	136419	20920765		19351016	34283010	92969	74784179
	Jama	15000	1525740	248500		203500	67000	2059740
	Wore Ilu	13000	331330	111696	2964440	445022		3865488
	Kombolcha	154000	4390100	2918000		506500	363000	8331600
Legehida	226600	709500	88000	22000			1046100	

	Hayk	59000	32805695	4359530		6084650	850200	44159075
	Wore Ilu city	226250	17059780	1130000		2763820	302000	21481850
	Delanta	291000	4546550	1607254	15708	2921902	76810	9459224
	Total	6646632	271756018	17165661	23282001	94315644	4847398	418,013,354
North Wollo	Bugna	17000	616760	183200		75000	213200	1105160
	Kobo district	16852166	24079066	3228460	1536610	13526335	2429985	61652622
	Gidan	5900840	4989965	30800	83600	148500	110000	11263705
	Meket	745750	98886822	1890080	27500	24305900	345000	126201052
	Wadla	506167	51293193	3314135	185570	12375085	2253090	69927240
	Mersa	96700	27647230	11461700		3103250	2355900	44664780
	Guba Lafto	296325	9612735	4762500		1101050	424000	16196610
	Harbu	820645	14883937	3078365	58740	2953480	1543650	23338817
	Woldia	263000	1831000	2773500		815000	276700	5959200
	Lasta	27000	79000	53000		27500	43500	230000
	Wadnt	7000	443569			167755	9500	627824
	Gazo	152900	4616985	145600		167000	55500	5137985
	Angot	1073750	6885266	289800	272325	786155	21500	9328796
	Kobo city		685000	1255500		32500	176500	2149500
	Lalibela	29000	520000	297500		114000	231000	1191500
	Total	26,788,243	247,070,528	32,764,140	2,164,345	59,698,510	10,489,025	378,974,791

Table 37. *Estimated cost of partially destroyed houses in North and South Wollo Zones by woredas*

In North Shewa Zone, the amount of damage related to the partial destruction of houses was about half a billion (450,736,225 Birr). Shewa Robit city experienced the heaviest damage, which corresponds to half of the total destruction in the North Shewa Zone. The findings of the study revealed a substantial amount of partial housing destruction in the Oromo Special Zone (99924415 Birr) and the Desie City Administration (98,133,898 Birr) (Table 38).

Zone	Partially destroyed houses by construction type							
		Main houses			Service houses			
	District	Thatched	iron sheet	Blocks	Thatched	iron sheet	Blocks	Total
North Shewa	Menz Gera	218900	344806					563706
	Antsokia		410000	70000		10000	50000	540000
	Efratana Gidim	72919523	42360693	4427041		118000		119825257
	Mama	131560	250250					381810
	Tarma Ber	3308320	36340424	2273750	20500	9482431	1439250	52864675
	Wujana Wdera		2620010					2620010
	Kewot	240460	682220	44880				967560
	Menz Keya	231660	1855631	344000		1738300	135000	4304591
	Shewa Robit	67000	13631351	2658500		6430920	2073950	24861721
	Ataye	127913441	69974790	18209844		22354070	3520350	241972495
	Mehal Meda	115000	805500	307950		336500	269450	1834400
	Total	205145864	169275675	28335965	20500	40470221	7488000	450,736,225

Oromia Special Zone	Dawa Chefa		1985478					1985478
	Bati Zuria	6359918	8563700	636200		1809500	80000	17449318
	Jile Timuga		1248790	150000		73500		1472290
	Artuma Fursi	316250						316250
	Dawa Harwa	9372145	709000	970900		887000	100000	12039045
	Kemisie	605900	31329960	703000		423200	250000	33312060
	Bati city	16654213	41851450	2460100		3193200	430000	64588963
	Total	4102510	17058754	7558080	29452333	29188923	12563815	99924415
Waghimra	Zikuala	309000	2676860	1898000		736600	389500	6009960
	Dehana		744195			249700		993895
	Gazbila	24500	69300	60000		16000		169800
	Dessie Zuria		435105	35750		145530		616385
	Total	333500	3925460	1993750		1147830	389500	7,790,040
North Gondar	Adi Arkay	171050	7196701	44110	2554097	1193920		11159878
	Debark	1017302	20338133		1509827	2473537		25338799
	Dabat	156541	2402902		3535708	732303		6827454
	Telemt	11715	109560		205370	11660		338305
	Total	1356608	30047296	44110	7805002	4411420		43,664,436
South Gondar	Farta	6500	1327200	6600		240980	6600	1587880
	Lay Gaint		2320300			67000		2387300
	Guna Begemdr		286000	136000		23500	31000	476500
	Nefas Mewucha	22000	3902580	1281000		1734210	251500	7191290
	Total	28500	7836080	1423600		2065690	289100	11,642,970
Dessie City Admin	Menafesha	344900	51341958	4761860		9160400	2057500	67666618
	Buanbua Wuha	51400	13733420	6271100		3939910	645000	24640830
	Hote	20600	1271400	509000		243000	328500	2372500
	Arada	275600	309000	70000		170500	75500	900600
	Segno Gebeya	529350	1730000	145000		32000	117000	2553350
	Total	1221850	68385778	11756960		13545810	3223500	98,133,898
Grand Total		258175410	840148285	95944286	33271848	2.19E+08	27156523	1,473,544,677

Table 38. *Estimated cost of partially destroyed houses in North Shewa, Noth and South Gondar, Oromo Special and Waghimra Zones by woredas*

3.3.2. Damage to Governmental Institutions and Vehicles

In the invaded areas, various institutions and vehicles were used for different purposes at each zone, district, and Keble administration. Some of these institutes and vehicles were hit with heavy weapons and burned. The invading forces looted the remains. At the time of looting, the doors and windows of most of the buildings were closed, the invading forces were broking with various tools, expensive office equipment, and machinery were stolen by the technical robbers who deployed; those that were not looted were smashed where they were (Figures 19 and 20).



a) Damaged office equipment at Guna Begemidir district, South Gondr zone



b) Destruction of offices at Kutaber district, South Wollo zone



Figure 19. Destruction of governmental offices at Guna Begemidir and Kutaber woredas (a and b)



Figure 20. Total destruction of different vehicles and looting of spare parts of governmental sector office

Damage to Government Institutions

Government institutions in all the occupied zones had severe damage (destruction and looting) at all administrative levels. ore than forty-six regional and federal sector offices had been damaged to varying degrees. Government institutions at different levels are among those that have been heavily damaged. For example, administrative institutes losses with the worth of 10,169,562,773 Birr (ten billion one hundred sixty nine million five hundred sixty two thousand seven hundred seventy three birr); agricultural sector with worth of 7,791,820,184 Birr (seven billion seven hundred ninety one million seven hundred twenty one hundred four Birr); work and training office 4,867,775,572 (four billion eight hundred sixty seven million seven hundred seventy five thousand five hundred seventy two Birr); water and energy office 2,839,110,015 Birr (Two billion eight hundred thirty nine million one hundred ten thousand fifteen Birr); finance and development office 1,814,928,276 Birr (one billion eight hundred fourteen million nine hundred twenty eight thousand two hundred seventy sixty Birr), urban development and housing construction office 1,204,387,378 (one billion two hundred four million three hundred eighty seven thousand three hundred Seventy-eight Birr); education office 817,950,592 Birr (eight hundred and seventeen million nine hundred fifty thousand five hundred and ninety-two Birr), police office 783,959,363 Birr (seven hundred eighty-three million nine hundred fifty-nine thousand three hundred sixty-three Birr); Health office 723,081,598 Birr (Seven Hundred Twenty Three Million Eighty One Thousand Five Hundred Ninety Eight Birr), Birr); and road and transport office 672,733,997 Birr (Six Hundred Seventy Two Million Seven Hundred Thirty Three Thousand Nine Hundred Ninety Seven Birr).

Government institutions at different levels that had been damaged at an intermediate level; militia office 460,934,439 (four hundred sixty million nine hundred thirty-four thousand four hundred thirty-nine Birr); culture and tourism office 432,299,913 (four hundred thirty-two million two hundred ninety-nine thousand nine hundred thirteen Birr); Business and Economic Development office 363,071,760 (Three Hundred Thirty-Three Million Seventy-One Thousand Seven Hundred Sixty Birr); Women and Children Birr 363,071,760 (Three Hundred Thirty-Three Million Seventy-One Thousand Seven Hundred Sixty Birr); Revenues office 361,098,346 (Three Hundred Sixty-One Million Ninety Birr) Eight thousand three hundred and forty six Birr); Civil Service office 349,596,492 (Three Hundred Forty-Nine Million Five Hundred Ninety-Six Thousand Four Hundred

Ninety-Two Birr), court and justice office 307,331,000 (Three Hundred Three Million Three Hundred Thirty-One Thousand One Hundred Birr) and the rest show that they have been destroyed at a low level. It showed that a total of damage of 38,340,350,000 (Thirty-Eight Billion Three Hundred Forty Million Three Hundred Fifty Thousand Birr) was destroyed in government offices in the occupied areas (Table 39).

Offices	North Gonder	South Gonder	North Wollo	South Wollo	North Shewa	Waghimra	Oromo adm	Dessie City	Total
Health Bureau	443271	63133404	46021175	459758036	145956514	43456930	23085381	4360291	723191598
Education	645040	1095060	24859419	190210762	379388136	31684450	92640295	98522490	829245242
Agriculture	14825900	13995096	209584704	1.5billion	2.65billion	1.05billion	2.23billion	137409580	7,797,433,493
Trade and Revenue	644221	1202180	71844003	21029980	67246125	3462980	196239666	4425245	364892220
Work and training	745652	5012365	13959922	124654683	471000000	2998012	12085755	3331548	4,867,775,572
Culture and tourism	68660	1364750	10855765	65013253	182399905	59093678	104437489	10431163	432299913
Sport	1148355	419999	8400239	78457627	67066560	9091478	17842055	2026772	184033086
Women and children	72050	537500	4682751	92014458	146757080	9517954	102483975	7543492	363071760
Finance and dev't	1372624	4291153	42932184	747339680	566609711	12482245	436074932	8116900	1815723276
Revenue	1731950	4647535	30722186	89619043	217536305	5526047	15962815		361098346
Plan and dev't				13420028	10801049	769405	155744270		180734752
Vital event		432000		59946	30217693	812757			31090396
Justice	1679717	0	12654114	41241429	26321697	940319	4615215	172920	87706411
Court	4513319	1830990	11017341	111570492	149574577	20109505	8550300	1995466	307331000
Prisons		6239711	21046210	75269977	16720000	12394714	25373425	87057388	237861714
Land administration	1202519		18196074	37907897	126273976	1204500	39178819	195921	224225706
Irrigation and lowland	632863								632863
Police commission	5064831	4247695	49361466	127921486	511958590	43791658	7553920	38307412	784066562
Militia	208735	2470080	21707290	275300953	20049865	1164576	142503020		460934439
Administration	12583736	9428349	306244820	503000000	220000000	56320356	254000000	24413861	10,170,641,495
Road and transport	225199	964602	324481885	116365822	175391427	1375517	54031219	862928	672733997
House of council	7268468	764993	6873812	45640379	69009879	32342900	131945088	2966920	296047446
Peace and security	160559	183190	9576193	90285995	61794047	2004274	74366820	237050	238424938
Construction and house development		2809223	101813739	73211821	423808132	71126198	180703140	353724348	1204387378
Water and energy	534184	20428551	88134708	216000000	412182705	51143714	114784364	12330340	2839110015
Communication	719851	0	16014477	48590577	81265795	9430909	39388910		195410519
Telecommunication		913313		1176450	469982	1025750			2672182
Electricity		593494		1656985	4281838	3300	492250		6434373
Civil service	300066	1498565	12971433	82599794	141292211	1478510	96261385	14693093	349,596,492
Industry and investment		2078944	5995489	38854928	49202771	2109077	146932874	8656901	251,752,040
Env't, and wildlife	72424	235315	764940	23094191	13123586	113300	247282695		284,451,136
Postal service		160000	88732			69575			158307
Anti-corruption						703560			703560
Social Security Agency			395019						395,019
Audit								2985895	2,985,895
Ethiopian commodity and Exchange				414370					414,370
Statistic								3098633	3,098,633
Road								66890528	66,890,528
Ethiopia aviation				26180086					26,180,086
Ethiopia suitability assessment								59693149	59,693,149
Construction			21655839	4329157	259641	9960060	189946	146931811	183,326,454

Walia capital			2260847	146675					2,407,522
Ethiopian oil deliver				439699737					439,699,737
National Information						99000			99,000
Others	1173571	24351524	7315821	47103851	872719274	3960968	46865775	29291606	1,008,430,866
Total (000000) Birr	58.04	175.33	1,502.43	12,280.14	14,529.68	1,551.77	7,287.62	1,130.67	38,340.35

Table 39. *Estimated costs of governmental institutes' damage of each zone*

1. North Gondar Zone

The total damage to government institutions in North Gondar is 58,037,765 Birr (Fifty Eight Million Sixty-Seven Thousand Seven Hundred Sixty-Five Birr). These damages have happened to the government institutions in four districts. The deterioration in Debark district was estimated at 26,952,435 (twenty pot million nine hundred and fifty-two thousand four hundred and sixty five Birr); Adarkay district with the worth of 12,170,298 Birr (twelve million one hundred seventy-two hundred and ninety nominal Birr); Telemit district 17,538,812 (seventeen million five hundred and thirty nominal thousand Birr); and Dabat districts with worth of 1,376,221 (one hundred million three hundred seventy-six thousand two hundred twenty-one birr) and twenty birrs ((one million three hundred seventy-six thousand two hundred and twenty-one birr)) were destroyed (Figure 21).

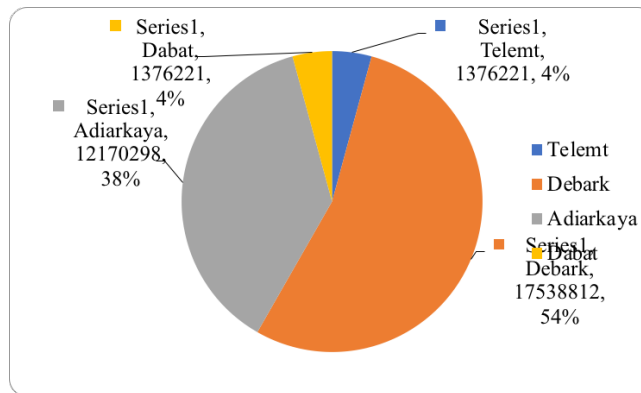


Figure 21. *Estimated costs of damage (birr) on government institutes in four districts of North Gonder*

2. North Wollo Zone

There are fourteen districts and North Wollo. TPLF invaded all districts and, causing tremendous loot destruction of governmental institutes. The looted and destructed institutes of each district are presented as follow. The damage to governmental institutes at Woldia City administration is

estimated at 575,890,000 birr (Five Hundred Seventy Five Million Eight Hundred and Ninety thousand Birr). In Wadila district with estimate of 219,980,000 Birr (two hundred and nineteen million eight hundred and ninety thousand Birr); in Lasta district, it was 176,500,00 Birr (One Hundred Seventy-Six Million Five Hundred thousand Birr), in Lalibala city 123,730,000 Birr (One Hundred Twenty-Three Million Seven Hundred and Thirty thousand Birr); and in Raya Kobo district 104,270,000 Birr (One Hundred Seventy-Four Million Two Hundred Seventy thousand Birr).

Those districts that suffered moderate damage compared to others were Meket district Gidan, Dawunt, Bugna; Gazo and Angot woredas (Fig. 22) woredas with low low-level damage Kobo City, Harbu and Gubalafto (Fig. 22).

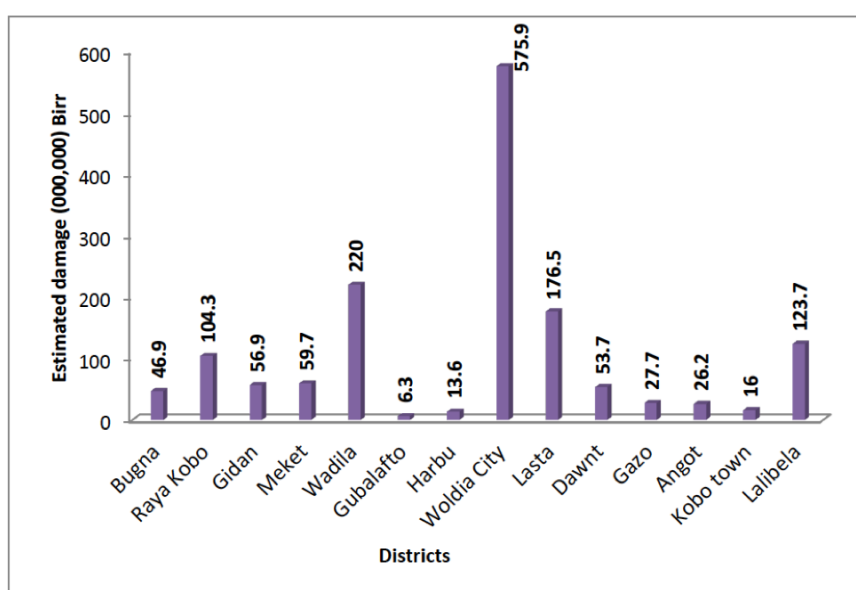


Figure 22. *Estimated costs of damage (birr) on government institutes in four districts of North Wollo*

3. South Wollo Zone

Among the thirty districts and city administrations under the South Wollo administration zone, twenty five districts and city administrations were known to have suffered various damages directly or indirectly from the invading force.

In south Wollo, there are twenty-five districts, of which the invading force destructed and looted seventeen districts. The estimated value of

the districts that had been destroyed at different levels were 4,891,086,219 Birr at Kutaber, 3,418,102,128 at Delanta, 1,589,572,117 at Kombolcha and 674,813,656 Birr at Mekdela woredas (Fig. 23).

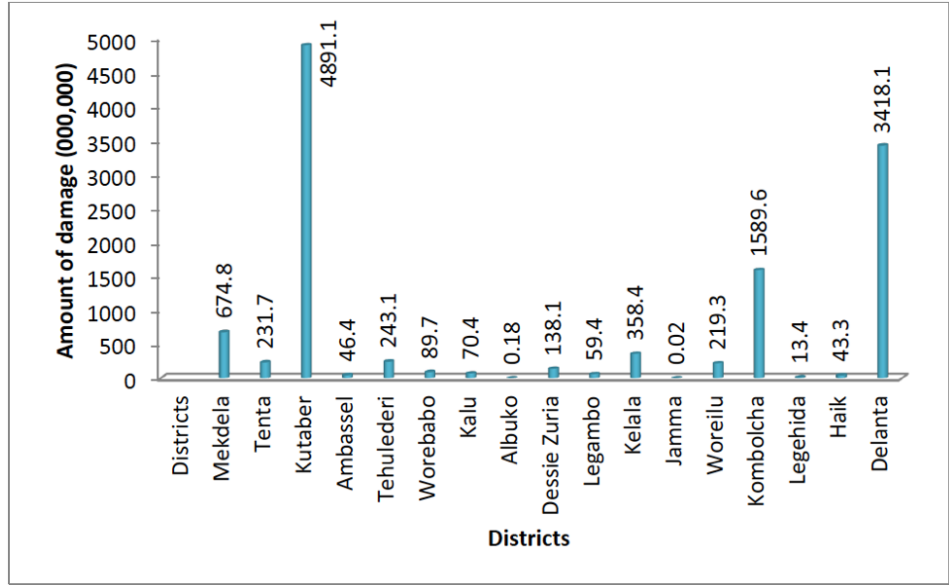


Figure 23. *Estimated costs of damage (birr) on government institutes in different districts of South Wollo*

4. North Shewa

Among the twenty-seven districts and one city administration in North Showa Zone, thirteen districts and one city administration were invaded by the tplf terrorist group, causing tremendous. Regarding the destruction of institutions, twelve of the thirteen had been severely damaged. The districts that have been destroyed at different levels were 6,874,045,490 Birr at Ataye, 1,860,885,553 birrs at Shewarobit, 1,284,612,201 Birr at Mehal-Meda, 1,064,627,943 Birr at Menz-Keya, 676,008,103 Birr at Ephratana Gidim. It had been confirmed that the other districts and city administrations were also damaged, with an estimated less than half a billion birr ((Fig. 24).

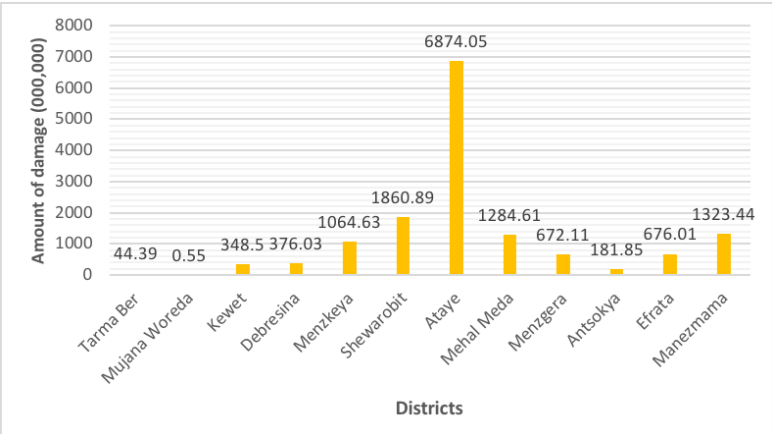


Figure 24. *Estimated costs of damage (birr) on government institutes in different woredas of North Shewa*

5. Wag-Himra Zone

There are eight districts and city administrations under the Wag-Hamra administration Zone. Of these districts, seven districts and on city administrations were invaded by TPLF and causing huge losses. Regarding the destruction of institutions in the five districts, which were freed from occupation, estimated losses of 1,043,877,070 Birr, 228,770,162 Birr, 171,211,545 Birr, 53,559,132 Birr, and 53,395,535 Birr at Sekota Zuria, Dahna, Sekota City, Ziquala and Gaz-Gibla districts, respectively (Fig. 25).

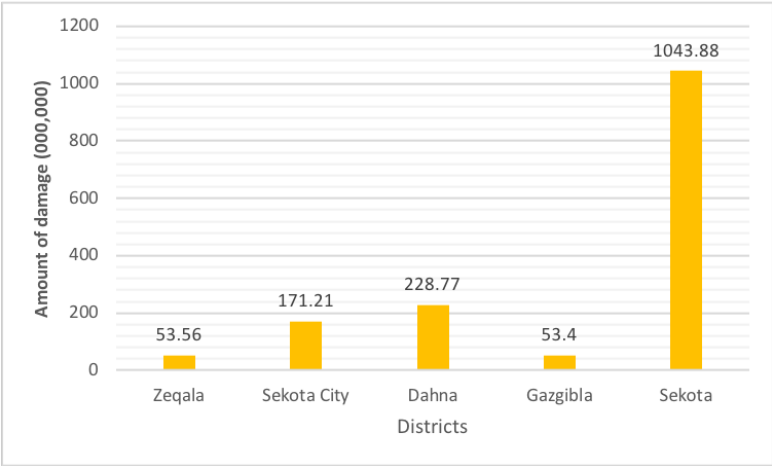


Figure 25. *Estimated costs of damage (birr) on government institutes in five districts of Wag-himra Zone*

6. Oromo Administration Zone

There are seven districts and city administrations in the Oromo administration zone. All these districts were invaded and caused unbelievable destruction and losses by the TPLF group. The study revealed that worth of 2,470,510,729 Birr, 1,693,738,240, 1,512,604,865, 939,338,204, 345,287,426, 311,035,960 and 31,073,790 Birr losses (in birr) were recorded at Kemissie, Dawa-chef, Bati, Dawa-harawa, Artuma-fursi, Gile-time and Bati districts, respectively (Fig. 26).

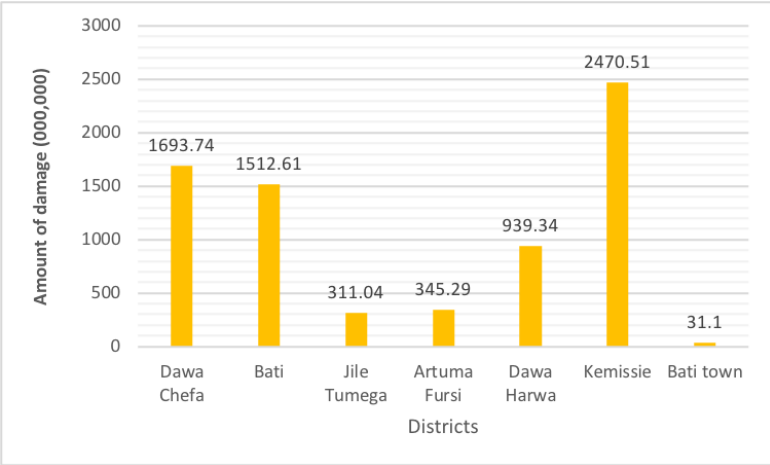


Figure 26. *Estimated costs of damage (birr) on government institutes in different woredas in the Oromo Administration Zone in the Amhara Region.*

7. Dessie City Administration

There are five sub-cities in Dese city. All these sub-cities were invaded by TPLF armed forces and causing huge losses.. Regarding the destruction of the institutions, all the institutions of the sub-cities had been destroyed at different levels. This study result showed that the magnitude of damages was estimated for each sub-city as 629,470,000 Birr at Hote, 209, 840,000 Birr at Buanbua wuha, 129, 180, 000 Birr at Menafesha, 12, 160,000 birr at Arada, 3, 009, 000 Birr at Segno-abaya (Fig. 27).

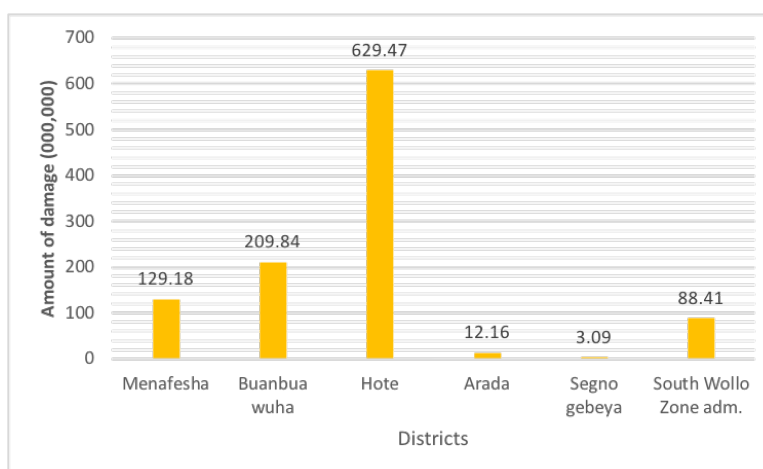


Figure 27. Estimated costs of damage (birr) on government institutes in different woredas of Dessie city in Amhara Region

B. Damage to Government Vehicles

There are governmental institutes and development organizations with vehicles providing services. These organizations had vehicles from bicycles to heavy trucks. However, all these vehicles were either totally vandalized or looted by this terrorist invade, TPLF. The research result revealed that 777 cars were damaged and looted from different sector offices. The number of damage of each institute was shown (Table 40)

Institutes	Zone								Total
	North Gonder	Oromo adm.	Dessie	South Wollo	North Wollo	South Gonder	North Shewa	Wag-himra	
Health	3	9	6	29	32		10	15	104
Education	0	1	1	16	14		1	8	41
Agriculture	2	9	0	39	23		7	16	96
Trade and economic development	0	1	1	4	6		1	1	14
Works and training	0	3	0	10	9		3	1	26
Tourism	0	1	1	1	4		0	0	7
Sport	0	1	0	1	6		0	0	8
Women and children	0	1	0	5	0		1	1	8
Fiancé and development	0	0	0	9	8		2	4	23
Revenue	0	0	0	4	5		0	0	9
Plan and dev;t	0	0	0	1	0		0	0	1
Vital events	0	1	0	0	0		0	0	1
Justice	0	0	2	2	0		2	1	7
Court	0	0	0	1	0		0	2	3
Prison	0	0	0	2	0		5	0	7
Land administration	0	0	0	6	3		0	2	11
Police	1	0	2	7	19		4	6	39
Militia	0	0	0	2	1		1	0	4

Administration	1	7	14	12	32		6	14	86
Road and transport	0	12	16	55	7		2	3	95
House of council	0	1	0	1	2		0	1	5
Peace and security	1	2	0	4	4		2	1	14
Urban devt, housing & construction	0	5	2	2	26		0	1	36
Water and energy	2	12	0	28	13		4	3	62
Communication	0	2	1	2	3		0	0	8
Electric city	0	3	0	0	0		0	0	3
Civil service	0	1	0	5	3		0	1	10
Industry and investment	0	2	0	4	3		0	0	9
Environmental protection and wildlife	0	1	0	3	2		0	0	6
Social Security Agency	0	0	0	0	2		0	0	2
Others	0	1	0	4	22		4	1	32
Total	10	76	46	259	249		55	82	777

Table 40. Number of vehicles vandalized or looted in different government offices in the invaded zones

C. Vehicles Damage or Looted at District Level of Each Administrative Zone

1. North Wollo zone

Out of the eighteen districts and one city administration under North Wolo Zone, damage or looted vehicles were recorded from twelve districts and one city administrations. A total of 249 vehicles were damaged or looted from North Wollo. These districts with damaged or looted vehicles were Raya Kobo (44), Woldia City (38), Lasta (29), Lalibela (27), Wadla (26), Gdan (25), Angot (18), Daunt (14), Bugna (11), Gazo (10), Meket (5) and The Habru (2 vehicles) (Figure 28).

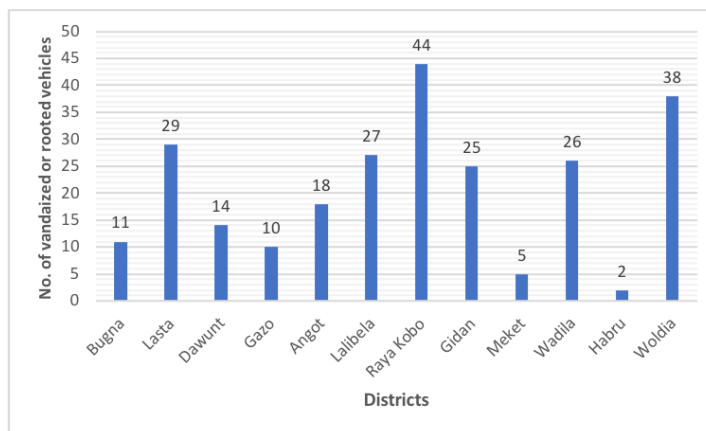


Figure 28. Number of vehicles vandalized or looted in different government offices in the invaded woredas of North Wollo.

2. South Wollo Zone

Out of the 30 districts under South Wolo Zone, damaged or looted vehicles were recorded from 15 districts. A total of 259 vehicles were damaged or looted from the South Wollo zone (Figure 29).

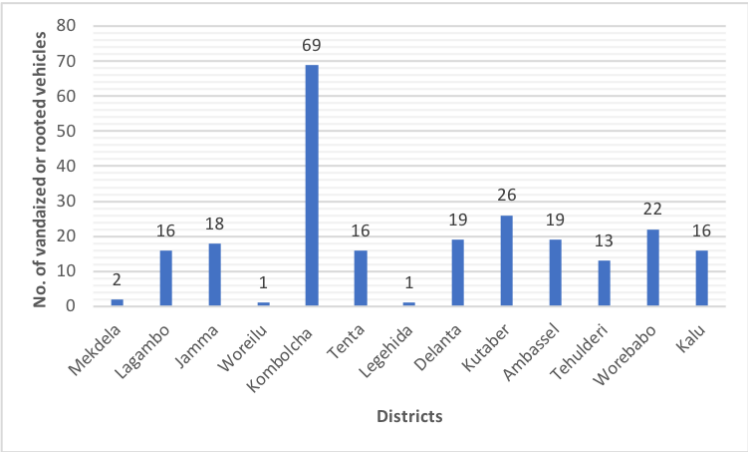


Figure 29. *The number of vehicles vandalized or looted in different government offices in the invaded woredas of South Wollo.*

3. North Shewa Zone

There are 30 districts under North Shewa Zone. Out of these districts, 13 districts were invaded by TPLF forces. During the invasion, a total of 55 government vehicles from eight districts were either damaged or looted (Fig. 30).

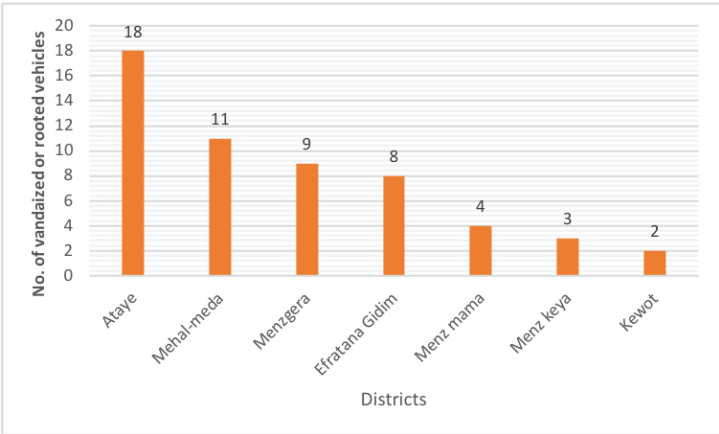


Figure 30. *Number of vehicles vandalized or looted in different government offices in the invaded woredas of North Shewa*

4. Waghimra Administration Zone

All the districts (8) of the Waghimra zone were invaded by TPLF forces and either vandalized or loot government vehicles. The study confirmed that a total of 82 vehicles were damaged or looted from these districts (Figure 31)

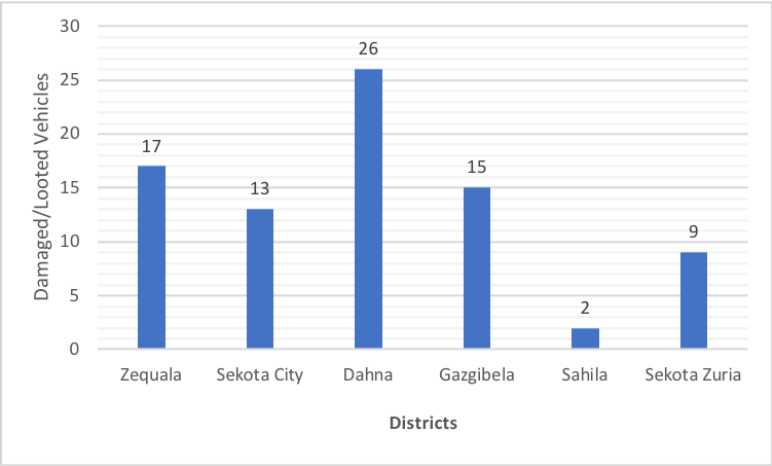


Figure 31. Number of vehicles vandalized or looted in different government offices in the invaded woredas of Waghimra zone

5. Dessie City Administration

All five Dessie city administration sub-cities were under the TPLF forces' invasion. However, 46 government vehicles were vandalized or looted from only three sub-cities (Fig 32)

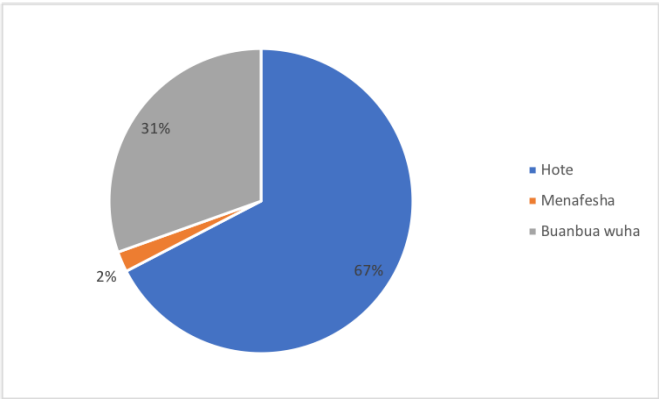


Figure 32. Number of vehicles vandalized or looted in different government offices in the invaded sub-cities of Dessie City Administration

The study revealed that 777 vehicles were either damaged or looted from different government offices, as stated in the above districts and cities. The estimated cost of these damaged vehicles was about 2,130,021,497 Birr. Regarding the cost estimation of the vehicles of each zone, the highest was at the Waghimra zone (610,976,000 birrs), and the least was at North Gonder (16,760,000 birrs) (Table 41).

It was also recorded that a total worth of 2,130,021,497 birr was lost due to vehicle damage in each office of the region. This Revealed that the most serious and lowest damage or looted vehicle were estimated as 408,508,000 and 171,920 Birr at Health and social security offices, respectively (Table 41).

Sectors	N. Gonder	Oromo adm.	Dessie city	N. Wollo	S. Wollo	N. Shewa	Waghimra	Sum totalTotal
Health	7800000	29000000	21010149	91549000	125437500	25817000	39,020,000	339,633,649
Education		350000	150000	33598000	15210000	400000	358,800,000	408,508,000
Agriculture	4200000	25056000		32311000	57837900	7173000	160,666,000	287,243,900
Trade		3200000	3900000	2052000	695000	13000	350,000	10,210,000
Work and Training		3175000		14812000	14505000	4863000	200,000	37,555,000
Tourism		1000000	2300000	6550000	120000			9,970,000
Youth and sport		150000		1240000	500000			1,890,000
Women and children		3000000			1060000	36000	200,000	4,296,000
Finance and Dev't				38366000	5863500	260000	4,360,000	48,849,500
Revenue				12400000	590000			12,990,000
Plan and Dev't					300000			300,000
Vital event		350000						350,000
Justice			2700000		510000	3536000	200,000	6,946,000
Court					350000		2,800,000	3,150,000
Prisons					165000	2734000		2,899,000
Land adm				8100000	1785000		3,700,000	13,585,000
Police	180000		5600000	40743600	1350000	1256000	3,260,000	52,389,600
Militia				220000	110300	20000		350,300
Administration	200000	11100000	36419000	52654000	12780000	2475450	26,970,000	142,598,450
Road and transport		111650000	64600000	6747400	199784000	600000	1,880,000	385,261,400
House of council		3500000		245000	120000		2,900,000	6,765,000
Peace and security	2400000	1380000		4420000	2810000	59000	3,000,000	14,069,000
Construction and house development		38300000	2800000	111509878	520000		200,000	153,329,878
Water and energy	1980000	37076500		17210000	50735000	3645000	1,510,000	112,156,500
Communication		2536000	2400000	3900000	270000			9,106,000
Electricity		8600000						8,600,000
Civil service		340000		535000	10660000		600,000	12,135,000
Industry and investment		5300000		7500000	905000			13,705,000
Enviromental		350000		500000	768000			1,618,000
Social security				171920				171,920
Others		540000		13020400	5120000	10349000	360,000	29,389,400
Total (000000) birr	16.76	285.95	141.88	500.36	510.86	63.24	610.98	2130.30

Table 41. Estimated cost of damaged vehicles of each zone of Amhara region by TPLF invader forces.

3.3.3. Destruction of Non-Governmental Organizations

It is known that various non-governmental organizations are active in the Amhara regional government, especially in the areas where the invading force entered. A total estimated loss of 503,020,865 birr was recorded in all TPLF zones (Table 42).

Zone	Districts	Damage losses (birr)	Zone	Districts	Damage losses (birr)
North Wollo	Bugna	4,614,060	South Wollo	Tenta	52,800
	Raya Kobo	3,078,412		Kutaber	104,995
	Gidan	12,495,164		Ambassel	6,323,889
	Meket	152,185		Tehulederi	37,535,506
	Wadla	2,145,792		Worebabo	144,144
	Gubalafto	898,145		Kalu	91,300
	Harbu	3,545,857		Dessie Zuria	147,400
	Woreilu	19,233,655		Legambo	830,788
	Lasta	14,959,421		Jamma	8,690
	Dawn	1,541,826		Woreilu	3,583,759
	Gazo	3,376,390		Kombolcha	72,311,909
North Shewa	Lalibela	20,282,131		Legehida	787,716
	Subtotal	86,323,038		Delanta	119,020
	Subtotal	86,323,038		Subtotal	122,041,916
	Debresina	469,982	North Gonder	Adiarkay	1,898,314
	Menzegeera	1,947,894		Debark	33,330,000
	Efratagidm	26,398,550		Telemt	69,255,505
	Menzmama	784,201		Subtotal	104,483,819
	Tarmaber	10,854,069	Waghimra	Ziquala	10,808,391
	Menzkeya	478,630		Sekota twon	11,233,040
	Shewarobit	216,359		Dahina	1,805,894
	Ataye	4,016,592		Gazibla	30,063,435
	Mehalmeda	1,317,905		Sekota zuria	29,780,285
	Subtotal	46,191,688		Subtotal	83,691,045
Dessie town	Menafesha	8,181,629	South Gonder	Laygaint	23,388,910
	Buanbua what	2,956,886		Guna begemdir	1,903,351
	Hote	22,305,974		Nifas Mewucha	206,133
	Arada	1,053,982		Subtotal	25,498,394
	Subtotal	34,498,471		Subtotal	25,498,394
503,020,865					

Table 42. TPLF damage on Non-governmental organization of the invaded areas of Amhara regional state.

3.3.4. Destruction TPLF Armed Invasion in the Education Sector

During the invasion, 1156 pre-preschool to higher education institutions and three regional universities (Woldia, Wollo, and Makdela Amba Universities) were looted and destroyed (Figure 37). Most destroyed

educational institutions (89%) were primary schools, while 117 and 5 were secondary schools and Teaching Training Colleges, respectively. More than half a million students have been forced out of school because of the pervasive damage to schools and higher education institutions (Table 43). Relatively large numbers of schools were destroyed in North Wollo (355), South Wollo (230), and North Shewa zones (200) (Table 43).

In North Wollo Zone, a total of 355 schools were looted or destroyed, of which 318 were primary schools, and 34 were secondary schools. Moreover, the invading forces looted or destroyed a teacher's training college located in Woldiya City Administration. The district-level analyses showed that extensive destruction of schools was observed in Raya Kobo (58), Harbu (48), and Bugna (41) districts. Two hundred schools were destroyed in the North Wollo Zone, 23 of which were secondary schools, and large majorities (207) were primary schools. Pervasive distractions were reported in Desie Zuria (39), Legambo (34) and Kalu (31) districts of the zone (Table 43).

In North Gondar zone, 99 pre-schools to higher educational institutions were destroyed. About half (41%) of the total destruction in the zone was in Debarak city administration. Thirty-four schools were looted or destroyed in the Adrkai district. In the South Gondar zone, the invading force has damaged forty-three educational institutions. Most of these destructions occurred in Lay Gaynt district (Table 43). North Shewa zone is one of the zones heavily destroyed by the Tigrayan invading forces. Two-hundred educational institutions were looted or destroyed in the zone, and one-third of these destructions occurred in Efratena Gidim district. The Kewet (30 schools) and Menz Gera (28 schhols) districts also experienced sever destruction (Table 43)..

In Oromo Special Zone, 102 educational institutions were destroyed, nine of which were secondary schools and one was teaching training college. The heaviest damage in the zone was observed in Jile Timuga district, where 41 schools were destroyed. Totally 87 educational institutions were destroyed in Waghmira Ethnic Administration Zone. In this zone, 63 primary and 15 secondary schools and one teaching training college were destroyed. In Dahna and Ghazgibla districts, 26 and 27 educational institutions were destroyed, respectively. This study confirmed that forty-one educational institutions were damaged in Desie city administration. Twelve schools each were looted or destroyed in Hote and Menafesha sub-cities of the city administration (Table 43).

Zone	District	Pre-school	Primary school	Secondary school	College	Total damaged schools
North Gondar	Adi Arkay	1	33	0	0	34
	Janamora	0	1	0	0	1
	Debark	0	38	2	0	40
	Dabat	0	10	0	0	10
	Telemt		13	1	0	14
	Total	1	95	3	0	99
South Gondar	Lay Gaint	0	19	5	1	25
	Guna Begemdr	0	9	2	0	11
	Farta	0	5	1	0	6
	Este	0	1	0	0	1
	Total	0	34	8	1	43
North Wollo	Bugna	0	38	3	0	41
	Raya Kobo		52	6	0	58
	Gidan	0	30	1	0	31
	Meket		27	2	0	29
	Wadla		28	4	0	32
	Gubalafto		22	2	0	24
	Harbu		46	2	0	48
	Woldia	0	5	1	1	7
	Lasta		26	3	0	29
	Dawnt	1	14	2	0	17
	Gaza		17	2	0	19
	Angot	0	9	3	0	12
	Kobo city	0	4	2	0	6
	Llibela	1	10	1	0	12
	Total	2	318	34	1	355
South Wollo	Mekdela	0	6	0	0	6
	Tenta	0	6	2	0	8
	Ambasel		25	1	0	26
	Tehuledere	0	18	1	0	19
	Worebabo	0	17	1	0	18
	Kalu	0	27	4	0	31
	Dessie Zuria		36	3	0	39
	Lagambo	0	31	3	0	34
	Kelela	0	6	2	0	8
	Wore Ilu	0	6	2	0	8
	Kombolcha	-	23	2	0	25
	Delanta	0	6	2	0	8
	Total		207	23	0	230
North Shewa	Menzgera	0	25	3	0	28
	Antsokia	0	10	1	0	11
	Efratana Gidim	0	58	4	0	62
	Menz Mama	0	22	2	0	24
	Tarma Ber	0	17	2	0	19
	Kewot	0	28	2	0	30
	Shiwa Robit	0	19	1	0	20
	Menz Keya	0	5	1	0	6
	Total	0	184	16		200

Waghimra	Zikuala	0	7	1	0	8
	Sekota city	0	8	3	1	12
	Dehana	0	23	4	0	27
	Gazbila	0	24	2	0	26
	Sekota Zuria	0	11	3	0	14
	Total	0	73	13	1	87
Oromia Special Zone	Dawachefa	0	20	1	0	21
	Bati district	0	3	0	0	3
	Jile Timuga	1	37	3	0	41
	Artuma Fursi	0	12	2	0	14
	Dawa Harwa	0	5	0	0	5
	Kmisie	0	7	1	1	9
	Bati city	0	7	2	0	9
	Total	1	91	9	1	102
Dessie City Admin	Manafesha	0	9	2	1	12
	Buanbua Wuha	0	6	3	0	9
	Hote	0	7	5	0	12
	Arada	0	1	1	0	2
	Segno Gebeya	0	5	0	0	5
	Total	0	28	11	1	40
Grand total		4	1030	117	5	1156

Table 43. Number of damaged education institutions caused by Tigrian invading forces by woredas and zones

Destruction of School Resources

Schools faced multi-faceted damages. As an illustration, 628 and 785 educational institutions experienced the destruction of laboratories and other basic supplies, respectively. Relatively, pervasive destruction to laboratory and other supplies was reported in North and South Wollo Zones and North Shewa Zone. In North Wollo Zone, laboratory supplies of 191 schools were destroyed. In addition, the destruction of teaching materials or supplies was observed in 161 educational institutions in the zone. The higher number of schools in the Gidan (47), Angot (45), and Raya Kobo (43) districts of the zone faced the destruction of supplies. In North Gondar Zone, 140 educational institutions experienced the destruction of academic laboratories and other resources. The relatively highest number of schools in the Adiarqay district had such destruction. This study revealed that many educational institutions in Waghimra Ethnic and Dese City Administration experienced extensive destruction of laboratories and educational supplies (Table 44).

A total of 330 educational institutions faced the destruction of supplies in the South Wolo zone; of these, the incidence of looting of laboratory supplies was reported in 123 schools. Many educational institutions in Dese Zuria,

Delantana, and Kombolcha suffered looting or destruction of learning resources (Table 45). In North Shwa Zone, 178 educational institutions were looted of their educational resources by the invading forces. Among these, looting of laboratory supplies was observed in eighty schools. Many educational institutions in Ephratagedem (42) and Menzamama (43) districts lost their supplies through looting and destruction. In the Oromo Ethnic Administration, forty-two and fifty-eight educational institutions, respectively, had their laboratories and other resources destroyed (Table 45).

