



STUDY REPORT

**GENDER, CLIMATE AND CONFLICT ANALYSIS IN
SOMALIA AND ASSESSMENT OF OPPORTUNITIES
FOR CLIMATE AGRICULTURE AND LIVELIHOOD
OPPORTUNITIES FOR CRISIS-AFFECTED AND AT-
RISK WOMEN IN SOMALIA**



STUDY REPORT

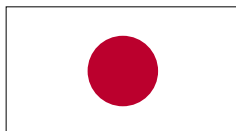
Gender, Climate and Conflict
Analysis in Somalia and
Assessment of Opportunities
for Climate Agriculture and
Livelihood Opportunities for
Crisis-affected and At-risk
Women in Somalia



**Prepared by: Horn Africa
Consultants Firm (HACOF)
March 2022**

Photo credits: ©Shutterstock.com

**Produced with the generous support
of the Government of Japan**



ACKNOWLEDGEMENTS

Financial Support

The Government of Japan

Federal Government of Somalia

Hon. Hanifa Mohamed Ibrahim - Federal Minister of Women and Human Rights Development; Hon. Adar Abdullahi - Ismail Ministers of Women, Family Affairs and Human Rights Development of Jubaland; Hon. Fahima Osman Omar - Minister of Women, Family Affairs and Human Rights Development Southwest States of Somalia; Mohamed Hussein - Director General of Ministries of Women, Family and Human Rights Development of Jubaland and Madina Noor - Director General of Ministries of Women, Family and Human Rights Development of Southwest States of Somalia.

UN Women Senior Management Team

Zebib Kavuma - Deputy Regional Director, UN Women East and Southern Regional Office (ESARO); Dr. Sadiq Ahamad Jilani Syed - UN Women's Somalia Country Programme Manager

UN Women Staff

Beatrice Teya - Humanitarian Specialist, ESARO; Sophie Kiarie - Humanitarian and DRR Programs Specialist (Consultant), ESARO; Aijamal Duishebaeva - Communication Specialist, ESARO and James Ochweri - Communication Associate, ESARO; Mohamed Farah - UN Women Somalia, LEAP Programme Specialist; Osman Ali; Abdikadir Noor; Assad Isse and Said Ogle.

Horn of Africa Consultants Firm (HACOF)

Violah Sugut; Gerald Njoroge; Nicholas Mwenda; Mohamed Hassan; Bernard Nyauchi and Ali Hassan.

Your invaluable support has facilitated this and for that we sincerely want to thank you.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	03
BACKGROUND	05
METHODOLOGY	10
DESCRIPTION OF STUDY PARTICIPANTS	17
ANALYSIS AND MAPPING OF POTENTIAL CLIMATE RISKS, CHALLENGES IN AGRICULTURE	25
EXISTING CONFLICTS THAT IMPACT IDPS AND CRISIS-AFFECTED AND AT-RISK WOMEN AND HOST COMMUNITIES	40
INTERRELATIONSHIP BETWEEN GENDER, CLIMATE AND CONFLICT IN SOMALIA	46
GOOD AND PROMISING OPPORTUNITIES IN AGRICULTURE IN SOMALIA	49
STRATEGIES AND SOLUTIONS TO TACKLE CLIMATE CHANGE, GENDER BARRIERS AND CONFLICT	55
STRATEGIES TO PROMOTE WOMEN IN LEADERSHIP AND ECONOMIC EMPOWERMENT	58
CONCLUSION AND RECOMMENDATION	60

LIST OF TABLES

Table 1: Somalia: Country Statistics	8
Table 2: The PESTLE Analysis	11
Table 3: Distribution of KIIs by Target Groups	12
Table 4: Distribution of Focus Group Discussions by Target Groups	13
Table 5: Distribution of Case Studies by Target Groups	13
Table 6: Distribution of Quantitative Sample by Target Locations	14
Table 7: Description of Quantitative Participants by Selected Variables	20
Table 8: Main Sources of Household Income	23
Table 9: Number of FGDs Completed	23
Table 10: Number of KIIs Completed	24
Table 11: Soil Types by Region	30
Table 12: Respondents' Perception of Soil Fertility Levels	30
Table 13: Common Agricultural Practices of Crisis-Affected and At-Risk Women	39
Table 14: Gender Differentials in Agricultural Practices	47
Table 15: Good Practices in CSA	54

LIST OF CHARTS

Chart 1: Distribution of Quantitative Respondents by Location	18
Chart 2: Household Size	22
Chart 3: Access to Farm Land by Households	29
Chart 4: Crops That Are Commonly Grown in Somalia	32
Chart 5: Main Reasons for Not Using Herbicides	34
Chart 6: Main Reasons for Not Using Fertilizers	35
Chart 7: Common Pests and Diseases in Somalia	37
Chart 8: Common Types of Conflicts in Somalia	44
Chart 9: Common Conflicts Experienced by Crisis-Affected and At-Risk Women	44
Chart 10: Drought-Resistant Crops That Are Common in Somalia	50

LIST OF FIGURES

Figure 1: Key Activities in Somalia's Seasonal Calendar	26
Figure 2: Methods Used by Farmers in Plowing	51

ABBREVIATIONS

CAPI	Computer-Assisted Personal Interviewing
CSA	Climate-Smart Agriculture
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
FGM	Female Genital Mutilation
GBV	Gender-Based Violence
GBVIMS	Gender-Based Violence Information Management System
HACOF	Horn Africa Consultants Firm
IDP	Internally Displaced Person
KII	Key Informant Interview
LEAP	Leadership, Empowerment, Access and Protection
PESTLE	Political, Economic, Social, Technological and Legal Environment
SGBV	Sexual and Gender-based Violence
SPSS	Statistical Package for Social Sciences
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFP	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
WHO	World Health Organization



FOREWORD

The Women's Leadership, Empowerment, Access and Protection (LEAP) project, funded by the government of Japan and implemented by UN Women between April 2021 to March 2022) promotes access to livelihood opportunities; preventing/reducing violence against women and girls in target communities and building and sustaining peace through gender-responsive stabilization and recovery of conflict-affected displaced women and men in Kismayo and Baidoa integrating the 'Triple Nexus'.

Somalis dependent on livestock agriculture and forestry are adversely affected by climate change. It is a major concern driving humanitarian need in the country with a huge impact on women's livelihoods. Women and girls are consistently more vulnerable to drought as it places a triple burden on them to survive, care for their families, and evade sexual violence. COVID-19 has exacerbated existing