C) Destruction of Textbooks

The invading forces looted or destroyed 2,861,979 textbooks. The study results showed that the highest destruction of books occurred in South Wollo (1,312,645) and Waghemra (730,301) zones. About one-quarter billion textbooks were destroyed in North Gondar (240, 026) and North Wollo (227, 474) Zones (Table 46).

Zone	District	Number of schools with laboratory damages	Number of schools with other education supplies damaged	The total number of schools that experienced damage
North Gondar	Adi Arkay	33	37	70
	Janamora	0	4	4
	Debark	2	17	19
	Dabat	0	12	12
	Telemt	23	12	
	Total	58	82	140
South Gondar	Lay Gaint	27	5	32
	Guna Begemdr	9	2	11
	Farta	5	1	6
	Este	1		1
	Total	42	8	50
North Wollo	Bugna	5		4
	Raya Kobo	21	12	43
	Gidan	45	2	47
	Meket	16	23	39
	Wadla	2	26	28
	Gubalafto	4	14	18
	Harbu		14	14
	Woldia city		9	9
	Lasta	28		28
	Dawnt		11	11
	Gaza	39	19	58
	Angot	21	26	45
	Kobo city		2	2
	Lalibela	10	3	13
	Total	191	161	352

Waghimra	Total	80	98	178
	Zikuala	3	20	23
	Sekota city	3	16	19
	Dehana	4	40	44
	Gazgibla	4	13	17
	Sekota Zuria	12	9	21
	Total	26	98	124
Dessie City Admin	Menafesha	17	16	33
	Buanbua Wuha	13	9	22
	Hote	22	11	33
	Arada	6	2	8
	Segno Gebia	8	4	12
	Dessie city		1	1
	Total	66	41	107

Table 44. *Number of schools with laboratory and other educational supplies damaged by districts and administrative zones*

Zone	District	A number of institutions experienced damage to educational laboratories	A number of institutions experienced damage to educational supplies	Total number of education sectors
South Wollo	Mekdela	4	0	4
	Tenta	7	17	24
	Kutaber	10	1	11
	Ambasel	0	32	32
	Tehuledere	0	8	8
	Worebabo	0	15	15
	Kalu	6	30	36
	Albuko	0	1	1
	Dessie zuria	23	26	49
	Legambo	23	4	27
	Kelela	9	4	13
	Jama		3	3
	Were Ilu	7	5	12
	Kombolcha	25	21	46
	Haik		1	
	Were Ilu city		1	1
	Delanta	9	38	47
	Total	123	207	330
North Shewa	Debre Sina	2		2
	Menz Gera	1	12	13
	Antsokia Gemza	4	1	5
	Efratana Gidm	22	18	42
	Menz Mama	21	23	43
	Tarmaber	8	14	22
	Mujana Wodera	2	4	
	Kewot	6	9	15
	Menz Keya		5	5
	Shiwa Robit	8	7	15
	Ataye	4	4	8
	Mehalmeda	2	1	3

	Total	80	98	178
Oromia Special Zone	Dawa Chefa	7	7	14
	Bati district	4	6	10
	Jile Timuga	4	18	22
	Artuma Futsi	5	7	12
	Dawa Harwa	1	4	5
	Kemissie	5	6	11
	Bati Ketema	16	5	21
	Total	42	53	95

Table 45. Number of schools with laboratory and other education supplies damaged in South Wollo and North Shewa Zones by woredas

Grade	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag himra	Oromia Special Zone	Dessie City Admi	Total
10th	2727	7692	13194	159115	11665	37573	6646	16202	254814
11th	2791	5660	9790	131491	11030	26821	1512	16727	205822
12th	3372	4536	8529	116880	11622	17704	1637	13663	177943
1st	30635	9564	25112	86727	7012	37340	4941	2746	204077
2nd	27026	10083	23671	44956	4138	33161	4860	2499	150394
3rd	25619	9143	15988	42217	4207	32849	5630	2395	138048
4th	23143	8089	21145	76451	4508	33076	5548	2432	174392
5th	28873	8435	27583	120790	7064	52359	8801	4062	257967
6th	27325	6723	22727	103513	6925	293496	8540	4640	473889
7th	32784	8430	23577	134637	7542	66113	9109	5340	287532
8th	33128	8058	24290	138183	7563	61046	8986	7730	288984
9th	2603	8327	11868	157685	10254	38763	1306	16651	247457
Reference books								660	660
Grand total	240026	94740	227474	1312645	93530	730301	67516	95747	2,861,979

Table 46. Damage to textbooks in invaded areas by administrative zones and level of schools

Incongruent with this, the results of the qualitative studies showed pervasive distraction from educational institutions. The invading forces looted or destroyed educational materials and supplies, including books, tables, and laboratory supplies. They also used schools as war camps and destroyed students' documents.

The preparatory school director in Kemisie City said that “...*They destroyed schools as they used them as war camps. The library was completely destroyed, and they used it as a clinic for the wounded and used the books as mattresses and pillows. The laboratory chemicals were looted or destroyed. The invading forces damaged the school's water and electricity infrastructures. They also tried to make fake educational credentials.*”

The Waghemra study participants stated, “...*They (the invading forces)*

looted the television, generator, and ten solar panels belonging to the high school. They failed to take the generator, which was full of fuel. Hence they removed the main transmission and made it out of service. They took away all the things which were worth it for them. Otherwise, they destroyed what they could not loot or what they thought was useless. In this high school, they destroyed ninth and tenth-grade students' academic credentials."

Apart from the looting, the invading forces also used the schools' wooden resources as cooking fuel. The study confirmed that they also slaughtered and ate the milk cows that supported the students of poor families. According to the research participants of the North Gondar Zone (Telemt Woreda);

"...In addition to using schools as a camp, they break and use chairs and tables as fuel for cooking. The season was very cold, so they burned and heated these school materials. If you look at schools now, they don't have chairs and tables. Three-four shootings also destroyed the plasma of the preparatory school. There were cows given to kindergartens and those who lost their guardians, and there was a bull brought for breeding, and they ate it."

The Amount of Damage to Educational Institutions in Ethiopian Birr

The study confirmed that the total damage to educational institutions in the eight zones occupied by the invading forces of Tigray was 6,503,988,544 Birr. Half of the damage (2,976,351,865 Birr) was related to the looting or destruction of school resources. Damage related to school buildings (952,258,564 Birr), laboratories (919,681,420 Birr), and books (829,056,791 Birr) ranged from eight to nine hundred million each. Furthermore, the damage observed in educational offices and departments was 826,529,746 Birr. Relatively devastating distractions occurred in North Shewa, Waghimra Ethnic Administration, and North and South Wollo Zones (Table 47).

This study illustrated that the amount of damage in the North Wollo Zone was 1,315,255,801 Birr and in South Wollo Zone 1,194,668,803 Birr. The damage caused to educational institutions in North and South Gondar Zones was 138,482,757 Birr and 29,777,190 Birr, respectively (Table 47). The findings of the study also showed pervasive damage to educational institutions in North Shewa Zone (1,815,120,351 birrs), Waghamra Ethnic Administration (1,348,107,309 birrs), and Dese City Administration (423,686,714 birrs) (Table 48).

Zone	District	Damage to buildings	Damage to laboratories	Damage to other educational supplies	Damage to books	Damage to institutions (colleges)	Total
North Gondar	Adi Arkay	16710188	7745661	26304161	10469340	645040	61874390
	Janamora	330000		688692	507548		1526240
	Debark	39390138	1488795	2743116	9864294		53486343
	Dabat	3443275		832532	2721070		6996877
	Telemt	3586980	2441010	5712787	2858130		14598907
	Total	63460581	11675466	36281288	26420382	645040	138482757
South Wollo	Lay Gaint	2508550	3609540	12650969	3244809	1095060	23108928
	Guna Begemdr	1239150	230120	3825478	815925		6110673
	Farta	53809	0	398090	4411		456310
	Este	16500	4400	80379			101279
	Total	3818009	3844060	16954916	4065145	1095060	29777190
North Wollo	Bugna	7560313	9498841				17059154
	Raya Kobo	55638110	21461872	22251419		4747995	104099396
	Gidan	7557059	53828492	16972082		1915430	80273063
	Meket	7919479	6352476	26906455			41178410
	Wadla	11754600	5637500	44828695	32143289		94364084
	Gubalaffto	961400	452100	5203688	2496803		9113991
	Harbu	9650996		5049105	2508155		17208256
	Woldia	108477		259336542	445805	7258874	267149698
	Lasta	2690469	14028247			5331618	22050334
	Dawunt	2969890		8247107	7417190		18634187
	Gazo	62052561	250847970	156938480		1650816	471489827
	Angot	2566300	1148510	22005435		1797081	27517326
	Raya Kobo	726000		5049222			5775222
	Lalibela	1899238	6204330	129081679		2157606	139342853
	Total	174,054,892	369,460,338	701,866,909	45,011,242	24,859,420	1,315,255,801
South Wollo	Mekdela	179080	462603				641683
	Tenta		91733399	33486386	889966	2745380	128855131
	Kutaber	1197900	2655675	27686340	61780357	87076220	180396492
	Ambasel	7494300		39254133	1549849	2119480	50417762
	Tehuledere	173891740		7194849	896104	5832750	187815443
	Werebabu	8112456		10557907	995883	4651493	24317739
	Kalu	10136720	4856804	14675261	2426610	2112341	34207736
	Albuko			1323845			1323845
	Dessie Zuria	10581758	4118514	7270801	2114168	75668607	99753848
	Legambo	723140	5749120	109989	162360	1962235	8706844
	Kelela	69300	255769114	204386	81048		256123848
	Jama			2751045	31220		2782265
	Were Ilu	2366980	5163180	73067685	6295394		86893239
	Kombolcha	9927390	25900534	47675290	12658007		96161221
	Haik city			68,860			68,860
	Were Ilu city			12,365,741			12,365,741
	Delanta	3,613,082	523,600	15,445,756	22,968	4,231,700	23,837,106
	Total	228,293,846	396,932,543	293,138,274	89,903,934	186,400,206	11,946,68,803

Table 47. *Estimated cost (in Eth. Birr) of damage to educational institutions in North and South Gondar and Wollo Zones by zone and districts*

Zone	District	Schools damage	Laboratory damage	Education supply damage	Text book damage	Damage to institutions	Total
North Shewa	Debre Sina	2200	25300				27500
	Menz Gera	9856154	37895	1788815	571296		12254160
	Antsokia	1675300	29095	6617996			8322391
	Efratana Gidm	44219553	5387745	54923125	1223351	1459600	107213374
	Menz Mama	11536360	374035	182124240	99946	3207807	197342388
	Tarma Ber	17887703	1214400	4947492	414220	1155000	25618815
	Mojana Wodera		70092	2232857	798		2303747
	Kewot	4001800	794970	940950537	3540483		949287790
	Menz Keya	55000		6417191			6472191
	Shiwa Robit	8022300	1423906	3054080	54577		12554863
	Ataye	2084500	2398545	107073148	3168000	363122100	477846293
	Meha Meda	1060400	96209	144056	32078	14544096	15876839
	Total	100401270	11852192	1310273537	9104749	383488603	1815120351
Waghimra	Zikuala	114461160	4469300	33095357	1584531	8074220	161684568
	Sekota city	119952690	36107500	183701075	596877147		936638412
	Dahna	17332808	10990155	35842797	30873440	3973112	99012312
	Gazbila	36891910	407000	12376529	3846601	1949200	55471240
	Zekota Zuria	29767430	1879438	38959921	7006070	17687918	95300777
	Total	318405998	53853393	303975679	640187789	31684450	1348107309
Oromo Special	Dawa Chefa	4386470	292501	2816795	1861090		9356856
	Bati district	15400	277090	1311704	30745	223080	1858019
	Jile Timuga	1964930	719180	7995578		7243958	17923646
	Artuma fursi	5852528	599572	86052894	477981		92982975
	Dawa Harwa	1161600	30800	2334035	35737	88561220	92123392
	Kemissie	2554637	837892	13800335	290565		17483429
	Bati city	4437748	654509	3411436	190561	3806220	12500474
	Total	20373313	3411544	117722777	2886679	99834478	244228791
Dessie city administration	Menafesha	4331663	16080526	79692737	2935134	119240	103159300
	Buanbua Wuha	4102593	4458460	40940255	844418		50345726
	Hote	26868710	35655629	58522000	7013469	98403250	226463058
	Arada	226600	1650693	2563880	187697		4628870
	Segno Gebia	7921089	10806576	14419613	496153		33643431
	South Wollo Zonal Department					5446329	5446329
	Total	43450655	68651884	196138485	11476871	103968819	423686714

Table 48. *Estimated cost (in Eth. Birr) of damage to educational institutions in North Shewa, Waghimra and Oromo Special Zones and Dessie city administration by zone and woredas*

E) Teachers' Death and Physical Injury

Research results confirmed that 174 teachers died in eight zones occupied by the invading group. About half of the dead (78) are female teachers. Hundred-one teachers experienced physical injury, a third of whom were females. Furthermore, 119 and 94 male and female teachers were lost without any address. Four hundred eighty-eight teachers were killed or injured; the rest were lost without address. The study showed that most

teacher deaths (119) and injuries (262) occurred in North Wollo Zone. 60, 59, and 40 teachers have died in South Wollo, North Shewa, and Oromo Ethnic Administration zones, respectively (Table 49).

Zone	Death			Disability			Lost without any address			Total
	Male	Female	Sub-total	Male	Female	Sub-total	Male	Female	Sub-total	
Dessie City Admin	5	1	6	10	6	16	5	2	7	29
North Wollo	59	60	119	16	10	26	54	63	117	262
South Wollo	12	5	17	8	10	18	21	4	25	60
North Shewa	8	4	12	12	6	18	17	12	29	59
Oromia Special Zone	3	3	6	8	3	11	16	7	23	40
North Gondar	2	1	3	2	0	2	0	0	0	5
Waghimra	7	4	11	9	1	10	6	6	12	33
South Gondar	0	0	0	0	0	0	0	0	0	0
Total	96	78	174	65	36	101	119	94	213	488

Table 49. Teachers’ death, disability, and other sufferings by sex and administration zones

The Impact of the Destruction of Educational Institutions on the Community

The qualitative study shows that children living in the areas affected by the invasion are out of school due to the destruction of schools. As a result, residents say that children became victims of depression and despair. In addition, the community faced economic problems due to massive looting and the distraction of their properties by the invading forces. As a result, even if the schools started providing services, they had problems securing the required resources for their children to go to school.

A study participant from Waghimra stated that “... All resources were looted or destroyed; hence all public institutions have been empty. Currently, schools are closed, so students are going to unhealthy environments. For example, in this community, every house sent five to six children to school but now left people empty-handed. Even if the schools are rebuilt or re-established and start providing services, where will pens and notebooks come from for all these students? We want to suggest you (government and other stakeholders) see how much we struggle to purchase or secure required materials for our children to attend school.”

The other Debark district research participants said that “...The out-of-school students are exposed to depression and are going to bad places. School grain and other properties were looted. The destruction of educational institutions has made children lose interest in learning. The invading forces

made children and youths of the affected areas feel hopeless as they were forced out of school.”

3.3.5. Destruction of Agriculture During TPLF Armed Invasion

Amhara National Regional State has a huge potential in Agriculture and natural resources. Most of the region population engage in agriculture (crop and livestock production) and natural resource (forestry). In most areas of the region, the Tigray People Liberation Front (TPLF) force invasion took place during periods of main agricultural activities (from June 2021 – December 2021). Because of this, people living in the invaded area had said, “June is a pick time of farming practices (Donkey plowing) for land preparation, planting various annual crops.”. This indicated that June was critical for agricultural work. However, since the invader started the invasion in June, the Community’s agricultural activities collapsed. They were unable to cultivate various crops, and even the destruction of the agricultural resources and giving up harvesting matured crops directly made the invasion bad for the agricultural sector. During the invasion, agricultural resources owned by individuals, buildings, and properties of various agricultural institutions and offices were damaged and looted. Therefore, the expression used to describe the damage done to the community of the invaded area was expressed by local figuratively speaking one June uproots, two Junes do not compensate again,” which explained the magnitude of the damage had been in the agricultural sector.

During the TPLF armed invasion, the national defense, Amhara especial force, Fano, and militia tried to reverse the aggression. During aggression reversed effort, the heavy truck and weapons rolled, fort built constructed, and heavy weapon bullets fell and were used for the mass grave of TPLF dead soldiers in the crop fields. Similarly, the troops traveled on foot, transported heavy weapons and used it for burial place, causing serious damage to the crops (Figure 40). In addition to that, community members of the area where the studies were conducted stated that during the invasion, the crops in the field and at harvest stage were looted and damaged by the invading force.



a) A fort built on a farm field (Wadla District)



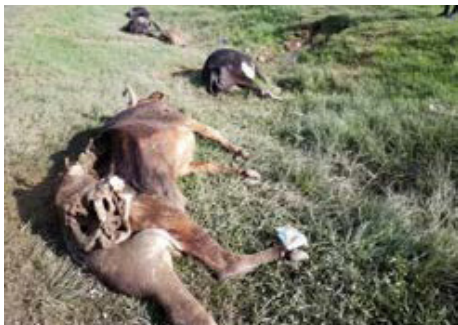
b) Farm field damage due to heavy weapon fell (Debark district)



c) Mass of the junta's grave on farm land (Lay Gaint District)



e) Due to hate action of TPLF Animals killed on the streets (Angot District)



e) Due to hate action of TPLF Animals killed on the grazing land (Farta District)



f) surplus meat left in the field by TPLF after slaughtering animals (Wadla District)

Figure 33. *Example photos of heavy damage crop and animal by TPLF invaders*

As soon as the invading force takes control of areas, they looted and destroyed major agricultural institutions. When they stayed and used to acclimatizing the environment as well as the community, they start robbing the wealthy and more literate community members. On their way out, when

the power loss of the faction is coming and they confirmed that they were going to be defeated, they started slaughtering for immediate use as meal and killing the community's bulls, cows, sheep and goats without hesitation as a revenge.

“one farmer has explained the situation that happened in Boru Selase Kebele administration of Dessie city; As a result of the war, the whole community left the place, so there was sheperd who could take care of the cows, oxen, sheep or chicken stayed outside even at night without ownership. The TPLF soldiers slaughtered and ate half part of the meat and leave the rest for dogs and hyenas. On the other hand, some farmers' sold their livestock when the armed invasion approached to their Keble and kept their animal and crop products and cash under ash and compost. The invading force searched the entire suspected properties hided under ground tries to search and dug the ground, ash and compost then looted a lot of crops and livestock products and money. When they had searched all around and found nothing, they were shooting any domestic animals get in front of them.”

3.3.6. Damage of Agricultural Institutions

The agricultural institutions were supporting the agricultural extension and development, which were well organized and structured from the region to the root levels (Kebeles). However, the armed forces did a well organized looting and destroying the entire facilities of each institute with the ambition to destroy the main livelihood of the Amhara people, make poor for the future. Most of the destroyed agricultural institutions were established to provide services to the local community at the zone, district and Keble levels; It was known that some of them were established in Dessie and Kombolcha to provide services to the Eastern Amhara zones, even at the regional level. Among all, soil laboratory, tissue culture, plant health clinic, livestock enterprise, poultry development enterprise and others had been mentioned (Figure 40 and Table 50).

This study results showed that a total of twenty-two unions (multi-purpose, savings, credit and irrigation) and 2985 cooperatives had been destroyed or looted; the types of associations affected were multi-purpose, honey, credit and savings, animal fattening, dairy farming, handicrafts and natural resources (Table 50).



A) Destruction of pesticides and animal medicines



B) Dessie tissue culture glass house destruction



C. Total damage of Sirinka agricultural research center laboratories and offices



Figure 34. Photo showing destruction of agricultural facilities (A, B and C).

Name of Zones	Farmers Training center	Animal and plant health clinic	Seedling nursery	Cooperatives and unions	Agri. Colleges	Agri. Research center	Tissue culture, soil laboratory and lalibela honey museum	Poultry enterprise	Others	Total
North Gondar	21	15	1	342	0	0	0	0	1	380
North Wollo	88	52	6	761	1	1	1	0	36	946
South Wollo	39	26	4	802	0	0	0	1	20	892
North Shewa	6	11	0	84	0	0	0	0	2	103
Wage Himera	48	20	3	300	0	1	0	0	2	374
Oromi especial zone	19	3	1	29	0	0	0	0	3	55
Dessie City	4	4	1	19	0	0	2	1	1	32
South Gondar	8	8	3	670	1	0	0	0	2	692
Total	233	139	19	3007	2	2	3	2	69	3476

Table 50. Number agricultural facilities destroyed by TPF forces in each zones

All the damaged agricultural institutions listed above had been severely damaged and looted from Keble to the zones with estimated costs of 12,818,743,516 birr, nurseries with the worth of 5,086,159,063 birr and agricultural research centers with estimated worth of 4,716,318,088 Birr. The total destruction of agricultural institutions was estimated cost of 31,203,087,328 (Table 51).

Zones damage agricultural institutions	Institutions that were destroyed by the invading force at the zonal level							
	Animal and plant health clinics	Farmers training center	Seedlings Nursey	Agricultural Research centers	Tissue culture, soil laboratory & lalibela honey museum	Cooperatives and unions	Poultry enterprise and others	Total
North Gondar	1,669,192	14,436,096	793,167,100			1,451,071,039	110,550	2,260,453,976
South Gondar			687,858,402			2,260,701,333		2,948,559,735
North Wollo	1,083,333,333	1,115,180,082	3,138,404,012	4,135,745,575	1,205,695,008	3,867,856,413	1,690,798	14,547,905,224
South wollo	475,066,666	330,344,860	843,523,512		427,714,117	1,985,122,776	3,995,576	2,565,767,506
North Shewa	349,353,694	305,922,590	775,558,130		302,508,000	1,091,175,494	987,000	2,825,504,909
WagHimera	414,658,815	424,835,477	826,319,212	580,572,513		1,519,563,214	381,150	3,766,330,380
Oromo adm. zone	249,756,736	225,323,195	264,488,019			356,039,562	83,105	1,095,690,615
Dessie city	151,939,958	167,014,153	179,154,519		407,552,665	287,213,685	588,181	1,192,874,982
Total	2,725,778,394	2,583,056,453	7,508,472,906	4,716,318,088	2,343,469,791	12,818,743,516	7,836,360	31,203,087,328

Table 51. Lists of destroyed agricultural institutions in each zone and estimated costs in Birr

North Gondar Zone

According to the study results, agricultural institutions destruction in North Gondar administrative zone assessed about half billion birr had been recorded in most of the districts and the highest damage with the cost of 1,451,071,039 birr was to the cooperatives of each district.. It was confirmed that the total amount of agricultural institutions destroyed in all the invaded districts was costs with the worth of 2,260,453,976 Birr (Table 52).

List of destroyed agricultural institutes	List of woredas agricultural institutions destroyed in North Gondar and estimated damage in Birr				
	Adiarkay	Adarkay	Dabat	Telemet	Total
Animal health clinics	1,112,609	23,540	18,073	514,969	1,669,192
Farmers training centers	1,893,480	12,048,381	177,980	316,256	14,436,096
Tree Nursery sites	188,159,539	231,839,432	174,719,572	198,448,558	793,167,100
Cooperatives and unions	355,780,026	419,886,518	316,405,709	358,998,786	1,451,071,039
others			110,550		110,550
Total	546,945,654	663,797,870	491,431,884	558,278,569	2,260,453,976

Table 52. Estimated costs of destroyed agricultural institutes and facilities of districts in North Gondar administrative

South Gondor Zone

It was known that the armed TPf force invaded six districts of the the total 21 districts in South Gondar for only eleven days. . Because of their short time stay, the amount of damage interms of costs was lower in north and south Wollo and the numbers of Agricultural institutions damaged were fewer in number. The study results eveaedt that the damage due to the nursery site was estimated 687,858,402 birr. Whereas, The damage estimated costs in the cooperatives and unions was 2,260,701,333 birr. The total damage in agricultural institutions of South Gonder administratiion zone was 2,948,559,735 Birr (Table 53).

Damage Agricultural Institution	Agricultural institutions and their estimated damaged costs in different districts					
	Farta	Lay gaint	Estie	Guna Begamider	Nefas Mewucha	Total
Nursery sites	159,748,536	169,145,509	167,266,114	191,698,243		687,858,402
Cooperatives and unions	493,086,213	578,840,336	557,401,806	621,717,398	9,655,580	2,260,701,333
Total	652,834,749	747,985,845	724,667,920	813,415,642	9,655,580	2,948,559,735

Table 53. *Damaged or looted agricultural institutions and their estimated costs (birr) in different districts of South Gondar*

Up on the TPLF forces stayed periods in south Wollo zone, they caused huge losses on agricultural institutions. The cooperatives and unions were among the agricultural institutions, which were heavily looted and damaged with estimated costs of 543,523,512 birr. In all districts, the damage and looting were very devastating. . The study reveaed that among the highly devastating districts in this zone were Kombolcha, Kelala, Kalu, Delanta, Legambo, Dessie zuria and Ambasal with estimated costs of 401,296,537 birr, 222,983,986 birr, 205,394,145 birr, 204,697,332 birr, 188,733,234 birr, 182,067,741 birr, and 181,770,530, respectively. The total damaged and looted in the this administrative zone was 2,565,767,506 birr (Table 55).

North Wollo Zone

The TPLF forces were invaded North Wollo administrative Zone for long months , Because of this, the study showed that most of the agricultural institution facilities were severely damaged or looted. Sirinka Agricultural Research Center was one of the institutions, which totaly destructed and looted, total destroy of buildings that estimated loss of 4,135,745,575 birr. Moreover, the study revealed that cooperatives and unions; and nursery sites were highly damaged and looted with estimated costs of 3,867,856,413 birr and 3,138,404,012, respectively.

Regarding institution level, Sirinka Agricultural Research Center was

one of the highest damaged and looted institutes with estimated loss of 4,135,745,575 birr. Among districts, the destruction at Habru with estimated of 4,575,815,903 birr at Mersa City with estimation of 1,963,676,946birr, at Gubalafto with cost of 895,025,810 birr at Kobo with cost of 808,865,294 biirr; at Dawunt with cost of 612,426,981 birr, at Meket 693,087,400 birr, and at Gidan 525,989,486 birr. It has been confirmed that the total damage of the zone is 14,547,905,223 Birr (fourteen billion five hundred forty seven million nine hundred five thousand two hundred twenty three Birr) (Table 54).

Districts	List of damaged agricultural institutes with estimated birr							
	Animal health clinics	Farmers Training Centers	Nursery sites	Agriculture Research centers	Poultry enterprise and breeds improvement	Cooperatives and unions	others	Sum Total
Kobo	269,188,322	271,175,115	268,501,857			262,020,920		808,865,294
Gidan	598,710	4,380,897	260,759,888			258,863,083	1,386,908	525,989,486
Meket	164,309,102	373,520	252,997,334			275,407,444		693,087,400
Wadla	574,192	71,518,198	27,214,236			241,384,748		340,691,374
Mersa	180,188,322	230,833,333	346,960,283		1,205,695,008			1,963,676,946
Gubalafto	269,188,322	362,761	315,015,426			310,459,301		895,025,810
Habru	918,346	1,629,878	221,988,288	4,135,745,575		215,533,816		4,575,815,903
Woldia	169,188,322	220,833,333	190,979,242			195,405,053		776,405,950
Lasta	2,532,243	18,734,123	245,955,574			241,878,131	303,891	509,403,962
Dawunt	894,765	21,591,645	299,510,903			290,429,668		612,426,981
Gazo	752,687	122,913,945	284,006,380			277,822,369		685,495,381
Angot	25,000,000	150,833,334	601,665,219			215,318,547		992,817,100
Sum Total	1,083,333,333	1,115,180,082	3,138,404,012	1,135,745,575	1,205,695,008	3,867,856,413	1,690,798	14547905223

Table 54. *Estimated costs of damaged and looted agricultural institutions in different districts of North Wollo Administrative*

Districts	List of damaged agricultural institutes with estimated birr						
	Animal health clinics	Farmers Training Centers	Nursery sites	Poultry enterprise and breeds improvement	Cooperatives and unions	Others	Total
Mekdela	246,400	844,932					1,091,332
Tenta		2,485,635	38,271,905		121,075,050		161,832,590
Kutaber			39,371,905		115,571,639		154,943,544
Ambasel	27,926,986		38,271,905		115,571,639		181,770,530
Thulederie	1,771,770	1,848,000	31,474,714		110,888,278	22,000	146,004,762
Werebabo		1,686,971	27,977,524		99,061,405	616,550	129,342,450
Kalu		1,642,575	55,166,286		148,585,285		205,394,145
Albuko		4,090,337	29,980,333		88,054,582		122,125,252
Dessie Zuria	252,179		49,569,084		132,081,873	164,604	182,067,741
Legambo			31,277,524		157,178,002	277,708	188,733,234
Kelela	338,636	441,265	54,460,667		167,743,418		222,983,986
Jama		319,220	25,383,143		66,040,937		91,743,299
Wereillu			38,469,095		132,081,873		170,550,968

Kombolcha	143,340,890	710,215	32,180,333	127,714,117	94,436,268	2,914,713	401,296,537
Haike	1,189,804						1,189,804
Delanta		16,275,710	51,669,095		136,752,527		204,697,332
Total	175,066,666	30,344,860	543,523,512	127,714,117	1,685,122,776	3,995,576	2,565,767,506

Table 55. *Estimated costs of damaged and looted agricultural institutions in different districts of South Wollo Administrative*

North Shewa Zone

Although the armed force stayed for a few days in North Shewa Zone, it caused huge losses to many agricultural institutions. This study showed that cooperatives and unions received estimated loss of 1,091,175,494 birr, nursery sites with cost of 775,558,130 and animal health clinics with cost of 49,353,694 Birr.

At district leve, huge losses of agricultural facilities were recorded. For instances, the estimated losses in birr were recorded as 625,648,420 birr at Menz Gera district, 611,268,233 birr at Efratana Gidim district, 379,765,214 birr at Kewet district, 335,362,264 birr at Shawa Robit district, 305,673,223 birr at Tarmaber district, and 288,851,378 birr at Menz keya district. Generally, a total damage loss of 2,825,504,908 birr agricultural facilities was damaged and looted by invaded force (Table 56).

Districts	List of damaged agricultural institutes with estimated birr						
	Animal health clinics	Farmers Training Centers	Nursery sites	Poultry enterprise and breeds improvement	Cooperatives and unions	Others	Total
Menze Gera	80,210,831	43,497,269	119,486,545	302,508,000	79,945,775		625,648,420
Efratana Gedeme	53,422,275	45,355,903	138,344,183		373,353,872	792,000	611,268,233
Menze Mama	42857143	43,436,953	94,736,212		97,905,868		278,936,176
Tarma Bere	42,860,143	42,979,914	103,382,723		116,255,443	195,000	305,673,223
Kewet	43,036,234	44,749,066	120,675,746		171,304,168		379,765,214
Menze keya	42,946,619	42857141	86,903,486		116,144,132		288,851,378
Shewa Robit	44,020,450	43,046,343	112,029,235		136,266,236		335,362,264
Total	349,353,694	305,922,590	775,558,130	302508000	1091175494	987000	2,825,504,908

Table 56. *Estimated costs of damaged and looted agricultural institutions in different districts of North Shewa Adminstrative zone*

Waghimra Zone

The armed force invasion stayed for more than four months in the Wag himra zone and caused huge destruction in different districts. It was not only the TPLF but also the armed Agew Shengo forces was looting and damaging village council and various agricultural institutions. Like other zones, cooperatives and unions suffered loss estimate of 1,119,563,214

birr and nursery sites with loss of 426,319,212 birr. The well established Sekota dryland agricultural research center was looted and damaged with estimated cost of 180,572,513 birr. Likewise, estimated costs of 24,835,477 birr and 14,658,815 birr were recorded from farmers training center and animal health clinics, respectively.

The study revealed that five districts were suffered by TPLF forces. These highly damaged district were Sekota City with estimated loss of 572,548,430 birr, Gazgibla with loss of 331,633,126 birr, Sekota zuria with a loss of 263,032,778 birr and Zakuala with loss of 252,620,414 birr. A total estimated loss of 1,766,330,380 birr was recorded at Zonal level (Table 57).

Damaged agricultural Institutions	List of woredas where agricultural institutes were damaged and estimation in Birr					
	Zekuala	Sekota City	Dahena	Gazegibella	Sekota Zuria	Total
Animal health clinics	82,021,470	82,420,369	81,692,225	80,546,623	87,978,128	414658814.9
Farmers training Center	82,135,991	80,876,541	93,267,964	82,926,721	85,628,260	424835476.9
Nursery sites	152,632,609	188,948,913	170,977,211	168,391,131	145,369,348	826319211.9
Sekota Agricultural Research Center		580,572,513				580,572,513
Cooperatives and Unions	255,830,344	359,730,093	320,177,082	319,768,652	264,057,043	1519563214
Others			381,150			381150
Total	572,620,414	1,292,548,429	666,114,482	651,633,127	583032579	3766330380

Table 57. *Estimated costs of damaged and looted agricultural institutions in different districts of the Waghimra Administrative zone*

Oromo Ethnic Administration Zone

When the armed invading force invades the Oromo ethnicspecial administrative zone, there was a fight with the combined forces of the government to reverse the invasion. Among the agricultural institutions that were damaged in the zone were cooperatives and unions 167,717,056 Birr (one hundred sixty-seven million seven hundred seventeen thousand fifty-six Birr), nursery sites 76,165,513 Birr (seventy-six million one hundred sixty-five thousand five hundred thirteen Birr), Animal health clinics 61,434,230 Birr (Sixty One Million Four Hundred Thirty Four Thousand Two Hundred Thirty Birr) and Farmers Training Center 37,000,689 Birr (Thirty Seven Million Six Hundred Eighty Nine Birr).

Assessment result at Woreda level revealed that, all the invaded woredas Agricultural institutions were damaged. In order of priority, the list of woreda damaged are Bati 131,845,989 Birr (one hundred thirty one million eight hundred forty five thousand nine hundred eighty nine Birr), Jile Tamuga 77,651,777 Birr (seventy seven million six hundred fifty one thousand seven hundred seventy seven birr), Artuma Fursi 64,708,350 birr

(sixty-four million seven hundred eight thousand three hundred fifty birr), Dewa Harawa 27,192,509 birr (twenty-seven million one hundred ninety-two thousand five hundred and nine birr), Misa 23,348,715 birr (twenty three million three hundred Forty seven thousand seven hundred fifteen birr) and Bati city 17,653,252 birr (seventeen million six hundred fifty-three thousand two hundred fifty-two birr) has been confirmed as indicated in Table 58.

Damaged agricultural Institutes	List of damaged oromo ethnic especial zone woredas and actual damage estimated in Birr						
	Bati	Jilie Timuga	Artuma fursi	Dawa Harawa	Kemisie	Bati City	Total
Animal health clinics	92,709,334	31,499,064	31387084.3	31387084.3	31387084	31387084	249756735.6
Farmers training centers	64,218,564	31387084.3	31,969,193	31,739,084	34,522,084	31,487,184	225323194.6
Nursery Sites	42,732,023	57,672,526	50,162,400	39,007,210	38,787,210	36,126,647	264,488,019
Cooperatives and unions	57,734,404	82,641,439	76,654,904	50,607,467	44,200,673	44,200,673	356039561.6
Others			83,105				83,105
Total	257,394,325	203,200,113	190,256,686	38,185,211	148,897,051	143,201,188	1095690615

Table 58. *Estimated costs of damaged and looted agricultural institutions in different districts of the Oromo Administrative zone*

Dessie City Adminstration

According to this research, it has been confirmed that various agricultural institutions such as tissue culture laboratory, paint laboratory, poultry breeding, etc., have been damaged and looted in the Berber regions of Eastern Amhara. Among the agricultural institutions that were damaged or looted by TPLF force were livestock breed improvements facilities and laboratories with estimated cost of 256,894,661 birr, cooperatives and unions with the loss of 136,555,681 birr, nursery sites with the loss of 28,496,515 birr, farmer training centers 16,356,149 birr and animal health clinics 1,281,954 birr.

Regarding agriculture facilities, the destruction and looting were recorded in the two subcities. Thus, estimated loss of 718,987,359 birr and 399,151,950 birr were recorded at Buanbua Wuha and Menafesha subcities, respectively (Table 59).

Agricultural institutions	List of Dessie city subcities and its estimated damage cost in Birr		
	Menafesha	Buambua wuha	Total
Animal Health Clinics	70,329,000	81,610,958	151,939,958
Farmers Training Center	76,109,199	90,904,954	167,014,153
Nursery Sites	103,566,467	75,588,052	179,154,519
Breed improvements, poultry enterprise and laboratories	331,838,031	74 14635	406,552,666
Cooperatives and unions	136,555,681	150658004	287,213,685
Others	588,981	389982	978,963
Total	718,987,359	399,151,950	1192 853944

Table 59. *Estimated costs of damaged and looted agricultural institutions in different districts of Dessie city Adminstrative*

Damage to Agricultural Products

1. Destroyed or Stolen Field Crops by TPLF Armed Forces

The invading force steals crops, destroys unripe crops while in the field, sometimes burns piled crops, collects crops from farmers and robs them.

According to the results of this research, 301,896.64 quintals of grain from the farmer's field and 12,654.12 quintals of grain from the farmer's house were damaged by heavy weapons. It was also found that the armed force has stolen 32,811.47 quintals of grains from fields and 26,477.47 quintals of grains from residences or warehouses (Table 60). The damage and stolen different crops' grain yield in various invaded zones were indicated in Table 60.

The study showed that field crops with estimated monetary loss of 581,870,255 birr at South Wollo, 548,329,727 birr at North Gondar, 502,763,367 birr at North Wolo, 362,115,300 birr at Waghimera and 309,087,818 birr at North Shawa were recorded (Table 61).

Damaged field crops types	Damage of field crops by the invaders estimated in quintal								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag himera	Oromo special zone	Dessie City	Total
Teff	16,993.68	371.69	16440.8	18,859.93	12,729.51	10,553.63	1,860.49	1,487.13	79,296.81
Barley	7,484.17	20.80	10,435.42	4,825.29	5,168.85	5,197.96	101.01	971.17	34,204.67
Wheat	13,833.09	400.97	25,670.89	8,281.66	6,944.08	5,677.14	53.78	1,380.24	62,241.85
Maize	8,750.99	442.95	4,991.05	15,358.47	4,775.88	1,338.03	1,042.54	7,008.09	43,708.00
Sorghum	22425	47.00	11,958.53	13,556.51	26,360.93	6,978.46	5,891.69	65.40	87,283.58
Fingure millet	12,349.11	31.00	957.36	552.07	82.81	199.50	24.50	12.50	14,208.85
Field pea	1,377.80	21.01	4,304.51	4,885.90	732.77	2,581.10	43.21	597.52	14,543.82
Faba bean	2,508.94	69.60	3,999.43	17,280.55	4,294.39	8,164.59	67.34	4,605.04	40,989.88
Lintel	99.48	66.90	2,468.07	4,208.98	319.79	1,625.40	17.75	28.96	8,835.33
Haricot bean	65.50	2.00	496.52	3,726.33	137.40	111.86	15.43	9.00	4,564.04
Chickpea	74.05	8.50	3,635.08	1,049.24	546.62	708.98	62.52	123.61	6,208.60
Lathyrus	272.15	1.00	946.07	788.54	682.55	76.10	10.34	50.32	2,827.07
Masho	1,632.42	18.00	671.98	851.36	4,326.75	127.85	352.22	1.00	7,981.58
Niger seed	4,199.11		70.35	183.98	95.57	9.00		3.00	4,561.01
Flax	463.27	27.50	617.16	360.81	53.27	17.15	16.30	5.80	1,561.26
sunflower	89.86	4.50	100.93	79.18	30.65	24.60	43.10		372.82
sesamae	768.70	374.00	151.06	191.12	487.76	6.00	69.32	2.50	2,050.46
Gomenzer	622.18		62.13	66.78	12.25	2.00	7.43	0.40	773.17
Ground nut	23.50		13.26	312.06	1,310.46		2,066.67	25.00	3,750.95
Others	5,677.23	39,813.3	4,920.36	10,015.52	441.71	610.90	17.35	948.16	62,444.50
Total	99,710.23	41,720.70	92,910.90	105,434.28	69,534.00	44,010.25	11,762.99	7,324.84	482,408.19

Table 60. Types and quantity of field crop grains (qt) damaged by the TPLF forces in different zones

Damage crop types	Field crop (Cereals, pulses and oil crops) destruction estimated in birr								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag himera	Oromo ethnic group	Dessie city	Total
Teff	86,635,050	1,626,325	83,091,596	00,513,991	58,093,556	53,376,410	8,760,440	7,063,302	399,160,670
Barley	35,924,016	68,510	46,858,139	22,638,570	17,478,903	23,503,451	482,024	3,227,665	150,181,278
Wheat	71,932,094	1,599,075	26,504,903	36,012,499	27,368,552	27,982,813	277,240	3,727,155	295,404,331
Maize	24,504,417	171,500	15,418,209	44,865,629	9,363,308	3,478,122	3,369,008	17,835,870	119,006,063
Sorghum	84,495,402	5,400	41,566,751	49,956,177	72,525,994	147,821,014	38,397,914	101,100	434,869,752
Fingure millet	47,904,738	55,400	5,150,468	3,117,100	366,006	737,600	112,100	2,250	57,445,662
Field pea	9,644,600	120,810	23,941,420	28,399,600	4,753,346	17,200,100	315,150	2,193,140	86,568,166
Faba bean	17,562,580	178,050	24,500,737	101,968,396	28,122,789	54,950,385	464,550	1,718,405	249,465,892
Lintel	1,193,760	823,000	27,651,527	20,237,770	3,330,880	17,398,900	210,500	278,120	71,124,457
Haricot bean	425,750	6,000	3,203,480	24,153,870	315,600	727,090	102,545	10,800	28,945,135
Chickpea	518,350	38,950	25,291,450	7,234,940	3,671,015	4,866,270	521,840	375,440	42,518,255
Grass pea	1,224,675	3,000	4,384,590	3,554,980	3,114,590	342,450	47,280	235,980	12,907,545
Masho / mungbean	32,648,400	1,500	11,854,600	16,915,400	69,126,200	2,515,000	5,531,150	15,000	138,607,250
Niger seed	46,190,210		755,730	2,000,230	858,020	99,000		27,000	49,930,190
flax	4,169,430	11,000	5,449,744	3,240,940	445,080	154,350	146,700	51,600	13,668,844
sunflower	808,740	38,250	556,040	713,840	379,600	221,400	387,900		3,105,770
sesame	11,530,500	95,300	2,210,193	2,858,500	1,165,950	64,000	2,782,300	25,000	20,731,743
Gomenzer	5,599,620		560,420	601,020	110,150	18,000	66,870	3,800	6,959,880
Ground nut	129,250		66,555	1,563,630	7,073,535		29,496,655	83,800	38,413,425
Others	65,288,145	20,152,486	53,746,816	11,323,173	1,424,744	6,658,945	85,000	4,652,316	363,331,625
Total	548,329,727	24,994,556	502,763,367	581,870,255	09,087,818	362,115,300	91,557,166	61,627,743	2,582,345,931

Table 61. *The amount of damage caused to cereals, pulses, and oilseeds estimated in birr*

The extent of damage or stolen crops grains was varied across the invaded zones. The highest field crops grain damage due to war destruction was 356,394.45 quintals while 57,712.15 quintals were stolen from house (Table 62).

Way of field crops damage	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag himera	Oromo ethnic zone	Dessie City	Total
Damage on farmers field	90,160.26	32,762.50	66,010.16	75,077.63	34,623.00	38,123.43	8,248.56	11,388.91	56,394.45
Field crops looted on farmers field	6,409.58	9.80	7,580.75	9,985.37	8,282.06	2,916.73	1,495.93	2,205.07	38,885.29
Field crops damaged at a house	1,718.44	9.04	3,427.42	5,490.71	5,299.00	438.14	599.51	287.21	17,269.47
Field crops looted at house	953.45	8,938.81	12,727.73	10,997.25	17,898.99	1,791.06	1,232.03	3,172.84	57,712.15
Invaders eaten at individual house	30.50	0.55	1,480.72	2,744.84	1,988.21	674.89	170.16	254.21	7,344.08
others	438.00		1684.14	1,138.48	1,442.74	66.00	16.80	16.60	4,802.76
Total	99,710.23	41,720.70	92,910.90	05,434.27	69,534.00	44,010.25	11,762.99	7,324.84	82,408.19

Table 62. *Type and amount of damage to creal, pulses and oilseeds cropsin quintals at different zones*

Zones	Field crops estimated damaged in birr in a different situation						
	Damage on the farmers field	Looed on the farmers field	Damaged at house	Looted at house	Consumed by invading force at house	Others	Total
North Gondar	486,841,061.5	46,465,643.0	8,433,982.0	4,219,240.0	190,900.0	2,178,900.0	548,329,726.5
South Gondar	96,504,423.3	57,700.0	29,972.0	28,396,710.9	5,750.0		124,994,556.2
North Wollo	355,981,776.4	44,062,698.0	19,588,229.5	60,239,739.9	9,370,164.7	13,520,758.2	502,763,366.6
South Wollo	403,358,392.0	54,851,780.0	32,105,932.0	63,496,707.5	19,250,089.0	8,807,354.0	581,870,254.5
North Shewa	173,795,174.0	41,594,994.0	16,802,018.0	63,862,239.0	6,387,978.0	6,645,415.0	309,087,818.0
Wag himera	326,099,686.0	19,251,380.0	2,392,200.0	9,474,344.0	4,492,490.0	405,200.0	362,115,300.0
Oromo especial zone	66,269,965.0	13,948,500.0	3,217,244.0	7,147,762.0	911,985.0	61,710.0	91,557,166.0
Dessie City	40,389,600.0	7,186,700.0	819,370.0	12,325,286.0	882,425.0	24,362.0	61,627,743.0
Total	1,949,240,078.2	227,419,395	83,388,947.5	249,162,029.3	41,491,781.7	31,643,699.2	2,582,345,930.8

Table 63. *Estimated losses of field crops (Birr) for each invaded zones*

This study revealed that various losses of field crops yield both interms of quaninty (qt) and edtimated costs of each districts in different invaded zones were presented (Tables 64-77; Fig. 42-44).

Damage field crops type	Filed crops damage in North Gondar woredas estimated in quintal					
	Adiarkay	Janamora	Debark	Dabat	Telemet	Total
Teff	6,228.46	213.00	8,662.10	1,821.38	68.74	16,993.68
Barley	973.84	1,734.85	2,530.61	1,537.87	707.00	7,484.17
Wheat	1,975.18	2,945.12	6,423.08	1,856.22	633.50	13,833.09
Maize	1,484.15	56.30	6,086.73	1,057.78	66.03	8,750.99
Sorghum	9,908.57	473.15	9,960.39	1,779.32	303.58	22,425.00
Fingur millet	4,839.15	64.50	6,112.32	1,223.89	109.25	12,349.11
Field pea	98.20	456.85	191.40	504.35	127.00	1,377.80
Faba bean	84.70	324.77	638.60	1,298.85	162.02	2,508.94
lintel	5.45	73.58	16.35	3.10	1.00	99.48
Haricot bean	31.00		34.50			65.50
Checkpea			59.65	14.40		74.05
Grass pea	3.00	228.00	33.65	7.50		272.15
Mung bean (Masho)	119.07	444.00	1,066.70	0.65	2.00	1,632.42
Niger Seed	2,172.36	12.00	1,576.78	429.97	8.00	4,199.11
Flax	24.40	17.11	23.25	395.51	3.00	463.27
Sunflower/safflower	7.01		72.75	5.10	5.00	89.86
Sesamae	199.02		558.08	11.60		768.70
Gomenzer	14.84	0.50	32.80	574.04		622.18
Ground nut	70.00		22.80			23.50
Others	158.12		263.43	5,244.01	11.67	5,677.23
Total	28,327.21	7,043.73	44,365.97	17,765.54	2,207.79	99,710.23

Table 64. *Damage and theft of field crops by invading forces in the woredas of North Gondar zone by crop type and in quintal.*

Field crops damage situations	List of woredas in North Gondar where field crops were damaged					
	Adiarkay	Janamora	Debark	Dabat	Telemet	Total
Damage on the farmers field	2,708,476	704,373	3,658,960	1,723,439	220,779	9,016,026
Loot on farmers field	23,225		576,343	41,390		640,958
Damage at house	32,670		131,904	7,270		171,844
Loot at house	68,350		23,190	3,805		95,345
Invaders force damage at house			2,400	650		3,050
Others			43,800			43,800
Total	2,832,721	704,373	4,436,597	1,776,554	220,779	9,971,023

Table 65. *Destruction of field crops in the woredas of the North Gondar zone estimated in quintal*

Field crops damage situations	List of woredas in North Gondar various field crops damage and estimated in Birr					
	Adiarkay	Janamora	Debark	Dabat	Telemet	Total
Damage on the farmers field	135,019,634.0	43,405,459.0	172,310,731.5	124,900,892.0	1,204,345.0	486,841,061.5
Loot on farmers field	1,034,635.0		43,360,218.0	2,070,790.0		46,465,643.0
Damage at house	1,374,800.0		6,677,842.0	381,340.0		8,433,982.0
Loot at house	2,526,685.0		1,281,980.0	410,575.0		4,219,240.0
Invaders consumed at at home			144,400.0	46,500.0		190,900.0
Others			2,178,900.0			2,178,900.0
Total	139,955,754.0	43,405,459.0	225,954,071.5	127,810,097.0	11,204,345.0	548,329,726.5

Table 66. *Estimates of the filed crops destruction in North Gondar woredas in birr.*

Damaged field crop types	Field crops damage in the invaded woredas of South Gondar is estimated in quintal				
	Farta	Lay gaint	Guna Begameder	Nefas mewucha	Total
Teff	56.98	106.36	63.35	145.00	371.69
Barley	3.00	8.65	1.75	7.40	20.80
Wheat	90.65	252.42	19.70	38.20	400.97
Maize	1.25	2.00		439.70	442.95
Sorghum			45.00	2.00	47.00
Fingure millet				31.00	31.00
Field pea	4.15	3.00	1.00	12.86	21.01
Faba bean	13.40	22.50	5.25	28.45	69.60
Lintel		0.50	2.00	64.40	66.90
Haricot bean				2.00	2.00
Chickpea	1.80	3.30	0.50	2.90	8.50
Grass pea	1.00				1.00
Mung bean (masho)				18.00	18.00
Flax		2.00	0.50	25.00	27.50
Sun flower/safflower				4.50	4.50
Sesame				374.00	374.00
others	45.90	38,648.07	675.44	30.77	39,813.28
Total	631.23	39,048.80	814.49	1,226.18	41,720.70

Table 67. *Damage of field crops in invaded woredas of South Gondar zone by crop type and estimated quintals.*

Field crops damage suitations/ places	Filed crops damage in various woredas of south Gondar in quintal and berr									
	Destruction estimated in quintal					Destruction estimated in Berr				
	Farta	Lay gaint	Guna Begameder	Nefas Mewucha	Sum total	Farta	Lay gaint	Guna Begameder	Nefas Mewucha	Total
Destruction in farmers field	477.0	31,575.0	640.50	70.00	32,762.5	1,623,900	92,340,162	2,465,561	74,800	96,504,423
Looted in farmers field		4.00		5.80	9.80		12,600		45,100	57,700.0
Destructed at home	2.00			7.04	9.04	4,000			25,972	29,972.0
Looted at home	152.2	7,469.80	173.99	1,142.8	,938.81	558,838	25,234,230	475,960	2,127,683	28,396,711
Consumed at home				0.55	0.55				5,750	5,750
Total	631.2	39,048.8	814.49	1,226.8	1,720.7	2,186,738	17,586,992	2,941,521	2,279,305	24,994,556

Table 68. Estimates of field crops destruction in South Gondar Zone woredas in estimated quintals and berr.

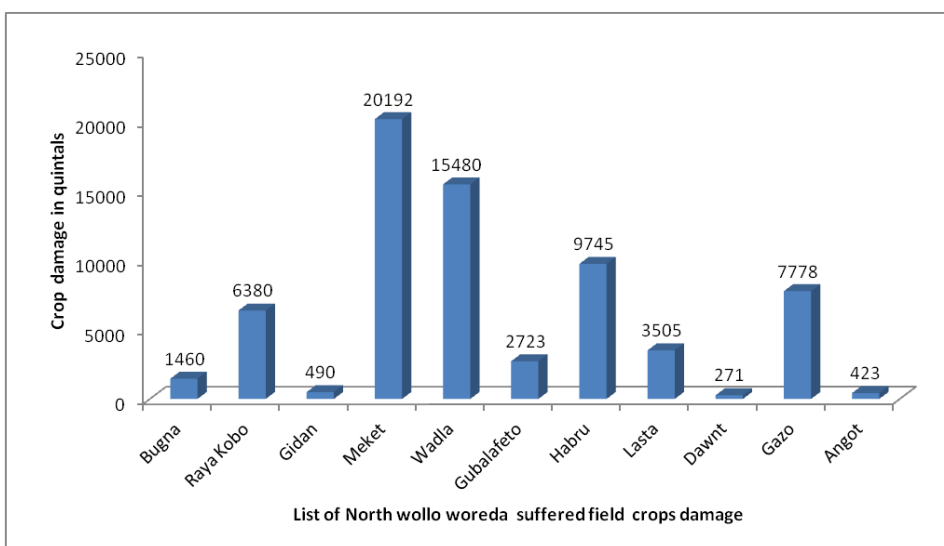


Figure 35. Field crops damage in North Wolo administrative zone woredas and estimated quintals

List of woredas in North wollo	Field crops damaged in the famers field	Field crops looted in farmers field	Field crops damaged at home	Field crops looted at home	Field crops consumed by the invaders	Others	Total
Bugna	2,033,922	1,187,966	1,444,329	3,288,436	943,476	3,042,599	11,940,727
Raya kobo	26,338,117	2,277,649	1,357,633	2,919,976	431,659	280,470	33,605,503
Gidan	832,650	544,100	215,210	1,724,431	152,687	418,210	3,887,288
Meket	113,370,840	10,733,305	2,514,232	9,806,169	1,363,141	4,398,183	142,185,870
Wadla	93,541,923	4,367,509	4,321,880	5,405,137	421,685	659,090	108,717,224
Mersa	394,250	262,734	121,700	4,924,149	8,000		5,710,833
Gubalafeto	17,322,870	4,133,500	1,124,710	6,311,504	491,110	48,660	29,432,354
Habru	60,224,324	5,832,895	3,758,703	6,570,086	3,754,779	87,000	80,227,786
Woldia	2,411,300	141,200	49,300	279,720	253,590	15,000	3,150,110
Lasta	14,638,066	5,840,962	1,317,215	2,360,872	159,714	595,564	24,912,393

Dawnt	828,386	347,060	265,498	245,351	12,101	780	1,699,176
Gazo	20,833,118	7,391,833	2,820,670	12,328,205	1,087,113	3,685,377	48,146,316
Angot	1,033,855	340,072	163,740	1,965,295	106,351	274,025	3,883,338
Kobo city	381,300	228,900	71,200	1,234,073	58,900		1,974,373
Lalibela	1,796,855	433,013	42,210	876,338	125,860	15,800	3,290,076
Total	355,981,776	44,062,698	19,588,230	60,239,740	9,370,165	13,520,758	502,763,367

Table 69. Amount of different field crops damage in North Wolo words estimated in Birr

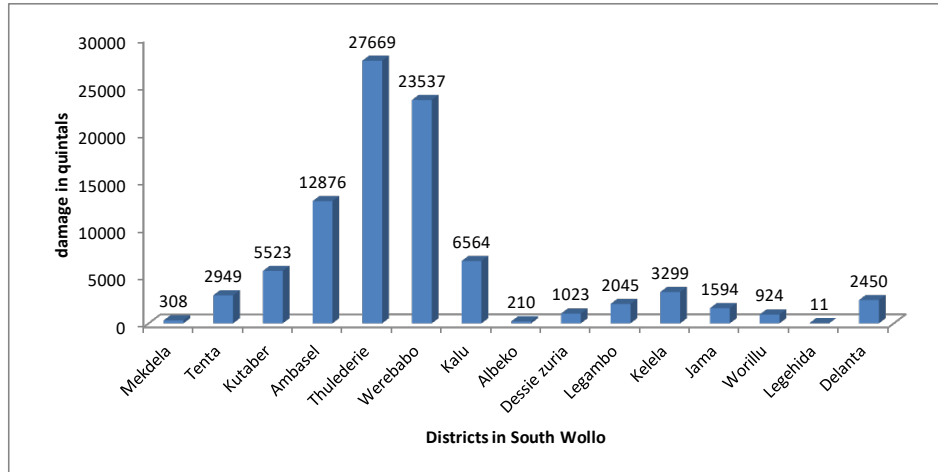


Figure 36. Field crops damage in South Wollo zone different woredas in estimated quintal

List of Woredas	Damage situation						Total
	Damage in the farm field	Loot in the farm field	Damage at house	Loot at house	Consumed at house	others	
Mekdela	1,212,746	219,720	8,641	488,615	10,000	17,250	1,956,972
Tenta	11,500,498	2,641,480	1,213,385	1,850,898	831,552	178,900	18,216,713
Kutaber	17,232,284	6,797,417	2,444,675	4,244,542	1,397,858	1,001,359	33,118,134
Ambasel	55,401,030	2,490,105	6,865,306	11,277,174	408,955	199,650	76,642,220
Tehulederie	120,017,014	13,786,861	9,068,505	21,624,269	10,026,072	2,036,602	176,559,323
Werbabo	108,514,331	22,138,160	4,880,970	4,222,914	1,348,053		141,104,428
Kalu	34,727,014	2,471,940	3,030,010	4,111,142	2,414,379	79,100	46,833,585
Albuko	1,473,000	394,450	21,000	7,750			1,896,200
Dessie zuria	3,303,280	473,625	624,133	1,630,460	525,000	207,025	6,763,523
Legambo	11,227,773	768,190	546,620	2,345,094	43,560	71,800	15,003,037
kelela	14,747,643	77,300	134,885	1,228,822	221,740	4,625,264	21,035,654
Jama	4,738,050	115,150	1,188,935	1,472,188	1,372,285	63,825	8,950,433
Werilla	4,057,900	688,374	385,493	1,429,551	260,570	460	6,822,348
Kombolcha	1,399,180.0	60,850.0	72,700.0	573,625.0	114,480.0	6,650.0	2,227,485.0
Legehida	75,000.0	25,500.0	79,500.0	1,200.0	17,500.0	12,000.0	210,700.0
Haikie city	989,915.0	106,250.0	51,925.0	2,149,765.0	13,480.0	700.0	3,312,035.0
Werilla	3,169,975.0	14,600.0	91,750.0	816,860.0	60,005.0	180.0	4,153,370.0
Delanta	9,571,759.0	1,581,808	1,397,499	4,021,840.0	184,600	306,590.0	17,064,096.0
Total	403,358,392.0	54,851,780	32,105,932	63,496,707.5	19,250,089	8,807,354.0	581,870,254.5

Table 70. Estimated destruction of field crops in South Wollo woredas in birr

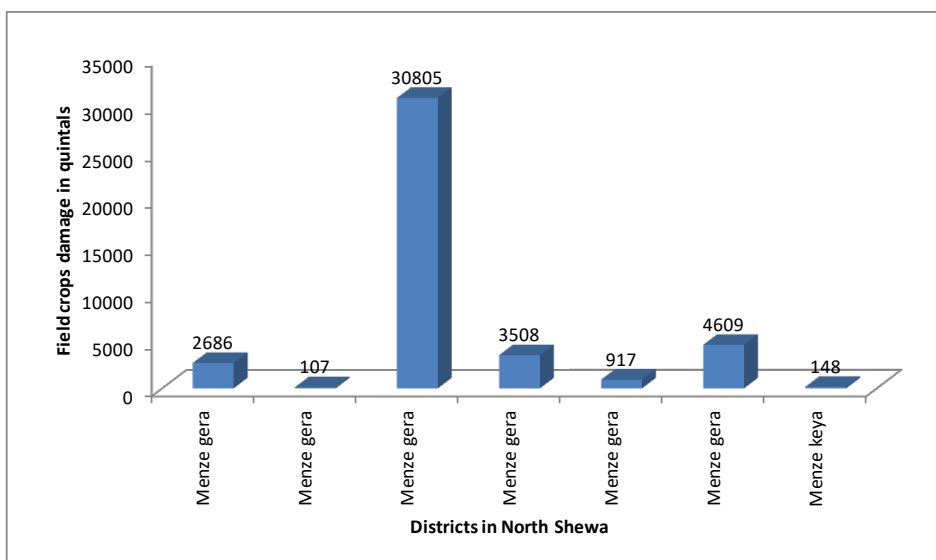


Figure 37. Field crops destruction in the North Shewa administration zone woredas estimated in quintals

List of woredas	Field crops destruction situation.						Total
	Damaged on farmers field	Loot ed on farmers field	Damaged at house	Looted at house	Consumed at house	Others	
Menz Gera	6,211,014	1,708,945	223,177	707,360	931,400	4,913,600	14,695,496
Antsokia Gemza	1,608,768	176,350	98,410	524,700	272,900		2,681,128
Ephrataenagidem	123,174,257	30,501,902	9,590,630	23,712,561	1,962,224	101,870	189,043,444
Menz Mama	14,374,446	5,021,510	298,830	506,936	489,360	10,050	20,701,132
Tarmabere	7,385,354	1,488,940	872,805	2,061,019	903,425	103,495	12,815,038
Moja ena wodera	4,003,045	346,315	124,050	217,432	646,985		5,337,827
kewet	11,637,970	1,394,086	3,018,166	3,506,564	829,804	1,510,250	21,896,840
Mene Keya	685,440	24,916	7,800	182,948	151,650		1,052,754
Shewa robit	1,964,200	156,100	911,150	12,081,843	32,560		15,145,853
Ataye	2,264,180	723,730	1,641,100	20,081,410	165,420	4,650	24,880,490
Mehal meda	486,500	52,200	15,900	279,466	2,250	1,500	837,816
Total	173,795,174	41,594,994	16,802,018	63,862,239	6,387,978	6,645,415	309,087,818

Table 71. Estimation of Field crops destruction in Birr in Invaded woredas of North shewa

Types of field crops damaged	List of Waghimra ethnic administration zone woredas and damage estimation in quintal.				
	Zikuala	Dahna	Gazegibela	Sekota zuria	Total
Teff	42,882.90	478,357.00	4,199.20	8,325.00	533,764.10
Barley	32,877.25	191,980.56	4,603.90	5,572.80	235,034.51
wheat	24,135.77	235,639.36	6,312.00	13,741.00	279,828.13
Maize	3,770.10	28,119.42	486.00	2,405.70	34,781.22
Sorghum	1,280,866.62	187,695.45	675.57	8,972.50	1,478,210.14
Fingure Millet	190.00	6,878.00	194.00	114.00	7,376.00
Field pea	6,613.70	146,520.50	701.80	18,165.00	172,001.00
Faba bean	39,009.35	487,820.30	4,908.20	17,766.00	549,503.85

lindle	28,333.50	128,058.00	2,801.50	14,796.00	173,989.00
Haricot bean		618.15	309.40	780.00	7,270.90
Chickpea	957.00	38,629.50	3,920.00	5,156.20	48,662.70
Grass pea		254.25		882.00	3,424.50
Mung bean (Masho)	180.00	24,570.00	400.00		25,150.00
Noug		770.00	220.00		990.00
flax		1,111.50		432.00	1,543.50
Sunflower/safflower	90.00	1,935.00		189.00	2,214.00
sesame	415.00	225.00			640.00
Rape seed		180.00			180.00
Others	3,583.45	5,977.50	31,077.60	25,950.90	66,589.45
Total	1,463,904.64	1,973,191.09	60,809.17	123,248.10	3,621,153.00

Table 72. *Estimated Destruction of filed crops in the invaded woredas of Waghimra ethnic adminstration zone by type of crop and per quintal.*

Damage Situations of field crops	List of Waghimra ethnic adminstrative zone woredas and field crops damage estimation in birr				
	Zikuala	Dahna	Gazegibela	Sekota zuria	Total
Destruction in farmers field	140,103,577	177,984,569	1,013,150	6,998,390	326,099,686
Looted in farmers field	1,321,300	11,659,140	2,503,375	3,767,565	19,251,380
Destructed at home	217,020	1,182,240	335,840	657,100	2,392,200
Looted at home	4,591,667	3,439,430	1,112,447	330,800	9,474,344
Consumed at home	146,100	2,939,330	836,105	570,955	4,492,490
Total	10,800	114,400	280,000		405,200

Table 73. *Destruction of field crops by invading force in Waghimra ethnic adiminstrative zone woredas estimated in Birr.*

Type of field crops damaged	Amount of field crops damages in the invaded woredas of the Oromo ethnic zone estimated in quintals							
	Dawa chefa	Bati	Jilie Timuga	Artuma Fursie	Dawa harawa	Kemissie	Bati city	Total
Teff	1,607.50	1,237.50	25,417.20	12,656.40	1,139.00	1,314.00	44,232.80	87,604.40
Barley	288.00		2,915.24	1,520.00	72.00		25.00	4,820.24
Wheat		158.60	1,328.60	1,137.20	26.00	40.00	82.00	2,772.40
Maize	3,521.61	445.50	19,059.27	7,514.60	13.50	49.00	3,086.60	33,690.08
Sorghum	17,898.01	3,774.00	121,917.56	41,703.57	2,553.00	1,761.50	194,371.50	383,979.14
Fingure millet			38.00	133.00			950.00	1,121.00
Field pea		721.00	514.50	315.00		40.00	1,561.00	3,151.50
Faba bean	350.00		1,986.50	2,262.00		47.00		4,645.50
Lindle			1,700.00	375.00		15.00	15.00	2,105.00
Haricot bean		190.45	650.00		65.00	20.00	100.00	1,025.45
Chickpea	259.00	105.00	512.50	3,030.00	1,131.90		180.00	5,218.40
Grass pea			150.30	292.50		30.00		472.80
Mung bean (Masho)	86.00	250.00	50,365.50		3,400.00	700.00	510.00	55,311.50
Flax		274.50	1,192.50					1,467.00
Sunflower/ safflower		90.00	2,349.00		1,440.00			3,879.00
Sesame	237.00	2,220.00	3,051.00		465.00		21,850.00	27,823.00
Rape seed	38.70	630.00						668.70
Ground Nuts	657.25	766.15	2,453.00	509.50	562.65	8.00	290,010.00	294,966.55
Others			259.00	88.00		182.50	320.50	850.00

Total	24,943.07	10,862.70	235,859.67	71,536.77	10,868.05	4,207.00	557,294.40	915,571.66
-------	-----------	-----------	------------	-----------	-----------	----------	------------	------------

Table 74. Destruction of field crops in invaded woredas of Oromo ethnic zone by type of crop estimated in quintal

Field crops damage situations	Invaded woredas of Oromo ethnic administration zone field crops damage estimated in birr							
	Dawa chefa	Bati	Jilie Timuga	Artuma Fursie	Dawa harawa	Kemissie	Bati city	Total
Damage on the farmers field	2,036,370	389,725	8,032,245	2,193,100	305,215	359,850	52,953,460	66,269,965
Looted on farmers field	150,850	134,900	7,110,730	4,057,700	44,540		2,449,780	13,948,500
Damage at home	27,200	238,385	2,672,762	120,397	125,300	19,200	14,000	3,217,244
Looted at home	254,635	323,260	5,232,667	391,600	609,750	36,150	299,700	7,147,762
Invading force cunumed at home	20,252		483,353	390,880	2,000	3,000	12,500	911,985
others	5,000		54,210			2,500		61,710
Total	2,494,307	1,086,270	23,585,967	7,153,677	1,086,805	420,700	55,729,440	91,557,166

Table 75. Field crops damage situation in invaded woredas of Oromo ethnic administration zone estimated in birr

Field crops damage by invading force	Field crops damage in the subcities of Dessie city estimated in birr					
	Menafesha	Buanbua wuha	Hote	Arada	Segno gebeya	Total
Teff	53,493.62	10,660.65	3,198.30	1,069.95	2,210.50	70,633.02
Barley	31,822.65	383.00	30.00	30.00	11.00	32,276.65
Wheat	32,259.70	4,031.30	284.75	132.00	563.80	37,271.55
Maize	171,453.50	6,153.20	138.00	530.00	84.00	178,358.70
Sorghum	906.00			105.00		1,011.00
Fingure millet	22.50					22.50
Field pea	19,947.20	129.60	1,140.20	634.40	80.00	21,931.40
Faba bean	208,232.55	7,391.50	60.00	1,212.00	288.00	217,184.05
Lintel	2,320.70	48.00	114.50	200.00	98.00	2,781.20
Haricot bean	108.00					108.00
Chickpea	3,609.00	38.40	57.00	20.00	30.00	3,754.40
Grass pea	2,284.00	37.80		38.00		2,359.80
Mung bean (Masho)	150.00					150.00
Noug			270.00			270.00
Flax	512.50		3.50			516.00
Sesame				250.00		250.00
Rape seed	30.00		8.00			38.00
Ground Nut		838.00				838.00
Others	32,986.21	4,226.40	8,604.05	283.00	423.50	46,523.16
Total	560,138.13	33,937.85	13,908.30	4,504.35	3,788.80	616,277.43

Table 76. Destruction of field crops by the invading force in the sub-cities of Desei city by field crop type estimated in birr.

Destruction situations	Field crops damage in Dessie subcities estimated in Birr					
	Menafesha	Buanbua wuha	Hote	Arada	Segno gebeya	Total
Damage in farmers field	38,950,750	1,119,650	22,300	274,400	22,500	40,389,600
Looted in farmers field	6,900,000	224,150	3,900	47,600	11,050	7,186,700
Damage at house	691,720	41,500	46,980	38,520	650	819,370
Looted at house	8,828,356	1,766,985	1,313,800	80,515	335,630	12,325,286
Consumed by invading forces	636,525	236,000	3,850		6,050	882,425
Others	6,462	5,500		9,400	3,000	24,362
Total	56,013,813	3,393,785	1,390,830	450,435	378,880	61,627,743

Table 77. *Destruction of field crops in sub-cities of Dese city estimated in birr*

2. Destruction of Vegetables and Root Crops in the Invaded Areas

In the invading areas before invaded farmers sold various highland and lowland vegetables and root crops to various cities of the country, including Mekele and Semera. However, during the invasion, some types of vegetables and roots were consumed and looted in the farmers' fields by the invading force.

In this damage assessment, it was recorded that more than eleven types of vegetables and root crops were damaged or stolen. The extent of damage of vegetables and root crops in various invaded administration zones were estimated in quintals. The damages were estimated from highest in North Shewa zone (71,651.61 qt) to the lowest in south Gonder zone (231.74 qt). A total of 160,548.31 qt of vegetable and root crops was either damaged or stolen or both. Interms of the crop types, the highest was onion (76592.96 qt) and the lowest spinach (9427.59 qt) (Table 78).

These damages or stolen vegetables and root crops were estimated in terms of birr and a total losses of the invaded zones with estimated cost was 599,393,753 birr (Table 79).

Types of damaged vegetables and root crops	Vegetables and root crops destruction in various invaded administrative zones in quintals									
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag Ethnic zone	Oromo ethnic zone	Dessie City	Total	
	Irish potato	2636.14	131.23	1923.86	1850.73	2252.32	272.60	76.77	210.73	9354.38
	Onion	128.11	8.59	38830.35	1976.82	34394.99	35597	815.31	82.83	76592.96
	Garlic	556.56	12.88	1799.67	1683.92	2139.77	449.45	59.77	122.92	6824.94
	Tomato	301.96	1.16	6132.09	3903.51	15872.77	444.16	129.66	35.86	26821.16

Rape seed	161.92	0.01	425.31	721.70	1193.57	37.40	15.67	9.62	2565.19
Cabbage	214.21	48.20	167.96	3416.13	4148.38	338.20	34.60	87.72	8455.40
Bet root	8.00	3.00	2121.8	1436.24	3489.09	41.60	73.16	109.97	5373.24
Carrot	16.40	9.00	196.27	3780.60	352.19	27.32	36.75	795.34	5213.86
Lettuce	4.00		48.05	1084.52	18.26	47.75	11.02	17.09	1230.69
Spinach	40.35	2.10	64.16	237.98	202.36	53.23	1.27	326.69	928.14
Caspicum	441.23	15.54	915.32	2005.06	5438.41	484.55	123.31	4.17	9427.59
Others	39.00	0.03	914.47	4549.44	2149.52	26.14	69.17	12.99	7760.76
Total	4547.88	231.74	51629.69	26646.63	71651.61	2578.37	1446.46	1815.93	160548.31

Table 78. *Destruction of Vegetables and root crops in various invaded administrative zones in quintals*

Vegetables & root crops	Vegetables and root crops damage in invaded Adminstriative zones estimated in Birr								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag Ethnic zone	Oromo ethnic zone	Dessie City	Total
Irish potato	6,688,300	144,625	4,674,717	4,944,472	5,597,350	681,500	223,290	336,985	23,291,239
Onion	512,440	26,875	48,495,821	7,448,585	113,527,261	1,446,740	3,043,190	266,767	174,767,679
Garlic	4,961,496	74,750	13,719,927	14,912,354	18,044,763	4,108,058	542,011	746,900	57,110,259
Tomato	944,060	1,130	17,907,924	11,766,252	34,520,983	1,074,722	307,054	131,840	66,653,965
Rape seed	518,144	30	1,063,746	1,997,516	3,891,673	119,080	27,745	70,100	7,688,034
Cabbage	449,841	122,300	235,744	6,652,875	9,628,799	833,820	29,200	228,790	18,181,369
Bet root	21,600	7,500	538,650	3,045,714	8,326,744	112,250	18,732	252,225	12,323,415
Carrot	65,600	22,500	538,550	8,442,603	1,141,405	114,044	142,400	1,594,680	12,061,782
Lettuce	12,000		143,250	1,116,734	53,990	152,700	14,250	116,470	1,609,394
Spinach	121,050	6,500	186,760	627,739	607,260	152,690	3,040	155,850	1,860,889
Caspicum	14,339,975	387,470	22,305,040	22,665,639	125,999,318	9,864,680	3,756,650	70,130	199,388,902
Others	117,000	900	2,789,425	13,838,672	7,348,508	81,900	172,083	108,340	24,456,828
Total	28,751,506	794,580	112,599,554	97,459,153	328,688,054	18,742,184	8,279,645	4,079,077	599,393,753

Table 79. *Destruction of Vegetables and root crops in invaded Administrative zones of / Amhara region estimated in Birr*

These damages and looting were taking place in various places like in the fields and houses and the highest damage (qt) and estimated cost in birr was in the farm fields (107,532.4 qt, 439,374,761.7 birr) (Table 8o & 81).

Damage situations	Vegetables and Root crops damaged by zones estimated in quintals								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag Ethnic zone	Oromo ethnic zone	Dessie City	Total
Damage at farmers' field	2,618.7	93.1	20,721.0	20,496.2	59,208.8	1,856.0	978.8	1,559.9	107,532.4

Looted at farmers field	1,055.8	41.5	28,176.2	3,359.0	7,589.0	383.0	145.6	134.8	40,884.8
Damage at home	180.0	10.5	818.9	450.7	1,453.6	45.7	25.9	32.3	3,017.5
Looted at home	51.7	86.7	1,595.8	1,429.4	2,966.7	132.8	194.0	58.0	6,515.0
Consumed at home	634.0		76.5	327.8	379.6	60.2	16.2	16.8	1,511.1
Others	7.8		241.4	583.6	53.8	100.7	86.0	14.3	1,087.6
Total	4,547.9	231.7	51,629.7	26,646.6	71,651.5	2,578.4	1,446.5	1,815.9	160,548.3

Table 80. *Damaged and stolen vegetable and root crops (qt) in the field and home in different invaded administrative zones.*

Damage situations	Vegetables and Root crops damage in invaded administrative zones estimated in birr								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag Ethnic zone	Oromo ethnic zone	Dessie City	Total
Damage at farmers field	8,428,873	95,000.	80,897,982	66,402,384.4	252,247,722.3	12,119,042	5,872,718	3,311,040	439,374,761.7
Looted at farmers field	3,145,585	155,700.	18,178,418	15,667,466.8	45,553,641.0	4,225,851	398,707	324,480	87,649,848.8
Damage at home	991,398	11,815	3,448,039	2,799,341.5	9,281,643.0	370,380	403,049	125,610	17,431,275.5
Looted at home	511,585	532,065	7,495,524	8,754,653.3	16,573,364.0	961,189	1,132,788	198,887	36,160,055.3
Consumed at home	5,420,565		1,628,041	1,888,319.5	4,758,241.5	319,480	149,383	50,010	14,214,040.0
Others	253,500		951,550	1,946,988	273,442.1	746,242	323,000	69,050	4,563,772.1
Total	8,751,506	94,580	112,599,554	7,459,153.4	328,688,054	8,742,184	,279,645	4,079,077	99,393,753.3

Table 81. *Estimated costs of damaged and stolen vegetable and root crops in the field and homeduring the invasion period ofdifferent administrative zones*

This study result revealed that the damage and loot vegetable and root crops in terms of quantity (qt) and cost were presented across different invaded districts of the each administrative zone (Tables 82 -99).

Vegetables and root crops damaged	Vegetables and root crops in invaded areas of North Gondar woredas in quintals and birr									
	Damage in quintals					Damage in birr				
	Adiarkai	Debark	Dabat	Telemet	Sum total	Adiarkai	Debark	Dabat	Telemet	Total
Irish potATO	59.47	1,898.30	678.37		2,636.14	148,675	4,799,700	1,739,925		6,688,300
Onion	5.83	105.43	14.85	2.00	128.11	23,320	421,720	59,400	8,000	512,440
Garlic	69.73	278.16	167.17	41.50	556.56	631,844	2,447,808	1,504,844	377,000	4,961,496
Tomato	29.00	176.73	96.23		301.96	92,800	547,644	303,616		944,060
Rape seed	9.00	46.50	106.42		161.92	28,800	148,800	340,544		518,144
Cabbage	7.55	165.20	12.46	29.00	214.21	15,855	346,920	26,166	60,900	449,841
Beet root	1.50	0.50	6.00		8.00	4,050	1,350	16,200		21,600
Carrot		0.40	16.00		16.40		1,600	64,000		65,600

Lettuce		3.00	1.00		4.00		9,000	3,000		12,000
Spinach	18.70	10.65	11.00		40.35	56,100	31,950	33,000		121,050
Capsicum spp.	47.45	304.33	88.75	0.70	441.23	1,542,125	9,890,725	2,884,375	22,750	14,339,975
Others	18.80	20.20			39.00	56,400	60,600			117,000
Total	267.03	3,009	1,198	73	4,548	2,599,969	18,707,817	6,975,070	468,650	28,751,506

Table 82. Destruction of vegetabeles and root crops in invaded areas of North Gondar woredas in quintals and berr

Damage situations	Vegetables and root damaged in North Gondar woredas estimated in quintal and berr.									
	Damage amount in quintals					Damage amount in Berr				
	Adiarkai	Debark	Dabat	Telemet	Sum total	Adiarkai	Debark	Dabat	Telemet	Total
Damage at farmers' field	228.63	1,297.9	1,030.96	61.20	2,618.72	1,869,649	10,068,162	6,108,212	382,850	18,428,873
Looted at farmers field	22.95	1,000.1	22.70	10.00	1,055.75	257,945	2,682,700	137,540	67,400	3,145,585
Damage at home	6.50	48.6	122.89	2.00	179.99	196,500	154,500	621,998	18,400	991,398
Looted at home	8.95	39.2	3.50		51.65	275,875	223,310	12,400		511,585
Consumed at home		615.8	18.20		633.97		5,325,645	94,920		5,420,565
Others		7.8			7.80		253,500			253,500
Total	267.03	3,009.4	1,198.25	73.20	4,547.88	2,599,969	18,707,817	6,975,070	468,650	28,751,506

Table 83. Destruction of vegetables and root crops grown in North Gondar woredas estimated in quintal and berr.

Damaged vegetables and root crops	Vegetables and root crops in invaded woredas of the south Gondar zone are estimated in quintals and berr							
	Damage estimate in quintals				Damage estimates in Berr			
	Farta	Guna Begamider	Laygaint	Sum Total	Farta	Guna Begamider	Laygaint	Total
Irish Potato	45.00	81.20	5.03	131.23	55,000	84,050	5,575	144,625
Onion	1.00	4.07	3.52	8.59	2,500	16,295	8,080	26,875
Garlic	0.25	9.43	3.20	12.88	2,500	55,250	17,000	74,750
Tomato	0.10		1.06	1.16	200		930	1,130
Rape seeds			0.01	0.01			30	30
Cabbage		48.20		48.20		122,300		122,300
Beet roots		3.00		3.00		7,500		7,500
Carrot		9.00		9.00		22,500		22,500
Spinach		2.10		2.10		6,500		6,500
Capsicum/hot pepper	2.84	0.60	12.10	15.54	80,970	5,000	301,500	387,470
Others	0.30			0.03	900			900
Total	49.22	157.60	24.92	231.74	142,070	319,395	333,115	794,580

Table 84. Destruction of vegetables and root crops in invaded woredas of the south Gondar zone estimated in quintals and birr

Damage situations	vegetables and root crops in the invaded woredas of the South Gondar administrative zone estimated in quintals and birr							
	Damage estimate in quintals				Damage estimate in birr			
	Farta	Guna Begamider	Laygaint	Sum Total	Farta	Guna Begamider	Laygaint	Total
Damage in the farmers field	2.50	90.60		93.10	4,000	91,000		95,000
Loot in farmers field		38.50	3.00	41.50		154,200	1,500	155,700
Damage at house	10.00	0.40	0.07	10.47	10,000	1,600	215	11,815
Loot at house	36.72	28.10	21.85	86.67	128,070	72,595	331,400	532,065
Total	49.22	157.60	24.92	231.74	142,070	319,395	333,115	794,580

Table 85. Destruction of vegetables and root crops in the invaded woredas of the South Gondar administrative zone estimated in quintals and birr

List of districts	Vegetables and root crops damage situations						
	Damage in farmers field	Loot in farmers field	Damage at home	Loot at home	Consumed by invading forces	Others	Total
Bugna				0.06			0.06
Raya kobo	40.60	11.50	0.26	20.32	0.04		72.72
Gidan		3.00	7.00	5.27			15.27
Meket	431.50	135.08	10.00	105.18	3.00		684.76
Wadla	1,658.21	795.89	56.92	51.71	2.44	22.60	2,587.76
Mersa	142.17	86.61	393.15	1,087.78			1,709.71
Gubalafto	407.50	237.06	158.52	60.65	15.40	22.35	901.47
Habru	11,344.69	610.96	130.64	88.53	47.86	194.65	12,417.35
Woldia	1.00	5.33	11.00	0.04			17.37
Lasta	162.10	187.28	0.03	112.87			462.28
Dawnt	22.95	41.08	10.54	26.22	7.75		108.54
Gazo	147.87	8.76	0.80	4.10			161.53
Angot	6.50	87.65		20.85			115.00
Kobo city	6,274.17	25,905.00	40.02	9.20			32,228.39
Lalibela	81.70	61.00		3.00		1.80	147.50
Total	20,720.95	28,176.19	818.88	1,595.78	76.49	241.40	51,629.69

Table 86. Destruction of vegetables and root crops in invading woredas of North Wollo estimated in quintals

List of woredas	Vegetables and Root crops in invading areas North Wolo woredas in estimated birr						
	Damage in farmers field	Loot in farmers field	Damage at home	Loot at home	Consumed by invading forces	Others	Total
Bugna				1,800			1,800
Raya kobo	340,000	19,500	1,445	93,645	350		454,940

Gidan		30,000	49,000	23,380			102,380
Meket	1,746,120	248,800	32,500	353,630	11,000		2,392,050
Wadla	8,204,823	4,197,975	526,310	657,350	32,300	132,750	13,751,508
Mersa	344,000	1,126,000	1,156,550	4,336,480			6,963,030
Gubalafto	2,309,965	1,407,885	685,911	467,434	214,819	173,615	5,259,629
Habru	47,189,204	8,562,758	681,028	669,020	1,319,572	635,485	59,057,067
Woldia	5,000	10,100	105,000	1,000			121,100
Lasta	320,464	402,560	110	512,545			1,235,679
Dawnt	319,450	307,340	42,785	228,630	50,000		948,205
Gazo	152,350	17,080	2,400	21,000			192,830
Angot	5,940	189,420		105,420			300,780
Kobo city	19,761,666	1,567,000	165,000	12,190			21,505,856
Lalibela	199,000	92,000		12,000		9,700	312,700
Total	80,897,982	18,178,418	3,448,039	7,495,524	1,628,041	951,550	112,599,554

Table 87. *Destruction of vegetables and Root crops in invading areas North Wolo woredas in estimated birr*

List of Woreda	Types of Vegetables and root crops destructed in south wollo woredas estimated in quintal												Total
	Irish potato	Onion	garlic	Tomato	rape seed	Cabbage	beet root	carrot	Lettuce	Kosta	Capsicum/ hot pepper	others	
Mekedela	0.02		0.30	1.00		0.90					2.78	4.97	10.17
Tenta	59.15	514.48	74.7	88.97	1.65	47.01	13.70	7.11	0.30	2.05	108.66	56.67	974.47
Kutaber	109.1	100.41	134.4	303.66	10.13	102.45	61.45	1,020.4	4.65	20.8	91.04	136.24	2,094.8
Ambasel	91.22	306.68	279.5	1,164.4	32.61	36.73	20.38	255.20	6.40	15.1	386.37	1,135.9	3,730.4
Tehulederie	293.6	332.76	232.2	146.60	56.53	2,771.7	847.9	373.32	25.18	41.1	567.24	2,344.1	8,032.2
Werebabo	57.39	110.89	231.3	106.58	36.2	64.90	14.48	1,026.1	4.40	22.8	559.13	314.38	2,548.5
Kalu	27.8	156.67	13.8	1,462.2	11.0	52.50	1.00	15.55	5.00	9.44	192.66	80.84	2,028.5
Albuko											0.60	0.16	0.76
Dessie Zuria	393.8	12.04	4.70	94.06	88.0		4.00	77.20	1.00	6.01	3.48	0.32	716.27
Legambo	5.60	100.56	225.5	7.51	68.3	37.60	38.55	10.75	1.00	38.2	38.43	20.90	592.81
Kelela	6.36	3.45	8.25	5.04		0.17		29.10		10.0	18.30	52.30	132.97
jama	0.60	13.75	77.49	1.10	2.00		101.00	5.00	15.0	0.03	4.68	19.36	240.01
werrillu	3.52	7.20	50.79	0.06		0.25	10.26	1.80	0.09		5.84	169.00	248.81
Kombolcha	108.1	224.73	2.80	24.00	52.3	262.27	313.50	935.60	1,018.8	51.5	2.55	25.50	3,021.6
lgehida	26.68	20.50	15.75	0.52				1.65			1.31	4.12	70.61

Haik	1.59	5.47	3.91	0.27					0.20	0.20	3.39	63.00	78.03
Werrillu town.	0.02	0.02	35.95	217.01		2.55	1.00		0.40	0.65	0.05	0.41	258.06
Delanta	666.2	67.01	292.52	280.60	363.1	37.07	9.01	21.80	2.10	20.2	18.57	89.45	1,867.5
Total	1,850.7	1,976.8	1,683.9	3,903.5	721.7	3,416.1	1,436.2	3,780.6	1,084.5	238.0	2,005.1	4,549.4	26,646.6

Table 88. *Destruction of vegetable and Root crops in South Wolo woredas estimated in quintal*

Districts	Vegetables and Root crops damage situations estimated in quintals						
	Damage in farmers field	Loot in farmers field	Damage at home	Looted at home	Consumed by invading forces	Others	Total
Mekedela	2.20	6.43	0.02	1.47	0.05		10.17
Tenta	719.00	123.18	58.44	53.28	19.57	1.00	974.47
Kutaber	1,032.73	850.20	38.73	83.87	86.91	2.35	2,094.79
Ambasel	3,388.72	170.59	52.40	115.76	2.73	0.20	3,730.40
Tehulederie	6,826.05	357.75	80.91	243.61	57.59	466.32	8,032.21
Werebabo	1,895.53	402.12	56.97	153.04	31.00	9.84	2,548.49
Kalu	1,677.97	178.81	49.41	92.09	26.20	4.00	2,028.48
Albeko	0.60			0.16			0.76
Dessie Zuria	281.91	193.99	13.61	215.65	10.97	0.14	716.27
Legambo	411.94	78.86	13.76	78.51	9.55	0.20	592.81
Kellela	47.04	27.10	1.56	56.61	0.39	0.27	132.97
Jama	124.67	43.76	3.71	24.23	43.56	0.02	240.01
Wereillu	43.16	78.22	7.11	17.36	3.96	99.00	248.81
Kombolcha	3,015.60	1.70	0.37	3.94	0.01		3,021.62
Legehida	29.50		6.43	34.18	0.50		70.61
Haik	3.60	0.30	0.08	74.05			78.03
Wereillu city	213.44	0.60	0.05	43.67	0.30		258.06
Delanta	782.51	845.36	67.12	137.91	34.54	0.25	1,867.69
Total	20,496.17	3358.96	450.72	1429.36	32.78	583.59	26,646.63

Table 89. *Destruction of vegetables and root crops in South Wollo woredas in estimated quintals*

Districts	Vegetables and Root crops damage situations estimated in birr						
	Damage in farmers field	Loot in farmers field	Damage at home	Looted at home	Consumed by invading forces	Others	Total
Mekedela	8,400	78,775	700	25,904	1,625		115,404
Tenta	4,091,252	635,225	312,110	506,466	169,958	9,000	5,724,011
Kutaber	4,584,156	3,659,787	244,135	447,084	321,795	12,475	9,269,432
Ambasel	13,886,050	720,225	311,133	628,739	17,658	600	15,564,404
Tehulederie	20,857,296	1,571,116	511,960	1,103,500	252,263	1,562,028	25,858,163

Werebabo	4,404,162	2,497,705	313,551	1,199,013	178,390	39,560	8,632,381
Kalu	7,310,635	952,025	372,124	1,026,555	274,757	14,800	9,950,896
Albeko	21,000			480			21,480
Dessie Zuria	825,995	650,795	67,730	582,957	71,547	1,260	2,200,284
Legambo	2,767,128	713,700	108,425	708,020	31,935	560	4,329,768
Kellela	193,565	123,400	24,361	649,150	9,555	8,775	1,008,806
Jama	386,820	254,985	63,985	179,203	397,845	180	1,283,018
Wereillu	471,981	451,029	86,480	130,721	32,713	297,000	1,469,924
Kombolcha	3,176,535	46,000	2,439	16,351	30		3,241,355
Legehida	142,250		43,170	147,879	1,900		335,199
Haik	91,100	1,000	220	486,040			578,360
Wereillu city	354,845	1,800	160	14,300	1,650		372,755
Delanta	2,829,215	3,309,900	336,659	902,292	124,700	750	7,503,516
Total	66,402,384	15,667,467	2,799,342	8,754,653	1,888,320	1,946,988	97,459,153

Table 90. *Destruction situation of vegetables and root crops in South Wollo woredass estimated in birr,*

Districts	Vegetables and Root crops damage situations estimated in birr						Total
	Damage in farmers field	Damage in farmers field	Damage in farmers field	Damage in farmers field	Damage in farmers field	Damage in farmers field	
Menze Gera	118.00	108.11	9.01	22.31	14.56	3.00	274.98
AnTsokia gemeza	14,458.46	281.08	18.16	0.46	15.10	6.10	14,779.36
Efreataena gidm	38,382.27	6,008.91	1,233.44	1,356.28	142.35	18.42	47,141.66
Menze Mama	369.38	364.99	10.66	218.70	29.91	5.15	998.79
Tarma bere	275.38	168.61	42.23	83.52	44.61	4.11	618.46
Moja ena wodera	45.61	39.00	0.23	2.05	9.73		96.62
Kewet	281.61	68.42	53.69	226.06	87.54	10.04	727.36
Menze Keya	19.49	15.99	7.42	6.61	26.55	5.52	81.58
Shewa robit	35.30	30.00		272.26			337.56
Ataye	5,182.90	503.63	78.13	778.49	9.30		6,552.45
Mehal Meda	40.43	0.26	0.60			1.50	42.79
Total	59,208.83	7,589.00	1,453.57	2,966.73	379.65	53.83	71,651.61

Table 91. *Destruction of vegetables and root crops in North Shewa woredas estimated in quintals*

Damaged vegetables and root crops	Vegetables and root crops destruction in Oromo ethnic administration zone woredas estimated in quintal						
	Dawa chefa	Bati Zuria	Jilie Timuga	Artuma fursi	Dawa Harawa	Kemissie	Bati City
Irish potato	0.01	0.20	70.03	0.03		0.50	6.00
							76.77

Onion	8.50	9.00	178.15	566.50	7.00	40.66	5.50	815.31
Garlic	0.10		51.84	0.09	6.44	0.10	1.20	59.77
Tomato	52.00	4.00	8.33	13.00	0.50	4.08	47.75	129.66
Rape seeds			5.00	10.00		0.17	0.50	15.67
cabbage	4.50		2.00	25.00		0.10	3.00	34.60
Beet root			50.00	20.00		0.16	3.00	73.16
Carrot			30.00	3.00		0.25	3.50	36.75
Lettuce				10.00		0.02	1.00	11.02
Spinach	0.80		0.66			0.03	0.50	1.27
Capsicum/Hot pepper	10.78	6.15	46.10	46.82	2.89	0.07	10.50	123.31
Others	8.20		1.68	2.50	0.69	-	56.10	69.17
Total	84.17	19.35	443.79	696.94	17.52	46.14	138.55	1,446.46

Table 92. *Destruction of vegetable and root crops in Oromo ethnic adminstration zone woredas estimated in quintal*

Damaged vegetables and root crops	Destruction of Vegetables and root crops in oromo ethnic zone woredas estimated in birr							
	Dawa chefa	Bati Zuria	Jilie Timuga	Artuma fursi	Dawa Harawa	Kemissie	Bati City	Total
Irish potato	30	500	210,085	75		600	12,000	223,290
Onion	32,200	36,000	692,900	2,165,100	28,000	75,490	13,500	3,043,190
Garlic	900		466,551	5,400	57,960	1,200	10,000	542,011
Tomato	156,000	12,000	24,144	39,000	1,400	22,710	51,800	307,054
Rape seeds			15,000	10,000		1,245	1,500	27,745
cabbage	9,900		200	12,500		600	6,000	29,200
Beet root			3,000	11,000		732	4,000	18,732
Carrot			120,000	12,600		1,300	8,500	142,400
Lettuce				13,000		250	1,000	14,250
Spinach	240		1,980			320	500	3,040
Capsicum/Hot pepper	375,225	213,750	1,508,950	1,254,425	101,150	2,650	300,500	3,756,650
Others	24,300		4,713	10,000	2,070		131,000	172,083
Total	598,795	262,250	3,047,523	3,533,100	190,580	107,097	540,300	8,279,645

Table 93. *Destruction of vegetables and Root crops in the Oromo ethnic administrative zone Woredas estimated in birr*

Damage situations	Destruction of vegetable and root crops in the Oromo ethnic zone woredas estimated in quintals							
	Dawa chefa	Bati Zuria	Jilie Timuga	Artuma fursi	Dawa Harawa	Kemissie	Bati City	Total
Damage at farmers field	46.55	4.40	200.77	627.04	0.50	43.39	56.10	978.75
Looted at farmers field	6.00	14.25	1.56	68.35	0.27	0.09	55.10	145.62
Damage at home	4.30	0.10	16.86			2.63	2.00	25.89

Looted at home	20.42	0.60	129.84	1.55	16.60	0.03	24.95	193.99
Consumed at home	6.90		8.76		0.15		0.40	16.21
Others			86.00					86.00
Total	84.17	19.35	443.79	696.94	17.52	46.14	138.55	1,446.46

Table 94. *Destruction of vegetable and root crops in Oromo ethnic zone woredas estimated in quintals*

Damage situations	Destruction of vegetable and root crops in Oromo ethnic zone woredas estimated in birr							
	Dawa chefa	Bati Zuria	Jilie Timuga	Artuma fursi	Dawa Harawa	Kemissie	Bati City	Total
Damage at farmers field	297,650	19,000	1,643,318	3,423,500	17,500	92,250	379,500	5,872,718
Looted at farmers field	18,000	218,750	7,470	70,725	8,930	5,032	69,800	398,707
Damage at home	150,500	3,500	233,824			9,725	5,500	403,049
Looted at home	88,195	21,000	766,628	38,875	160,500	90	57,500	1,132,788
Consumed at home	44,450		73,283		3,650		28,000	149,383
Others			323,000					323,000
Total	598,795	262,250	3,047,523	3,533,100	190,580	107,097	540,300	8,279,645

Table 95. *The destruction of vegetable and root crops in Oromo ethnic woredas estimated in Birr*

List of damaged vegetables and root crops	Destruction of vegetables and root crops in sub-cities of Dessie city administration estimated in quintals and birr									
	Destruction estimate in quintals					Destruction estimate in Birr				
	Menafesha	Buanbua Wuha	Hote	Segno gebeya	Sum Total	Menafesha	Buanbua Wuha	Hote	Sgno gebeya	Total
Irish potato	206.05	2.15	1.68	0.85	210.73	325,810	5,175	3,000	3,000	336,985
Onion	66.57	14.17	2.09		82.83	233,677	26,240	6,850		266,767
Garlic	104.79	17.01	0.12	1.00	122.92	592,630	147,680	590	6,000	746,900
Tomato	2.07	2.34	0.95	30.50	35.86	6,280	2,550	1,510	121,500	131,840
Rape seeds	8.80	0.72	0.10		9.62	68,400	1,500	200		70,100
cabbage	87.12	0.60			87.72	213,790	15,000			228,790
Beet root	101.97			8.00	109.97	236,225			16,000	252,225
Carrot	772.29	15.90	0.15	7.00	795.34	1,561,030	19,200	450	14,000	1,594,680
Lettuce	17.09				17.09	116,470				116,470
Kosta	326.69				326.69	155,850				155,850
Capsicum/Hot pepper	3.66	0.38	0.13		4.17	53,920	14,750	1,460		70,130
Others	6.66	5.91	0.32	0.10	12.99	51,700	51,050	2,220	3,370	108,340
Total	1,703.76	59.18	5.54	47.45	1,815.93	3,615,782	283,145	16,280	163,870	4,079,077

Table 96. *Destruction of vegetables and root crops in sub-cities of Dessie city administration estimated in quintals and birr*

Damage situations	Destruction of vegetable and root crops in Dessie city administration sub cities estimated in quintals and birr									
	Destruction estimated in quintals					Destruction estimated in birr				
	Menafesha	Buanbua Wuha	Hote	Segno gebeya	Total	Menafesha	Buanbua Wuha	Hote	SEgno gebeya	Total
Damage at farmers field	1,531.98	18.63	0.24	9.00	1,559.85	3,161,090	127,450	500	22,000	3,311,040
Looted at farmers field	86.21	11.44	0.10	37.00	134.75	171,600	18,680	200	134,000	324,480
Damage at home	31.10	1.10	0.05		32.25	122,900	2,540	170		125,610
Looted at home	25.56	27.26	4.75	0.45	58.02	59,502	121,525	13,990	3,870	198,887
Consumed at home	16.41	0.25	0.10		16.76	39,440	10,450	120		50,010
Others	12.50	0.50	0.30	1.00	14.30	61,250	2,500	1,300	4,000	69,050
Total	1,703.76	59.18	5.54	47.45	1,815.93	3,615,782	283,145	16,280	163,870	4,079,077

Table 97. *Destruction of vegetable and root crops in Dessie city administration sub cities estimated in quintals and birr*

Damaged vegetables and root crops	Destruction of vegetables and root crops in Waghimra ethnic administrative zone woredas estimated in quintals and birr									
	Destruction estimated in quintals					Destruction estimated in birr				
	Zekuala	Dahena	Gaz gibela	Sekota zuria	Sum total	Zekuala	Dahena	Gaz gibela	Sekota zuria	Total
Irish potato	11.00	261.60			272.60	27,500	654,000			681,500
Onion	40.44	312.16	3.37		355.97	184,620	1,248,640	13,480		1,446,740
Garlic	27.30	402.56	15.72	3.87	449.45	288,000	3,639,830	144,624	35,604	4,108,058
Tomato	209.99	229.67	3.60	0.90	444.16	360,338	699,984	11,520	2,880	1,074,722
Rape seeds	0.50	36.90			37.40	1,000	118,080			119,080
cabbage	144.97	184.13	7.60	1.50	338.20	425,920	387,880	16,720	3,300	833,820
Beet root	0.10	41.50			41.60	200	112,050			112,250
Carrot		26.45	0.87		27.32		110,390	3,654		114,044
Lettuce	0.95	46.80			47.75	12,300	140,400			152,700
Kosta	7.00	45.93		0.30	53.23	14,000	137,790		900	152,690
Capsicum/ Hot pepper	242.12	237.09	0.87	4.47	484.55	1,379,630	8,298,150	30,450	156,450	9,864,680
Others	2.59	17.30	5.95	0.30	26.14	11,250	51,900	17,850	900	81,900
Total	686.96	1,842.09	37.98	11.34	2,578.37	2,704,758	15,599,094	238,298	200,034	18,742,184

Table 98. *Destruction of vegetables and root crops in Waghimra ethnic administrative zone woredas estimated in quintals and birr*

Damage situations	Destruction of vegetables and root crops in Waghimra ethnic administrative zone woredas estimated in quintals and birr									
	Destruction estimated in quintals					Destruction estimated in birr				
	Zekuala	Dahena	Gaz gibela	Sekota zuria	Sum total	Zekuala	Dahena	Gaz gibela	Sekota zuria	Total
Damage at farmers field	656.5	1,172.5	17.3	9.9	1,856.0	2,420,688	9,446,644	65,476	186,234	12,119,042
Looted at farmers field	5.9	361.9	15.2		383.0	83,600	4,028,645	113,606		4,225,851
Damage at home	6.5	39.2			45.7	25,000	345,380			370,380
Looted at home	18.1	111.2	3.5		132.8	175,470	740,369	45,350		961,189
Consumed at home		59.3	0.87		60.2		315,826	3,654		319,480
Others		98.1	1.1	1.5	100.7		722,230	10,212	13,800	746,242
Sum total	687.0	1,842.1	37.9	11.3	2,578.4	2,704,758	15,599,094	238,298	200,034	18,742,184

Table 99. *Destruction of vegetables and Root crops in Waghimra ethnic Administrative zone woredas estimated in quintals and birr*

3. Destruction of Spices in Invaded Areas of Amhara Region

In the areas where armed force invaded, there were various spices that grown in the highlands, hills and valleys. The community living in the areas has the habit of using different spices in different dishes.

Therefore, the damage to the spice crops was occurred at home and in the farmer's fields. This force was looting and eating various types of spices. The highest and lowest damaged or stolen spices were in south Wollo and Waghimra with estimated quantity of 211,722,386 qt and 5,266,893 qt, respectively. Intermes of the spice types, the highest and lowest damaged or stolen were on basil and turmeric with quantity of 5,730,237 qt and 556,007 qt, respectively. Generally, this study revealed that a total quantity of 538,961,694 qt in all invaded zones (Table, 100).

This comprehensive study reported the costs of each spice in terms of birr were presented on Table 101.

In addition, damage and stolen spices of each invaded district were presented in quantity (qt) and as well as estimated costs (birr) (Tables 102-123).

Types of spice damaged	Spaice crops damage in invaded administration zones of Amhara national Regional state estimated in quintals								
	N. Gondar	S. Gondar	N. Wollo	S. Wollo	N.Shewa	Wag Himera	Oromo adm	Dessie City	Total
Ginger	738,400	5,000	224,572	171,000	33,205	8,030	385	10,120	1,190,712
Cardamon	9,000		776,873	544,060	48,520		960	2,000	1,381,413
Turmeric			350,572	183,305	21,630	300	200		556,007
White cumin	4,750		727,175	1,219,620	11,345	11,400	1,000	16,000	1,991,290
Black cumin	3,252,000		808,961	1,600,435	42,900		1,680		5,705,976
Thyme	864,000		565,418	615,960	3,480	24,150	2,000		2,075,008
Coriander	98,000		791,274	310,215	7,520		120	250	1,207,379
Rue	404,325		2,150,020	2,070,888	1,460			13,450	4,640,143
Koseret/ ippia abyssinica	15,840		350,356	203,680	2,400			3,000	575,276
Basil		4,000	2,006,825	2,271,132	1,406,180	23,000	8,100	11,000	5,730,237
Long pepper		18,600	635,832	909,875	108,530	12,240	2,590	12,000	1,699,667
Others	102,720	14,236,725	106,962,457	201,622,217	94,934,265	5,187,773	9,284,526	79,877,906	12,208,589
Total	5,489,035	14,264,325	116,350,333	211,722,386	96,621,435	5,266,893	9,301,561	79,945,726	38,961,694

Table 100. *Quantity of damaged or stolen spice crops (qt) in the invaded administration zones of Amhara national Regional state*

Types of spice damaged	Spices damage in invaded zones estimated in birr								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag Himera	Oromo adm	Dessie City	Total
Ginger	13,975	120	4,009	3,438	621	146	7	52	22,368
Cardamon	50		3,893	2,492	215		9	25	6,684
Turmeric			3,608	1,680	345	3	3		5,638
White cumin	50		7,772	14,233	154	120	9	200	22,538
Black cumin	8,130		2,151	13,661	150		7		24,099
Thyme	8,200		4,742	5,101	62	230	23		18,357
Coriander	400		3,230	1,326	92		10	1	5,058
Rue	1,501		7,795	7,952	35			55	17,338
Koseret	99		2,220	1,302	50			15	3,686
Basil		20	10,039	11,351	8,190	115	113	50	29,877
Long pepper		160	3,980	4,434	408	52	12	35	9,081
Others	428	66,159	534,205	1,208,401	483,998	32,970	57,693	410,101	2,793,956
Total	32,833	66,459	587,640	1,275,369	494,320	33,636	57,886	410,534	2,958,677

Table 101. *Damage different types of spices in invaded zones of amahara region estimated in birr*

Destructect spice types	Spices destructed in North Gondar zone invaded woredas estimated in quintals and birr							
	Destruction estimated in quintals				Destruction estimated in birr			
	Adiarkai	Debark	Dabat	Total	Adiarkai	Debark	Dabat	Total
Ginger		0.75	139.00	139.75		3,900	734,500	738,400
Cardamon		0.50		0.50		9,000		9,000
White cummin		0.50		0.50		4,750		4,750
Black cummin		4.30	77.00	81.30		172,000	3,080,000	3,252,000
Thyme		2.00	80.00	82.00		24,000	840,000	864,000
Coriander		0.50	3.50	4.00		12,250	85,750	98,000
Rue	0.10	12.50	2.41	15.01	2,650	336,810	64,865	404,325
Koseret/Lippia abyssinica		0.99		0.99		15,840		15,840
Others	4.00	0.28		4.28	96,000	6,720		102,720
Total	4.10	22.32	301.91	328.33	98,650	585,270	4,805,115	5,489,035

Table 102. *Estimated cost (Birr) and quantity (qt) of damage of different spice crops in different districts of North Gondar zone*

Damage situations	Spices destructed in North Gondar zone invaded woredas estimated in quintals and birr							
	Destruction estimated in quintals				Destruction estimated in birr			
	Adiarkay	Debark	Dabat	Sum total	Adiarkay	Debark	Dabat	Total
Destruction in farmers field	4.10	20.27	51.91	76.28	98,650	544,720	466,615	1,109,985
Looted in farmers field			248.00	248.00			4,284,500	4,284,500
Destruction at Home		0.50	2.00	2.50		4,750	54,000	58,750
Looted at home		1.55		1.55		35,800		35,800
Total	4.10	22.32	301.91	328.33	98,650	585,270	4,805,115	5,489,035

Table 103. *Estimated cost (Birr) and quantity (qt) of damage of different spice crops at various situations of different districts of North Gondar zone*

Crops	Spices destructed in South Gondar zone invaded woredas estimated in quintals and birr									
	Destruction estimated in quintals					Destruction estimated in birr				
	Farta	Guna Bagamider	Laygaint	Nefas Meucha	Sum total	Farta	Guna Bagamider	Laygaint	Nefas Meucha	Total
Ginger		0.01			0.01		5,000			5,000
Basil			0.02		0.02			4,000		4,000
Long pepper	0.02	0.08		0.06	0.16	2,000	1,600		15,000	18,600
Others	0.78	0.98	1.35	3.52	6.66	1,549,490	1,829,420	2,693,350	8,164,465	14,236,725
Total	0.80	1.07	1.37	3.58	6.85	1,551,490	1,836,020	2,697,350	8,179,465	14,264,325

Table 104. *Destruction of different types of spices in South Gondar woredas estimated in quintals and birr*

Damage situations	Spices damaged in South Gondar zone invaded woredas estimated in quintals and birr									
	Destruction estimated in quintals					Destruction estimated in birr				
	Farta	Guna Bagamider	Laygaint	Nefas Meucha	Sum total	Farta	Guna Bagamider	Laygaint	Nefas Meucha	Total
Farmers field schools				0.07	0.07				1,500	1,500
looted in farmers field		10.50			10.50		210,000			210,000
Damage at home	0.04	2.65	0.25	1.03	3.97	1,200	13,100	5,500	17,910	37,710
looted at home	76.14	87.14	134.18	351.13	648.6	1,550,290	1,612,920	2,673,300	8,142,055	13,978,565
Consumed at home			0.77	0.54	1.31			18,550	14,300	32,850
Others				0.15	0.15				3,700	3,700
Total	76.18	10,029	135.20	352.9	664.6	1,551,490	1,836,020	2,697,350	8,179,465	14,264,325

Table 105. *Damage of different types of spices in invaded wooredas of South Gondar administrative zone estimated in quintals and birr*

Districts	Ginger	Cardamon	Turmeric	White cummin	Black Cummin	Thyme	Coriander	Rue	Koseret	Basil	Long pepper	Others	Total
Bugna	1.10	0.10	0.67	2.02		95.00	0.81	0.05	0.81	0.58	1.50	344.94	353.46
Raya kobo	0.50	0.31	1.10	1.60	1.21	0.12	0.10	0.60	1.10	0.18	1.20	229.31	237.33
Gidan		0.43	0.50							0.75		9.95.5	11.64
Meket	5.84	1.28	2.90	10.83	2.41	1.22	0.27	0.52	0.15	15.76	0.34	473.91	515.43
Wadla	1.12	0.20	0.50	3.52	1.10		0.15	0.50		0.03	20.20	1,017.81	1,045.1
Mersa										0.02	0.30	824.80	825.12
Gubalafto	4.71	0.36	2.02	0.83	0.01		20.00	24.50	2.50	21.79	1.58	359.39	437.69
Habru	3.78	0.20	3.05	4.41	0.02		0.01			1.29	0.07	288.55	301.38
Woldia	0.01	0.01	1.51	0.01	0.01			0.01	0.01	0.01	9.00	420.57	431.15
Last	0.96	0.83	0.04	10.29	0.07	0.19	0.04	10.10	8.37	4.37	1.10	68.60	104.96
Dawnt	0.24	27.35	0.25	28.70	1.29	27.27	1.12	28.68	0.26	31.76	0.13	23.35	170.40
Gazo	21.73	7.71	23.44	15.15	15.15	17.71	9.21	11.76	9.00	23.75	4.12	191.44	350.17
Angot	0.10	0.15	0.09	0.36	0.24		0.59	1.23		0.10	0.26	177.86	180.96
Kobo city			0.01			0.01						433.86	433.88
Lalibela												477.71	477.71
Total	40.09	38.93	36.08	77.72	21.51	47.42	32.30	77.95	22.20	100.39	39.80	5,342.05	5,876.40

Table 106. *Destruction of different types of spices in North Wolo woredas estimated in quintals*

Spices damage recooded woredas	Damaged spice types in invaded woredas of north wollo administration zone												
	Ginger	Crdamon	Turmeric	White cummin	Black Cummin	Thyme	Coriander	Rue	Koseret	Basil	Long pepper	Others	Total
Bugna	5,863	1,800	6,876	19,190		9,423	20,125	1,350	12,880	11,600	31,800	7,142,227	7,263,133
Raya kobo	2,607	5,580	11,100	15,205	31,220	1,270	2,450	14,450	17,600	5,100	23,700	5,642,520	5,772,802
Gidan		7,955	5,250							15,000		186,525	214,730
Meket	32,036	86,680	24,784	102,885	94,225	13,415	6,615	12,518	2,325	315,200	6,630	9,321,418	10,018,731
Wadla	5,830	3,300	2,500	33,440	44,000		3,675	12,058		615	395,000	22,124,094	22,624,512
Mersa										1,000	7,000	16,512,070	16,520,070
Gubalafto	27,015	7,425	19,220	8,290	440		490,000	649,250	38,750	430,545	56,300	7,795,280	9,522,515
Habru	21,720	4,050	29,050	44,100	880		245			25,345	1,335	5,592,895	5,719,620
Woldia	55	300	330	100	300			350	155	110	1,600	7,623,793	7,627,093
Lasta	5,580	15,355	420	97,755	2,660	2,265	980	262,600	129,820	87,400	21,400	1,384,885	2,011,120
Dawnt	2,923	492,900	3,127	258,890	52,206	327,240	28,186	859,680	4,826	634,225	5,082	600,780	3,270,065
Gazo	120,418	148,890	246,870	143,925	575,700	211,675	225,645	306,260	144,000	478,850	80,340	3,960,177	6,642,750
Angot	525	2,638	935	3,395	7,330		13,353	31,505		1,835	5,645	3,476,803	3,543,963
Kobo city			110			130						6,107,280	6,107,520
Lalibela												9,491,710	9,491,710
Total	224,572	776,873	350,572	727,175	808,961	565,418	791,274	2,150,020	350,356	2,006,825	635,832	106,962,457	116,350,333

Table 107. Destruction of different spice sypes in North Wollo invaded woredas estimated in birr

Districts	Damage situations						Total
	Destruction of spice crops in the farmers field	Loot of spice crops in the farmers field	Destruction spice crops at home	Looting of spice crops at home	Consumption of spices by invading force	Others	
Bugna	1.90	0.45	2.61	324.16	10.27	14.07	353.46
Raya kobo	0.60	0.09	3.51	230.28	2.85		237.33
Gidan	2.06		0.29	9.07	0.23		11.64
Meket	54.94	2.96	14.48	426.08	3.78	13.20	515.43
Wadla	85.35	115.07	102.12	717.48	22.26	2.85	1,045.13
Mersa	0.93	80.40	176.92	565.96	0.74	0.17	825.12
Gubalafto	45.98	42.47	13.49	215.54	119.99	0.22	437.69
Habru	8.54	6.83	6.20	258.27	2.54	19.00	301.38
Woldia		0.60	2.53	397.22	20.13	10.67	431.15
Last	23.75	1.68	1.43	46.54	30.73	0.83	104.96
Dawnt	2.00	2.05	7.79	158.36	0.20		170.40
Gazo	35.07	11.95	41.30	218.12	10.79	32.94	350.17

Angot	2.20	0.90	4.18	171.83	1.86		180.96
Kobo city		170.39	0.09	170.98	92.42		433.88
Lalibela	10.00	225.61	1.12	228.92	1.06	11.00	477.71
Total	273.31	661.45	378.05	4,138.80	319.85	104.95	5,876.40

Table 108. Damage to different types of spices in North Wollo administrative zone woredas in damage condition and estimated quintal

Districts	Damage conditions						Total
	Destruction of spice crops in the farmers field	Loot of spice crops in the farmers field	Destruction of spice crops at home	Looting of spice crops at home	Consumption of spices by invading force	Others	
Bugna	43,750	4,570	51,244	6,606,850	256,853	299,867	7,263,133
Raya kobo	14,502	1,470	62,695	5,625,660	68,475		5,772,802
Gidan	39,973		6,700	163,398	4,660		214,730
Meket	1,022,078	34,565	251,029	8,358,077	82,880	270,103	10,018,731
Wadla	1,831,958	2,308,990	2,123,040	15,837,197	466,927	56,400	22,624,512
Mersa	23,550	1,310,600	3,551,550	11,608,770	20,900	4,700	16,520,070
Gubalafto	884,955	949,800	311,200	4,782,115	2,585,845	8,600	9,522,515
Habru	143,020	171,500	82,100	5,189,025	42,175	91,800	5,719,620
Woldia		21,000	46,375	7,103,580	432,075	24,063	7,627,093
Last	499,600	26,520	24,420	929,945	510,300	20,335	2,011,120
Dawn	33,500	49,200	165,140	3,018,225	4,000		3,270,065
Gazo	578,795	245,515	705,953	4,259,915	116,242	736,330	6,642,750
Angot	53,900	23,450	70,490	3,372,155	23,968		3,543,963
Kobo city		3,073,700	7,000	1,139,720	1,887,100		6,107,520
Lalibela	200,000	4,507,400	16,850	4,513,960	28,000	225,500	9,491,710
Total	5,369,580	12,728,280	7,475,786	82,508,591	6,530,400	1,737,698	116,350,333

Table 109. Damage of different types of spices in North Wollo administrative zone invaded woredas by damage condition and estimated birr

Districts	Ginger	Cardamon	Turmeric	White cumin	Black cumin	Thyme	Coriander	Rue	Lippia abyssinica	Basil	Long pepper	Others	Total
Mekedela												1.50	1.50
Tenta	0.97	0.65	0.35	0.09	0.5	0.22	0.08		0.04	2.98	0.19	70.68	76.7
Kutaber			0.01	0.2	0.09			0.37	0.26	0.93	2.4	772.69	776.9
Ambasel	0.17	0.02	0.85	127.4	3.2	0.01		2.79		0.95	3.4	1,094.61	1,233.3
ehulederie	8.62	20.32	12.68	2.7	3.8	50.2	9.25	33.36	10.5	58.8	17.6	77.51	305.4
Werebabo	14.98	0.62	0.15	3.6	27.1	0.1	0.05	1.71	0.90	38.5	5.02	701.67	834.4
Kalu	4.44	0.33	0.56	6.84	101.0		3.21	0.74		9.74	12.3	1,190.28	1,329.4

Dessie Zuria	2.35	0.15				0.09						87.62	90.2
Leganbo	0.50	0.01	0.01		0.01	0.02		0.04	0.30	0.29		548.65	549.8
Kelela	0.03	0.12						0.01		0.03	0.14	4.85	5.2
Jama		0.20	0.55	0.35								179.6	180.7
Woreilu	1.25	0.30	0.11		0.02	0.02	0.17	0.13		0.1		39.43	41.6
Kombolcha	0.01	0.31		0.01	0.01					0.01	0.5	1,922.3	1,923.2
Legehida												36.48	36.5
Haik												4,689.4	4,689.4
woreilu	1.00	0.75	1.00	1.10	1.00	0.30	0.50	0.25	1.00	0.40	2.80	111.46	121.6
Delanta	0.06	1.15	0.53	0.08				0.13		0.80	0.10	555.39	558.2
Total	34.38	24.92	16.80	142.3	136.61	51.01	13.3	79.5	13.0	113.5	44.34	12,084	12,753.7

Table 110. Destruction of different types of spices in South Wollo Adminstrative Woredas in quintals

Districts	Ginger	Cardamon	Turmeric	White cumin	Black cumin	Thyme	Coriander	Rue	Lippia abyssinica	Basil	Long pepper	others	Total
Mekedela												31,500	31,500
Tenta	5,335	14,300	3,850	810	19,580	2,640	1,875		660	58,110	3,800	1,420,303	1,531,263
Kutaber			110	7,800	9,080			9,805	4,290	18,600	48,175	14,979,039	15,076,899
Ambasel	900	330	9,350	1,082,575	138,600	120		73,095		18,700	69,905	19,835,040	21,228,615
Tehulederie	47,410	447,040	139,480	23,745	166,100	602,760	221,000	873,045	176,280	1,181,990	354,300	1,624,785	5,857,935
Werebabo	82,390	13,640	1,650	32,605	1,192,675	1,440	1,200	1,084,613	14,800	770,127	102,368	7,267,708	10,565,215
Kalu	7,130	7,140	6,160	60,615	45,000		79,890	19,610		193,705	249,028	19,385,390	20,053,668
Dessie Zuria	12,925	3,300				1,020						1,815,535	1,832,780
Leganbo	2,500	150	110		400	240		1,020	4,950	5,660		10,275,882	10,290,912
Kelela	150	2,500						265		700	3,400	98,030	105,045
Jama		2,000	9,610	2,975								3,135,714	3,150,299
Woreilu	6,875	6,600	1,210		880	240	4,250	3,435		2,340		799,280	825,110
Kombolcha	55	3,120		120	120					200	11,300	21,182,168	21,197,083
Legehida												355,100	355,100
Haik												88,744,434	88,744,434
woreilu	5,000	18,750	6,000	7,700	28,000	7,500	2,000	2,700	2,700	5,000	65,600	2,014,910	2,165,860
Delanta	330	25,190	5,775	675				3,300		16,000	2,000	8,657,400	8,710,670
Total	171,000	544,060	183,305	1,219,620	1,600,435	615,960	310,215	2,070,888	203,680	2,271,132	909,875	201,622,217	211,722,386

Table 111. Destruction of different types of spice crops in the invaded woredas of South Wollo administration Zone estimated in birr

Districts	Damaged in farmers field	Looted in farmers field	Damaged at home	Looted at home	Consumed by invading forces	Others	Total
Mekedela	1.50						1.50
Tenta	3.17	2.26	5.39	15.65	50.23		76.69
Kutaber	5.12	44.62	26.01	691.98	7.14	2.05	776.92
Ambasel	149.07	14.15	0.25	1,066.61	0.23	3.00	1,233.31

Tehulederie	194.95	100.67	2.00	0.07	7.00	0.65	305.34
Werebabo	149.80	322.90	1.30	355.87	4.44	0.05	834.36
Kalu	453.21	56.03	206.99	511.62	94.58	6.96	1,329.38
Dessie Zuria	2.81	0.11	5.62	77.01	4.53	0.13	90.21
Leganbo	10.23	88.29	18.10	428.41	4.55	0.25	549.83
Kelela			0.05	5.13			5.18
Jama	45.60	30.00	17.05	82.67	5.34		180.66
Woreilu	0.12	1.76	2.38	34.77	2.52		41.55
Kombolcha	5.17	24.30	855.81	1,034.04	3.09	0.75	1,923.16
Legehida			0.42	36.06			36.48
Haik	0.16	100.29	123.41	4,437.91	27.59	-	4,689.36
woreilu	0.58	0.04	0.75	107.57	4.97	7.65	121.56
Delanta	9.64	0.98	8.02	421.23	0.70	117.65	558.22
Total	1,031.11	786.39	1,273.55	9,306.60	216.91	139.14	12,753.69

Table 112. *Damage of different types of spices crops in South Wollo woredas by damage condition and estimated in quintal*

Districts	Damage conditions						Total
	Damaged in farmers field	Looted in farmers field	Damaged at home	Looted at home	Consumed by invading forces	Others	
Mekedela	31,500						31,500
Tenta	65,785	47,108	91,930	308,202	1,018,238		1,531,263
Kutaber	112,950	937,100	124,315	13,702,189	156,090	44,255	15,076,899
Ambasel	1,630,075	292,435	6,100	19,225,505	7,000	67,500	21,228,615
Tehulederie	4,067,732	1,617,348	45,000	1,155	115,000	11,700	5,857,935
Werebabo	3,676,835	1,948,120	49,335	4,805,705	83,220	2,000	10,565,215
Kalu	6,398,933	692,745	4,105,430	6,829,465	1,887,300	139,795	20,053,668
Dessie Zuria	33,210	1,265	109,200	1,587,875	98,620	2,610	1,832,780
Leganbo	224,296	1,757,660	361,400	7,855,881	86,800	4,875	10,290,912
Kelela			2,030	103,015			105,045
Jama	882,200	600,000	285,875	1,272,319	109,905		3,150,299
Woreilu	2,165	32,490	55,640	684,590	50,225		825,110
Kombolcha	12,350	46,210	246,900	20,676,968	187,655	27,000	21,197,083
Legehida			14,200	340,900			355,100
Haik	5,500	2,008,500	2,631,000	83,527,284	572,150	-	88,744,434
woreilu	11,050	1,000	14,100	1,902,640	148,120	88,950	2,165,860
Delanta	207,900	23,510	263,155	7,629,245	19,360	567,500	8,710,670
Total	17,362,480	10,005,490	8,405,610	170,452,938	4,539,683	956,185	211,722,386

Table 113. *Destruction of different types of spice crops in South Wollo administration zone invaded woredas estimated in birr*

Crops	Anstsokia gemeza	Epheratana gidm	Tarma bere	Moja and wodera	Kewet	Menze Keya	Shewa Robit	Ataye	Mehal Meda	Total
Ginger		1.35	0.43				3.0	1.43		6.21
Cardamon		1.55	0.32					0.28		2.15
Turmeric		1.20	1.82		0.03			0.40		3.45
White cumin		0.45	0.42	0.02				0.65		1.54
Black cumin		0.40	0.54					0.56		1.50
Thyme		0.20	0.07					0.35		0.62
Coriander		0.20	0.32					0.40		0.92
Rue		0.10	0.15					0.10		0.35
Koseret		0.20						0.30		0.50
Basil		0.22	68.2			0.56	0.11	0.8	12.0	81.90
Long pepper		0.26	0.05	0.01		0.18	1.19	2.4		4.08
others	1.23	366.5	838.7			59.3	1,419.8	1,896.3	258.12	4,839.9
Total	1.23	372.65	911.0	0.03	0.03	60.07	1,424.1	1,903.9	270.1	4,943.2

Table 114. Destruction of different types of spice crops in North Showa administrative woredas estimated in quintals

Crops	Spices destruction in North shewa Woredas									
	Antsokia Gemza	Ephrata ena gidm	Tarma bere	Moja ena wedera	Kewet	Menze Keya	Shewa robit	Ataye	Mehal Meda	Total
ginger		7,325	2,125				15,000	8,755		33,205
Cardamon		28,700	9,300					10,520		48,520
Turmeric		11,000	8,010		300			2,320		21,630
White cummin		3,975	3,500	190				3,680		11,345
Black cummin		16,000	14,700					12,200		42,900
Thyme		1,000	1,080					1,400		3,480
Coriander		1,200	2,600					3,720		7,520
Rue		400	880					180		1,460
Koseret		400						1,000		2,400
Basil		1,600	1,368,850			13,530	3,800	17,200	1,200	1,406,180
Long pepper		14,000	2,000	195		2,705	54,200	35,430		108,530
Others	46,000	6,226,628	16,439,843			1,058,690	30,358,374	35,661,847	5,142,883	94,934,265
Total	46,000	6,313,228	17,852,888	385	300	1,074,925	30,431,374	35,758,252	5,144,083	96,621,435

Table 115. Destruction of different types of spices in North Shewa woredas estimated in birr

Districts	Damage conditions						
	Damaged in farmers field	Looted in farmers field	Damaged at home	Looted at home	Consumed by invading forces	Others	Total
Antsokia Gemza			0.85	0.28	0.10		1.23
Epherata ena gidm	4.15	0.56	1.04	360.12	5.63	1.15	37.27
Tarma bere	2.59	0.28	64.76	840.38	2.91	0.10	911.02
Moja ena wodera	0.02				0.01		0.03
Kewet			0.03				0.03
Menze keya	0.09	4.13	0.30	55.22	0.33		60.07
Shewa Robit	0.42	20.40	5.09	1,352.69	45.50		1,424.10
Ataye	15.82	1.39	19.43	1,785.01	81.66	0.65	1,903.96
Mehal Meda	0.02		0.23	227.48	42.37	0.02	270.12
Sum Total	23.11	26.76	91.73	4,621.17	178.51	1.92	4,943.20

Table 116. *Damage to different types of spices in North Shewa Woredas damage condition estimated in quintal*

Districts	Damaged in farmers field	Looted in farmers field	Damaged at home	Looted at home	Consumed by invading forces	Others	Total
Antsokia Gemza			30,000	15,000	1,000		46,000
Epherata ena gidm	99,600	6,055	8,840	6,040,953	137,080	20,700	6,313,228
Tarma bere	38,200	4,900	1,261,256	16,478,717	68,815	1,000	17,852,888
Moja ena wodera	190				195		385
Kewet			300				300
Menze keya	2,040	3,000	6,300	1,053,285	10,300		1,074,925
Shewa Robit	14,050	415,000	166,600	28,897,824	937,900		30,431,374
Ataye	214,180	52,850	428,613	34,624,549	414,060	24,000	35,758,252
Mehal Meda	400		4,000	4,293,040	845,843	800	5,144,083
Total	368,660	481,805	1,905,909	91,403,368	2,415,193	46,500	96,621,435

Table 117. *Damage of different types of spices crops in North Showa woredas estimated in birr*

Crops	Damage estimate in quintal					Damage estimate in birr				
	Zequal	Dahena	Gaz gibella	Sekota Zuria	Sum Total	Zequal	Dahena	Gaz gibella	Sekota Zuria	Total
Gin ger	0.32	0.58		0.56	1.46	1,760	3,190		3,080	8,030
Turmeric	0.03				0.03	300				300
White cumin	0.60	0.60			1.20	5,700	5,700			11,400
thyme	2.30				2.30	24,150				24,150
basil		0.81		0.34	1.15		16,200		6,800	23,000
Long pepper	0.20			0.32	0.52	T 6,000			6,240	12,240

others	285.20	0.25	43.88	0.37	329.70	4,340,383	3,000	835,510	8,880	5,187,773
Total	288.65	2.24	43.88	1.59	336.36	4,378,293	28,090	835,510	25,000	5,266,893

Table 118. Destruction of different types of spices in Waghimra woredas estimated in quintals and birr

Damage conditions conditions	Damage estimate in quintal					Damage estimate in birr				
	Zequal	Dahena	Gaz gibella	Sekota Zuria	Sum Total	Zequal	Dahena	Gaz gibella	Sekota Zuria	Total
Damage in farmers field	70.44	1.85		1.25	73.54	78,905	22,290		18,200	119,395
Loot in farmers field	2.39			0.34	2.73	32,255			6,800	39,055
Damage at home	0.94				0.94	17,700				17,700
Loot at home	212.97	0.39	43.88		257.24	4,195,783	5,800	835,510		5,037,093
Consumed by the invading force	1.57				1.57	42,650				42,650
others	0.34				0.34	11,000				11,000
Total	288.65	2.24	43.88	15.90	336.36	4,378,293	28,090	835,510	25,000	5,266,893

Table 119. Damage of different types of spices in Waghimra woredas by damage condition, estimated in quintals and birr

Crops	Damage estimate in quintal					Damage estimate in birr				
	Jile Timuga	Artuma fursie	Kemissie	Bati City	Sum Total	Jile Timuga	Artuma fursie	Kemissie	Bati City	Total
Ginger				0.07	0.07				385	385
Cardamon				0.09	0.09				960	960
Turmeric	0.03				0.03	200				200
White cumin				0.09	0.09				1,000	1,000
Black cummin				0.07	0.70				1,680	1,680
Thyme	0.23				0.23	2,000				2,000
Coriander				0.10	0.10				120	120
basil				1.13	1.13				8,100	8,100
Long pepper		0.12			0.12		2,590			2,590
Others	331.33	127.14	59.77	58.69	576.93	6,330,231	2,340,245	350,930	263,120	9,284,526
Total	331.59	127.26	59.77	60.24	578.86	6,332,431	2,342,835	350,930	275,365	9,301,561

Table 120. Damage of different types of spices in Oromo ethnic administrative zone woredas estimated in quintals and birr.

Damage conditions	Destruction estimate in quintal					Destruction estimate in birr				
	Jile Timuga	Artuma fursie	Kemisie	Bati City	Sum Total	Jile Timuga	Artuma fursie	Kemisie	Bati City	Total
Damage in farmers field	5.11		0.44	0.41	5.96	182,100		8,320	8,150	198,570
Loot in farmers field	0.13	0.10	0.05	1.43	1.71	4,350	2,350	1,500	32,330	40,530
Damage at home	0.60	60.66	2.97	0.20	64.43	11,300	1,220,890	90,450	6,400	1,329,040
Loot at home	325.67	66.25	56.19	57.99	506.10	6,132,381	1,111,795	246,460	223,510	7,714,146
Consumed by the invading force	0.08	0.25	0.12	0.15	0.60	2,300	7,800	4,200	4,375	18,675
others				0.06	0.06				600	600
Total	331.59	127.26	59.77	60.24	578.86	6,332,431	2,342,835	350,930	275,365	9,301,561

Table 121. *Damage of different types of spices in Oromo ethnic administration zone woredas estimated in quintals and birr.*

Types of spice crops damaged	Damage estimated in Quintals						Damage estimated in Birr					
	Menafesha	Buambua wuha	Hote	Arada	Segno Gebeya	Sum Total	Menafesha	Buambua wuha	Hote	Arada	Segno Gebeya	Total
ginger	0.02	0.50				0.52	120	10,000				10,120
Cardamon		0.25				0.25		2,000				2,000
White cumin	2.00					2.00	16,000					16,000
coriander	0.01					0.01	250					250
Rue	0.16	0.39				0.55	1,850	11,600				13,450
Koseret	0.15					0.15	3,000					3,000
basil	0.50					0.50	11,000					11,000
Turmeric	0.20	0.15				0.35	7,000	5,000				12,000
Others	2,302.60	1,545.04	62.66	41.44	149.27	4,101.01	46,027,858	29,457,138	899,030	872,010	2,621,870	79,877,906
Total	2,305.64	1,546.33	62.66	41.44	149.27	4,105.34	46,067,078	29,485,738	899,030	872,010	2,621,870	79,945,726

Table 122. *Destruction of different types of spices in Dessie city sub-cities in quintals and Birr*

Damage conditions	Damage estimated in Quintals						Damage estimated in Birr					
	Menafesha	Buambua wuha	Hote	Arada	Segno Gebeya	Sum Total	Menafesha	Buambua wuha	Hote	Arada	Segno Gebeya	Total
Damage in farmers field	57.15	435.61	0.20			492.96	1,108,320	8,014,500	18,000			9,140,820
Loot in farmers field	41.90	1.50	0.18	0.63		44.21	842,300	24,750	5,050	6,550		878,650
Damage at home	8.80	100.37	1.52	1.83	0.35	112.87	188,375	2,012,500	38,300	51,500	10,500	2,301,175
Loot at home	2147.86	946.96	6.14	15.65	146.73	3317.34	42,856,678	18,107,048	822,300	346,760	2,567,410	64,700,196
Consumed by the invading force	49.37	61.89	0.61	23.33	2.18	137.38	1,059,305	1,326,940	15,080	467,200	43,660	2,912,185
others	0.56		0.01		0.01	0.58	12,100		300		300	12,700
Total	2305.64	1546.33	62.66	41.44	149.27	4105.34	46,067,078	29,485,738	899,030	872,010	2,621,870	79,945,726

Table 123. *Damage of different types of spices in the sub-cities of Dessie city administration in different conditions of damage, estimated in quintals & birr.*

4. Damage or Stolen on Perennial Fruit Crops

All invaded districts of each administration zone are known to grow all types of perennial fruit crops. The study revealed that quantity of 74,284 qt and 74,820 qt of perennial fruit crops were either stolen or damaged or eaten in the orchards at South Wollo and North Shewa zones, respectively. In terms of the perennial fruit crop types, the highest damage was 38,455 qt of banana (Table 124). In addition, the study showed that the estimated costs of each perennial fruit crop reported in each zones and districts (Table 124-129).

Crops	Permenant crops damged in quintal by zone level								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag ethnic zone	Oromo special zone	Dessie City	Total
Banana	329.80		1,288.01	2,088.71	34,563.17	118.08	67.47		38,455.24
Orange	68.90		1,200.86	9,092.27	13,645.45	35.57	6,833.08	12.40	30,888.53
Papaya	187.45		3,891.54	1,169.24	360.40	25.45	1,155.06	1.00	6,790.13
Lemon	101.70		265.24	340.15	289.34	48.80	78.52		1,123.75
Apple	152.19		500.98	1,724.22	563.91	22.05	7.50	16.06	2,986.91
Mango	185.59		6,329.44	3,760.16	2,529.60	83.92	966.81	31.50	13,887.02
Peach	184.73		14.06	617.20	15,382.71	13.80	3,540.00		19,752.50
coffee	476.19		570.78	8,835.61	2,230.02	19.43	159.64	3.74	12,295.40
Guava	49.40		912.92	1,416.71	389.28	50.22	1,848.25	1.00	4,667.78
Pinapple	5.00		3.15	76.35		25.90			110.40
Tangerine	174.10		893.83.5	3,202.71	1,217.11	23.12	6.10		5,516.98
Gesho	1,526.93		2173.82.5	391.13	500.82	51.46	69.03	102.00	4,815.19
Others	332.87	2.40	36,790.42	681,575.01	3,148.39	86.25	1,782.90	191.10	723,909.33
Total	3,775	2	54,835	714,289	74,820	604	16,514	359	865,198

Table 124. *Damage or stolen perennial crops (qt) in the invaded administration zones*

Crops	Damaged or stolen perennial crops by one and estimated damage in birr								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag ethnic zone	Oromo special zone	Dessie City	Total
Banana	1,649,000		5,645,840	10,515,590	238,086,400	620,400	337,850		256,855,080
Orange	826,800		9,310,180	108,239,188	163,637,230	370,040	77,550,050	38,500	359,971,988
Papaya	1,124,700		20,526,105	6,964,550	1,418,750	151,520	477,850	10,000	30,673,475
Lemon	610,200		707,770	2,126,200	1,619,140	292,800	444,760		5,800,870
Apple	5,326,650		16,745,410	60,247,725	19,567,280	770,300	262,500	120,560	103,040,425
Mango	1,299,130		31,774,316	25,497,800	25,626,525	239,570	5,522,030	42,000	90,001,371

Peach	923,625		76,300	3,086,000	76,913,150	59,800	17,700,000		98,758,875
coffee	17,142,840		14,160,626	314,676,470	77,522,170	619,760	5,663,800	120,700	429,906,366
Guava	172,900		3,137,435	4,946,786	1,383,135	175,385	4,621,575	10,000	14,447,216
Pinapple	25,000		25,750	381,750		129,500			562,000
Tangerine	783,450		4,059,388	14,412,345	5,501,425	104,040	15,500		24,876,148
Gesho	30,538,600		42,285,348	6,789,400	9,931,700	1,029,200	239,900	206,000	91,020,148
Others	1,664,350	21,800	182,917,189	3,406,926,355	15,199,950	143,020	8,553,960	602,355	3,616,028,979
Total	62,087,245	21,800	331,371,657	3,964,810,159	636,406,855	4,705,335	121,389,775	1,150,115	5,121,942,941

Table 125. *Estimated costs (birr) of damaged or stolen perennial crops in different invaded administration zones*

Crops	Destruction of Permanant crops by number and invaded administrative zones							
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag himera	Oromo special zone	Total
Banana	9,646		33,293	41,029	20,451	2,631	291	107,341
Orange	420		3,366	10,274	833	323	259	15,475
Papaya	1,681		3,021	5,111	1,653	282	324	12,072
Lemon	640		1,438	3,300	206	728	226	6,538
Apple	727		3,328	4,237	1,372	282	-	9,946
Mango	1,483		8,586	19,186	640	672	219	30,786
Peach	1,014		2,431	23,764	1,087	1,387	420	30,103
coffee	8,680		3,778	45,529	2,279	1,015	50	61,331
Guava	308		928	20,453	205	498	357	22,749
Pinapple	250		11	7,602		825		8,688
Tangerine	5,318		3,641	7,269	566	717		17,511
Gesho	23,063		24,256	14,542	15,434	2,129		79,424
Others	16,634	36,833	2,234,611	5,217,884	82,739	1,617	72,423	7,662,741
Total	69,864	36,833	2,322,688	5,420,180	127,465	13,106	74,569	8,064,705

Table 126. *Quantity of damaged or stolen perennial crops (qt) in farmer fields in different invaded administrative zones*

Crops	Destruction of permananat crop plants estimated by zone and birr							
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag himera	Oromo special zone	Total
Banana	38,584,000		133,172,000	164,116,000	81,804,000	10,524,000	1,164,000	429,364,000
Orange	39,840,000		319,320,000	778,370,000	83,300,000	19,160,000	25,900,000	1,265,890,000
Papaya	20,172,000		36,252,000	61,332,000	19,836,000	3,384,000	3,888,000	144,864,000
Lemon	57,600,000		129,420,000	297,000,000	18,540,000	65,520,000	20,340,000	588,420,000
Apple	43,620,000		199,680,000	254,220,000	81,450,000	16,920,000		595,890,000

Mango	326,260,000		1,888,920,000	4,220,920,000	140,800,000	147,840,000	48,180,000	6,772,920,000
Peach	25,350,000		60,775,000	594,100,000	27,175,000	34,675,000	10,500,000	752,575,000
coffee	156,240,000		68,004,000	819,522,000	41,022,000	18,270,000	900,000	1,103,958,000
Guava	10,780,000		32,480,000	715,855,000	7,175,000	17,430,000	12,495,000	796,215,000
Pinapple	62,500		2,750	1,900,500		206,250		2,172,000
Tangerine	239,310,000		163,845,000	327,105,000	25,470,000	32,265,000		787,995,000
Gesho	288,287,500		303,200,000	181,775,000	192,925,000	26,612,500		992,800,000
Others	66,536,000	147,332,000	8,938,444,000	20,871,536,000	330,956,000	6,468,000	289,692,000	30,650,964,000
Total	1,312,642,000	147,332,000	12,273,514,750	29,287,751,500	1,050,453,000	399,274,750	413,059,000	44,884,027,000

Table 127. *Damage or stolen estimated costs (birr) of perennial fruit crops in different invaded administration zones*

Damage conditions	Destruction of permananat crops in quintals by administrative zones								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag	Oromo special zone	Dessie City	Total
Damage in farmers field	3,400.5	1.90	44,624.5	708,879.8	58,385.3	426.3	9,048.64	348.8	825,115.6
Loot in farmers field	208.85		7,578.95	3,553.32	6,867.08	82.46	7,226.30	2.41	25,519.37
Damage at home	92.49		1,269.21	359.82	1,254.05	4.30	0.21		2,980.07
Loot at home	7.50	0.50	553.34	844.32	5,066.86	2.95	227.21	7.07	6,709.75
Consumed by the invading force	62.00		49.82	77.97	3,235.27	5.95		0.50	3,431.51
others	3.50		759.23	574.45	11.61	82.05	12.00		1,442.84
Total	3,774.6	2.40	54,835.0	714,289.4	74,820.2	604.1	16,514.4	358.8	865,199.1

Table 128. *Table 128: Status and amount of destruction of permanent crops in the invaded areas administrative zones estimated in quintals*

Damage conditions	Destruction of Permanent crops estimated by zone and in birr								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag ethnic zone	Oromo adm. zone	Dessie City	Total
Damage in farmers field	56,017,665	20,000	260,365,298	3,917,005,156	466,257,285	3,147,935	52,803,610	1,029,010	4,756,645,959
Loot in farmers field	3,201,750		52,808,321	36,930,193	74,701,220	856,400	67,407,285	13,000	235,918,169
Damage at home	1,769,330		6,973,088	2,546,520	21,500,500	80,700	2,580		32,872,718
Loot at home	134,000	1,800	5,666,030	4,895,915	55,041,580	24,950	1,116,300	91,305	66,971,880
Consumed by the invading force	947,000		471,580	553,485	18,848,220	64,825		16,800	20,901,910
others	17,500		5,087,340	2,878,890	58,050	530,525	60,000		8,632,305
Total	62,087,245	21,800	331,371,657	3,964,810,159	636,406,855	4,705,335	121,389,775	1,150,115	5,121,942,941

Table 129. *Destruction of permanent crops in the invaded areas administrative zone and estimated in birr*

5. Destruction Occurred on Livestock in the Invaded Areas of The Amhara Region

Agriculture is the backbone of livelihoods of the Amhara people living in the rural areas. Livestock husbandry is one of the various agricultural activities and the most important next to crop production. In the areas invaded by the invading force of Tigray, the livestock husbandry sector has a significant contribution. However, the invading force destroyed high number of livestock in the areas they invaded. The invading force also caused damage to the animal husbandry by killing, looting and consuming them.

According to the victims, the members of the raiding group looted the animals they found in the house or in the wild, butchered them, and shot them to kill them. According to a study participant and a victim of the problem in Dessie zuria woreda;

"... In terms of livestock, the animals were shot and slaughtered. The event is hard to say and no word to say. We left our cattle in the field and were forced to flee. In addition, they said that they bought our bulls from the gate or tied them, and after walking for a while, they threatened to kill us. They kill a bull and carry only half of the carcass and leave the rest. When they (members of the invading force) drove a bull to the place where they were, if they refused, they killed it with a bullet and brought it easily, so we tore it apart and carried it dripping blood. And when we return, we gather our sheep and take them away. Now we have nothing to lick and taste."

The damage assessment results confirmed that the invading force used to take away the farmers' property, whether it was animals or other property which they had sold. During a group discussion participant who lives in Dessie zuria woreda;

"...There is no farmer whose cattle, sheep, chickens have not been robbed, slaughtered or eaten. Milk cows worth of 700,000 birr were also shot dead. Farmers do not have a habit of saving in the bank rather all the money they get from selling their grains and animals keep in the house. As a result, they looted any money found in the house. They would check the whole house, for example the yard, water, even ashes and compost. They would stop at every street and check pockets. Not only at the office level, but at the individual level, he is going into every house, handcuffing and stabbing us with a knife,

saying who is rich and who has money, he looted all our money.”

The study result showed that the people living in the occupied areas by the invading forces were exposed to serious problems due to the large-scale looting and destruction of resources.

In the focus group discussion, the informant who lives in a village at Dessie stated:

“...Even the cereal grain seeds left over from the damage or stolen was available for sale and food by the community. There is currently a shortage of food grains. Now this farmer has no to sow if it rains. So far, no one has a kilo of grain to give the other person. In general, thus our kebele is in a critical situation to get grains for food and to sow.. “

In numerical terms, the invaded administrative zones with the highest destruction of livestock by the invading forces were North Wollo 85,621, North Shewa 80,050, South Wollo 72,337, and North Gondar 30,278. Regarding the destruction of livestock, chickens 153,693, goats 35,464, sheep 27,636, bulls 8,701, bee swarms 7,044, and cow 4,638 were some highest damaged livestock, respectively. of livestock damaged in the invaded areas was 305,168 (Table 130).

Animals	Livestock destruction in number and administrative zone level								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag ethnic zone	Oromo special zone	Dessie City	Total
oxen	2,175	193	3,135	1,634	740	563	174	87	8,701
cows	1,441	16	1,168	912	505	322	122	152	4,638
Bull and hiefers	887	9	1,658	1,309	416	171	57	69	4,576
Calf	285	6	1,123	751	478	90	45	50	2,828
sheep	3,141	275	7,567	8,007	4,826	1,053	338	2,429	27,636
Goat	9,418	170	6,839	7,534	8,024	1,603	1,144	732	35,464
Mule and horse	118	79	334	222	57	14	11	44	879
Donkeys	707	15	733	888	276	114	50	142	2,925
camels	349	60	1,244	1,990	892	211	144	16	4,906
Chicken	10,299	7,400	35,013	37,771	45,325	4,698	3,770	9,417	153,693
Bees swarm	1,458	28	2,268	2,092	535	575	55	33	7,044
Others			24,539	9,227	17,976	20	81	35	51,878
Total	30,278	8,251	85,621	72,337	80,050	9,434	5,991	13,206	305,168

Table 130. *The number of livestock destroyed by Tigray invaders by type, number, and administrative zone level*

Tigray's invading force was organized into different groups during an armed invasion. The main groups were robbers, murderers, and rioters. According to this, when looking at the numbers of the damage done to animals by the invading group, 174,708 were looted, 37,516 were killed in anger of invading forces, and 92,944 were slaughtered for consumption, and their food leftover was thrown to the fields for dogs and other wild animals. The total number of animals destroyed is 305,168 (Table 131).

Zones	Livestock damage situations in number			
	looted	Killed	Slaughtered	Total
North Gondar	8,481	6,747	15,050	30,278
South Gondar	8,086	59	106	8,251
North Wollo	54,287	10,412	20,922	85,621
South Wollo	39,484	8,635	24,218	72,337
North Shewa	52,303	7,451	20,296	80,050
Wag himera	2,559	731	6,144	9,434
Oromo special zone	1,816	1,672	2,503	5,991
Dessie City	7,692	1,809	3,705	13,206
Total	174,708	37,516	92,944	305,168

Table 131. *Tigray's invading force destroyed a large number of livestock, as estimated by the administrative zone.*

As shown in Table 132, livestock damage in invaded administrative zones that had been abandoned by the invading force were highly extreme. When this damage was estimated in terms of birr, camels 371,059,750 birr (Three Hundred Seventy One Million Fifty Nine Thousand Seven Hundred Fifty Birr), Bull 269,701,522 birr (Two Hundred Sixty Nine Million Seven Hundred One Thousand Five Hundred Fifty Two Birr), Goat 155,284,756 birr (one hundred fifty five million two hundred eighty four thousand seven hundred fifty-six Birr), sheep 116,795,622 (one hundred sixteen million seven hundred ninety five thousand six hundred twenty-two Birr) and cow 107,179,710 birr (one hundred Seven million one hundred seventy-nine thousand seven hundred ten Birr) are mainly the top references damage. At the administrative zone level, South Wollo 419,165,297 birr (four hundred nineteen million one hundred sixty-five thousand two hundred ninety-seven Birr), North Wollo 321,396,857 birr (three hundred twenty-one million three hundred ninety-six thousand eight hundred fifty-seven Birr), North Gondar 196,698,524 (One Hundred ninty Six Million three Hundred Ninety-six thousand Five Hundred Twenty-Four Birr) and

North Shewa 177,482,754 birr (One Hundred seventy-seven Million four Hundred eighty-two thousand Seven Hundred fifty-Four Birr) are the main top references damage. In general, the total damage of livestock recorded were 1,239,909,627 Birr (one billion two hundred thirty-nine million nine hundred nine thousand six hundred twenty-seven Birr).

Animals	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag ethnic zone	Oromo special zone	Dessie City	Total
oxen	65,295,670	2,684,300	86,226,643	63,273,100	25,431,859	18,013,900	5,193,050	3,583,000	269,701,522
cows	23,656,850	475,000	28,619,070	25,196,710	14,221,500	6,060,280	3,056,300	5,894,000	107,179,710
Bull and hiefers	17,205,870	305,000	24,824,770	27,842,150	6,998,665	3,025,750	865,500	1,485,500	82,553,205
Calf	2,112,150	40,000	9,233,958	7,155,850	4,321,700	689,300	510,900	552,100	24,615,958
sheep	13,146,927	1,044,700	32,496,877	36,509,244	18,770,274	4,801,805	1,474,815	8,550,980	116,795,622
Goat	35,028,565	648,850	29,554,684	40,789,752	33,734,802	7,313,801	5,022,753	3,191,550	155,284,756
Mule and horse	1,793,420	676,100	4,745,300	3,195,500	853,400	202,075	114,500	502,500	12,082,795
Donkeys	4,287,900	52,000	4,755,310	5,916,240	1,377,110	605,710	340,500	515,900	17,850,670
camels	25,738,600	24,500	81,479,200	188,202,200	50,246,850	16,857,100	8,440,200	71,100	371,059,750
Chicken	4,269,372	2,925,944	13,125,069	15,888,473	19,753,214	1,482,744	1,399,164	4,239,576	63,083,556
Bees swarm	4,163,200	46,200	6,026,470	5,046,340	1,395,130	1,899,220	170,650	105,500	18,852,710
Others			309,506	149,738	378,251	2,200	1,278	8,400	849,373
Total	196,698,524	8,922,594	321,396,857	419,165,297	177,482,754	60,953,885	26,589,610	28,700,106	1,239,909,627

Table 132. *Estimated damage of livestock by the invading force of Tigray in Birr*

When the destruction of livestock was estimated in Birr, the looted amount haswas 669,894,764 (six hundred sixty-nine million eight hundred ninety-four thousand seven hundred sixty-four Birr), the number of those who were killed for angering the invading force was 283,331,733 Birr (two hundred eighty-three million three hundred thirty one thousand seven hundred thirty-three Birr) and those slaughtered for consumption and thrown in the field for dogs and wild animals were 286,683,131 Birr (two hundred eighty six million six hundred eighty three thousand one hundred thirty one Birr). The total number of livestock destroyed was 1,239,909,627 Birr (one billion two hundred thirty-nine million nine hundred nine thousand six hundred twenty-seven Birr) (Table 133).

Zones	Livestock damage situations in birr			
	Looted	Killed	Slaughtered	Total
North Gondar	64,150,495	64,784,195	67,763,834	196,698,524
South Gondar	8,146,924	454,400	321,270	8,922,594
North Wollo	182,945,878	81,668,079	56,782,901	321,396,857
South Wollo	240,294,055	97,309,095	81,562,147	419,165,297
North Shewa	123,253,089	14,981,449	39,248,216	177,482,754

Wag himera	24,854,119	6,081,615	30,018,151	60,953,885
Oromo adm. zone	14,232,978	7,346,570	5,010,062	26,589,610
Dessie City	12,017,226	10,706,330	5,976,550	28,700,106
Total	669,894,764	283,331,733	286,683,131	1,239,909,627

Table 133. *Destruction of livestock by damage condition and price estimate in birr on different administrative zone*

The destruction of livestock in the invaded woreda under the North Gondar administrative zone was very high. The type and number of livestock that suffered the most damage were chicken 10,299, goat 9,418, sheep 3,141, bull 2,175, beehive 1,458, and cow 1,441. At the woreda level, Dabark 13,134, Adiarkai 10,108, and Dabat 6,878 were the main ones (Table 134).

Animals	Livestock damage in North Gondar invaded woredas in number					
	Adiarkai	Janamora	Debark	Dabat	Telemet	Total
oxen	987	11	882	292	3	2,175
cows	810	5	445	179	2	1,441
Bull and hieifers	454	7	264	162		887
Calf	125	1	60	99		285
Sheep	661	7	1,192	1,263	18	3,141
Goat	3,239	7	4,808	1,315	49	9,418
Mule and horse	15	8	29	66		118
Donkeys	203	7	341	152	4	707
Camels	184		124	41		349
Chicken	2,795		4,478	2,999	27	10,299
Bees swarm	635		511	310	2	1,458
Total	10,108	53	13,134	6,878	105	30,278

Table 134. *The number of livestock destroyed by Tigray invaders in the North Gondar administrative zone invaded woredas*

When ingingassessing the price and type of the livestock that aswas injured above, the estimated damage of bull 65,295,670 birrs (sixty-five million two hundred ninety-five thousand six hundred seventy birrs), goat 35,028,565 birrs (thirty-five million twenty-eight thousand five hundred sixty-five berr), camel 25,738,600 (twenty-five million seven hundred thirty-eight thousand six hundred birrs) and cow 23,656,850 cow berr (twenty-three million six hundred sixty-five thousand eight hundred fifty birrs) whasas mainly mentioned as the top damage respectively. At the woreda administration level, Adairkai 82,734,316 berr (eighty-two million

seven hundred thirty-four thousand three hundred sixteen birrs), Debarak 79,890,440 birr (seventy-nine million eight hundred ninety thousand four hundred forty birrs) and Janamora 33,001,153 birr (thirty-three million one thousand One hundred fifty-three Birr) were recorded. In general, the total livestock damage in the North Gondar administrative zone was 196,698,524 Birr (one hundred ninety-six million six hundred ninety-eight thousand five hundred fifty-four Birr) (Table 135):

Animals	Livestock damage in North Gondar invaded woredas estimated in birr					
	Adiarkai	Janamora	Debark	Dabat	Telemet	Total
oxen	28,888,860	255,200	27,467,660	8,608,050	75,900	65,295,670
cows	12,706,700	84,700	6,889,050	3,939,000	37,400	23,656,850
Bull and hiefers	9,078,550	106,220	5,043,500	2,977,600		17,205,870
Calf	862,250	6,500	396,400	847,000		2,112,150
Sheep	2,413,930	37,790	5,473,592	5,153,815	67,800	13,146,927
Goat	11,058,614	37,950	19,379,271	4,399,410	153,320	35,028,565
Mule and horse	210,000	126,300	426,650	1,030,470		1,793,420
Donkeys	1,194,915	48,150	2,077,495	946,840	20,500	4,287,900
Camels	13,371,000		9,479,000	2,888,600		25,738,600
Chicken	1,158,477		1,822,972	1,278,738	9,185	4,269,372
Bees swarm	1,791,020		1,434,850	931,630	5,700	4,163,200
Total	82,734,316	702,810	79,890,440	33,001,153	369,805	196,698,524

Table 135. Destruction of livestock by Tigray invaders in the North Gondar administrative zone of invaded woredas estimated in birr .

In the North Gondar zone, the number of animals that have been injured is 15,050. When valued in Birr, it will be Birr 67,763,834 (sixty-seven million seven hundred sixty-three thousand eight hundred thirty-four Birr). The number of animals killed was 6,747; The amount of the damage was 64,784,195 Birr (Sixty Four Million Seven Hundred Eighty-Four Thousand One Hundred Ninety-Five Birr). The number of animals stolen was 8,481; The amount of the damage is 64,150,495 Birr (Sixty Four Million One Hundred Fifty Thousand Four Hundred Ninety-Five Birr). The total number of animals destroyed is 30,278, and the amount of damage is 196,698,524 Birr (one hundred ninety-six million six hundred ninety-eight thousand five hundred twenty-four Birr) (Table 136).

District	Damage situation of livestock by invading forces							
	Livestock destruction in a number				Livestock destruction in birr			
	looted	Killed	Slaughtered	Sum total	looted	Killed	Slaughtered	Total
Adiarkai	3,810	3,572	2,726	10,108	30,498,960	40,104,714	12,130,642	82,734,316
Janamora		53		53		702,810		702,810

Debank	3,137	1,820	8,177	13,134	25,079,625	13,942,257	40,868,558	79,890,440
Dabat	1,492	1,278	4,108	6,878	8,513,905	9,877,314	14,609,934	33,001,153
Telemet	42	24	39	105	58,005	157,100	154,700	369,805
Total	8,481	6,747	15,050	30,278	64,150,495	64,784,195	67,763,834	196,698,524

Table 136. *Damage Situation of livestock by invading forces in North Gondar administrative Zone of invaded woredas estimated in number and birr*

In the limited days stay that the invading force armed invasion in the South Gondar administrative zone, despite fighting as much as possible in the four woredas they invaded, they injured livestock. According to the type of livestock, the highest number of damage was recorded in the following order of damage numbers chicken 7400, sheep 275, oxen 193, goat 170, mule and horse 79, and donkey 75. At the woreda level, the number of damage that happened on livestock was Begemider 3,142, ingagainst 2,890 Farta 1,726, and Nefas uchmuch 493. In general, the total numbers of livestock destroyed by invading forces in the invaded administrative zone were 8,251 (Table 137).

Animals	Livestock damage number in south Gondar invading woredas				
	Farta	Laygaint	Guna Begamider	Nefas Meucha	Total
oxen	40	82	56	15	193
Cows	3	4		9	16
Bull and hiefers		2		7	9
Calf		4		2	6
Sheep	73	105	43	54	275
Goat	37	76	33	24	170
Mule and horse	39	31	5	4	79
Donkey	10	18	36	11	75
Chicken	1,538	2,570	2,925	373	7,400
Bees swarms	6	18	4		28
Total	1,726	2,890	3,142	493	8,251

Table 137. *The number of livestock destroyed by the invading force of Tigray in the South Gondar administrative zone woredas*

When the damage of livestock was estimated in terms of Ethiopian birr, the highest amount of damage was incurred in order of descending such as chicken 2,925,944 birr (two million nine hundred twenty-five thousand nine hundred forty-four birr), bull 2,684,300 birr (two million six hundred eighty-four thousand three hundred birrs), sheep 1,044,700 birr (one million forty-four thousand seven hundred birrs), mule and horse 676,100 birr (six hundred seventy six thousand one hundred birr) and goat 648,850 birr (six hundred forty-eight thousand eight hundred fifty birrs) aswas recorded. The damages that occurred on the livestock at the woreda level are mentioned in order of an amount such as Lai Giant 2,743,025 birr (two million seven

hundred forty-three thousand and twenty-five birr), Farta 2,505,455 birr (two million five hundred five thousand four hundred fifty-five birr), Guna Begemdir 2,289,144 birr (two million Two hundred eighty-nine thousand one hundred forty-four birr) and wind-ouNefas Meucha 1,384,970 birr (one million three hundred eighty-four thousand nine hundred seventy birrs) were recorded in the study (Table 138).

Animals	Livestock damage in south Gondar invaded woredas estimated in Birr				
	Farta	Laygaint	Guna Begamider	Nefas Meucha	Total
Oxen	660,000	902,000	762,800	359,500	2,684,300
cows	135,000	100,000		240,000	475,000
Bull and hieifers		40,000		265,000	305,000
calf		25,000		15,000	40,000
sheep	344,500	338,600	156,400	205,200	1,044,700
Goat	197,500	250,800	127,050	73,500	648,850
Mule and Horse	407,550	180,500	41,250	46,800	676,100
Donkeys		29,500	26,000	21,000	76,500
Chicken	741,105	856,825	1,169,044	158,970	2,925,944
Bees swarms	19,800	19,800	6,600		46,200
Total	2,505,455	2,743,025	2,289,144	1,384,970	8,922,594

Table 138. *Estimated Livestock destruction by the Tigray invasion force in the districts of the South Gondar administrative zone in Ethiopian birr*

the ,, the states of the destruction of livestock were damaged due to looting, killing, and consuming. Therefore, most of the destruction of animals in the administrative zone was 8,086 looted, which in terms of birr became 8,146,924 Birr (eight million one hundred forty-six thousand nine hundred twenty-four birr). Therefore, the total number of livestock destroyed in the administrative zone was 8,251 in number, and when it is estimated in birr, it reaches about 8,922,594 birr (eight million nine hundred twenty-two thousand, five hundred ninety-four birr) (Table 139).

Districts	Livestock damage situations during the armed invasion							
	Livestock damage in a number				Livestock damage in estimated birr			
	Looted	Killed	Slaughtered	Sum Total	Looted	Killed	Slaughtered	Total
Farta	1,698	6	22	1,726	2,430,655	64,500	10,300	2,505,455
Laygaint	2,857	28	5	2,890	2,532,025	198,000	13,000	2,743,025
Guna Begamider	3,122	12	8	3,142	2,232,344	54,000	2,800	2,289,144
Nefas Meucha	409	13	71	493	951,900	137,900	295,170	1,384,970
Total	8,086	59	106	8,251	8,146,924	454,400	321,270	8,922,594

Table 139. *Livestock destroyed by the invading force in the invading woredas of South Gondar administrated zone in estimated birr*

It is known that all the woredas in the North Wollo administrative zone

have been invaded by the invading force for a long time (more than five months). Due to this, the livestock damage in the administrative zone has suffered a lot. Considering the type of livestock, chickens 35,013, sheep 7,567, goats 6,839, bulls 3,135, beehives 2,268, bulls and heifers 1,658, and cows 1,168 were the leading victims. When we assess at the woreda level, Gazo 23,961, Meket 16,524, Wadla 10,846, and Habru 10,748 were among the worst affected. The study confirmed that the total number of livestock destroyed in the administrative zone was 85,621 (Table 140).

Districts	Destruction of livestock type and number												
	Oxen	Cows	Bull and heifers	calf	sheep	Goat	Mule and Horse	Donkeys	Camels	Chicken	Bees swarms	others	Total
Bugna	28	21	7	6	86	81		9	92	1,358	27	369	2,084
Raya kobo	145	109	61	17	249	426	7	50	60	1,889	13	666	3,692
Gidan	16	6	10	2	77	6		10	7	202	2	748	1,086
Meket	239	170	153	65	743	430	92	107	282	6,257	943	7,043	16,524
Wadla	138	102	84	84	1,540	236	106	119	3	6,124	568	1,742	10,846
Mersa	63	41	31	14	339	308	1	63	5	2,834	14		3,713
Gubalafto	266	121	60	70	703	663	24	74	26	2,636	106	311	5,060
Habru	441	316	234	85	994	3,898	28	202	335	3,862	348	5	10,748
Woldia	9	21		7	43	21	1	2		537	2		643
Lasta	1,038	32	598	19	128	135	5	14	16	294	41	207	2,527
Dawnt	7	7	3	2	49	57	8	10		279	108	56	586
Gazo	424	94	358	665	2,306	416	60	37	402	5,909	93	13,197	23,961
Angot	37	85	41	74	232	93	1	5	16	2,367		191	3,142
Kobo city	55	36	17	10	53	64	1	29		45		4	314
Lalibela	229	7	1	3	25	5		2		420	3		695
Total	3,135	1,168	1,658	1,123	7,567	6,839	334	733	1,244	35,013	2,268	24,539	85,621

Table 140. *Type and number of livestock destroyed by the invading forces in the invaded woredas of North Wollo administrative zone.*

When this damage is estimated in terms of birr, the damaged livestock bull and eiheifers become 86,226,643 birrs (eighty-six million two hundred twenty-six thousand six hundred forty-three birr), sheep damage become 85,765,878 birrs (eighty-five million seven hundred sixty-five thousand, eight hundred seventy-eight birr), and camels damage become 81,479,200 birrs (eighty-one million four hundred seventy-nine thousand two hundred birrs), goat damage becomes 29,554,684 birrs (twenty-nine million five hundred fifty-four thousand six hundred eighty-four birr) and cow damage become 28,619,070 birrs (twenty-eight million six hundred nineteen thousand seventy birrs) were Recorded (table 141).

At the woreda level, the damage was recorded in Gazo 63,144,475 birr (sixty-three million one hundred forty-four thousand four hundred seventy-five Birr), Habru 79,856,920 birr (seventy-nine million eight hundred

fifty-six thousand nine hundred twenty Birr), Lasta 35,756,406 birr (thirty-five million seven hundred fifty-six thousand four hundred six birrs), Mersa 27,785,490 birr (twenty-seven million seven hundred eighty-five thousand four hundred ninety birrs), Gubalafeto 22,543,595 birr (twenty-two million five hundred forty-three thousand five hundred ninety five birr), Wadla 22,460,195 birr (twenty-two million four hundred sixty thousand one hundred ninety-five Birr) and Meket 22,016,691 birr (twenty-two million sixteen thousand six hundred ninety-one birr) damage were recorded. In general, the total damage that occurred on livestock in the administrative zone was 321,396,857 birr (three hundred twenty one million three hundred ninety-six thousand eight hundred fifty-seven Birr) (table 141).

In different invaded woredas of the North Wollo administrative zone, the destruction of livestock resources was due to looting, killing, and eating by the invading forces. As a result, most of the destruction of livestock number in the administrative zone was 54,287 due to looting and when this destruction was estimated in cash, it reached 182,945,878 Birr (one hundred eighty-two million nine hundred forty-five thousand eight hundred seventy-eight Birr). In general, the total number of livestock destroyed in the administrative zone were 85,621, and when estimated in cash, it becomes 321,396,857 Birr (Three Hundred Twenty-One Million Three Hundred Ninety-Six Thousand Eight Hundred Fifty-Seven Birr) (Table 142).

Districts	Oxen	Cows	Bull and heifers	calf	sheep	Goat	Mule and Horse	Donkeys	Camels	Chicken	Bees swarms	others	Total
Bugna	704,200	358,100	103,300	39,850	352,465	278,740		55,100	5,980,000	527,703	66,500	39,971	8,505,929
Raya kobo	4,078,550	2,464,200	999,400	144,820	996,250	1,712,120	92,600	315,400	3,568,500	662,670	30,850	12,131	15,077,491
Gidan	478,310	106,700	123,950	16,400	371,545	25,400		49,500		68,320	5,000	4,214	1,249,339
Meket	5,499,380	2,889,500	2,131,600	556,500	3,148,170	1,407,635	1,289,500	642,000		2,068,105	2,328,260	56,041	22,016,691
Wadla	3,343,330	2,243,000	1,332,100	798,200	7,190,168	868,310	1,399,550	763,240	198,000	2,655,749	1,619,780	48,768	22,460,195
Mersa	2,116,000	1,949,500	798,000	166,000	1,413,900	1,273,100	7,000	268,300	18,520,000	1,203,690	70,000		27,785,490
Gubalafto	8,460,600	3,425,100	1,033,700	564,050	2,872,270	2,672,550	449,100	578,870	1,800,000	887,381	245,650	9,324	22,543,595
Habru	15,990,905	8,957,730	4,520,140	766,688	4,099,605	18,053,562	454,600	1,481,900	22,977,000	1,538,110	1,016,650	30	79,856,920
Woldia	380,000	796,000		61,500	140,900	79,300	10,000	6,700		188,260	3,000		1,665,660
Lasta	25,221,800	454,400	7,552,900	157,000	497,705	485,134	70,000	73,400	1,040,000	93,450	94,430	16,187	35,756,406
Dawnt	135,580	118,500	46,300	22,700	220,991	255,293	112,400	60,700		106,242	300,000	308	1,379,015
Gazo	9,715,588	1,612,200	5,241,600	5,188,550	9,703,524	1,748,830	834,550	221,600	26,634,500	1,907,125	243,350	93,058	63,144,475
Angot	906,400	1,244,140	597,280	539,700	1,160,985	372,710	6,000	27,100		837,034		28,515	5,719,864
Kobo city	2,324,000	1,751,000	330,000	172,000	238,300	304,500	20,000	205,500	761,200	43,180		960	6,150,640
Lalibela	6,872,000	249,000	14,500	40,000	90,100	17,500		6,000		338,050	3,000		7,630,150
Total	86,226,643	28,619,070	24,824,770	9,233,958	32,496,877	29,554,684	4,745,300	4,755,310	81,479,200	13,125,069	6,026,470	309,506	321,396,857

Table 141. Destruction of livestock types in North Wollo aminstrative zone woredas estimated in birr

Animals	Livestock damage situations by the invading forces							
	Livestock damage situations in the number				Livestock damage estimate in birr			
	Looted	Killed	Slaughtered	otal	Looted	Killed	Slaughtered	Total
Bugna	1,647	86	351	2,084	7,162,879	957,380	385,670	8,505,929
Raya kobo	1,971	720	1,001	3,692	3,542,271	9,193,050	2,342,170	15,077,491
Gidan	890	59	137	1,086	1,186,566	307,293	210,480	1,704,339
Meket	11,347	2,475	2,702	16,524	22,417,778	12,070,532	5,858,381	40,346,691
Wadla	6,264	1,179	3,403	10,846	9,467,342	8,035,610	4,957,243	22,460,195
Mersa	1,770	613	1,330	3,713	5,059,510	1,937,740	2,458,240	9,455,490
Gubalafto	2,627	1,448	985	5,060	8,731,159	11,180,101	2,632,335	22,543,595
Habru	3,669	2,560	4,519	10,748	40,009,610	21,008,253	18,839,057	79,856,920
Woldia	573	32	38	643	773,460	650,700	241,500	1,665,660
Lasta	1,905	419	203	2,527	28,577,892	6,232,939	945,575	35,756,406
Dawnt	309	80	197	586	626,108	402,681	350,225	1,379,015
Gazo	18,714	290	4,957	23,961	44,957,725	2,250,990	15,935,760	63,144,475
Angot	1,793	299	1,050	3,142	2,238,299	2,827,350	1,415,415	6,481,064
Kobo city	143	139	32	314	889,980	4,358,460	141,000	5,389,440
Lalibela	665	13	17	695	7,305,300	255,000	69,850	7,630,150
Total	54,287	10,412	20,922	85,621	182,945,878	81,668,079	56,782,901	321,396,857

Table 142. Destruction status, number, and estimated cost (birr) of livestock destroyed by the invading force in the North Wollo administrative zone

The invading forces have invaded 25 rural woredas and city administrations under the South Wollo administrative zone. During this armed invasion period, the invading force caused great damage to livestock in 17 woredas under the administrative zone. According to the type of livestock, chicken 37,771, sheep 8,011, goat 7,544, bull 1,724, beehive 2,092, bull and heifer 1,363, camel 1,522, and cow 1,002 were the leading livestock resources damaged highly. Looking at the woredas level, Kalu 11,072, Tehuledere 9,904, Werebobo 8,750, Leganbo 7,256, Kutaber 7,074, and Ambasal 6,930 were some of the worst affected woredas. The study confirmed that the total number of livestock destroyed in the administrative zone was 72,337 (Table 143).

Animals	Type and number of animals damaged												
	Oxen	Cows	Bull and heifers	calf	sheep	Goat	Mule and Horse	Donkeys	Camels	Chicken	Bees swarms	others	Total
Mekedela	2		2		39		1			1			45
Tenta	71	51	150	16	209	62	1	13		641	33	880	2,127
Kutaber	106	81	62	74	966	232	58	81		5,015	98	301	7,074
Ambasel	174	105	50	136	737	993	48	53	282	3,654	648	50	6,930
Tehuledrie	637	287	503	150	872	2,156	28	135	768	4,048	215	105	9,904
Worebobo	260	205	448	81	696	2,939	55	310	326	2,716	659	55	8,750
Kalu	110	69	24	25	260	294	11	12	132	5,375	135	4,625	11,072

Albuka	22					1							23
Dessie	41	19	27	75	355	32	13	17		757	30	1,568	2,934
Legambo	111	33	40	50	1,831	166	24	31		4,434	122	414	7,256
Kelala	27	17	2	2	216	45	5	14		743	16	158	1,245
Jamma	36	26	14	21	500	29	31	43		1,750	20		2,470
worillu	37	21	19	28	388	49	24	23		2,488	10	363	3,450
Kombolcha	7	16		6	67	177	1	4	6	2,581	9	1	2,876
Legehida	5		2	6	43	26		2		421	1		506
Haik	19	14	4	6	459	248	5	27	8	1,634	9	18	2,454
Delanta	59	58	26	109	373	95	26	200		1,513	87	689	3,235
Total	1,724	1,002	1,363	785	8,011	7,544	331	965	1,522	37,771	2,092	9,227	72,337

Table 143. Type and number of livestock destroyed by the invading force in the South Wollo administrative zone districts.

When livestock damage is estimated in terms of cash, group of livestock, and state of damage,, it is recorded that the camels were damaged highly and counted as 188,202,200 birrs (one hundred eighty-eight million two hundred two thousand two hundred birr). Next to comes, the greatest damage wasas incurred on oxen as 63,273,100 birr (sixty-three million two hundred seventy three thousand one hundred birrs). On the third order, goat damage were estimated at 40,789,752 birrs (forty million seven hundred eighty-nine thousand seven hundred fifty-two birr), sheep damage 36,509,244 birrs (thirty-six million five hundred nine thousand two hundred forty-four birr), and bulls and heifers 27,842,150 birr (twenty-seven million eight hundred forty-two thousand one hundred fifty birrs) were recorded.

Damage at woreda level assessment recorded in Tehuledere 158,089,800 birr (one hundred fifty eight million eighty-nine thousand eight hundred Birr), Werebobo 82,043,173 birr (eighty two million forty-three thousand one hundred seventy-three Birr), Ambasel 60,016,990 birr (sixty million sixteen thousand nine hundred ninety birr), Kutaber 21,566,262 birr (Twenty One Million Five Hundred Sixty-Six thousand Two Hundred Sixty-Two birr) and Delanta 10,945,509 birr (Ten Million Nine Hundred Forty-Five thousand Five Hundred nine birr) have been confirmed a highly damaged woreda due ti armed invasion (Table 144).

In analyzing the state of destruction of livestock in the South Wollo administrative zone, the numbers of major livestock destructions were 39,484 due to looting, 24,218 due to slaughtering and eating, and 8,635

killings. When we estimate in terms of cash, the looted livestock were 240,294,055 birrs (two hundred forty million two hundred ninety-four thousand birrs), slaughtered livestock estimated 97,309,095 birr (ninety-seven million three hundred nine thousand ninety five birrs) and killed livestock were estimated as 81,562,147 birr (eighty-one million five hundred sixty-two thousand one hundred forty-seven birr) . therefore, in general, the total number of livestock damage in different damage situations becomes 72,337, and in terms of cash estimation, a total of 419,165,297 birrs (four hundred nineteen million one hundred sixty-five thousand two hundred ninety-seven birr (Table 145).

Districts	Destruction of different animal types and estimated costs (birr)												
	Oxen	Cows	Bull and heifers	calf	sheep	Goat	Mule and Horse	Donkeys	Camels	Chicken	Bees swarms	others	Total
Mekedela	66,000		31,500		210,250		12,000			385			320,135
Tenta	1,682,500	1,007,440	2,360,300	118,000	854,430	208,500	5,000	43,300	420,000	255,985	90,500	5,678	7,051,633
Kutaber	3,015,150	2,031,450	822,400	513,850	4,190,080	1,415,580	747,000	426,400	6,172,000	1,990,475	237,200	4,677	21,566,262
Ambasel	8,898,400	2,993,400	1,087,900	1,609,550	4,350,350	5,770,300	720,000	367,600	31,249,000	1,538,560	1,431,630	300	60,016,990
Tehuledrie	28,376,450	8,680,770	12,149,050	1,761,700	4,959,526	12,804,315	377,500	1,012,350	85,731,500	1,715,432	512,270	8,938	158,089,800
Worebabo	9,767,000	5,012,200	9,599,100	807,100	3,837,970	15,996,897	740,800	2,119,740	31,237,700	1,226,294	1,698,070	303	82,043,173
Kalu	3,316,800	1,742,200	399,800	217,550	947,750	1,280,630	137,800	65,000	8,961,100	2,054,949	294,900	39,877	19,458,356
Albuka	561,000					6,000							567,000
Dessie	904,300	226,500	268,000	479,900	1,246,650	121,610	37,800	41,000	3,835,000	317,176	70,870	39,386	7,588,192
Legambo	2,683,600	350,150	331,000	378,500	7,192,037	615,200	46,000	135,100	5,255,900	1,839,817	300,120	30,132	19,157,556
Kelala	512,400	275,000	28,000	15,500	1,000,225	182,500		25,300	2,270,000	300,545	35,220	1,486	4,646,176
Jamma	712,500	429,000	58,500	85,100	2,147,100	111,480	107,400	291,400	4,640,000	808,700	60,610		9,451,790
worilla	473,500	33,000	145,000	161,000	1,793,360	153,950	48,000	93,400	5,410,000	1,102,684	25,850	2,129	9,441,873
Kombolcha	192,000	785,000		73,500	250,500	574,350	18,000	15,000	60,000	1,281,360	27,000	350	3,277,060
Leghida	121,800		25,000	40,600	230,170	59,200		11,000		139,032	1,650		628,452
Haik	630,000	405,500	74,000	44,700	1,613,450	1,084,400	125,000	95,350	100,000	728,390	10,200	4,350	4,915,340
Delanta	1,359,700	1,225,100	462,600	849,300	1,685,397	404,840	73,200	1,174,300	2,860,000	588,689	250,250	12,133	10,945,509
Total	63,273,100	25,196,710	27,842,150	7,155,850	36,509,244	40,789,752	3,195,500	5,916,240	188,202,200	15,888,473	5,046,340	149,738	419,165,297

Table 144. *Estimated costs (birr) of damaged or stolen animals by invading forces in different districts of South Wollo zone.*

Districts	Destruction of livestock destruction situations in estimated number and costs (birr)							
	Destruction of livestock in number				Destruction of livestock in estimated birr			
	Looted	Killed	Slaughtered	Sum total	Looted	Killed	Slaughtered	Total
Mekedela	43	1	1	45	299,335	12,000	8,800	320,135
Tenta	1,594	54	479	2,127	4,838,088	604,250	1,609,295	7,051,633
Kutaber	3,558	789	2,727	7,074	10,320,307	6,492,645	4,753,310	21,566,262
Ambasel	3,199	801	2,930	6,930	36,024,810	13,484,960	10,507,220	60,016,990
Tehuledrie	3,796	2,177	3,931	9,904	91,320,763	45,074,695	21,694,343	158,089,800
Worebabo	3,062	1,238	4,450	8,750	39,681,701	15,603,760	26,757,712	82,043,173
Kalu	7,575	2,004	1,493	11,072	10,004,472	7,697,189	1,756,695	19,458,356
Albuka		23		23		567,000		567,000
Dessie	2,391	122	421	2,934	5,644,346	901,715	1,042,131	7,588,192
Legambo	3,933	356	2,967	7,256	11,828,172	1,137,790	6,191,594	19,157,556

Kelala	839	214	192	1,245	3,409,761	622,270	614,145	4,646,176
Jamma	553	94	1,823	2,470	6,141,320	569,900	2,740,570	9,451,790
worillu	1,849	92	1,509	3,450	7,043,956	253,461	2,144,456	9,441,873
Kombolcha	2,608	136	126	2,870	2,401,740	753,350	121,970	3,277,060
Legehida	197	31	278	506	213,480	228,295	186,677	628,452
Haik	1,569	275	602	2,446	2,793,290	1,329,100	792,950	4,915,340
Delanta	2,718	228	289	3,235	8,328,514	1,976,715	640,280	10,945,509
Total	39,484	8,635	24,218	72,337	240,294,055	97,309,095	81,562,147	419,165,297

Table 145. Destruction of livestock by the invading forces in invaded woredas of South Wollo administrative zone in number and birr

It is clear that 13 rural woredas and city administrations under the northern Shawa administrative zone were invaded by the invading forces even for a short period of time. During this time, the invading force caused great damage to livestock in 11 woredas under the administrative zone. When the damage caused by the type of livestock have been analyzed in order number such as , chicken 45,325, goat 8,024, sheep 4,826, camel 892, bull 740, beehive 535, cow 505, calf 478 and bull and heifer 416 were mentioned as the highest damae. When we assessed the livestock damage at the woreda level, Tarmaber 21,880, EfratanaGidm 15,768, Ataye 12,792, Shewarobit 9,317, Menze Gera 5,855 and kewet 5,495 are among the worst affected woredas. The study confirmed that the total number of livestock destroyed in the administrative zone was 80,050 (Table 146).

Districts	Animal types and number of damage												Total
	Oxen	Cows	Bull and heifers	calf	sheep	Goat	Mule and Horse	Donkeys	Camels	Chicken	Bees swarms	others	
Menze Gera	9	10	4	16	537	20	2	4	51	2,288	80	2,834	5,855
Anstokia Gemza	16	9	8	6	53	58	3	7	1	1,969	24		2,154
Eferatanagidm	366	224	214	157	1,228	1,995	14	83	479	9,271	244	1,493	15,768
Menze Mama	18	12	9	130	319	124		4	37	1,630	44	1,477	3,804
Tarmabere	53	32	21	55	738	531	12	32	36	10,043	64	10,263	21,880
Moja and wajera	2	7	6	3	49	17	1	4	18	198	1	85	391
Kewat	13	8	37	49	167	1,135		2	224	2,716	61	1,083	5,495
Menze Keya	17			14	103	40	1	2		989	1	266	1,433
Shewa ot robot	83	60	55	14	289	2,797	8	71	32	5,455	3	450	9,317
Ataye	162	142	62	34	1,299	1,304	16	67	14	9,671	13	8	12,792
Mehal Meda	1	1			44	3				1,095		17	1,161
Total	740	505	416	478	4,826	8,024	57	276	892	45,325	535	17,976	80,050

Table 146. Type and number of livestock destroyed by the invading forces in the invaded woredas of North Shewa administrative Zone

When the destruction of livestock indicated above estimated in cash in each woreda showed that Efratana Gidam 75,014,641 birr (Seventy Five Million Fourteen Thousand Six Hundred Forty-One birr), Atye 26,234,720 birr (Twenty Six Million Two Hundred Thirty-Four Thousand Seven Hundred Twenty birr), Shewa Robit 21,149,430 birr (Twenty-one million one hundred forty-nine thousand four hundred thirty birrs), kewot 21,149,430 birrs (twenty-one million one hundred forty-nine thousand four hundred thirty birrs) and Tarmaber 12,574,667 birr (twelve million five hundred seventy-four thousand six hundred sixty-seven birr).

North Shewa administrative zone has been invaded and suffered a lot of damage. In comparison to the type of livestock, camel 50,246,850 birrs (fifty million two hundred forty-six thousand eight hundred fifty birr), goat 33,734,802 birrs (thirty-three million seven hundred thirty-four thousand eight hundred two birds), bull 25,431,859 birrs (twenty-five million four hundred thirty-one thousand eight hundred fifty-nine birr), chicken 19,753,214 birrs (nineteen million seven hundred fifty-three thousand two hundred fourteen birrs), sheep 18,770,274 birrs (eighteen million seven hundred seventy thousand two hundred seventy-four birr) and cow 14,221,500 birrs (fourteen million two hundred twenty-one thousand five hundred birrs) have the highest destruction. In general, the total destruction in the administrative zone becomes 177,482,754 birrs (one hundred seventy-seven million four hundred eighty-two thousand seven hundred fifty-four birr) (Table 147).

Animals	Livestock damage in kind and estimated birr												Total
	Oxen	Cows	Bull and heifers	calf	sheep	Goat	Mule and Horse	Donkeys	Camels	Chicken	Bees swarms	Others	
Menze Gera	220,000	275,000	57,400	158,400	2,204,630	93,940	31,500	27,400	3,085,500	902,085	205,220	19,949	7,281,024
Anstsokia Gemza	495,200	193,500	160,000	47,400	177,950	318,800	45,000	44,300	35,000	585,900	56,600		2,159,650
Eferatanagidm	13,077,560	6,726,700	3,496,765	1,544,500	5,512,901	9,973,294	232,800	550,210	28,963,000	4,200,215	708,760	27,937	75,014,641
Menze Mama	579,700	319,000	129,700	1,287,000	1,352,071	623,690		27,800	2,238,500	653,801	121,700	12,179	7,345,140
Tarmabere	1,531,499	623,500	231,000	209,000	2,727,000	2,467,700	83,100	136,200	145,900	4,139,863	91,800	188,105	12,574,667
Moja and wajera	66,000	214,500	96,300	29,700	229,420	67,800	15,000	24,800	1,089,000	78,566	1,650	685	1,913,421
Kewat	350,900	190,300	531,500	485,100	744,505	3,627,848		14,300	13,562,000	1,238,373	167,200	8,053	21,149,430
Menze Keya	885,000			138,600	476,177	215,600	8,500	15,000		420,311	2,200	1,894	2,163,282
Shewa ot robot	2,849,000	1,308,000	1,109,000	117,000	1,024,500	10,966,100	213,000	269,400	617,600	2,561,830	1,500	112,500	21,149,430
Ataye	5,356,000	4,353,000	1,187,000	305,000	4,191,720	5,363,030	224,500	267,700	510,350	4,435,770	38,500	2,150	26,234,720
Mehal Meda	21,000	18,000			129,400	17,000				536,500		4,800	726,700
Total	25,431,859	14,221,500	6,998,665	4,321,700	18,770,274	33,734,802	853,400	1,377,110	50,246,850	19,753,214	1,395,130	378,251	177,482,754

Table 147. Destruction of livestock by the invading forces in the woredas of North Shewa administrative zone by type and estimated in birr

When analyzing the destruction of livestock in the woredas of the North Shewa administrative zone, it was found that 52,303 of them were looted, 20,296 were slaughtered and consumed and 7,451 were killed in the house and open fields. In addition to that, when this destruction was estimated in monetary loss, 123,253,089 birr (one hundred twenty-three million two hundred fifty-three thousand eighty-nine birr) due to looting, 39,248,216 birr (thirty-nine million two hundred forty-eight thousand two hundred sixteen birr) slaughtered and consumed and 14,981,449 birr (fourteen million Nine hundred eighty-one thousand four hundred forty-nine birr) were killed. In general, the total number of livestock damaged in the administrative zone has 80,050 livestock and the damage in cash was 177,482,754 birr (one hundred seventy-seven million four hundred eighty-two thousand seven hundred fifty-four birr) recorded (Table 148).

Animals	Livestock damage situation and estimate number and costs (Birr)							
	Livestock damage situations in a number				Livestock damage estimate in birr			
	Looted	Killed	Slaughtered	Total	Looted	Killed	Slaughtered	Total
Menze Gera	4,585	779	491	5,855	5,066,054	1,285,780	929,190	7,281,024
Anstsokia Gemza	220	1,916	18	2,154	1,306,700	759,700	93,250	2,159,650
Eferatanagidm	6,835	687	8,246	15,768	47,971,872	7,377,245	19,665,525	75,014,641
Menze Mama	1,937	157	1,710	3,804	2,604,049	1,128,955	3,612,137	7,345,140
Tarmabere	15,246	2,266	4,368	21,880	5,416,908	1,516,759	5,641,000	12,574,667
Moja and wajera	161	50	180	391	1,262,940	396,480	254,001	1,913,421
Kewat	2,938	502	2,055	5,495	16,317,618	1,021,350	3,581,111	20,920,079
Menze Keya	1,141	10	282	1,433	1,410,809	48,810	703,663	2,163,282
Shewa ot robot	7,475	21	1,821	9,317	18,017,200	149,500	2,982,730	21,149,430
Ataye	10,658	1,057	1,077	12,792	23,213,140	1,288,070	1,733,510	26,234,720
Mehal Meda	1,107	6	48	1,161	665,800	8,800	52,100	726,700
Total	52,303	7,451	20,296	80,050	123,253,089	14,981,449	39,248,216	177,482,754

Table 148. Destruction of livestock by the invading forces in North Shewa administrative zone of invaded woredas by the state of destruction number and estimated in birr

Among the rural woredas and city administrations under Waghimra ethnic administrative zone, it was confirmed that the as damaged by invading forces. During this period, while the invading force was on the move, it caused severe damage to livestock in 4 woredas of the Waghimra ethnic administrative zone. When the damage caused by the type of livestock was analyzed in order of importance, chicken 4,698, goat 1,603, sheep 1,053, bull 563, beehive 575, and cow 322 were the leading references of damage. ,Dahna

6,253, Zakhala 1,436, Gazgibla 1,348 and Sekota 397 were among the worst affected at the woreda level. The study confirmed that the total number of livestock destroyed in the zone 9,434 (Table 149).

When this destruction was estimated in terms of livestock, oxen damage were 18,013,900 birrs (eighteen million thirteen thousand nine hundred Birr), camels were 16,857,100 birr (sixteen million eight hundred fifty-seven thousand one hundred Birr), goats were 7,313,801 birrs (seven million three hundred thirteen thousand eight hundred one birr), cows 6,060,280 birrs (six million sixty thousand two hundred eighty birrs), sheep 4,801,805 birrs (four million eight hundred one thousand eight hundred five birrs), bulls and heifers 4,801,805 birrs (four million eight hundred one thousand eight hundred five birrs), bees swarm in hive 1,899,220 birrs (one million eight hundred ninety-nine thousand two hundred twenty birrs) and chicken 1,482,744 birrs (one million four hundred eighty-two thousand seven hundred forty-four birr).

The damage occurred at the woreda level was assessed in terms of cash: Dahna Birr 41,516,975 (forty-one million five hundred sixteen thousand nine hundred seventy-five birr), Gazgibla 10,092,164 birr (ten million ninety-two thousand one hundred sixty-four birr), Zqalala 5,491,146 birr (five million four One hundred ninety-one thousand one hundred forty-six Birr) and Sekota zuria 3,853,600 birrs (three million eight hundred fifty-three thousand six hundred Birr). In general, the total destruction of the administrative zone became 60,953,885 birr (sixty million nine hundred fifty-three thousand eight hundred eighty-five Birr) (Table 149).

Animals	Districts incurred livestock damage estimated number and birr									
	Livestock damage in a number					Livestock damage estimated in birr				
	Zequala	Dahena	Gaz gibella	Sekota zuria	Sum total	Zequala	Dahena	Gaz gibella	Sekota zuria	Total
Oxen	59	338	134	32	563	1,625,000	9,376,400	5,746,400	1,266,100	18,013,900
Cows	31	205	83	3	322	718,100	3,908,440	1,393,150	40,590	6,060,280
Bulls and hieifers	14	102	54	1	171	219,000	1,909,750	880,000	17,000	3,025,750
calf	3	76	7	4	90	31,000	569,900	62,400	26,000	689,300
sheep	180	683	97	93	1,053	563,300	3,336,820	393,120	508,565	4,801,805
goat	270	1,079	188	66	1,603	747,280	5,011,291	1,027,030	528,200	7,313,801
Mule an d Horse		13	1		14		191,075	11,000		202,075
Donkeys	40	31	43		114	143,040	191,370	271,300		605,710
camels	1	193		17	211	80,000	15,456,000		1,321,100	16,857,100
chicken	545	3,311	722	120	4,698	155,926	1,018,009	273,664	35,145	1,482,744

Bees swarm	293	222	19	41	575	1,208,500	547,920	34,100	108,700	1,899,220
Others				20	20				2,200	2,200
Total	1,436	6,253	1,348	397	9,434	5,491,146	41,516,975	10,092,164	3,853,600	60,953,885

Table 149. *Number of livestock Destroyed by the Invading Force in Waghimra Ethnic administrative zone wordas*

In analyzing the devastation indicated from above, the number of livestock hunted and consumed was 6,144; in terms of cash, It becomes 30,018,151 Birr (Thirty Million Eighteen thousand One Hundred Fifty One birr). The number of livestock looted by invading forces and looted livestock were 2,559, which is equivalent 24,854,119 birr (twenty four million eight hundred fifty four thousand one hundred nineteen Birr) (Table 150).

Animals	Destruction situations of livestock estimated in number and birr							
	Number of livestock edestruction in various situations				Livestock destruction in different situations and estimated in birr			
	Looted	Killed	Slaughtered	Total	Looted	Killed	Slaughtered	Total
Zekuala	943	432	61	1,436	3,415,576	1,825,190	250,380	5,491,146
Dahena	539	71	5,643	6,253	16,711,335	368,880	24,436,760	41,516,975
Gaz gibella	792	227	329	1,348	1,382,868	3,865,545	4,843,751	10,092,164
Sekota zuria	285	1	111	397	3,344,340	22,000	487,260	3,853,600
Total	2,559	731	6,144	9,434	24,854,119	6,081,615	30,018,151	60,953,885

Table 150. *Livestock Destruction status, quantity, and estimated values that the invader invades in the wargamers ethnic administrative zone estimated in birr*

It is known that all the rural wordas and city administrations in the Oromo ethnic administrative zone were invaded by the invading forces. In addition to the invading forces of Tigray, the study revealed that the movements of the Oromo liberation front (OLF) Shene forces were another additional pressure. As a result, the invading force caused great damage to livestock in seven rural wordas and city administrations during their stay in the administrative zone. When the damage caused by the type of livestock was analyzed in order of damage, levels such as chicken 3,770, goat 1,144, sheep 338, oxen 174, camel 144, and cow 122 were assessed as the higher damage. When we assessed and analyzed the damage number of livestock at the worda level, it was confirmed that Jile Tamuga 3,961, Artuma Fursi 995, Bati City 321, Dawa chefa 268 and kemise 242 were among the worst affected. The study confirmed that the total number of livestock damaged in the administrative zone was 5,991 (Table 151).

When this damage is estimated in terms of cash, camel 8,440,200 Birr eight million four hundred forty thousand two hundhundred), oxen 5,193,050 birrs (Five million one hundred ninety-three thousand fifty Birr), goats 5,022,753 birrs (Five million twenty-two thousand seven hundred fifty-three birr), cow 3,056,300 birrs (Three million Fifty-six thousand three hundred Birr), sheep 1,474,815 birrs (one million four hundred seventy-four thousand eight hundred fifteen birrs) and chicken 1,399,164 birrs (one million three hundred ninety-nine thousand one hundred sixty-four birr). When the damage assessed at the worda level in terms of cash, Jile Tamuga 14,018,843 birr (fourteen million eighteen thousand eight hundred forty-three birr), Artuma Fursi 6,774,347 birr (six million seven hundred seventy-four thousand three hundred forty-seven Birr), Dewa chefa 2,324,809 birrs (two million three hundred twenty-four thousand eight hundred nine Birr) and Bati 1,141,396 birr (one million one hundred forty-one thousand three hundred ninety-six birrs). In general, the total destruction amount of livestock in the administrative zone was 26,589,610 birrs (twenty-six million five hundred eighty-nine thousand six hundred ten birrs) (Table 152).

In analyzing the destruction caused by the armed invasion, the number of livestock killed and consumed was 2,503, which is 5,010,062 birr (five million ten thousand sixty-two birr). The number of livestock looted was 1,816, and its estimation in cash became 14,232,978 birrs (fourteen million two hundred thirty-two thousand nine hundred seventy-eight birr). The number of livestock killed for various reasons was 1,672, and the amount in birr was 7,346,570 (seven million three hundred forty-six thousand five hundred seventy birr) (Table 153).

Animals	List of wordas on livestock damage record in number							Total
	Dewa Chefa	Bati	Jile Timuga	Artuma fursi	Dawa harawa	Kemissie	Bati city	
Oxen		13	103	39	7	3	9	174
cows	11	11	51	32	1	8	8	122
Bull & hiefers	5	1	20	28	1	2		57
calf	3		27	10	4	1		45
sheep	27	3	185	90	1	14	18	338
Goat	17	58	747	190	45	36	51	1,144
Mule /horse				5		5	1	11
Donkeys	1	4	23	17	4	1		50
Camels	27	1	66	49	1			144
Chicken	155	23	2,704	471	14	169	234	3,770
Bees swarms	8	5	17	16	6	3		55
Others	14	1	18	48				81
Total	268	120	3,961	995	84	242	321	5,991

Table 151. *The number of livestock destroyed by the invading force in Oromo ethnic world*

Animals	Livestock damage of various woreda estimate in birr							
	Dewa Chefa	Bati	Jile Timuga	Artuma fursi	Dawa harawa	Kemissie	Bati city	Total
Oxen		498,300	3,080,500	836,550	304,700	107,000	366,000	5,193,050
cows	298,100	287,100	1,243,600	902,500	22,000	173,000	130,000	3,056,300
Bull & hieifers	100,100	18,700	296,500	397,200	23,000	30,000		865,500
calf	29,700		267,500	94,100	39,600	80,000		510,900
sheep	99,450	9,900	939,665	326,200	6,600	45,000	48,000	1,474,815
Goat	77,100	221,406	3,257,077	821,150	270,020	151,000	225,000	5,022,753
Mule / horse				52,500		54,000	8,000	114,500
Donkeys	6,200	24,800	161,570	117,300	25,630	5,000		340,500
Camels	1,628,000	60,500	3,726,700	2,964,500	60,500			8,440,200
Chicken	67,375	8,140	983,069	205,415	6,765	55,450	72,950	1,399,164
Bees swarms	18,700	11,950	62,500	56,500	19,800	1,200		170,650
Others	84	600	162	432				1,278
Total	2,324,809	1,141,396	14,018,843	6,774,347	778,615	701,650	849,950	26,589,610

Table 152. *Estimated value of Livestock destroyed by the invading forces in Oromo ethnic woredas in birr*

Districts	Livestock damage by invading forces							
	Livestock damage situations and number				Livestock damage situations estimated in birr			
	Looted	Killed	Slaughtered	Total	Looted	Killed	Slaughtered	Total
Dewa chefa	77	34	157	268	1,417,489	739,680	167,640	2,324,809
Bati	16	54	50	120	97,690	715,050	328,656	1,141,396
Jilie Timuga	973	1,199	1,789	3,961	7,499,412	3,160,010	3,359,421	14,018,843
Artuma fursie	408	122	465	995	3,985,722	1,854,500	934,125	6,774,347
Dewa harawa	65	7	12	84	592,165	124,630	61,820	778,615
Kemissie	207	23	12	242	349,750	264,300	87,600	701,650
Bati city	70	233	18	321	290,750	488,400	70,800	849,950
Total	1,816	1,672	2,503	5,991	14,232,978	7,346,570	5,010,062	26,589,610

Table 153. *Destruction of livestock by the invading forces in the Oromo ethnic zone by state of destruction, quantity and estimated cash value in birr*

It is known that all the sub-cities under the DEssie city administration were under the control of the invading force. Thus, the invading force caused great damage on livestock in all 5 sub-cities during their stay in the city. When the damage caused by the type of livestock assessed and analyzed in order of damage chicken 9,417, sheep 2,429, goats 732, cows 152, donkeys 142 and oxen 87 were mentioned as highly damage. At the sub-cities level, damage caused to livestock will be 10,285 in menafesha, 2,181 in Buambua wuha, 2,181 in Segno gebyea, 222 in Hote and 76 in Arada. In general, the study confirmed that the total number of livestock destroyed in the city

become 13,206 (Table 154).

When this damage estimated by the type of livestock and cash, sheep 8,550,980 birr (eight million five hundred fifty thousand nine hundred eighty birr), cow 5,894,000 birr (five million eight hundred ninety four thousand Birr), chicken 4,239,576 birr (four million two hundred thirty nine thousand five hundred seventy-six birr), oxen 3,583,000 birr (three million five hundred eighty-three thousand birr), goat 3,191,550 birr (three million one hundred ninety-one thousand five hundred fifty birr) and bull and heifers 1,485,500 birr (one million four hundred eighty-five thousand five hundred birr) were referred highly damaged. When the damage done at the level of the sub-cities were analyzed in terms of financial losses, the park cost were 24,475,646 birr (twenty-four million four hundred seventy-five thousand six hundred forty-six birr), Buambua wuha 2,874,510 birr (two million eight hundred seventy-four thousand five hundred ten Birr), the Segno Gebeya were 623,050 (Six hundred twenty-three thousand fifty birr), Hote 436,300 birr (four hundred thirty-six thousand three hundred birr) and Arada 290,600 birr (two hundred ninety-six thousand six hundred Birr) recorded (Table 155).

In analyzing the damage situation, the number of looted livestock were 7,692 and their estimated cash value become 12,017,226 birr (twelve million seventeen thousand two hundred twenty six birr). The number of domestic animals that were consumed by the invading forces were 3,705 and their estimated cash value become 5,976,550 birr (five million nine hundred seventy six thousand five hundred fifty birr). The number of livestock killed for various reasons were 1,809 and their estimated cash value become 10,706,330 birr (ten million seven hundred six thousand three hundred thirty birr) (Table 156).

Animals	Subcities					
	Menafesha	Buambua wuha	Hote	Arada	Segno gebeya	Total
Oxen	83	2			2	87
cows	114	32	3	3		152
Bulls and hiefers	61	6	2			69
Calf	46	3		1		50
sheep	2,126	199	5	26	73	2,429
Goat	645	65	3	18	1	732
Mule & Horses	43		1			44
Donkeys	138	3			1	142
Camels	14				2	16

chicken	6,982	1,871	173	28	363	9,417
Bees swarms	33					33
Others			35			35
Total	10,285	2,181	222	76	442	13,206

Table 154. *The number of livestock destroyed by the invading forces in the subcities of Dessie city administration*

Animals	Sub-cities					
	Menafesha	Buambua wuha	Hote	Arada	Segno gebeya	Total
Oxen	3,456,000	87,000			40,000	3,583,000
cows	4,639,000	880,000	265,000	110,000		5,894,000
Bulls and hiefers	1,266,000	159,500	60,000			1,485,500
Calf	469,600	72,500		10,000		552,100
sheep	7,276,680	803,400	25,300	77,000	368,600	8,550,980
Goat	2,844,550	249,500	9,500	84,500	3,500	3,191,550
Mule and Horses	490,500		12,000			502,500
Donkeys	498,700	13,800			3,400	515,900
Camels	6,100				65,000	71,100
chicken	3,423,016	608,810	56,100	9,100	142,550	4,239,576
Bees swarms	105,500					105,500
Others			8,400			8,400
Total	24,475,646	2,874,510	436,300	290,600	623,050	28,700,106

Table 155. *Destruction of livestock by the invading forces in the sub cities of Dessie city administration estimated costs (Birr)*

Sub cities	Destruction of livestock in damage situation estimated number and birr							
	Destruction of livestock in number				Destruction of livestock estimated in birr			
	Looted	Killed	Slaughtered	Total	Looted	Killed	Slaughtered	Total
Menafesha	5,467	1,740	3,078	10,285	9,705,246	9,691,030	5,079,370	24,475,646
Buambua wuha	1,533	29	619	2,181	1,459,180	538,150	877,180	2,874,510
Hote	200	16	6	222	109,550	324,750	2,000	436,300
Arada	52	22	2	76	143,600	129,000	18,000	290,600
Segno Gebya	440	2		442	599,650	23,400		623,050
Total	7,692	1,809	3,705	13,206	12,017,226	10,706,330	5,976,550	28,700,106

Table 156. *Table 156: Destruction of livestock destroyed by the invading forces in Dessie city administration estimated in numbers and birr*

6. Destruction of Agricultural Inputs

When the invading forces started its armed invasion of the region, it was the period of rainy season input distribution, so most of the resources were stored in agricultural input storage warehouse areas located at the zonal level. Thus, standard fertilizer and best seed were destroyed in all invaded

administrative zones, while lime and bio fertilizer were destroyed only in four invaded zones (Figure 45). According to the zonal agricultural input destruction, South Gondar 23,3941 quintals, North Wollo 191,241 quintals, North Gondar 16,0902 quintals, South Wollo 28,738 quintals, Wag Hmra 16,941 quintals, Oromo ethnic administration zone 2,242 quintals and North Showa 967 quintals. In general, the total destruction of agricultural inputs in the invaded area become 634,978 quintals (Table 157).



a) Fertilizer Damage



b) Pesticides and spraying equipment

Figure 38. agricultural input damage photo in laygaint woreda south Gondar zone (a and b)

Zones	Fertilizer in Quintals	Improved variety seed in quintals	Limestone in quintals	Bio fertilizer in quintals	Pesticides in quintals(liters)	Total
North Gondar	154,116	1,271	3,166	2,338	11	160,902
South Gondar	195,740	2,436	1,366	20,645	13,754	233,941
North Wollo	184,293	4,378	1,364	1,212		191,247
South wollo	24,625	594	1,455	2,064		28,738
North Shewa	673	278			16	967
Wag himera	16,791	150				16,941
Oromo special zone	2,209	33				2,242
Total	578,447	9,140	7,351	26,259	13,781	634,978

Table 157. Agricultural inputs destroyed by zone, type and amount in the invading areas

The above-mentioned destruction of agricultural inputs in terms of cash which is equivalent, were fertilizer 1,090,464,945 Birr (one billion ninety thousand four hundred sixty-four thousand nine hundred forty-five birrs), improved seeds 37,280,246 birrs (thirty-seven million two hundred eighty thousand two hundred forty-six birrs), lime 3,252,681 birrs (three million two hundred fifty-two thousand six hundred eighty-one berr), bio-fertilizers 2,026,793 birrs (two million twenty-six thousand seven hundred ninety-three berr) and pesticides 17,171,988 (seventeen million one hundred seventy-one thousand nine hundred eighty-eight berr) has been confirmed. When analyzed at the zone level, South Gondar 394,570,517 berr (three

hundred ninety-four million five hundred seventy thousand five hundred seventeen birrs), North Wollo 362,703,924 birr (three hundred sixty-two million seven hundred three thousand nine hundred twenty-four birr), North Gondar 295,068,983 birr (two hundred ninety-five million sixty-eight thousand nine hundred eighty-three birr), South Wollo 50,475,495 birr (fifty million four hundred seventy-five thousand four hundred ninety-five birr), Waghimra 33,372,325 birr (thirty-three million three hundred seventy-two thousand three hundred twenty-five) birr), Oromo ethnic zone 8,689,021 birr(eight million six hundred eighty-nine thousand twenty-one birr) and North Shewa 5,316,388 (five million three hundred sixteen thousand three hundred eighty-eight birr). here the total destruction of agricultural inputs in the invaded area was 1,150,196,653 birr (one billion one hundred fifty million one hundred ninety-six thousand six hundred fifty-three birr) (Table 158).

Zones	Fertilizer in Quintals	Improved variety seed in quintals	Limestone in quintals	Bio fertilizer in quintals	Pesticides in quintals[liters)	Total
North Gondar	288,411,853	5,068,360	1,394,079	180,160	14,531	295,068,983
South Gondar	366,739,299	8,492,277	602,198	1,590,414	17,146,328	394,570,517
North Wollo	344,732,460	17,277,770	600,342	93,352		362,703,924
South wollo	47,189,684	2,466,883	656,062	162,866		50,475,495
North Shewa	2,160,581	3,144,678			11,129	5,316,388
Wag himera	32,769,619	602,706				33,372,325
Oromo adm. zone	8,461,448	227,573				8,689,021
Total	1,090,464,945	37,280,246	3,252,681	2,026,793	17,171,988	1,150,196,653

Table 158. *Table 158: Destruction of Agricultural inputs at the zone level estimated in birr*

7. Natural Resources and Forestry Damage

Although, the area invaded by the invading forces becomes deprived of natural resources/forests, it has severely damaged the natural resources that were recovering. This damage made the area that was fenced/respected and was recovering to be loose, to be cut without care, to be hit with a heavy weapon, to be left with a fortress wall, a grave cover and other things (Figure 46).

Therefore, in the areas where the invader invaded, various forests under private, government and community control have been destroyed. The amount of their damage in the form of community forest 12,098,158,708 birr (twelve billion ninety eight million one hundred ninety eight thousand seven hundred eight birr), government managed forest 3,841,992,272 birr

(three billion eight hundred forty one million nine hundred ninety two thousand two hundred seventy two birr) and private forest damaged showed that 2,818,312,399 birr (two billion eight hundred eighteen million three hundred twelve thousand three hundred ninety nine birr) was destroyed. When the amount of damage was observed and recorded at the administrative zone level, South Wollo 8,505,749,835 birr (eight billion five hundred five million seven hundred forty nine thousand eight hundred thirty five Birr), North Wollo 4,901,719,258 birr (four billion nine hundred one million seven hundred nineteen thousand two hundred fifty eight Birr) North Wollo 4,901,719,258 birr (four billion nine hundred one million seven hundred nineteen thousand two hundred fifty eight birr), North Gondar 3,487,747,073 birr (three billion four hundred eighty seven million seven hundred forty seven thousand seventy three birr) and North Shewa 1,134,091,033 birr (one billion one hundred thirty four million ninety one thousand thirty three birr) were recorded. In general, the total damage were 18, 758,463,379 birr (eighteen billion seven hundred fifty eight million four hundred sixty three thousand three hundred seventy nine birr) (table 159).



Figure 39. *Wadla worda gashena area devastation of forest photo*

All the invaded administrative zones have suffered destruction of natural resources. Among the most devastated administrative zones South Wollo 8,505,749,835 birr (eight billion five hundred five million seven hundred forty nine thousand eight hundred thirty five birr), North Wollo 4,901,719,258 birr (four billion nine hundred one million seven hundred nintyen thousand two hundred fifty-eight birr), North Gondar 3,487,747,073 birr (three billion four hundred eighty-seven million seven hundred forty-seven thousand seventy-three birr) and North Shewa 3,487,747,073 birr (three billion four hundred eighty-seven million seven hundred forty-seven thousand seventy-three birr) hold the highest share. When analyzed by the types of forest destroyed, the damage caused in community forest

were 12,098,158,708 birr (twelve billion ninety eight million one hundred fifty eight thousand seventy eight birr), in government forest 3,841,992,272 birr (three billion eight hundred forty one million nine hundred ninety two thousand two hundred seventy two birr)) and private forestry damage accounts 2,818,312,399 birr (two billion eight hundred eighteen million three hundred twelve thousand three hundred ninety nine Birr). In general, the total estimation of natural resource destruction were 18,758,463,379 birr (eighteen billion seven hundred fifty eight million four hundred sixty three thousand three hundred seventy nine birr) (Table 159).

Zones	Destructed Forest types			
	Private	community	Government	Total
North Gondar	363,443,960	2,213,457,730	910,845,383	3,487,747,073
North Wollo	725,791,359	1,580,556,758	2,595,371,141	4,901,719,258
South Wollo	206,345,535	8,275,039,300	24,365,000	8,505,749,835
North Shewa	1,105,460,433	28,630,600		1,134,091,033
Waghimera	333,300	376,420	5,215,870	5,925,590
Oromo adm. zone	416,937,813		1,375,000	418,312,813
Dessie City		97,900	304,819,878	304,917,778
Total	2,818,312,399	12,098,158,708	3,841,992,272	18,758,463,379

Table 159. Forest destruction in the invaded administrative zones by the invading forces with an estimated value in birr

When the above zone level forest destruction was analyzed by woreda and type of forest, North Gondar was destroyed in five woredas. The amount of damage incurred in Telemet 1,851,432,613 birr (one billion eight hundred fifty one million four hundred thirty two thousand six hundred thirteen birr), Debarak 1,634,684,920 birr (one billion six hundred thirty four million six hundred eighty four thousand nine hundred twenty Birr) and Adiarkai 692,890 birr (six hundred ninety-two thousand eight hundred ninety birr), Janamora 569,800 birr (five hundred sixty-nine thousand eight hundred birr) and Dabat 366,850 birr (three hundred sixty-six thousand eight hundred and fifty Birr) were found to have suffered moderate damage (Table 160).

Woredas	Destructed Forest types			
	Private	community	Government	Total
Adaiarkay	692,890			692,890
Janamora	201,300	368,500		569,800
Debark	362,149,920	770,891,000	501,644,000	1,634,684,920
Dabat	366,850			366,850
Telemet	33,000	1,442,198,230	409,201,383	1,851,432,613
Total	363,443,960	2,213,457,730	910,845,383	3,487,747,073

Table 160. Forest Resources destroyed in North Gondar invaded woredas by type and estimation in Birr

Regarding the North Wollo administrative zone, out of 18 invaded woredas, 11 of the woredas have been assessed the damage of private forest 725,791,359 birr (seven hundred twenty five million seven hundred ninety one thousand three hundred fifty nine birr), damage of community forest 1,580,556,758 birr (one billion five hundred eighty million five hundred fifty six thousand seven hundred fifty eight birr) and government managed forest 2,595,371,141 birr (two billion five hundred ninety five million three hundred Seventy one thousand one hundred forty one birr). Natural resources/forests that that have suffered major damage at the woreda level of North wollo administrative zone were Gidan 2,253,352,781 birr (two billion two hundred fifty three million three hundred fifty two thousand seven hundred eighty one birr), Lasta 1,558,647,343 birr (one billion five hundred fifty eight million six hundred forty seven thousand three hundred forty three birr) and Angot 715,225,500 birr (seven hundred fifteen million two hundred twenty five thousand five hundred birr) are the main references damage record (Table 161).

Out of the 25 woredas that were invaded in South Wollo administrative Zone, forest destruction was recorded in seven woredas of the zone. Out of the seven woredas, the highest destruction was recorded in Makdella 8,438,969,000 birr (eight billion four hundred thirty eight million six hundred sixty nine thousand birr), Dessie zuria 22,550,000 birr (twenty two Million Five Hundredfifty thousand birr), Albeko 13,772,000 birr (thirteen million seven hundred seventy two thousand birr) and Werebobo 12,815,110 birr (twelve million eight hundred fifteen thousand one hundred ten birr) were the highest damage. When the amount of destruction was studied by type of community forest 8,275,039,300 birr (eight billion two hundred seventy five million thirty nine thousand three hundred birr), private forest 206,345,535 birr (two hundred six million three hundred forty five thousand five hundred thirty five birr) and government managed forest 24,365,000 birr (twenty four million three hundred sixty five thousand birr) (Table 162).

Districts	Damaged forest in type and estimated costs (birr)			
	Private	community	Government	Sum total
Kobo	8,275,300	80,520		8,355,820
Gidan	97,350	3,066,622	2,250,188,809	2,253,352,781
Meket	675,946	330,000		1,005,946
Wadla	1,404,513	36,300	19,800	1,460,613
Habru	209,000	118,800	57,973,487	58,301,287
Last		1,552,118,898	6,528,445	1,558,647,343
Dawnt	13,750		50,600	64,350
Angot	715,115,500		110,000	715,225,500

Lalibela		24,805,618	280,500,000	305,305,618
Total	725,791,359	1,580,556,758	2,595,371,141	4,901,719,258

Table 161. Forest resources destroyed in North Wollo districts by type and estimated in birr

Districts	Destructed Forest type and estimated birr			
	Private	community	Government	Total
Mekedela	185,405,000	8,253,564,000		8,438,969,000
Tehulederi	8,675,425	3,300		8,678,725
Worebabo	12,265,110	550,000		12,815,110
Kalu			3,465,000	3,465,000
Albeko		11,297,000	2,475,000	13,772,000
Dessie Zuria		9,625,000	12,925,000	22,550,000
Delanta			5,500,000	5,500,000
Total	206,345,535	8,275,039,300	24,365,000	8,505,749,835

Table 162. Forest resources destroyed in South Wollo woredas by type and estimated in birr

In addition, the study confirmed that five woredas of North Shewa, three woredas of Oromo ethnic zone, three woredas of Waghimera ethnic zone and 1 sub-city of Dessie city administration community forest, private forest and government managed forest were affected highly. The estimated amount of total damage were 1, 134,091,033 birr (one billion one hundred thirty four million ninety one thousand thirty three Birr). When assessment and recordering was done one by one in the invaded zone wag 5, 925,590 birr, Oromo ethnic zone 418,312,813 birr Dessie city 304,917,778 birr damage estimate has been confirmed in the study (Table 163).

Zones	Woreda suffered Forest damage	Destructed Forest type and estimated cost (birr)			
		Private	community	Government	Total
North Shewa	Eferatanagidm	185,061,938	13,062,500		198,124,438
	Menze Mama	33,343,750			33,343,750
	Tarmabere	823,756,620	15,441,600		839,198,220
	Moja and wodera	63,298,125			63,298,125
	Shewa Robit		126,500		126,500
	Sum Total	1,105,460,433	28,630,600		1,134,091,033
Wag himera	Sekota city			2,137,575	2,137,575
	Gazegibela	333,300	167,200	3,078,295	3,578,795
	Sekota Zuria		209,220		209,220
	Sum Total	333,300	376,420	5,215,870	5,925,590
Oromo ethnic zone	Bati Zuria			1,375,000	1,375,000
	Artuma fursie	416,915,263			416,915,263
	Kemissie	22,550			22,550
	Sum Total	416,937,813		1,375,000	418,312,813
Dessie City	Menafesha		97,900	304,819,878	304,917,778

Table 163. Forest resources destruction rural in the invading rural woredas and sub-cities in different administrative zones by type and estimated birr

3.3.7. Destruction of Irrigation Development Sector

Expanding irrigation development become critical to food security and self-sufficiency of the invaded areas. However, it is known that the areas where the invader invaded area were high irrigation users and the hilly area from Kobo to Shewarobit has destroyed the irrigation network and the crops that are being cultivated on a large scale. In addition, the irrigation activity that was being carried out since October 2021 has stopped. Even now, there is not much revival in the irrigation development due to the fear that they will come back.

Therefore, according to the study, South Wollo 5,750,039,900 birr (Five billion seven hundred thirty nine thousand nine hundred birr), North Wollo 5,687,157,987.40 birr (Five billion six hundred eighty seven million one hundred fifty seven thousand nine hundred eighty seven birr), Waghimera 1,417,130,972.30 birr (one billion four hundred seventeen million one hundred thirty thousand nine hundred seventy two birr), South Gondar 948,332,872.00 birr (nine hundred forty eight million three hundred thirty two thousand eight hundred seventy two birr), North Gondar 677,980,842.00 birr (six hundred sixty seven million nine hundred eighty thousand eight hundred forty two Birr), Oromo ethnic zone 367,546,175.00 birr (three hundred sixty seven million five hundred forty six thousand one hundred seventy five birr) and Dessie City 23,100.00 birr (twenty three thousand one hundred birr). In generally, the total damage to irrigation development networks were 15,664,410,158.70 Birr (fifteen billion six hundred sixty four million four hundred ten thousand one hundred fifty eight birr) (Table 164).

Name of zone	Irrigation networks destruction	
	Type of irrigation infrastructural damages	Destruction estimate in birr
North Gondar	Irrigation canals and crops under irrigation	677,980,842.00
South Gondar	Irrigation canals and crops under irrigation	948,332,872.00
North Wollo	Irrigation canals and crops under irrigation	5,687,157,987.40
South wollo	Irrigation Dam, pond, cannal and crops under irrigation	5,750,039,900.00
North Shewa	Irrigation canals and crops under irrigation	816,198,310.00
Wag himera	Irrigation canals and crops under irrigation	1,417,130,972.30
Oromo ethnic zone	Irrigation canals and crops under irrigation	367,546,175.00
Dessie City	Irrigation canals and crops under irrigation	23,100.00

Table 164. *Destruction of Canals, Dams, and Irrigated Vegetables and Estimated in birr*

3.3.8. Destructions in Health Sector

The World Health Organization (WHO) set the six building blocks of the health care system as health workforce, access to essential medicines, health service delivery, health information systems, financing and leadership/governance. According to the international laws, health facilities should be protected from any damage during war. Despite this, the invading force of Tigray has caused extensive damage to health facilities. The extent and scope of damage encompassed all the forth-mentioned building blocks of the health system. The Ethiopian health care system consisted of three-tier system, named the primary, secondary and tertiary health care systems. Majority of the Ethiopian population (about 80%) lives in rural areas. The coverage and utilization of health services is considerably lower in the rural population compared to the urban ones. In order to address this unfair coverage and use of health services, the primary health care system is designed to make basic health services accessible to the vast rural community of the country. To achieve this goal, the primary health care system is composed of a primary hospital, health centers and five satellite health posts. The impact of the invading force on health facilities in all three levels of health care systems is presented in the text below (Figure 47 and Table 164).

A. Damage to the Primary Health Care Unit

The Tigray invading forces looted or destroyed 653 different health facilities in all eight zones. In particular to the primary health care system, a total of 297 health posts and 272 health centers were looted or destroyed. In Ethiopia, only 5% of primary health care units (health posts and health centers) have outstanding performance, and to curve this serious problem the country aims to increase this figure to 35% in 2017. The current devastating damage by the invading forces could pose significant negative impact on the primary health care system.

This destruction will drastically reduce the coverage of health services in rural areas, so the vast rural community is exposed to serious problems and even death due to the interruption of health services. Taking into account of the standard catchment area population presumed to be served by the damaged health facilities, the findings could imply that about 9.6 million rural residents cannot access health services (Table 164).

B. Damage to the Secondary and Tertiary Healthcare System

The secondary and tertiary health care systems comprise the general and specialized hospitals. Compared to the primary health care system, these health care systems relatively supposed to serve patients demanding advanced and critical care. With this regard, a general hospital designed to serve 1.0-1.5 million populations while specialized hospital presumed to render health service to 3.5-5.0 million populations. In spite of this, the invading forces looted or destroyed 30 primary or general hospitals and one specialized hospital. As a result, millions of the regional or Ethiopian populations at large were not able to access health services provided by the damaged health facilities.

C. Destruction of Private Health Facilities

For Ethiopia and other similar low-income countries, expanding private health facilities is one of the key strategies to improve essential health coverage. Hence, Ethiopian Health Sector Transformation Plan-II considered expanding and strengthening the private health facilities as one of the fourteen strategic directions. Despite this plan, the invading forces looted or destroyed 25 private clinics and 21 pharmacies. In addition to the destruction of government health facilities, looting or destruction of private health facilities leaves the affected community without any health care option (Table 164).

D. Damage to the Blood Bank and Oxygen Production Plant

Improving the coverage and quality of emergency medical services is one of the country's strategic directions. To achieve this goal, blood and oxygen supply are essential resources. However, the Tigray invasion forces destroyed the blood banks and oxygen production plants which are available in limited number in the country. Four blood banks and one oxygen manufacturing plant were looted or destroyed. This destruction greatly affected the growing emergency and lifesaving services of Ethiopia. Hence citizen will also suffer from injuries or any other infirmities related of lack or absence of life-saving health services (Table 164).

E. Destruction of Health College and Research Institute

This study confirmed that one health science college was looted or destroyed during the invasion. The invading forces also destroyed the only branch (Desie branch) of the Amhara Public Health Institute in the

region. The destruction of the two institutions will have a considerable negative impact in terms of addressing shortage of health professionals and supporting the health system with scientific or research data (Table 165).

Type of health facilities damaged	Number and types of health facilities damaged in invaded administrative zones								
	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Waghimra	Oromia Special Zone	Desie City Admin	Total
Health post	26	28	74	111	20	23	15		297
Clinic	2	0	7	9	3	1		3	25
Health center	11	12	98	65	29	22	26	9	272
Hospital	0	1	7	8	5	4	3	2	30
Specialized Hospital	0	0	0	0	0	0	0	1	1
Public Health (research) Institute	0	0	0	0	0	0	0	1	1
Oxygen production plant	0	0	0	0	0	0	0	1	1
Health science college	0	0	0	0	0	0	0	1	1
Blood bank	0	0	1	0	0	1	1	1	4
Pharmacy	0	0	5	9	1			6	21
Total	39	41	192	202	58	51	45	25	653

Table 165. Health facilities damage in invaded areas by type of destruction and administrative zones

F. Destruction of Health Facilities at the Zone and District Level

Out of the eight zones that were damaged by Tigray invading forces, North and South Wollo zones experienced the most pervasive destructions of health facilities. A total of 206 health facilities were looted or destroyed in North Wollo Zone. Accordingly, seven hospitals, one blood bank, 107 health posts and 78 health centers were destroyed. More or less similar level of destruction of health facilities was observed in the districts of North Wollo zone. But relatively larger numbers (40) of health facilities were destroyed in Wodia district.

In Desie City Administration, twenty-five health facilities were destroyed. This was one of the most terrible destructions as it includes limited number of health institutions which has high level of contribution to the functioning of the health care system. This damage included looting or destruction of an oxygen factory, a Public Health Research Institute, a health science college and blood bank. Two hospitals and seven health centers were looted or destroyed. Most (48%) of the destructions of health facilities or institutions

of Desie City Administration occurred at Hote Sub-city (Table 165).

A total of 17 health facilities were looted or destroyed in Waghimra Ethnic Administration Zone, which included 3 hospitals, 7 health centers and a blood bank. Almost all (16) of health facilities destruction was reported in Dehana district (Table 165). In South Wollo Zone, 165 health facilities were destroyed, including eight hospitals, 57 health centers and 89 health posts. In addition, one private clinic and four pharmacies were looted or destroyed. Relatively, Tenta (26) and Legambo (43) districts experienced heaviest destruction of health facilities (Table 165).

Ninety-nine health facilities were damaged in North Shawa Zone, of which 7 hospitals, 33 health centers and 46 health posts were looted or vandalized. The Efratana Gidim district alone reported destruction of 22 health facilities (Table 165).

A total of 53 health facilities were destroyed in Oromo Special Zone. Amon these, 3, 20 and 29 were hospitals, health centers and health posts, respectively. Compared to districts of Oromo Ethnic Administration Zone, the highest destruction was illustrated in Bati (13) and Jilenatamuga (10) districts (Table 165). In the South Wollo Zone, 165 health facilities were destroyed, including Eight hospitals, 57 health centers and 89 health posts. In addition, seven private clinics and four pharmacies were looted or destroyed. Relatively, the highest number of health facilities were destroyed in Tenta (26) and Legambo (43) districts of South Wollo Zone (Table 166).

A total of 57 health facilities, including 50 health centers and one hospital, were destroyed in the North Gondar zone. The results of the study showed that 15 health facilities each were looted or destroyed in Adiarkay District and Debark City Administration. Forty-two health facilities, i.e., 2 hospitals, 12 health centers and 28 health posts were also looted or destroyed in South Gondar Zone. About three-quarters (71%) of the total destructions of the zone occurred Lay Gaynt district (Table 166).

Zone	District	Health post	Clinic	Health center	Hospital	Specialized hospital	Public Health (research) institute	Oxygen Production plant	Health science college	Blood bank	Pharmacy	Total
South Wollo	Tenta	18		10	1							29
	Kutaber	31	1	3								35
	Ambasel			5								5
	Tehuledere	1	1	3	1							6
	Wrerebabo	5	1	3								9
	Kalu	7		6								13
	Dessie curia			1								1
	Lgambo	33	5	8	1						7	54
	Kelela	1	1	1	1						2	6
	Jama	10			1							11
	Wore Ilu	2		11	1							14
	Kombolcha			4	1							5
	Legehida	2		1								3
	Delanta			5	1							6
	Total	111	9	65	8	0	0	0	0	0	9	202
North Shewa	Menz Gera	2		5								7
	Efratana Gidm	6	2	13	1							22
	Menz Mama	4	1	5	1						1	12
	Tarmaber	5										5
	Kewot			2								2
	Menz Keya	1		2								3
	Molale city				1							1
	Shewa Robit	2		2	1							5
	Ataye				1							1
	Total	20	3	29	5	0	0	0	0	0	1	58
Oromia Special Zone	Dawa Chefa		6									6
	Bati district	5	8									13
	Jile Timuga	6	4									10
	Artuma Fursi	3	2	1								6
	Dawa Harwa	1	3									4
	Kemissie		2	1						1		4
	Bati city		1	1								2
	Total	15	26	3	0					1	0	45

North Gondar	Adi Arkay	10	2	2							14
	Debark	8		7							15
	Dabat	3									3
	Telemt	5		2							7
	Total	26	2	11							39
South Gondar	Lay Gaint	22		8	0						30
	Guna Begemdr	4		2	0						6
	Farta	2		1	0						3
	Este	0		1	0						1
	Nefas Mewcha	0		0	1						1
	Total	28		12	1						41

Table 166. Health facilities/institutions damaged in South Wollo, North Shewa, North Gondar, South Gondar, and Oromo special Zones by administrative zones and districts

The qualitative study findings also confirmed that health, education and agricultural institutions were the main targets of destruction by the invading forces. Study participants stated that any resources used to provide health services (such as medicines, laboratory equipment, etc.) in health facilities were looted and destroyed. The Ethiopian Ministry of Health is working to reduce maternal and child mortality by strengthening referral links between health facilities. Ambulances play a key role in facilitating referral linkages. However, ambulances and other vehicles in health facilities were looted by the invading forced. They also looted the damaged vehicles once they repaired it with their own mechanics.

As an elder of Woldya area said that “... Health facilities were completely destroyed. Health and higher education institutions were the first to be destroyed. All these looting and destructions were carried out by professional members of the invading force. It was conducted with the mediation of experts. And the local community. The local community made lot of efforts to protect properties from looting and destruction, but they failed to save. During the invasion, there was a group that committed looting, abuse and misery beyond the military wing.”

Another participant of the study (the head of the health center) stated that, “...the health center was completely looted, even without leaving single bed mattress. Many computers and medical machines were looted. Materials which were not looted were destroyed just not to provide service.”

G. The Amount of Damage to Health Institutions

The amount of destruction or looting to health institutions was estimated at 7,470,295,580 Birr. More than half the total destruction occurred in North Wollo (2,714,380,800 birr) and South Wollo, (2,178,751,830 Birr) Zones. In North Wollo Zone, pervasive destruction was shown in Harbu District (452,113,780 Birr) and Woldya City Administration (325,163,014 Birr). The results of this study confirmed that the destruction of health facilities worth 304,174,641 Birr in Wadla district. Destruction of health facilities in Desie City Administration was 651,488,087 Birr, 97% of which occurred in Hote sub-city (634,113,584 Birr) (Table 167).

Half of the two billion destructions of the health facilities reported in South Wollo Zone occurred in Kombolcha City Administration (958,542,184 Birr). Relatively extensive destructions were observed in Woreilu (246,044,689 Birr), Legambo (275,075,203 Birr) and Delanta (299,964,804 Birr) districts. More than half (606,170,939 Birr) billion destruction to health facilities was reported in North Shewa Zone. The highest distraction in the zone was illustrated in Efratanagidem (85,043,812 birr) and Menzgera districts (125,622,705 Birr) (Table 168).

Extensive destructions to health institutions were also shown in Waghemra Zone, i.e., 485,071,904 Birr. A total of 801,007,714 Birr destruction to health institutions was illustrated Oromo Ethnic Administration Zone. Comparably high level of destruction was observed in Bati (60,749,283 Birr) and Kemise (70,906,722 Birr) city administrations. The study revealed 29,773,948 Birr destruction in North Gondar Zone. The highest destructions to health institutions in the zone were observed in Debark City Administration (14,997,650 Birr), Adiarkay (8,928,900 Birr) and Telemt (3,976,018 Birr) districts. The Dabat district experienced about two million (871,380 Birr) destruction of the health facilities. The damage to health facilities in South Gondar Zone was estimated at 3,650,322 Birr, most of these was reported in Lay Gaynt District (2,171,500 Birr) (Table 169).

Zone	District	Health post	Clinic	Health center	Hospital	Specialized hospital	Public health (research) institute	Oxygen production plant	Health science college	Blood bank	Pharmacy	Total
Dessie City Admin	Menafetsa			742,115	13,627,500							14,369,615
	Buanbua			333,470								333,470
	Wuha											
	Hole		63,060	98,500	7,304,750	891,600	17,319,729	524488354.5	69500352.69	14379413.13	67825	634,113,584
	Arada		80,500	1,368,500							90534.9	1,539,535
	Segno Gebia			897,000							234882,725	1,131,883
	Total		143,560	3,439,585	20,932,250	891,600	17,319,729	524,488,355	69,500,353	14,379,413	393,243	651,488,087
	Bugna	195,900	39,900	66,352,523								66,588,323
	Raya Kobo	5,839,200	42,700	79,736,752	25,500,000							111,118,652
	Gidan		26,700	110,306,885								110,333,585
North Wollo	Meiket	2,868,850		131,466,485	73,431,477							207,766,812
	Wadla	10,271,750	292,600	147,989,219	145,527,871						93,200	304,174,641
	Gubalalo	332,150		114,388,485								114,720,635
	Harbu	464,993	209,345	281,235,017	170,204,425							452,113,780
	Woldia	5,405,000		65,314,988	223,758,066					30,684,960		325,163,014
	Lasta	99,864,120		122,678,123								222,542,243
	Dawnt	260,000		84,189,061								84,449,061
	Gazo	970,074		45,033,455								46,003,529
	Angot			100,792,752								100,792,752
	Koco city	14,074,800		21,071,335	247,000,000						150,000	282,296,135
	Lalibela			168,873,983	117,443,656							286,317,639
	Total	140,546,837	611,245	1,539,429,063	1,002,865,495					30,684,960	243,200	2,714,380,800

Table 167. Estimated cost of health facilities/institutions damage (in Eth. Birr) in North and South Wollo Zones and Dessie city administration by zone and districts

Zone	District	Health post	Clinic	Health center	Hospital	Specialized hospital	Public health (research) institute	Oxygen production plant	Health science college	Blood bank	Pharmacy	Total
South Wollo	Mekdela	75,000		7,157,542								7,232,542
	Tenta	16,775,992		13,199,773	107,332,280							137,308,045
	Kutaber	13,683,278	69,000	37,750,171								51,502,448
	Ambasel			842,750								842,750
	Tehuledere	70,000	1,725,000	14,700,680	100,546,187							117,041,867
	Werebabo	2,709,500	150,000	16,224,991								19,084,491
	Kalu	3,608,000		22,278,744								25,886,744
	Dessie Zuria			2,763,594								2,763,594
	Legambo	946,000	2,752,200	24,635,520	244,622,483						2,119,000	275,075,203
	Kelela	191,975	28,750	374,900	32,500,000						63,500	33,159,125
	Jama	110,300			3,220,000							3,330,300
	Wore Ilu	156,800		8,728,700	237,159,189							246,044,689
	Kombolcha			1,205,000	957,337,184							958,542,184
	Leghida	27,800		945,243								973,043
North Shewa	Delanta			9,120,414	290,844,391							299,964,804
	Total	38,354,645	4,724,950	159,928,021	1,973,561,714						2,182,500	2,178,751,830
	Menz Gera	442,500		125,180,205								125,622,705
	Efratana Gidim	5,175,000	356,000	104,909,993	74,602,820							185,043,812
	Menz Mama	14,956,000	12,784,000	30,413,979	7,210,514						4,000,000	69,364,492
	Tarmaber	2,921,190										2,921,190
	Kewet			2,119,678								2,119,678
	Menz Keya	25,000		11,042,970								11,067,970
	Molalie				18,278,548							18,278,548
	Shewa Robit	42,500		6,811,789	87,822,242							94,676,531
	Ataye				97,076,013							97,076,013
	Total	23,562,190	13,140,000	280,478,613	284,990,136						4,000,000	606,170,939

Table 168. Estimated cost (in Eth. Birr) of health facilities/institutions damage in South Wollo and North Shewa Zones by administrative zones and districts

Zone	District	Health post	Clinic	Health center	Hospital	Specialized hospital	Public health (research) institute	Oxygen production plant	Health science college	Blood bank	Pharmacy	Total
Waghimra	Zikuala	477,000		28,235,508	115,960,194							144,672,702
	Sekota city	2,882,490		44,693,433	63,041,559						3,868,920	114,486,401
	Dehana	2,791,220	60,000	28,544,701	129,601,481							160,997,402
	Gazbila	4,486,457		6,534,227								11,020,684
	Sekota zuria	25,295,400		28,599,314								53,894,714
	Total	35,932,567	60,000	136,607,184	308,603,233						3,868,920	485,071,904
Oromia Special Zone	Dewa Chafa			22,224,427								22,224,427
	Bati district	1,293,500		5,937,875								7,231,375
	Jile Timuga	484,000		619,347,920								619,831,920
	Artuma Fursi	1,274,000		320,000	1,723,057							3,317,057
	Dawa Harewa	465,500		16,281,432								16,746,932
	Kemissie			28,378,623	31,361,235			11,166,864				70,906,722
	Bati city			35,802,937	24,946,345							60,749,283
	Total	3,517,000		728,293,213	58,030,637			11,166,864				801,007,714

North Gondar	Adi Arkay	5,907,900	220,000	2,801,000							8,928,900
	Debark	2,666,000		12,331,650							14,997,650
	Dabat	1,871,380									1,871,380
	Telemt	3,211,018		765,000							3,976,018
	Total	13,656,298	220,000	15,897,650							29,773,948
South Gondar	Farta	19,200	231,122								250,322
	Lay Gaint	400,000	1,771,500								2,171,500
	Este		51,000								51,000
	Guna Begemdr	26,000	451,500								477,500
	Nefasnewcha			700,000							700,000
	Total	445,200	2,505,122	700,000							3,650,322

Table 169. Estimated cost of health facilities/institutions damage (in Eth. Birr) in North and South Gondar and Waghimra Zones by zone and districts

H. The amount (cost) of Damage to Medical and Other Supplies

This study showed more than five billion damage to laboratory (2,151,605,363 Birr) and other supplies (3,559,423,451.55 Birr). The Desie City Administration experienced heaviest (1,364,641,247 Birr) destruction of laboratory supplies corresponding to half of the total destruction in eight invaded zones. Moreover, extensive destruction of laboratory supplies was revealed in North (383,762,776 Birr) and South (165,605,504 Birr) Wollo Zones and North Shewa Zone (183,983,448 Birr). Desie City Administration also faced heaviest destruction of other medical supplies, which was estimated at 2,447,054,628 Birr (Table 170).

Zone	Damage to laboratory supplies in Eth. birr	Damage to other medical supplies in Eth. birr
Dessie City Admin	1,364,641,247	2,447,054,628
North Wollo	383,762,776	705,742,482
South Wollo	165,605,504	160,082,127.4
North Shewa	183,983,448	53,452,885
Oromia Special Zone	37,616,373	20,122,127.3
North Gondar	14,617,715	22,151,268.5
Waghimra	1,378,300	150,817,933.5
South Gondar	NA	NA
Total damage	2,151,605,363	3,559,423,451.55

Table 170. Estimated cost (in Eth. Birr) of damage to laboratory and other medical supplies by zone and district

I. Destruction of Health Offices and Departments

The health department and offices are supposed to provide any resource (e.g. drugs, medical equipment, etc.) and administrative supports to health care facilities. However, 60 health departments and offices were looted or destroyed during the invasion. In South Wollo Zone alone, 18 health departments and offices were destroyed. Many health departments and offices were also looted or destroyed in North Wollo (10), Oromo Ethnic Administration (11) and North Showa (12) Zones (Figure 48).

J. Injury to Health Professionals

During the invasion, 51 health workers suffered from various injuries. Of whom, two women and two men were killed. Thirty-seven health professionals were injured, eleven were women. Ten men remained without known destination (Table 171).

Zone	Deaths			Disability			Lost without any address			Sum total
	Male	Female	Sub-total	Male	Female	Sub-total	Male	Female	Sub-total	
Dessie City Admin	0	0	0	0	0	0	0	0	0	0
North Wollo	0	0	0	19	10	29	6	0	6	35
South Wollo	0	1	1	2	0	2	2	0	2	5
North Shewa	1	0	1	1	0	1	0	0	0	2
Oromia Special Zone	0	0	0	2	0	2	0	0	0	2
North Gondar	1	0	1	0	0	0	0	0	0	1
Waghimra	0	1	1	2	1	3	2	0	2	6
South Gondar	0	0	0	0	0	0	0	0	0	0
Total	2	2	4	26	11	37	10	0	10	51

Table 171. Health professionals' death, disability, and other sufferings caused by Tigrian invading forces

K. Community Problems or Sufferings Related to the Destruction of Health Facilities

The findings of the quantitative study found that more than 800 people died due to lack of medicine or lack of health services in the occupied areas. The qualitative analysis also affirmed that citizens were subjected to severe health problems and death due to interruption of health services.

Study participant from Dabark district witnessed that "...During the months-long invasion, the community was unable to access health services due to the destruction of health facilities and the lack of transportation services. As a result, pregnant women, HIV, Tuberculosis and diabetics patients were subjected to psychological problems and death due to the interruption of health services. A woman with heart disease who lived near to the health center died

due to absence medicine. A teacher and another pregnant woman living in the city died because of interruption of health services.”

Implications of the Destruction of Health Facilities

The results of the study showed that the invading forces caused serious damage to health facilities. The scope of destruction encompassed all the levels of the health care system, i.e., from primary to tertiary health care systems. Cognizant of the extent of health facilities destruction and catchment area population, about 12 million citizens living in the invaded and nearby areas were not able to access basic health services. Moreover, taking into account of the urban-rural ratio of the country and pervasive damage of the primary health care facilities, the wider rural population of Ethiopia may not be able to access essential health services. The rural areas of Ethiopia, relatively there is lower health service coverage and higher disease and death (especially of maternal and child death rates) rates. This makes the observed distraction worse in the rural population. As a result, it could be very challenging for Ethiopia to achieve the Health Sector Transformation Plan-II objectives, including improving Universal Health Coverage (0.43 to 0.58) and drug supply (79.2 to 90%) and reducing maternal (from 401 per 100,000 live births to 279) and child (from 59 per 1,000 live births to 44 per 1,000 live births) mortality rates. Ethiopia has been implementing the Optimizing Health Extension Program taking into account of changes in demand of quality health care services and disease epidemiology. The Optimization of Health Extension Program is one of the key national strategies targeted to improve Universal Health Coverage. In spite of this, the observed massive destruction of the health posts could challenge the implementation of Optimization of Health Extension Program.

3.3.9. Destruction Occurred in the Work and Training Sector

Under work and training sector technical and vocational schools and small and micro enterprise sector in the region which engaged most of the youth in the population. In this sectors a number of machineries and innovative activities were stated and engaged the youth group. The invading forces loot and destruct all the machineries of technical and vocational schools and investments of small and micro enterprises found in the invaded areas of Amhara region.

A. Destruction Occurred in Technical and Vocational Schools

It is known that technical and vocational training institutions have a significant role in increasing the work skills of citizens and in reducing the high unemployment rate in Ethiopia. However, as indicated in Table 173, many technical and vocational training institutions were looted and destroyed. The study confirmed that a total of 55 technical and vocational training institutions were looted and destroyed (Figures 49 and 50). In comparison with invaded administrative zones damage, South Wollo 20, North Shewa 10, North Wollo 9, Dessie city administration 7, oromo ethnic zone 4, wag ethnic zone 2, south Gondar 2 and North Gondar 1 were damaged highly (Table 173) .



Figure 40. A photo showing the looted & damaged Amdework Technical & Vocational College workshop



Figure 41. Photo of the destruction and looting of Woldia Polytechnic College

Apart from the quantitative study, the results have also confirmed that there has been huge destruction in technical and vocational colleges. As a result, teachers w working on this destructed technical and vocational colleges expressed that they had difficulty doing their teaching work. A teacher and participant in the study at Kmise Technical and Vocational College stated;

“... To be honest, the damage done in the education sector has dragged us far behind the 21st century. Office or even schoolwork we do by handwriting using Carobon. They have deprived us of many things. They made us move away from technology and go back to zero. For example: If you take information technology students to college without a computer, you will not settle them. You don’t just train with a chalkboard. It is not a matter of gathering vocational students and teaching them only theory does not work the teaching-learning processes. So they made us stay away from technology, I think the government should at least provide immediate solutions or support here.”

When the amount of damage happened in the technical and vocational schools in the eight invaded administrative zones has been calculated. It is estimated that 4,989,790,863 birr (four billion nine hundred eighty nine million seven hundred ninety thousand eight hundred sixty three birr). Of this, most (94.5%) of the destruction occurred in ten technical and vocational institutions in the North Shewa zone. The result of the study showed that the amount of damage in North shewa Technical and vocational college was 4,720,273,657 birr (four billion seven hundred twenty million two hundred seventy three thousand six hundred fifty seven birr) (Table 173).

Invaded zones	Number of damaged technical and vocational institutions	Estimated Damage in Birr
North Gondar	1	679,758
South Gondar	2	118,120,755
North wollo	9	4,795,683
South Wollo	20	134,442,505
North Shewa	10	4,720,273,657
Wag himera	2	944,627
Oromo ethnic zone	4	7,416,760
Dessie city	7	3,117,118
Sum Total	55	4,989,790,863

Table 172. *The amount of damage to technical and vocational institutions at the zonal level and the estimated value in birr*

Among the woredas in the North Gondar administrative zone, the destruction of technical and vocational institutions was recorded at 679,758 Birr (six hundred seventy-nine thousand seven hundred fifty-eight birr); in South Gondar administrative zone, the Technical and vocational college damage recorded in Nefas uchmuch 106,973,615 birrs (one hundred six million nine hundred seventy-three thousand six hundred fifteen Birr) and Guna Be Gemdir 11,147,140 birr (Eleven million one hundred forty-seven thousand one hundred forty birrs). Similarly, in seven woredas of the North Wollo administrative Zone the most damaged Technical and vocational college were Raya Kobo 2,489,899 birr (two million four hundred eighty-nine thousand eight hundred ninety nine birr), Dawunt 982,250 birr (nine hundred eighty-two thousand two hundred fifty birr) and Bugna 646,002 birr. (six hundred forty-six thousand two birr); in fifteen woredas of South Wollo the most damaged technical and vocational institutions were Kutaber 75,385,750 birr (Seventy Five Million Three Hundred Eighty Five Thousand Seven Hundred Fifty birr), Werebobo 37,168,819 birr (Thirty-Seven Million One Hundred Sixty Eight Thousand Eight Hundred Nineteen birr), Kombolcha. 7,838,315 birr (seven million eight hundred thirty eight thousand three hundred fifteen birr), Kalu 4,758,628 birr (four million seven hundred fifty eight thousand six hundred twenty-eight birr), haik 4,046,410 birr (four million forty six thousand four hundred ten birr). The total amount of damage recorded was 2,000,316 birr (two million three hundred sixteen Birr) (Table 174).

Destruction of Technical and Vocational Institutions in North Shwa have been confirmed in three woredas. Among these, the woredas with the highest level of destruction were Atye 3,450,000,000 birr (three billion four hundred fifty million), Menz Mama 1,160,000,000 birr (one billion one hundred sixty million) and Menz Qaya 60,142,600 birr (sixty million one hundred forty two thousand six hundred birr). In addition, four woredas of the Oromo ethnic zone technical and vocational schools were damaged; Bati City 3,805,200 Birr (Three Million Eight Hundred Five Thousand Two Hundred birr), Artuma Fursi 1,931,935 birr (One Million Nine Hundred Thirty One Thousand Nine Hundred Thirty Five birr), kemissie 1,621,250 birr (One Million Six Hundred Twenty One Thousand Two Hundred Fifty birr) and Dewa chefa 58,375 birr (Fifty Eight Thousand Three Hundred Seventy Five birr); in Waghimra administrative Zone Sekota City 944,627 birr (Nine Hundred Forty Four Thousand Six Hundred Twenty Seven birr), Dessie City Menafesha subcity vocational and technical institutions were

destroyed 1,597,893 birr (one million five hundred ninety seven thousand eight hundred ninety three birr), Arada 621,565 birr (six hundred twenty one thousand five hundred sixty five birr), Buambua wuha 265,980 birr (two hundred sixty five thousand nine hundred eighty Birr) and Hote 163,020 birr (One Hundred Sixty Three Thousand Twenty Birr) were recorded (Table 174).

Zone	Woreda	Damage amount in Birr	Zone	Woreda	Damage amount in Birr
North Gondar	Telemet	679758	South Gondar	Mekedela	730880
	Sum total	679758		Tenta	391600
North Gondar	Bugna	646002		Kutaber	75385750
	Raya Kobo	2489899		Ambasel	374506
	Meket	80432		Thulederie	2000316
	Wadla	207400		Worebabo	37168819
	Harbu	282700		Kalu	4758628
	Woldia	107000		Dessie Zuria	825
	Dawunt	982250		Legambo	534864
	Sum total	4795683		klala	396000
North Shewa	Menze Gera	13424920		Kombolcha	7838315
	Menze mama	1160000000		Legehida	112925
	Menze keya	60142600		Haik	4046410
	Shewa Robit	22893495		Delanta	38333
	Ataye	3450000000		Kutaber	664334
	Mehal Meda	13812642		Sum total	13442505
	Sum total	4720273657	Oromo ethnic zone	Dewa chefa	58,375
Dessie City	Menafesha	1,597,893		Artuma fursie	1,931,935
	Buanbua Wuha	265,980		kemissie	1,621,250
	Hote	163,020		Bati City	3,805,200
	Arada	621,565		Sum total	7,416,760
	Sum total	3,117,118	South Gondar	Nefas Meucha	106973615
Wag himera	Sekota City	944,627		Guna Begemider	11147140
	Sum total	944,627		Total	118120755

Table 173. *The damage amount of technical and vocational institutions in invaded zone and woreda estimated in birr*

B. Destruction in the Small and Micro-Enterprise Sector

In all the administrative zones and woredas affected by the armed invasion, the small and micro-enterprise sector is a sector that involves most of the

youth and embraces job seekers. However, the rate of destruction varies from zone to zone. Therefore, when the destruction in the small and micro enterprise sector is estimated in terms of cash, North Wollo were 611,003,513 birr (six hundred eleven million three thousand five hundred thirteen birr), North Shewa were 548,143,852 birr (Five hundred forty eight million one hundred forty three thousand eight hundred fifty two birr); Waghimra ethnic administration 233,424,107 birr (two hundred thirty three million four hundreded tewenty four one hundered seven birr), South Wollo 171,743,042 birr (one hundred seventy one million seven hundred forty three thousand forty two birr), Oromo ethnic administration 106,125,591 birr (one hundred six million one hundred twenty five thousand Five Hundred and Ninety One birr), Dessie City 67,147,079 birr (Sixty Seven Million One Hundred Forty Seven Thousand Seventy Nine birr), North Gondar 29,457,117 birr (Twenty Nine Million Four Hundred Fifty Seven Thousand One Hundred Seventeen birr) and South Gondar 14,092,685 birr (fourteen million Ninthy two thousand six hundred eighty five birr) was confirmed to have been destroyed (Table 175).

Among the four invaded woredas in the North Gondar administrative zone that were damaged by the invader, small and micro enterprises were damaged at Dabat 11,085,250 birr (eleven million eighty-five thousand two hundred fifty birrs), Telemt 9,437,472 birr (nine million four hundred thirty seven thousand four hundred seventy-two birr); Debark 8,301,235 birr (eight million three hundred one thousand two hundred thirty-five birr) and Adiarkai 633,160 birr (six hundred thirty-three thousand one hundred sixty birrs) the amount of destruction was recorded (Table 175).

Among the micro and small enterprises damaged by the invaders in the South Gondar administrative zone, Nefas much 7,214,359 Bbirr (seven million two hundred fourteen thousand three hundred fifty nine Birr), Guna Begemdir 4,068,898 birr (four million sixty eight thousand eight hundred ninety-eight birr), Laygiant 1,926,496 birr (one million nine hundred twenty-six thousand four hundred ninety-six birr) and Farta 882,932 birr (eight hundred eighty two thousand nine hundred thirty-two birr were recorded (Table 175).

Among the 18 districts that were damaged by the invaders in the North Wollo administrative zone, regarding the damage to micro and small enterprises, Raya Kobo 178,618,470 birr (one hundred seventy eight million six hundred eighteen thousand four hundred seventy birr), Kobo city

193,985,424 birr (one hundred ninety three million nine hundred eighty five four hundred twenty four birr), Woldia city 90,196,319 birr (ninety million one hundred ninety six thousand three hundred nineteen birr), Habru 84,251,790 birr (eighty four million two hundred fifty one thousand seven hundred ninety birr), Wadla 29,114,431 birr (twenty Nine million one hundred fourteen thousand four hundred thirty birr), Gubalafto 27,305,547 birr (twenty seven million three hundred five thousand five hundred forty seven Birr), Lasta 2,363,996 birr (two million three hundred sixty three thousand nine hundred ninety six birr), Meket 2,211,231 birr (two million two hundred eleven thousand two hundred thirty one birr), Lalibala 1,803,549 birr (one million eight hundred three thousand five hundred forty nine birr), Gidan 1,027,345 birr (one million twenty seven thousand three hundred forty five birr) and Gazo 125,411 birr (one hundred and twenty five thousand four hundred eleven birr) amount of damage was recorded (Table 175).

Out of the 25 rural woredas and city administrations in the South Wollo administrative zone, 13 small and microl enterprises were damaged. Regarding the damage of each rural woreda and city administration, Delanta 83,046,778 birr (eighty three million forty six thousand seven hundred seventy eight birr), Ambasel 31,549,120 birr (thirty one million five hundred forty nine thousand one hundred twenty birr), Kombolcha city 17,845,393 birr (seventeen million eight hundred forty-five thousand three hundred ninety-three Birr), Kutaber 14,496,669 birr (fourteen million four hundred ninety-six thousand six hundred sixty-nine birr), Jama 10,277,377 birr (ten million two hundred seventy-seven thousand three hundred seventy-seven birr), Werebabo 5,937,518 birr (five million nine hundred thirty seven thousand five hundred eighteen birr), haik 2,241,294 (two million two hundred forty one thousand two hundred ninety four Birr), Kalu 1,679,647 Birr (one million six hundred seventy nine thousand six hundred forty seven Birr) , Gambo 1,556,226 Birr (one million five hundred fifty six thousand two hundred and twenty six Birr), Tenta 1,498,131 Birr (one million four hundred ninety eight thousand one hundred thirty one Birr), Protection 1,159,917 Birr (one million one hundred fifty nine thousand nine hundred Seventeen Birr), Dessie 365,734 Birr (Three Hundred Sixty Five Thousand Seven Hundred Thirty Four Birr) and Magdala 89,238 Birr (Eighty Nine Thousand Two Hundred Thirty Named birr) have been recorded (Table 175).

Among the 13 rural woredas and city administrations in the North Shewa administration zone, eight rural woredas and city administrations were

affected by micro and small enterprises. Regarding the amount of damage, Shewarobit 306,920,447 birr (three hundred six million nine hundred twenty-four hundred forty-seven birr), Efratana Gidam 180,781,912 birr (one hundred eighty million seven hundred eighty-one thousand nine hundred twelve birrs), Menz Gera 45,295,312 birr (forty-Five million two hundred ninety-five thousand three hundred twelve birrs), Mehal media 11,112,907 birrs (eleven million one hundred twelve thousand nine hundred seven birrs), Ataye 3,864,941 birr (three million eight hundred sixty-four thousand nine hundred forty-one birr), Tarmaber 122,980 birr (one hundred twenty-two thousand nine hundred eighty birr), Menz Mama 25,993 birr (Twenty-five thousand nine hundred ninety-three birr) and Debresina 19,360 birr (nineteen thousand three hundred sixty birrs) amount of damage was recorded (Table 175).

Out of the eight rural woredas and city administrations in Waghimra ethnic zone, seven were affected by the damage to micro and small enterprises. The study was not conducted in two woredas because they were not liberated from the invading forces. Among the studied rural woredas and city administrations, the amount of damage in the invaded woredas, Sekota City 110,440,118 birr (one hundred ten million four hundred forty thousand one hundred eighteen birr), Dahna 79,578,200 birr (seventy-nine million five hundred seventy-eight thousand two hundred birrs). Sekota zuria 41,759,028 birr (Forty-One Million Seven Hundred Fifty-Nine Thousand Twenty-Eight birr) and Gaz gibela 937,910 birr (Nine Hundred Thirty-Seven Thousand Nine Hundred Ten birr) were recorded (Table 175).

Among the seven rural woredas and city administrations affected by the invaders in the Oromo ethnic administration zone, damage to micro and small enterprises has occurred in four woredas. The damage record by woreda level were estimated in kemissie 77,794,321 birr (seventy seven million seven hundred ninety four thousand three hundred twenty one birr), Jile Tamuga 27,964,090 birr (twenty seven million nine hundred sixty four thousand ninety birr), Bati city 251,680 birr (two hundred fifty One thousand six hundred eighty birr) and Bati 115,500 birr (one hundred fifteen thousand five hundred birr) was recorded as the amount of destruction (Table 175).

Small and micro enterprises in the five sub-cities that were damaged by the invaders in Dessie city administration have been recorded. The damage caused at the subcity level were estimated in cash such as Buambua wuha

19,624,659 birr (nineteen million six hundred twenty-four thousand six hundred fifty-nine birr), Arada 16,112,553 birr (sixteen million one hundred twelve thousand five hundred fifty-three birr), Menafesha 13,682,277 birr (Thirteen million six hundred eighty two thousand two hundred seventy seven birr), Segno gebeya 9,767,736 birr (nine million seven hundred sixty seven thousand seven hundred thirty six birr) and Hote 7,959,854 birr (seven million nine hundred fifty nine thousand eight hundred fifty four birr)) amount of destruction was recorded (Table 175).

Zone	Woreda	Damage amount in Birr	Zone	Woreda	Damage amount in Birr Zone
North Gondar	Adiarkay	633,160	North	Raya Kobo	178,618,470
	Debark	8,301,235		Gidan	1,027,345
	Dabat	11,085,250		Meket	2,211,231
	Telemt	9,437,472		Wadla	29,114,431
North shewa	Sub Total	29,457,117	Wollo	Gubalafeto	27,305,547
	Debresina	19,360		Habru	84,251,790
	Menze gera	452,95,312		Woldia	90,196,319
	Efrataena gidm	180,781,912		Lasta	2,363,996
	Menz mama	25,993	South	Gazo	125,411
	Tarmabere	122,980		Kobo city	193,985,424
	Shewa robit	306,920,447		Lalibela	1,803,549
	Mehal meda	11,112,907		Sub total	611,003,513
Oromo ethnic zone	Ataye	3,864,941		Mekdela	89,238
	Sub total	548,143,852		Tenta	1,498,131
	Bati	115,500		Kutaber	14,496,669
	Jile Timuga	27,964,090		Ambasel	31,549,120
Dessie city	Kemissie	77,794,321		werebabo	5,937,518
	Bati city	251,680		Kalu	1,679,647
	Sub total	106,125,591		Dessie Zuria	365,734
	Menafesha	13,682,277	Wollo	Legambo	1,556,226
	Buanbua wuha	19,624,659		Kelela	1,159,917
	Hote	7,959,854		Jama	10,277,377
Wag himra	Arada	16,112,553		Kombolcha	17,845,393
	Segno gebeya	9,767,736	South Gondar	Haik	2,241,294
	Sub total	67,147,079		Delanta	83,046,778
	Zequala	937,910		Sub total	171,743,042
	Sekota city	110,440,118		Farta	882,932
Wag himra	Dahena	79,578,200		Laygaint	1,926,496
	Gaz gibela	708,851		Guna Begemidr	4,068,898
	Sekota zuria	41,759,028		Nefas Mewucha	7,214,359
	subtotal	233,424,107		Sub total	14,092,685

Table 174. *Amount of damage to micro and small enterprises in birrr by zone and woreda level*

3.3.10. Destruction Cost in Industrial Sectors

Although the development of the industrial sectors in the Amhara National Regional State was limited, more than 70 percent of the existing industry capitals of the Amhara region were invaded at kombolcha and

Dessie cities. The result has been confirmed that the region has suffered a lot of destruction in the industrial sectors. A total of 184 industries were completely destroyed in all the invaded areas; 666 are partially destroyed (Figure 51). It has been confirmed in the study that the total number of those who were completely or partially destroyed were 824 (Table 176).



Figure 42. Photographs showing the destruction of Ghosh Meda plastic Factory (a, b, c & d).

In terms of the number of industries that were completely or partially destroyed by the invaders forces at the zonal level, Waghemra Ethnic Administration (362), North Shewa (235), South Wollo (109), North Wollo (57), Oromo Ethnic Administration (37) and Dessie City (24)) but no damage was recorded in the administrative zone of South and North Gondar. In terms of the industrial sector, the highest numbers of destructions were 451 in steel and wood, 268 in textile and leather industries, 78 in agro industry and 53 in chemical and construction inputs (Table 176).

Zone	Damaged industry sectors	Industries				
		Agro processing	Textile and leather	steel and wood	chemical and construction inputs	Sum total
North wollo	Full damage	2	4	5	2	13
	Partial damage	11	1	20	12	44
South wollo	Full damage	6	4	35	15	60
	Partial damage	13	10	13	13	49
North Shewa	Full damage		76	4	1	81
	Partial damage	14	130	9	1	154
Wag himra	Full damage	3	3	1		7
	Partial damage	7	8	340		355
Oromo ethnic zone	Full damage	3	4	2	1	10
	Partial damage	3	18	6		27
Dessie city	Full damage	2			2	4
	Partial damage	9	2	4	5	20
South Gondar	Full damage	2	2	4	1	9
	Partial damage	3	6	8		17
otal		78	268	451	53	850

Table 175. *Destruction of industries in each zone by type and number*

When the damage caused to the various industries listed in the above table 176 estimated in terms of cash. Among the industrial sectors that damage highly in order of amount, Agro Industry 35,902,384,572 birr (Thirty Five Billion Nine Hundred Two Million Three Hundred Eighty Four Thousand Five Hundred Seventy Two birr), Chemical and Construction Input 1,429,164,806 birr (one billion four hundred twenty nine million one hundred sixty four thousand eight hundred six birr), steel and wood 1,035,497,809 birr (one billion thirty five million four hundred ninety seven thousand eight hundred nine birr) and textiles and leather 343,561,573 birr (three hundred forty three million five hundred sixty one thousand five hundred seventy three birr).

According to the order of the destruction caused by the zone, South Wollo 37,129,229,722.27 birr (thirty-seven billion one hundred twenty-nine million two hundred twenty-nine thousand seven hundred twenty-two birr and twenty-seven cents), Dessie City 538,755,856.10 birr (five hundred thirty-eight million seven hundred fifty-five thousand eight hundred fifty-six birr and ten cents), North Wollo 485,566,396.70 birr (four hundred eighty-five million five hundred sixty-six thousand three hundred ninety-six birr and seventy cents), Oromo Ethnic Administration 325,995,263.00 birr (three

hundred twenty-five million nine hundred ninety) five thousand two hundred sixty-three birr), North Shewa 194,145,102.70 birr (one hundred ninety-four million one hundred forty-five thousand one hundred two birr and seventy cents) and Waghemra Ethnic Administration 83,672,580.20 birr (eighty-three million six hundred seventy-two thousand five hundred eighty birr and wttwenty cents).

Therefore, the total damage in the industrial sector was 38,757,364,920.97 birr (thirty-eight billion seven hundred fifty-seven million three hundred sixty-four thousand nine hundred twenty birr and ninety-seven cents) (Table 177).

Name of zone	Industries					Sum total
	Agro processing	Textile and leather	Steel and wood	Chemical and construction inputs	Others	
North Wollo	79,352,800	3,521,375	245,943,372	156,748,849		485,566,396.70
South wollo	35,704,935,270	297,265,543	332,291,797	794,737,113		37,129,229,722.27
North Shewa	326,076	38,442,250	154,908,617		468,160	194,145,102.70
Wag himera	4,960,120	1,097,030	77,615,430			83,672,580.20
Oromo ethnic zone	23,671,516		167,706,572	88,329,175	46,288,000	325,995,263.00
Dessie City	89,138,790	3,235,375	57,032,021	389,349,670		538,755,856.10
South Gondar	26,768,109.53	650,000	2,032,819	174,457,164.53		203,908,093.06
Sum total	35,902,384,572	343,561,573	1,035,497,809	1,429,164,806	46,756,160	38,961,273,013.8

Table 176. *Damage of industries in each zone by type of industry and estimation in birr*

Five of the 18 districts in the North Wollo zone have been heavily damaged. A total of 536 industries were destroyed. The total damage cost was 1,048,429,452.7 birrs (one billion forty-eight million four hundred twenty-nine thousand four hundred fifty-two birr and seven cents).

Therefore, the industrial sectors that suffered the most damage are construction and construction 690,823,849.4 Birr (six hundred and ninety million eight hundred and twenty three thousand eight hundred and forty nine Birr and four cents), steel and wood 269,002,630.4 Birr (two hundred and sixty nine million two thousand six hundred and thirty four cents)) and Agro Industry 84,037,832.90 Birr (Eighty Four Million Thirty Seven Thousand Eight Hundred Thirty Two Birr and Ninety Cents). When analyzed by district level, Angot 645,637,389.9 Birr (six hundred forty five million six hundred thirty seven thousand three hundred eighty nine Birr and nine cents), Woldia 294,196,997.2 Birr (two hundred ninety four million one hundred ninety six thousand nine hundred and ninety seven Birr and

two cents) and Wadla 71,471,981.5 Birr (Seventy One Million Four Hundred Seventy One Thousand Nine Hundred Eighty One Birr and Five Centim) are heavily damaged (Table 178).

Type of industries	Number and damage in birr	Raya Kobo	Wadla	Habru	Woldia	Angot	Sum Total
Agro processing	Number	4	21		64		89
	Damage estimate in Birr	14,772,450	11,943,371		57,322,011.9		84,037,832.90
Textile and leather	Number			4	2		6
	Damage estimate in Birr			1,186,900.00	3,377,731		4,564,631.00
Steel and wood	Number	1	32	15	87	1	136
	Damage estimate in Birr	187,000	41,215,515.5	8,394,832.60	218,888,482.3	316,800.00	269,002,630.4
Chemical and constructions input	Number		10	43	117	135	305
	Damage estimate in Birr		18,313,020.0	12,581,754.5	14,608,548	645,320,526.9	690,823,849.4
Sum total	Number	5	63	62.00	270.00	136.00	536.00
	Damage estimate in Birr	14,959,461	71,471,981.5	22,163,623.1	294,196,997.2	645,637,389.9	1,048,429,452.7

Table 177. *The number of industries destroyed by the invading force in the woredas of North Wollo administrative Zone and estimation in birr*

In Waghimra Ethnic Zone, two of the woredas were invaded heavily destroyed. A total of 389 industries were damaged. The amount of damage were 83,672,580 birr (eighty three million six hundred seventy two thousand five hundred eighty birr). Therefore, the industrial sectors that suffered the most damage were steel and wood 77,615,430 birr (seventy seven million six hundred fifteen thousand four hundred thirty birr) and agro industry 4,960,120 birr (four million nine hundred sixty thousand one hundred twenty birr) and leather and textile 1,097,030 birr (one million ninety seven thousand thirty birr). When the damage assesement analyzed at the woreda level, Dahna 79,136,180 birr (seventy nine million one hundred thirty six thousand one hundred eighty birr) and Sekota City 4,536,400 birr (four million five hundred thirty six thousand four hundred birr) were heavily damaged (Table 179).

Woreda	Agro processing		Textile and leather		steel and wood		Sum total	
	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr
Sekota City	4	4430800			3	105600	7	4536400
Dahena	9	529320	18	1097030	355	77509830	382	79136180
Sum Total	13	4960120	18	1097030	358	77615430	389	83672580

Table 178. *Number of industries destroyed by the invading force in Waghimra ethnic zone woredas and estimation in birr.*

In South Wollo Zone, five of the invaded woredas have been heavily destroyed. In these five woredas, a total of 463 industries were damaged. The amount of damage were estimated about 35,541,534,753 birr (thirty five billion five hundred forty one million five hundred thirty four thousand seven hundred fifty three birr). Therefore, the industrial sectors that suffered the most damage were Chemical and construction inputs 9,964,634,989 birr (nine billion nine hundred sixty four million six hundred thirty four thousand nine hundred eighty nine birr), steel and wood 8,914,078,434 birr and agro industry 13,532,370,788 birr (thirteen billion five hundred thirty Two million three hundred seventy thousand seven hundred eighty eight birr) were recorded. When the damage assesement analyzed at the woreda level, Kombolcha 35,221,890,387 birr (thirty five billion two hundred twenty one million eight hundred ninety thousand three hundred eighty seven birr), Kalu 253,308,000 birr (two hundred fifty three million three hundred eight thousand birr) and Kutaber 38,348,495 Birr (thirty eight million three hundred forty-eight thousand four hundred ninety-five birr) damage were recorded (Table 180).

Woreda name	Agro-processing		Textile and leather		steel and wood		Chemical and construction inputs		Sum total	
	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr
Kutaber	12	32,876,270			11	220,825	7	5,251,400	30	38,348,495
Ambasel	2	14,218	4	869,220	19	1,242,099	10	19,743,280	35	21,868,816
Kalu					5	1,628,000	1	251,680,000	6	253,308,000
Kelala					7	518,980			7	518,980
Kombolcha	78	13,496,756,326	59	3,127,590,138	62	8,910,103,880	101	9,687,440,042	300	35,221,890,387
Haik	50	2,723,974	10	1,991,185	15	364,650	10	520,267	85	5,600,076
Sum total	142	13,532,370,788	73	3,130,450,543	119	8,914,078,434	129	9,964,634,989	463	35,541,534,753

Table 179. *The number of industries destroyed by the invading force in South Wollo woredas and estimation in birr*

Out of thirthen invaded woredas in north Shewa administrative zone six of them have been heavily destroyed. In these invaded woredas a total of 465 industries were damaged. The total amount of damage were estimated as 197,281,886 birr (one hundred ninety seven million two hundred eighty one thousand eight hundred eighty six birr). The industrial sectors that suffered the most damage in the woredas were steel and wood 160,304,815 birr (one hundred sixty million three hundred four thousand eight hundred fifteen birr), textiles and leather 36,182,835 birr (thirty six million one hundred eighty two thousand eight hundred thirty five birr) and chemicals and construction inputs 468,160 birr (four hundred sixty eight thousand one hundred sixty birr) were mentioned. When the damage assesement

analyzed at the woreda level, Efratana Gidam 136,842,823 birr (one hundred thirty six million eight hundred forty two thousand eight hundred twenty three birr), Menz Gera 24,264,500 birr (twenty four million two hundred sixty four thousand five hundred birr) and Shewarobit 15,434,118 birr (fifteen million Four hundred thirty four thousand one hundred eighteen birr) were recorded as heavily damaged (Table 181).

Woreda name	Agro-processing		Textile and leather		Steel and wood		Chemical and construction inputs		Total	
	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr
Mene Gera					3	24,264,500		-	3	24,264,500
Eferatana guide			1	22,110,000	25	114,264,663	14	468,160	40	136,842,823
Tarmabere	14	326,076	343	14,072,835	22	949,060		-	379	15,347,971
Shewa robot					13	15,434,118		-	13	15,434,118
Ataye					28	5,183,737		-	28	5,183,737
Mehal Meda					2	208,737		-	2	208,737
Sum total	14	326,076	344	36,182,835	93	160,304,815	14	468,160	465	197,281,886

Table 180. *The number of industries destroyed by the invaders in the invaded woredas of North Shewa administrative zone and estimation in Birr*

In the Oromo ethnic administrative zone, three of the districts that were invaded have suffered major industrial destruction. In general, a total of 49 industries were damaged. The amount of damage were 325,995,263 birr (three hundred twenty five million nine hundred ninety five thousand two hundred sixty three birr). The industrial sectors that suffered the most damage were, respectively, steel and wood 167,706,572 birr (one hundred sixty seven million seven hundred six thousand five hundred seventy two birr), chemical and construction 88,329,175 birr (eighty eight million three hundred twenty nine thousand one hundred and seventy five birr) and Agro Industry 23,671,516 birr (Twenty Three Million Six Hundred Seventy One Thousand Five Hundred Sixteen birr) were mentioned. When damage assesment analyzed at the woreda level, Bati damage recorded as 181,587,032 birr (one hundred eighty one million five hundred eighty seven thousand thirty two birr), kemisie 119,108,231 birr (one hundred nineteen million one hundred eight thousand two hundred thirty one birr) and Jile Timuga 25,300,000 birr (twenty five million three hundred thousand birr) were heavily damaged (Table 182).

	Agro processing		Textile and leather		Steel and wood		Chemical and construction inputs		Sum total	
	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number
Bati	6	22,186,516	6	62,039,516	3	51,073,000	1	46,288,000	16	181,587,032
Jile Timuga		-	1	25,300,000		-		-	1	25,300,000
Kemisie	3	1,485,000	20	80,367,056	6	37,256,175		-	29	119,108,231
Sum total	9	23,671,516	27	167,706,572	9	88,329,175	1	46,288,000	46	325,995,263

Table 181. *The number of industries destroyed by the invading force in Oromo ethnic woredas and estimation in birr*

Among the sub-cities invaded by the invading forces in Dessie city administration, there has been a great destruction of industries. In general, a total of 75 industries were damaged. The total amount of estimated damage were 1,820,755,856 birr (one billion eight hundred twenty million seven hundred fifty five thousand eight hundred fifty six birr).

Therefore, the industrial sectors that suffered the most damage were steel and wood 1,326,032,021 birr (one billion three hundred twenty six million thirty two thousand twenty one birr), chemical and construction 402,349,670 birr (four hundred two million three hundred forty nine thousand six hundred seventy birr) and agro Industry 89,138,790 (Eighty Nine Million One Hundred Thirty Eight Thousand Seven Hundred Ninety Eight birr) are mentioned. When the damage assessment result analyzed at the woreda level, Buambua wuha 1,377,042,679 birr (one billion three hundred seventy seven million forty two thousand six hundred seventy nine birr), menafesha 359,122,988 birr (three hundred fifty nine million one hundred twenty two thousand nine hundred eighty eight birr) and segno gebeya 49,373,521 birr (forty nine million three hundred seventy three thousand five hundred twenty one Birr) are heavily damaged (Table 183).

Sub cities	Agro processing		Textile and leather		Steel and wood		Chemical and construction inputs		Sum total	
	No.	Damage estimate in Birr	No.	Damage estimate in Birr	No.	Damage estimate in Birr	No.	Damage estimate in Birr	No.	Damage estimate in Birr
Menafesha	20	32,889,170	1	2,964,500	3	2,319,680	15	320,949,639	39	359,122,988
Buambua wuha	12	11,813,450			8	1,318,774,991	3	46,454,238	23	1,377,042,679
Hote		-					2	34,945,793	2	34,945,793
Arada		-	1	270,875		-		-	1	270,875
Segno gebeya	9	44,436,171			1	4,937,350		-	10	49,373,521
Sum total	41	89,138,790	2	3,235,375	12	1,326,032,021	20	402,349,670	75	1,820,755,856

Table 182. *The number of industries destroyed by the invading force in Dessie city Administration sub-cities and estimation in birr*

Among the woredas that were invaded in South Gondar administrative zone, Nefasmewucha DEberetabor city and Farta have suffered a lot of industrial destruction. A total of 26 industries in the invaded areas were damaged. The total amount of damage recorded were 203,908,093.06 birr (two hundred three million nine hundred eight thousand ninety three birr). In the south Gondar administative zone invaded areas, the industrial sectors that have suffered the most damage were chemical and construction inputs 174,457,164.53 birr (one hundred seventy-four million four hundred fifty-seven thousand one hundred sixty-four Birr), agro industry 26,768,109.53 birr (twenty-six million seven hundred sixty-eight thousand one hundred nine birr), steel and Wood 2,032,819 birr (two million thirty two thousand eight hundred nineteen birr) and textile and leather 650,000 birr (six hundred fifty thousand birr) were mentioned. When the damage assesement result analyzed at the woreda level, Nefas Mewucha 181,238,093.06 birr (One Hundred Eighty One Million Two Hundred Thirty Eight Thousand Ninety Three birr), Debretabor 22,612,000 birr (Twenty Two Million Six Hundred Twelve Thousand birr) and Farta 58,000 birr (Fifty Eight Thousand Birr) damage have been recorded (Table 184).

	Agro processing		Textile and leather		Steel and wood		Chemical and construction inputs		Sum total	
	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr	Number	Damage estimate in Birr
Nefas mewucha	4	4156109.53	3	600000	11	2024819	1	174457164.53	19	181238093.06
Farta	-		5	50000	1	8000			6	58000
Deberetabor	1	22612000							1	22612000
Sum total	5	26768109.53	8	650000	12	2032819	1	174457164.53	26	203908093.0

Table 183. *The number of industries destroyed by the invading force in South Gondar woredas and estimation in birr*

3.3.11. Destruction Occurred in Investment Sectors

It is known that the invading force has caused massive destruction and looting in various investment sectors of the invaded areas. The destruction analysis made by zone and number of investment types indicates as North Wollo (1224), South Wollo (305), North Shewa (80) and Oromo ethnic zone were mentioned as higly damaged. When this destruction observed and recorded by type of investment, industry (842), trade (718), agriculture (157), social (53) and others (5); The total number of destroyed investments were1775 (Table 185).

Name of zone	Investment types and numbers					Sum total
	Agriculture	trade	social	Industry	Others	
North Gondar	2	23				25
South Gondar					5	5
North Wollo	82	476	33	633		1224
South Wollo	53	63	11	178		305
North Shewa	5	74		1		80
Wag himera	3	41	8			52
Oromo ethnic administration	1	41	1	30		73
Dessie city administration	11					11
Sum total	157	718	53	842	5	1775

Table 184. *Types and number of investments destroyed in the invaded zones*

When the industrial sectors destruction summarized above analyzed by zone and estimated price different amount of damage happened in different invaded administrative zones. The damage comparison of invaded administrative zones become, South Wollo 199,405,042.5 birr (one hundred ninety nine million four hundred five thousand forty two birr), North Wollo 886,173,136 birr (eight hundred eighty six million one hundred seventy three thousand one hundred thirty six birr). , South Gondar 261,648,338 birr (Two Hundred Sixty One Million Six Hundred Forty Eight Thousand Three Hundred Thirty Eight birr) and North Gondar 99,968,868 birr (Ninety Nine Million Nine Hundred Sixty Eight Thousand Eight Hundred Sixty Eight birr) were recorded as the highest destruction zones. When the damage assessment result analyzed by type of investment and damage cost, trade 756,954,014 birr (seven hundred fifty six million nine hundred fifty four thousand fourteen birr), agriculture 287,828,521 birr (two hundred eighty seven million eight hundred twenty eight thousand five hundred twenty one birr) and industry 237,032,331.4 Birr (two hundred thirty Seven million thirty-two thousand three hundred thirty-one birr) (Table 186).

Name of zone	Investment types and estimated damage cost in birr					Sum total
	Agriculture	trade	social	Industry	Others	
North Gondar	11277752	88691116				99,968,868
South Gondar					261648338	261,648,338
North Wollo	89071240	557308957	75714115	164078824		886,173,136
South Wollo	87744640	42789601.1	14347294	54523507.37		199,405,042.5
North Shewa	1449500	17565724		254000		19,269,224
Wag himera	385300	38919990	6574850			45,880,140
Oromo ethnic administration	10345	11678626	27000	18176000		29,891,971
Dessie city administration	97889744					97,889,744
Sum total	287,828,521	756,954,014	96,663,259	237,032,331.4	261,648,338	1,640,126,463

Table 185. *Types of investments destroyed in different invaded zones different investment sector estimated in birr*

3.3.12. Damages Costs in the Tourism Sector

The invading forces destroyed 868 artifacts, of these 457 movable artifacts were looted and destroyed (Figure 52). Although international laws stipulate that religious institutions should be protected from any harm during any invasion or war, the invading group looted, burned or destroyed 190 Christian and Islamic religious institutions. Sixty-eight permanent monuments and 54 cultural institutions were looted or destroyed. In addition, 36 natural tourism resources were damaged. Majority of the destructions occurred in invaded zones were reported in North Wollo Zone (310) and Desie City Administration (281), and 46% and 90% of these destructions, respectively, were carried out on movable heritages. Five hundred types of movable heritages were destroyed. Apart from the destruction of a large number of heritages in South Wollo (115) and North Gondar (43) zones, most of the destruction was on religious institutions. A special devastation was seen in the North Shwa Zone. The Guasa Park (a natural tourism) of the North Shewa Zone which lies in 3198 square meters were destroyed (Table 186).

In addition to the quantitative study, the qualitative findings showed pervasive destruction of heritages. The study participant residing in Desie City stated that

"...in their stay for five weeks, they were looting and transporting properties to Mekele. In particular to Desie museum, once they destroyed the buildings, they looted everything which they think of good for them. But if they cannot transport heritages or found not worth to loot, they completely destroyed it. Desie Museum and Merho Palace are among the worst damaged institutions as TPLF is an anti-historical and anti-heritage group. Unlike to other properties, heritages are priceless by its nature as a result damages to it cannot be reversed. Heritages are symbols of history, culture and identity. Hence, we will lose everything when heritages are destroyed. A generation without having good understanding or with misunderstanding of its history will be dangerous as it was seen in TPLF groups."

The other study participant from Desie city witnessed that *"...the heritage were destroyed not accidentally but deliberately after occupation of the cities (by the invading forces). They looted all heritages which they thought useful. Otherwise, they destroyed all the artifacts which they cannot transport or thought not useful. They forced the local community to pick-up some and to*

have photo on destroyed heritages thereby they used this strategy to mislead the international (European and Americans) community that all the damages were carried out by residents.”

A. The Main Purpose of the Destruction in the Tourism Sector

The main purpose of the looting or destruction of heritages was to distort or destroy the culture and history thereby to psychologically harm the community. According to the participants of this study who live in Desie; “... History is their (TPLF’s) enemy. When they were in power, they undersized the history of Ethiopia from 3000 to 100 years. It is possible to create strong society through letting them well aware of their tradition, culture and history. Otherwise, history is a key instrument to harm the generation so that it is possible to make the society very submissive and unconfident through distorting and destroying its history. This is what TPLF was doing. TPLF still destroyed the museum and artifacts in a special way because he wants to destroy and distort history. This museum was a museum of history, heritage and identity that they did not want to hear. In this museum, there were ancient historical documents and artifacts containing the history of Ethiopia, including many years of archeological artifacts. Therefore, it was an institution that was contradicting with the purpose for which TPLF was established. Hence, they had to destroy such historical institutions in order to fulfill their purpose. Although we do not expect it to be in this form, we thought they would loot and destroy artifacts. The institution named Ethiopia is also their enemy. Therefore, TPLF destroyed these museums in a special way as they contained the history of Ethiopia.”

The focus group discussant from rural kebeles of Desie City stated that the main purpose of TPLF was not to lead Ethiopia but rather to destroy it.

“...They said that we have go to even hell to destroy Ethiopia. Therefore, no good is expected from a person who desires hell while alive. They destroyed Desie and Kombolcha with inhuman behavior. If they wanted to lead Ethiopia, they wouldn’t do such destructions. When they came in 1982, they did not harm the farmers because they wanted power. They concur Addis Ababa with the cooperation of the farmers. Now, they do not seek power but to destroy. They have tortured and killed innocents or civilians. They burnt the Holy Qur’an and the Holy Bible, and this shows that their interest is not power but to destroy Ethiopia.”

Heritages and institutions	North Gondar	South Gondar	North Wollo	South Wollo	North Shewa	Wag himra	Oromia Special Zone	Dessie City Admin	Sum Total
Permanent heritages	1		54	6	4	1	0	2	68
Cultural institutions	0		22	7	2	9	1	13	54
Religious institutions	31		60	67	15	9	8	0	190
Natural tourism	1		26	3	2	4	0	0	36
Movable heritages	9		144	21	16	5	9	253	457
Public tourism offices	1		4	11	1	5	5	13	40
Total	43	23	310	115	40	33	23	281	868

Table 186. *Number of damaged heritages, cultural and religious institutions caused by Tigrian invading forces*

B. Amount of Tourism Damage in Money

The result of the study showed that the amount of destruction of artifacts in occupied zones was 9,740,595,623 Birr. More than half (52.6%) of the destruction occurred to movable artifacts. It is impossible to estimate these precious heritages in money values. As a result, in spite of the pervasive destructions in North and South Wollo Zones and Desie City Administration, the amount of damage expressed in monetary values relatively became lower. Comparably, the largest destruction was reported in North Shewa Zone, i.e., 8,808,940,250 birrs. This destruction accounts more than 90% of the total damage reported in all administrative zones (Table 187).

Heritages and institutions	Permanent heritages	Cultural institutions	Religious institutions	Natural tourism	Movable heritages	Total
North Gondar	440,000		84,167,457	41,800,000		126,407,457
South Gondar	1,698,180	1,867,998	3,118,907			6,685,085
North Wollo	59,392,300	65,331,530	19,368,602	44,880,000		188,972,432
South Wollo	1,448,700	1,593,570	28,227,639	4,180,000		35,449,909
North Shewa	280,500	308,550	7,911,200	8,800,440,000		8,808,940,250
Waghimra	550,000	605,000	2,183,060	562,760,000		566,098,060
Dessie city admin	1,100,000	1,210,000	5,732,430		1,100,000	8,042,430
Total	64,909,680	70,916,648	150,709,295	9,454,060,000		9,740,595,623

Table 187. *Estimated cost of damaged and looted heritages, cultural and religious institutions (only heritages estimated in monetary values were included)*

3.3.13. Destruction Cost of Religious Institutions

Of the total destroyed religious institutions, 291 were Orthodox churches and 22 Islamic religious institutions. Obviously, it is very hard to estimate the social and spiritual damages incurred to the society because of destruction of religious institutions. Cognizant of this, the amount of material damages was estimated at 115,921, 940 birr. Majority of the destructions occurred at Orthodox churches which were about, 289,540 birr. The destruction of

religious institutions by administrative districts was shown at Table 188.

Damage to religious institutions by invading forces											
Zone		Number of damaged institutions					Estimated cost of damage to institutions (in Eth. Birr)				
	District	Orthodox Christian church	Islamic religious institutions	Caves	Protestant churches	Total	Orthodox Christian church	Islamic religious institutions	Caves	Protestant churches	Total
South Wollo	Tenta	5				5	176300				176300
	Kutaber	5	5			10	421600	130550			552150
	Tehuledere	17	25			42	3214900	1403300			4618200
	Werebabu		12	2		14		10671000	154000		10825000
	Kalu		1			1		15750			15750
	Legambo	2	7			9	58850	470680			529530
	Jama	9	14	22		45	520200	504350	131010		1155560
	Haik		2			2		3884000			3884000
	Delanta	6				6	3905000				3905000
	Total	44	66	24	0	134	8296850	17079630	285010	0	25,661,490
North Wollo	Kobo	5		1		6	9005000	300000			9305000
	Meket	23		1	1	25	1800670	14200	30000		1844870
	Dawnt	1				1	125000				125000
	Gaza	41		1		42	6182950	150000			6332950
	Total	70	0	3	1	74	17113620	464200	30000	0	17,607,820
North Shewa	Menz Keya	8				8	1156400				1156400
	Antsokia	1				1	44000				44000
	Efratana Gidim	21	8			29	4599150	316500			4915650
	Tarmaber	6	2			8	1314550	5498000			6812550
Oromia Special Zone	Menz Gera				1	1				189500	189500
	Shewa Robit	1	2			3	70000	22900			92900
	Ataye	1				1	100000				100000
	Total	38	12	0	1	51	7284100	5837400	0	189500	13,311,000
	Bati Zuria	1	1			2	100000	520000			620000
	Jile Timuga		6			6		4527300			4527300
	Artuma Fursi		3			3		64000			64000
Waghimra	Total	1	10			11	100000	5111300	0	0	5211300
	Zikuala	10				10	376300				376300
	Dehana	33				33	1601300				1601300
	Gazbila	2				2	7000				7000
North Gondar	Total	45				45	1984600				1984600
	Adi Arkay	10				10	66,671,000				66,671,000
	Debark	79				79	7,300,870				7,300,870
	Dabat	23				23	2,540,500				2,540,500
	Telemt	3				3	3,500				3,500
South Gondar	Total	115				115	76,515,870				76,515,870
	Laygaint	12				12	187,000				187,000
	Guna Begemidr	3				3	25,000				25,000
	Farta	3				3	500,350				500,350
	Nefas Mewcha	4				4	360,000				360,000
	Debre Tabor	1				1	219,000				219,000
Grand total	Total	23				23	1,291,350				1,291,350
	Grand total	292	22	3	2	319	104289540	11412900	30000	189500	115,921,940

Table 188. Cost of damaged and looted religious institutions (includes only heritages estimated in monetary values)

3.3.14. Damage to Roads and Bridges

In all the areas invaded by the invading forces, various roads and bridges were severely damaged. The main reasons for the damage that they were driven by heavy weapons, hit by heavy weapons and roads were cut to limit transportation due to war (Figure 53). When the damage assesment analyzing the damage done in various invaded zones and woredas, Kalu, Kutaber, Delanta, Haik and Ambasel were located in South Wollo administrative Zone; The total road damage of the administrative zone were 12,044,264,200 birr (twelve billion forty four million two hundred sixty four thousand two hundred birr) (Table 189).



Figure 43. *Photographs of the flying force from the destroyed bridges*

In addition to that, road damage has occurred in 8 woredas of North Wollo administrative zone and the total amount of damage were 99,291,500 birr (ninety nine million two hundred ninety one five hundred birr). The damage caused on two woredas of North Shewa (Menz Gera and Ataye) were 727,100,000 Birr (seven hundred twenty seven million one hundred thousand birr). In general, the assessment study confirmed that the total damage caused by the invading force were 12,934,563,300 (twelve billion nine hundred thirty four million five hundred sixty three thousand three hundred birr) (Table 189).

Name of zone	woreda	Number of damaged roads	Estimated Damage cost in Birr at woreda level	Estimated damage cost in birr at zonal level
South wollo	kalu	2	788,800	12,044,264,200
	Kutaber	3	12,005,400,000	
	Delanta	1	103,400	
	Haik	1	1,320,000	
	Ambasel	4	36,652,000	
North Wollo	Mekete	1	1,430,000	99,291,500
	Angot	1	4,950,000	
	Dawunt	1	8,332,500	
	Raya Kobo	1	49,500,000	
	Wadla	3	10,956,000	
	Gidan	1	4,400,000	
	Gubalefto	1	110,000	
	Woldia city	4	19,613,000	
North Gondar	Adiarkay	2	33,550,000	34,320,000
	Dabat	1	770,000	
WAghimera	Zequala	1	2,200,000	2,200,000
Oromo Ethnic zone	Artuma fursi	1	168,850	168,850
North Shewa	Menze Gera	1	1,100,000	727,100,000
	Ataye	1	726,000,000	
South Gondar	Guna begemider	1	13,609,375	27,218,750
	Farta	1	13,609,375	
Sum total		33	12,934,563,300	12,934,563,300

Table 189. *The number of roads destroyed by the invading force in invaded zones and woreda and estimated damage cost in birr*

The invading force destroyed various bridges in different woredas. Depending on the nature of their destruction, there have been varying amounts of financial loss. As a result, 17 bridges were damaged to varying degrees in the areas affected by the attack. This damage occurred in 13 woredas of the five administrative zones where the invader invaded. The total damage were 53,734,358 Birr (Fifty Three Million Seven Hundred Thirty Four Thousand Three Hundred Fifty Eight birr) (Table 190).

Name of zone	Woreda	Number of damaged roads	Estimated Damage cost in Birr at woreda level	Estimated damage cost in birr at zonal level
South Wollo	Kutaber	1	4,400,000	18,087,300
	Delanta	1	377,300	
	Ambasel	2	13,310,000	
North Wollo	Meket	1	2,750,000	14,975,000
	Angot	1	990,000	
	Dawunt	1	660,000	
	Wadla	1	220,000	
	Raya Kobo	1	7,000,000	
	Gidan	1	2,200,000	
	Habru	2	1,155,000	
Wag Himra	Zequala	1	6,600,000	6,600,000
Oromo ethnic zone	Jile Timuga	1	665,808	665,808
South Gondar	Guna Begemider	3	13,406,250	13,406,250
Sum Total		17	53,734,358	53,734,358

Table 190. *Number of Bridges Destroyed by the Invading Force and Cost Estimates in birr by Zone and District Level*

3.3.15. Destruction of Drinking Water and Water Infrastructure

It is recognized that water is very important for the day-to-day functioning of the community. However, wherever the invading force invaded, they destroyed water, electricity and telephone services. As a result, their services have been terminated. In addition to that, various water supply pipes were looted and transported to Tigray. They destroyed what they could not plunder. Therefore, as shown in Table 191, in the areas where the invaders invade, 280 hand wells, 336 wells, 64 water reservoirs, 34 deep wells, 38 bono water, 19 generators and 346 other (rope pumps, break lines, motorized pumps and the like) water infrastructure were looted and destroyed in the study. When the water infrastructure damage happened in each administrative zone estimated in terms of cash. It is known that the total damage were 1,116,011,551.09 birr (one billion one hundred sixteen million eleven thousand five hundred fifty one birr) (Table 191).

Name of Zone	Handdug well	Damaged water infrastructure in type						Sum total	Estimated damage cost in birr
		Developed spring	Water harvesting infrastructure	Deep well	Bonno water	Generator	others		
North Gondar	37	55	21		1	2	14	130	33,445,925.00
South Gondar	4	20		2			5	31	17,300,651.00
North Wollo	173	194	2	6	35	1	112	523	213,395,966.00
South Wollo	34	62	28	13	2	12	128	279	808,756,293.78
North Wollo	14		2	2			3	21	1,653,501.00
Wag Himra	17	4	13	4		4	83	125	25,524,364.30
Oromo Ethnic Zone	1	1		2			1	5	5,234,850.00
Dessie City				5				5	10,700,000.00
Sum Total	280	336	64	34	38	19	346	1119	1,116,011,551.09

Table 191. *Damage to water infrastructure and facilities in each zone*

The invading force have destroyed water infrastructure and facilities in five woredas of North Gondar administrative zone. The damage were happened on 37 hand wells, 55 round springs, 21 water tanks, one bono water and two generators. When this destruction estimated in terms of cash, the total damage in the administrative zone reaches 15,669,947 birr (Fifteen Million Six Hundred Sixty Nine Thousand Nine Hundred Forty Seven birr) (Table 192).

Water infrastructures and institutions were destroyed in four woredas of the South Gondar Administrative zone where the armed invasion occurred. The damage was occurred on four hand wells, 20 raised wells, two deep wells, three motorized pumps and two rope pumps. When this destruction estimated in cash, the total destruction in the administrative zone reaches 9,146,380 birr (Table 193).

Type of water infrastructure and utility	Number and damage estimate	Adiarkay	Janamora	Debark	Dabat	Telemet	Sum total
Hand dug well	Number	1		23	11	2	37
	Damage estimate in Birr	200,000		2,047,800	971,000	185,005	3,403,805
Developed springs	Number	1		50		4	55
	Damage estimate in Birr	80,000		3,792,700		750,500	4,623,200
Water storage tankers	Number	5	1	3	12		21
	Damage estimate in Birr	2,620,020	500,000	1,260,000	5,369,100		9,749,120
Water bonno	Number				1		1
	Damage estimate in Birr				200,000		200,000
Generators	Number	2					2
	Damage estimate in Birr	13,650,000					13,650,000
Others	Number	4			10		14
	Damage estimate in Birr	300,000			1,519,800		1,819,800
Sum Total	Number	13	1	76	34	6	130
	Damage estimate in Birr	13,950,019	1	76	1,719,845	6	15,669,947

Table 192. Number of damaged water infrastructure in North Gondar zone and amount of damage in silver

	Hand dug well	Developed springs	Deep well	Moterized pump	Rope pump	Sum total	Estimated damage in birr
Guna Begemider	3	2	2		2	9	493,300
Laygaint	1	18				19	1,017,500
Nefas Mewucha				3		3	7,635,580
Sum Total	4	20	2	3	2	31	9,146,380

Table 193. Number of damaged water infrastructure in South Gondar zone and amount of damage in birr

Out of the 18 rural woredas and city administrations that were invaded in North Wollo administrative Zone, 11 rural woredas and city administrations have had various water infrastructures and institutions destroyed by the invading forces. Among the affected rural woredas and city administrations, Kobo 69,018,550 birr (sixty nine million eighteen thousand five hundred fifty birr), Lalibela 30,704,285 birr (thirty million seven hundred four thousand two hundred eighty five birr), Wadla 27,354,494 birr (twenty seven million three hundred fifty four thousand four hundred ninety-four birr), Gubalafto 23,995,000 birr (twenty-three million nine hundred ninety-five

thousand birr) and Gidan 21,958,197 birr (twenty-one million nine hundred fifty-eight thousand one hundred ninety-seven birr) were highly damaged lists. The damaged water infrastructures were 173 hand dug wells, 194 developed springs, two water reservoirs, six deep wells, one generator and 112 other facilities. When this damage estimated in cash, the total damage in the administrative zone reaches about 213,395,966 birr (two hundred thirteen million three hundred ninety five thousand nine hundred sixty six birr) (Table 194).

Out of the 25 rural woredas and city administrations invaded in South Wollo administrative zone, 15 rural woredas and city administrations have had various water infrastructures and institutions destroyed by the invading forces. Among the affected rural woredas and city administrations, Legambo 473,114,437 birr (four hundred seventy three million one hundred fourteen thousand four hundred thirty seven birr), Delanta 84,780,673 (eighty four million seven hundred eighty thousand six hundred seventy three birr), Jama 81,207,000 (eighty one million two hundred seven thousand birr), Haik, 270,615 birr (two hundred seventy thousand six hundred fifteen birr), Kutaber 15,690,292 (fifteen million six hundred ninety thousand two hundred and ninety two birr) and Ambasal 12,980,000 (twelve million nine hundred eighty thousand birr)) are mainly referenced as highly damaged woredas. The numbers of damaged water infrastructures were 34 hand dug wells, 62 developed springs, 28 reservoirs, 13 deep wells, 12 generators and 115 other facilities. When this damage cost estimated in terms of cash, the total damage in the administrative zone reaches about 808,756,294 birr (eight hundred eight million seven hundred fifty six thousand two hundred ninety four birr) (Table 195).

Types of iwater infrastructure and utilities	Number and damage estimate in birr	Bugna	Raya kobo	Gidan	Gidan	Mersa	Gubalefto	Habru	Lasta	Dawunt	Gazo	Lalibela	Sum Total
Deep wells	Number		1	1		1	1					2	6
	Damage estimate in Birr		3,600,000	2,042,500		750,000	18,000,000					6,300,000	30,692,500
Hand dug well	Number				140		3	1	7	17		5	173
	Damage estimate in Birr				16,851,590		2,583,000	45,000	7,083,500	1,574,000		9,485,000	37,622,090
Developed springs	Number			10	135		1	1		45		2	194
	Damage estimate in Birr			4,825,697	10,176,104		800,000	1,800,000		5,809,000		27,000	23,437,801
Water storage tanker	Number							2					2
	Damage estimate in Birr							300,000					300,000
Generator	Number							1					1
	Damage estimate in Birr							35,000					35,000
Water institute	Number	3	17				4				11		35
	Damage estimate in Birr	14,785,000	65,107,550				242,000				1,264,000		81,398,550
others	Number		4	14	8		10	9			1	66	112
	Damage estimate in Birr		311,000	15,090,000	326,800		2,370,000	919,940			6,000,000	14,892,285	39,910,025
Sum total	Number	3	22	25	283	1	19	14	7	62	12	75	523
	Damage estimate in Birr	14,785,000	69,018,550	21,958,197	27,354,494	750,000	23,995,000	3,099,940	7,083,500	7,383,000	7,264,000	30,704,285	213,395,966

Table 194. The number of water infrastructures damaged by the invading forces in the North Wollo administative zone and the amount of damage estimated in birr

Woreda name	No.	Deep wells Damage estimate in Birr	No.	Hand dug wells Damage estimate in Birr	No.	Developed springs Damage estimate in Birr	No.	Water storage tanker Damage estimate in Birr	No.	Water Bono Damage estimate in Birr	No.	Generators Damage estimate in Birr	No.	Others Damage estimate in Birr	No.	Sum total Damage estimate in Birr
Mekedela			7	503,000	3	80,000	3	1,636,000							5	1,756,000
Tenta							1	20,000							12	633,000
Kuaber	1	15,690,292													1	15,690,292
Ambasel					2	89,000,000	7	563,160			2	300,000			14	903,34410
Thulederie							2	80,000							2	80,000
Werhabo							1	100,000							1	100,000
Kalu			1	3,158,000			3	915,000							4	4,073,000
Albeke							4	5,640,000							4	5,640,000
Legambo	5	2,372,800	13	458,568,000	27	10,462,237	1	1,600,000							51	473,114,437
kedela					1	125,000	1	1,032,666.7							4	1,308,666.7
Jana	2	50,090,000	11	1,089,000	3	698,000	3	1180,000	2	100,000	6	28,050,000			27	81,207,000
Worlita	1	1,630,200			1	3,158,000									2	4,788,200
Kombolcha	1	600,000			6	12,380,000									7	12,980,000
Hak	1	1,900,000			9	6,141,500	1	50,000			4	828,000	115	23,351,115	130	32,270,615
Delanta	2	2,641,655.8	2	71,924,898	10	8,964,110	1	250,000							15	84,780,673
Sum Total	13	75,924,957.8	34	535,242,898	62	131,008,847	28	13,086,827	2	10,000	12	29,178,000	115	23,351,115	279	808,756,294

Table 195. *The number of water infrastructures and facilities in South Wollo administrative zone and the amount of damage coast in birr*

There are 13 rural woredas and city administrations invaded under North Shewa administrative Zone. However, the water infrastructures and institutions that were destroyed by the invading force were only in the five woredas. The damage was happened on 14 hand wells, two water tankers, two bono water and three unidentified water infrastructures. When this damage estimated in birr, the total damage in the administrative zone reaches 1,653,550 birr (one million six hundred fifty three thousand five hundred fifty birr) (Table 196).

There are seven rural woredas and city administrations under Waghimra Ethnic administrative Zone. The study showed that the water infrastructures and institutions have been destroyed in the five woredas. The remaining two woredas were still under the control of the invader, so the damage has not been studied. Thus, in the studied woredas, the water infrastructures that were destroyed were 17 hand dug wells, 13 water reservoirs, four deep wells, four wells, four generators and 83 are not unidentified water bodies. When this destruction estimated in terms of money, the woredas that suffered the most destruction were Sekota City 10,954,833 birr (ten million nine hundred fifty four thousand eight hundred thirty three birr), Dahna 10,839,637 birr (ten million eight hundred thirty nine thousand six hundred thirty seven birr), Sekota zuria 3,220,011 birr (Three Million Two Hundred Twenty Thousand Eleven Birr), Zaqala 495,003 birr (Four Hundred Ninety Five Thousand Three birr) and Gazgibla 15,001 Birr (Fifteen Thousand One birr). The total damage happened in the administrative zone were 1,653,550 birr (one million six hundred fifty three thousand five hundred fifty birr) (Table 197).

Name of Woreda	Water Storage tankers		Water bono		Hand dug wells		Others		Sum total	
	NO.	Damage estimate in Birr	NO.	Damage estimate in Birr	NO.	Damage estimate in Birr	NO.	Damage estimate in Birr	NO.	Damage estimate in Birr
Efrataenagidm					7	565,611			7	565,618
Menze Mama					5	58,390			5	58,395
Tarmabere					2	849,500			2	849,502
Kewet	2	60,000	2	50,000			2	20,000	6	130,004
Ataye							1	50,000	1	50,001
Sum total	2	60,000	2	50,000	14	1,473,501	3	70,000	21	1,653,520

Table 196. Number of damaged water infrastructure networks in North Shewa administrative zone and amount of damage in birr

Type of water infrastructure	Number and damage estimate	Zequala	Sekota city	Dahna	Gaz gibela	Sekota zuria	Sum total
Deep wells	Number	2		1		1	4
	Damage cost in Birr	200,000		700,000		300,000	1,200,000
Hand Dug Wells	Number	1	7	9			17
	Damage cost in Birr	60,000	6,903,030	6,713,010			13,676,040
Develped springs	Number	1		3			4
	Damage cost in Birr	35,000		583,000			618,000
Water storage tankers	Number	1	4	2		6	13
	Damage cost in Birr	200,000	760,000	60,000		1,880,000	2,900,000
Generators	Number		1			3	4
	Damage cost in Birr		90,000			770,000	860,000
Others	Number		67	13	1	2	83
	Damage cost in Birr		3,201,724	2,783,600	15,000	270,000	6,270,324
Sum total	Number	5	79	28	1	11	125
	Damage cost in Birr	495,003	10,954,833	10,839,637	15,001	3,220,011	25,524,485

Table 197. *Number of damaged water infrastructures in Waghemra Ethnic Zone and amount of damage in birr*

There are seven districts and city administrations invaded by the Oromo ethnic zone. The study confirmed that the water infrastructures and institutions in these areas have been destroyed by the invading force in the two woredas. No damage was reported to the rest of the invaded woredas. The two woredas were Bati zuria and Jile Tamuga. When this damage estimated in terms of money, it is around 3,540,000 birr (three million five hundred forty thousand birr) and 1,694,850 birr (one million six hundred and nine four thousand eight hundred and fifty birr) respectively. In general, the destruction in the adminstrative zone were 1,694,850 birr (one million six hundred ninety four thousand eight hundred fifty birr) (Table 198).

It is known that in all the five sub-cities of the Dessie city administration where the invaders hit, one deep well water infrastructure was destroyed. When this destruction estimated in money, the total damage to the city reaches about 10,700,000 Birr (ten million seven hundred thousand birr) (Table 199).

Name of woreda	Developed springs		Water institutions		Others		Sum total	
	NO.	Damage estimate in Birr	NO.	Damage estimate in Birr	NO.	Damage estimate in Birr	NO.	Damage estimate in Birr
Bati Zuria			3	3468000	2	72000	5	3540000
Jile Timuga	2	1579000	4	115850			6	1694850
Sum total	4	1579000	7	3583850	2	72000	13	5234850

Table 198. *The number of damaged water infrastructure networks in the Oromo ethnic zone and the amount of damage in birr*

Sub cities	Number of damaged Deep wells	Damage estimate in birr
Menafesha	1	3,400,000
Bumbuwa Wuha	1	3,000,000
Hote	1	100,000
Arada	1	2,700,000
Segno gebeya	1	1,500,000
Sum total	5	10,700,000

Table 199. *The number of damaged water infrastructure networks in Dessie City subcities and the amount of damage in birr*

3.3.16. Damage on the Business and Economic Development Sector

Commercial and market development is the livelihood of most of the city residents. In all the invaded administrative zones of Amhara National Regional State and woredas, all the businesses were looted and damaged. All trade ranks were suspended until the invading forces were withdrawn (Figures 54 and 55).



Figure 44. *Business houses destroyed by the invading force Nefas Mewucha woreda)*



Figure 45. *Gas stations that were made unavailable due to the destruction and looting of various parts by the invading forces (Gubalafto District)*

In North Gondar Administrative Zone Adiarkayi, Debark, Dabat and Telemt woredas Commercial and market development sectors become damaged with the cost of 43,036,488 irr (forty three million thirty six thousand four hundred eighty eight birr), in South Gondar Administrative Zone Lai Gyant, Nefas Mewucha, Farta, Guna begimeder and Debretabor, respectively occurred damage of 261,648,338 birr (two hundred sixty one million six hundred forty eight thousand three hundred thirty eight birr). In North Wollo administrative Zone 12 woredas record damage of 957,496,628 birr (Nine hundred fifty seven million four hundred ninety six thousand six hundred twenty eight birr). In South Wollo administrative Zone 13 woredas recorded a damage of 3,593,590,961 birr (three billion five hundred ninety three million five hundred ninety thousand nine hundred sixty one Birr). In North shewa administrative zone 10 woredas damage were recorded as 696,117,930 birr (six hundred ninety-six million, one hundred seventeen thousand, nine hundred thirty birr). In five woredas of the Oromo ethnic administrative zone 29,840,270 birr (twenty-nine million eight hundred forty thousand two hundred seventy birr) recorded. In addition to that, in all five sub-cities of Dessie City administration damaged 1,053,377,472 birr (one billion fifty-three Million Three Hundred Seventy Seven Thousand Four Hundred Seventy Two birr) were recorded (Table 200).

Most of the big firms and contractors had commercial vehicles to facilitate their business. Therefore, except for a car that accidentally went to the center of the country, all the cars of the business were looted by the invading force or destroyed. Therefore, Adiarkay and telemt woredas of North Gondar administrative zone damage estimated about 1,576,000 Birr (one million five hundred seventy six thousand birr), Laygiant, Nefas mewucha, Farta, Guna begimeder and Debrtabor woredas in South Gondar administrative zone damage estimated about 261,648,338 birr (two hundred sixty one million six hundred forty-eight thousand three hundred thirty-eight birr). In the 12 woredas of North wollo administrative zone 262,935,584 Birr (two hundred and sixty-two million nine hundred and thirty-five thousand five hundred and eighty-four Birr) damage estimated. In 13 woredas of South Wollo administrative Zone 132,796,830 Birr (one hundred and thirty-two million seven hundred ninety-six thousand eight hundred thirty birr) damage recorded. In 10 districts of North Shewa 85,169,125 Birr (eighty-five million one hundred sixty-nine thousand one hundred twenty-five birr) damage were recorded. In Wag Himra ethnic zone, Zequala, Sekota city and Sekota zuria 71,238,900 birr (seventy one million two hundred thirty eight

thousand nine hundred birr) damage recorded, in 2 woredas of Oromo ethnic zone 25,001,234 birr (twenty five million one thousand two hundred thirty-four birr) damage recorded. On the other hand, in all five subcities of Dessie city administration 1,053,377,472 Birr (one billion fifty-three million three hundred seventy-seven thousand four hundred seventy-two Birr) damage were recorded (Table 200).

Invaded Zone	Woreda	Damage estimate in birr	Invaded Zone	Woreda	Damage estimate in birr
Nort Gondar	Adiarkay	39,687,274	South Wollo	Tenta	153,847,292
	Debark	47,792		Kutaber	980,681,726
	Telemet	3,301,422		Ambasel	240,477,828
	Sub total	43036488		Thulederie	18,465,659
South Gondar	Nefas Mewucha	64,948,455		Worebabo	76,117,019
	Laygaint	180,569,753		Kalu	11,064,743
	Farta	1,706,920		DEssie Zuria	11,966,015
	Debertabor	10,383,254		Legambo	436,203,213
	Guna begimeder	4,039,956		Kelela	84,361,720
	Sub total	261,648,338		Jama	40,390,605
North Wollo	Bugna	21,688,916		Kombolcha	539,570,354
	Raya Kobo	55,522,458		Haik	649,562,599
	Gidan	19,291,273		Delanta	350,882,188
	Meket	970,440		Sum total	3593590961
	Wadla	53,593,581	Oromo Ethnic zone	Dewa Chefa	165,412
	Gubalafto	195,631		Bati Zuria	23,128
	Harbu	415,767,661		Jile Timuga	17,430,048
	Woldia	369,842,040		Artuma fursi	381,929
	Lasta	1,005,327		Kemisie	11,839,753
	Dawunt	7,745,053		Sub total	29,840,270
	Gazo	1,196,156			
	Angot	10,678,092			
	Sub total	957,496,628			
North Shewa	Debersina	12,212,962	Dessie City	Menafesha	106,375,102
	Menze Gera	1,362,801		Buambua Wuha	138,773,865
	Eferatana gidm	53,872,044		Hote	246,445,576
	Menze Mama	90,974,721		Arada	259,702,442
	Tarmabere	30,425,226		Sego gebeya	302,080,487
	kewet	135,264,440		Sub total	947,002,370
	Menze Keya	9,740,086	Wag Himra	Zequala	11,046,367
	Shewa robit	280,297,123		Sekota City	338,497,325
	Ataye	63,994,744		Sekota zuria	8,540,740
	Mehal Meda	17,973,783		Total	358,084,432
	Sum total	696,117,930			

Table 200. Table 200: Commercial and industrial development damage cost estimated in bir in various invaded administrative zones and woredas

Zone	Woreda	Damage estimate in Birr	Zone	Woreda	Damage estimate in Birr
North Wollo	Bugna	8,140,000	North Gondar	Adiarkay	1,540,000
	Raya Kobo	8,108,000		Telemet	36,000
	Gidan	145,000		Sub total	1,576,000
	Wadla	2,490,100	South wollo	Mekedela	1,460,000
	Gubalafto	225,900		Kutaber	360,000
	Habru	57,938,529		Ambasel	8,527,860
	Woldia	81,095,000		Thulederie	3,973,500
	Lasta	1,203,350		Worebabo	2,278,500
	Angot	30,711,200		Kalu	9,999,500
	Kobo city	70,480,900		Albeko	12,530,630
	Lalibela	2,397,605		Kelela	2,075,440
	Sub total	262,935,584		Jama	1,063,000
				Woreillu	24,500,000
North Shewa	DEbresina	500,000		Kombolcha	50,302,400
	Antsokia Gemza	19,000		Delanta	15,726,000
	Efretaena gidm	10,878,750		Sub total	132,796,830
	Menze Mama	30,000	Dessie	Menafesha	14,461,975
	Tarmabere	730,000		Bumbua Wuha	14,830,000
	Kewet	1,054,000		Hote	4,964,044
	Menze Keya	17,063,225		Arada	14,176,250
	Shewa robit	19,865,000		Segno Gebeya	26,000
	Ataye	28,952,650		Sub total	48,458,269
	Mehal Meda	6,092,500	Oromo ethnic zone	Jile Timuga	500,000
	Sub total	85,169,125		Bati City	24,501,234
				Sub total	25,001,234
Wag himra	Zequala	27,350,500			
	Sekota City	41,208,000			
	Skota zuria	2,664,400			
	Dahna	16,000			
	Sub total	71,238,900			

Table 201. *Damage rate of commercial vehicles by zone and district*

Chapter 4

Conclusion and Recommendations

4.1. Conclusion

ALL MOST IN ALL areas that the Tigray invading forces occupied, serious atrocities related to psychological and mental health were found. Compared to the material damage that the Tigray invading forces caused, the humanitarian and material damage was extremely high. In general, the TPLF-led invasion has caused massive crisis and civilian deaths specifically in the Amhara region and the country in general. This large-scale study have unveiled that there have been an extensive humanitarian, economic, social and psychological damage, as the result of Tigray invading forces. Because of this invasion, schools were interrupted; mothers, children (including infants) and the entire community traumatised or developed serious health problems due to the lack of health services. As the invading forces damaged the manufacturing industry, there was a high rate of unemployment in those areas. In addition, the agriculture sub-economy, which is the backbone of the country, has been badly hit. Thus, as the result, there was an extreme poverty and malnutrition. This has greatly increased the country's poverty rate. With a conservative estimate, basing the destruction in all the sectors studied, the invasion brought the region back to where it was thirty years ago (see Table 202).

The main findings related to psychological and mental health related damage were the following:

- The psychological make-up and wellbeing of the community were shaken; and their social fabric that makes them as a society have been either weakened or destroyed. The effects of this were mainly observed the sensitive segment of the population such as women, children, and the elderly. Negative changes in thinking, behaviour, mind and emotions were revealed. Communal life, expression of their traditions and cultural heritages, as well as their customs,

social relations and social roles were collapsed. As the result, those invaded zones became unfriendly to live, with little hope for growth and change.

- There has been a sense of lack of control in the community about what will happen in their future and the people living in those invaded areas developed a collective sense of “victimhood, guilt and anger”. From the in-depth discussions and interviews, the invasion may have caused long-term mental, psychological and physical health problems.
- Mental and psychological symptoms that can cause changes in behavior and personality, as well as anxiety problems that can be a source of serious health problems were seen in all the zones studied.
- The study has shown that there were attitudinal, behavioural and thinking problems, which resulted fear, hopelessness, isolation from others and trauma caused by psychological wounds. These widespread problems were observed in all age groups and sexes in all zones.
- The large extent of the population experienced traumatic experience. The study revealed that people are struggling to sleep and get over the trauma. Widespread post-traumatic stress disorder, as the result of the atrocities committed by the Tigray invading forces, was revealed. All segments of the population have a flash of atrocities even after the invaders left the area. It's predicted that this psychological scar will have related will have a longer mental health problems.

4.2. Recommendations

If it is possible for all sectors to recover from the psychological, intellectual, human and material damage, it is necessary to stimulate and coordinate all sectors to have a better regeneration process. Therefore, it is necessary to take various measures in terms of revitalizing all sectors.

The state and federal governments as well as other stakeholders should design and implement an immediate and sustainable economic, social and psychological strategy to bring the society out of the worst problems it has faced. For this, the implementation of the strategy requires extensive fundraising and fundraising. In general, the Amhara people need both legal and political protection to be protected from the severe attacks they are facing, and the federal and state governments and other relevant bodies must

work together to prevent similar problems from occurring in the future.

Government institutions and service sectors should be put into operation first; Although some have started working; Broken and damaged buildings, materials and resources cause psychological damage to the service and the user community, so it would be good if it could be done and organized better. If all sectors are organized from top to bottom in order to reverse the damage, if it is possible to do work; In particular, health and education institutions have been given special attention, and in general, by establishing a better organization and procedure, by drawing up a detailed plan and action plan, by collecting better resources and maintaining the organization in a strict manner, if it is possible to implement it, the issues that need to be worked on in each sector are presented in detail as follows.

4.2.1. To Help the Victims Recover From the Damage Done to His Psychology, Mental Health and Social Interaction

In order for the Amhara people to recover from psychological, mental health and social interaction and chaos, the interventions that need to be implemented at different levels are listed as follows:

Individual level

- C. Since psychology is very complex and has a direct relationship with daily activities, it should include things that need to be done at the individual level. Therefore, it is necessary to pay attention to balanced food, health facilities, formal and non-formal education, sufficient and safe playgrounds for children, and give special attention and work to vulnerable children (people with special needs, sexual harassment and abuse, as well as those who are neglected).
- D. It is necessary to help individuals to be decisive and have a vision for their future opportunities and hopes instead of the serious trending reactionary psychological wounds caused by the invading forces of Tigray, and it is necessary to design various programs (including television and radio programs). Focused should be given on sustainability and it is necessary to teach young people to be able to make decisions about the future, not just about the issues that have been given to them.

Family level

- A. The invading force of Tigray separated many family members by death or displacement. Since this family structure will play an irreplaceable role in the psychological structure of the future generation (children), it is necessary to connect people, especially children, who were separated from their families due to the invading forces of Tigray with their families, and to provide the necessary psychological support and work with sectoral offices at all levels.
- B. Social workers in cooperation with religious institutions should help to the community to have a positive family interaction in all the areas each area and form support groups.
- C. Because the thinking, behaviour and feelings of the family members are internalized in view of the atrocities that the invading force of Tigray has caused, it is important to emphasise on these, while working in re-building our psychological and social interactions;
- D. There is a need for governmental and non-governmental organizations to cooperate with the communities in each area to help the families who are in trouble due to the invasion to meet their basic needs, namely shelter, food and clothing.

Community level

- A. The values, traditions and social interactions that bind each to each other are altered. Social manifestations such as edir, ekub, helping the needy and so on have been weakened. Therefore, it's essential to encourage and empower neighbours to help each other and solve their various problems.
- B. In all the sections of society that have been under occupation, which covered in this study, the people have been subjected to psychological loneliness, anxiety, rape, hopelessness and various scars. Therefore, it is necessary to ensure that there are places of worship for the Christian and Muslim community where they can express their feelings, and to help reduce the stigma and discrimination of the people who were raped by the invading forces of Tigray and help them to be able to share.
- C. Children and women were victims of Tigray's invading force. Many

children have become orphans. Many women are raped. The study confirmed that there are some who have not returned and are hiding themselves due to fear of discrimination. Therefore, there is a need for governmental and non-governmental organizations to provide protection to children and facilitate comfortable local housing, identify and work on solutions to their problems.

- D. It is necessary to support the community in the areas where the invasion took place by working together with different sectoral offices, so that they can cooperate and participate in the reconstruction, so that the people can regain their social experience, traditions and values together.

Public level

- A. The psychological burden was not limited to the individual. The psychological scars and associated mental health disorders have been seen in many areas where the attacker was. Schools, places of worship and social institutions where any people can gather need to be used as resources for psychological rehabilitation. So that the psychological and mental scars and the social interaction can be corrected in a coordinated manner by governmental and non-governmental organizations.
- B. The invading force of Tigray mainly destroyed and looted the basic development institutions. Basic development institutions play an irreplaceable role in the psychology and social interaction of the community. Therefore, the government and non-governmental development institutions must work together to provide and re-build basic services.
- C. The invader has done great damage to make all zones uninhabitable. Therefore, it is necessary to work for the society to have a comfortable living environment. Evidence clearly shows that schools and religious institutions were used by the invading forces for burials. Therefore, it is important to check and clean these institutions.
- D. Since the invading force was attacking not as an individual, but as a community, it is necessary to provide social protection and protection. As the study indicated that this social protection was working to create worse differences in the administration of the Oromo ethnic

group; Focusing on this zone has been found to be important.

- E. Changes in mood, thinking and behavior associated with psychological damage were observed in the eight zones where invasion took place. Therefore, there is a need to bring together investors, government agencies and non-governmental organizations to develop rehabilitation centers for psychological and psychological-related mental health problems; organize.

Recover and rehabilitate the humanitarian damage

- give written and organized psychological training to the students in the schools in the areas affected by the invaders;
- provide complete and sufficient food and non-food (student materials, medical support, etc.) support until the parties whose livelihoods have been damaged are reorganized;
- reduce their vulnerability by providing full support to the victims who need special support (children, elderly and disabled) by coordinating the relevant members;
- Make sure that members of the civilians who died and or were seriously injured by the invading forces, are safe and rehabilitated
- Vulnerable segment of the population should have appropriate rehabilitation work was done;

4.2.2. Recovering or Re-Establishing Material Damages

In reconstruction Damage Residential Houses

Stating that the government and stakeholders should be mobilized to rebuild the destroyed houses and resettle the survivors have said strongly that they need cattle, seeds and fodder before the farming season. The work should integrate and include the community as the local residents said that it is important to make our victims participate in different ways.

In Recovering the Damage on the Agricultural Sector

- Since many agricultural institutions have been destroyed, work should be done facilitate the next agricultural development and improve the food security of the region.

- To restore destroyed agricultural institutions and provide the necessary community services;
- By making special efforts to compensate for the agricultural products that were destroyed during the invasion, making the farmer produce double or more than what they used to produce (crops, vegetables and fruits and animal products).
- To provide necessary inputs for the increase of various agricultural products, either through grants or loans;
- Better management of forest resources;
- Cultivating destroyed irrigation development networks and crops that can give better yield through irrigation;
- Carry out agricultural training and researches in an intensive manner;
- To have a supply that can replace the stolen and old water pump motors from the farmers, associations and the like.
- Facilitating the supply of fertilizers and best seeds in special conditions for irrigation;
- To provide various agricultural technologies for irrigation development, farm equipment and farm tractors as much as possible
- Designing a strategy to buy and give animals to farmers whose animals have been killed/robbed/slaughtered through loans or other rehabilitation methods, vaccination of destroyed and stolen animals; Funding for medicines and breeding materials;
- To restore destroyed forests and nurseries quickly;

Recovering the Vocational and Training Sectors

The employment and training sector includes many technical and vocational institutions and micro and small enterprises that have been destroyed.

- The various training machines looted and destroyed by technical and vocational institutes are mostly bought from abroad with foreign currency and are expensive. And in the medium term; If it is possible to purchase and replace them and start work;
- If through micro and small enterprises, the youths who have been

injured can be regrouped and given psychological and financial support to start their business.

- Revitalizing the business and investment
- In the short term, if there is a grace period for businesses that are engaged in the business and the service sector and have been injured, at a lower interest rate and according to the nature of the business, and if it is convenient for them in terms of the damage and they are allowed to go back to work;
- If it works on a national level so that those who were engaged in investment work in the area and who are victims of the damage get special credit services;
- Especially if the production sector, which is a part of the production sector, whose production machinery is destroyed and stolen, should be prepared and supported by special guidelines of the lease finance system.

In Education

Short-term action

- Facilitation of psychological training/motivation of teachers and students;
- Evaluating the type and extent of damage to schools at different levels, planning the situation where it is possible to start school on time;

Medium and long term action

- Finding different sources of funds to rehabilitate the damages caused to the schools, and be able to meet the missing resources by carrying out the repair and construction of the damaged buildings.

In the Health Sector

As emergency action

- Facilitating psychological training/motivation for professionals
- Make sure that maternal and child health services are completed;
- Ensuring that resources for emergency health services are met immediately;

- Providing resources for community members with long-term health problems to avoid discontinuation of medication;
- Provide ambulance for health facilities

Tasks that should be done in the

Medium term

- Make sure that medicines, diagnostic and treatment materials needed to complete and start regular health services are provided;
- Most health facilities should be equipped with motorcycles and generators;
- Make sure that “X-ray machine, anaesthesia machine, CBC machine, Chemistry machine, Infant Radiant warmer & refrigerator” is completed at the level of hospitals;
- Make sure that microscopes should be provided in all health centers.

Long term actions

Designing a plan and finding funds to ensure that the infrastructure of the affected health facilities is completed in a standard manner, and to carry out the re-construction.

On Culture and Tourism

- Make sure a series of stimulative platforms are created to improve the psychology of the community;
- Make sure urgent maintenance work is done on religious institutions and permanent heritage by coordinating the community and subsidizing the government;
- Make sure material and financial support is provided to help restore cultural museums;
- It is suggested to provide government institutions (culture and tourism offices) with electronics, stationery, office furniture and other necessary support for their start-up.
- Damaged religious institutions should be repaired by coordinating the community.

References

1. Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse*, 6(3), 195-216.
2. Aida, T. (2020). Revisiting suicide rate during wartime: Evidence from the Sri Lankan civil war. *PloS one*, 15(10), eo240487.
3. Amhara Association in America. May 2022. Negelected Massacres aaint Amharas: Compendium of AAA's 2021 Reports on Human Rights Violations against Amharas. 269.
4. Amnesty International. (2022). *Ethiopia: Survivors of TPLF attack in Amhara describe gang rape, looting and physical assaults*. [online] Available at: shorturl.at/hsGRV [Accessed 24 June 2022].
5. Central Statistical Agency (CSA) [Ethiopia] and ICF. (2016). Ethiopia Demographic and Health Survey 2016 .Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF.
6. Diagnostic and statistical manual of mental disorders: DSM-5 (5th ed.). (2013). Arlington, VA: American Psychiatric Association. 2013. p. 276
7. Gebissa Yigezu. (2021). The challenges and prospects of Ethiopian agriculture, *Cogent Food & Agriculture*, 7:1, 1923619, DOI: 10.1080/23311932.2021.1923619.
8. Jakupcak, M., Hoerster, K. D., Varra, A., Vannoy, S., Felker, B., & Hunt, S. (2011). Hopelessness and suicidal ideation in Iraq and Afghanistan war veterans reporting subthreshold and threshold posttraumatic tress disorder. *The Journal of nervous and mental disease*, 199(4), 272-275.
9. *Ministry of Health Ethiopia (2021). Health Sector Transformation Plan II: 2020/21-2024/25. file:///C:/Users/user/AppData/Local/Temp/HSTP-II.pdf*

-
10. *Ministry of Health (2020). Realizing Universal Health Coverage through Primary Health Care: A Road map for Optimizing the Ethiopian Health Extension Program 2020 – 2035. Addis Ababa, Ethiopia: Ministry of Health.*
 11. *Mortality and Burden of Disease Estimates for WHO Member States: Males, all ages (2004)” (xls). World Health Organization. 2004.*
 12. *Primary health care systems (PRIMASYS): case study from Ethiopia. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.*
 13. *Singer, M. I., Anglin, T. M., Yu Song, L., & Lunghofer, L. (1995). Adolescents’ exposure to violence and associated symptoms of psychological trauma. Jama, 273(6), 477-482.*
 14. *World Health Organization (2010). Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies*

Annex 1

Summary of the Overall Damage in Ethiopian Birr

Damaged sectors	N. Gondar	N. Wollo	S. Wollo	N. Showa	Oromo Admin	Desse City	Waghimra	S. Gondar	Sum
Agriculture and development initiatives	44,612,488	1,220,432,212	3,726,387,791	781,303,055	54,841,504	1,101,835,741	429,307,332	261,648,338	7,620,868,461
Industrial sector		1,048,429,452.7	35,541,534,754	197,281,886.00	325,995,263	1,820,755,856	83,672,580	203,908,093	39,221,577,884.76
Investment	99,968,868	885,173,136	125,999,842	19,167,424	50,174,971	97,889,744	45,880,140	261,648,338	1,585,902,463
Agriculture	4,771,608,241	28,905,429,496	42,643,831,913	6,058,443,028	1,142,655,045	616,826,023	4,655,466,212	3,639,481,907	92,433,741,865.25
Irrigation and tropical development	677,980,842	5,687,157,987	5,750,039,900	816,198,310	367,546,175	23,100	1,417,130,972	948,332,872	15,664,410,158
Forestry and environment	3,487,747,073	4,901,719,258	8,505,749,835	1,200,135,557	445,479,892	304,917,778	349,635,163		19,195,384,555
Vocational and trading	30,136,875	615,799,196	305,521,213	5,268,417,509	113,542,351	70,928,531	234,368,734	132,213,440	6,770,927,849
Governmental organisations	58,037,767	1,507,797,603	12,178,056,521	14,545,461,013	7,303,589,214	1,219,078,767.00	1,550,813,447	175,329,581	38,538,163,913
Non-governmental organisations	104,483,819	86,323,038	122,041,916	46,484,182		34,498,471	83,691,045	25,498,594	503,020,865
Governmental vehicles	171,755,800	501,085,198	227,442,800	77,581,450	280,953,500	141,879,149	610,776,000	52,048,800	1,579,197,499
Road authority	34,320,000	114,266,500	12,062,351,500	74,050,6250	819,658		8,800,000	40,625,000	13,001,688,908
Water	33,445,925	213,395,966	808,756,293.82	1,653,501.00	5,234,850	10,700,000	25,524,485	9,146,380	1,107,857,401
Tourism	126,407,457	188,972,432	35,449,909	8,808,940,250	5,211,300	8,042,430	566,098,060	6,685,085	9,740,595,623
Religious institutions	76,515,870	17,607,820	25,661,490	13,311,000	5,211,300		1,984,600	1,291,350	9,740,595,623
Education	138,482,757	1,315,255,801	1,194,668,803	1,815,120,351	244,228,791	423,686,714	1,348,107,309	29,777,190	6,509,327,716
Health	66,542,931	3,803,721,061	2,475,678,827	843,607,273	858,746,214	844,382,319	637,274,877	95,082,214	13,221,443,319
Amhara mass media									38,102,527
Financial sectors									386,329,936
Woldiya University									6,199,999,998
Wollo University									11,992,563,453
Mekdeda Amha University									1,231,049,616
Electrical grids									1,095,768,893
Telecommunication facilities									368,000,000
Industrial parks									368,485,048
Residential damages	63,778,263	795,413,769	1,012,818,610	1,024,998,240	199,848,830	143,449,148	24,953,348	18,062,970	3,314,27,222
Sum	9,985,824,976	50,790,550,472	91,200,457,164	42,061,328,392	11,078,083,595	5,018,137,915	11,989,811,725	5,696,871,859	291,816,377,953

Annex 2

Participated Federal and Regional Sectors

1. Federal Universities in Amhara (Bahir Dar, Gondar, Debre Tabor, Debark, Enjibara, Debre Markos, Debre Birhan, Wollo, Meqidela Amba, Woldiya University)
2. Plan and Development Commission
3. Finance Bureau
4. Disaster Prevention Food Security Commission
5. Health Bureau
6. Agriculture Bureau
7. Amhara Public Health Institution
8. Culture and Tourism Bureau
9. Women and Children's Affairs Bureau
10. Work and Vocational Bureau
11. City and Infrastructural Bureau
12. Trade and Market Development Bureau
13. Industry and Investment Bureau
14. Justice Bureau
15. Road Bureau
16. Transport Bureau
17. Ethiopian Statistical Service (Bahir Dar, Gondar, Dessie, Debre Birhan, Branch Offices)
18. Government Official of all the invaded Zones, Woredas, Kebeles, and Volunteers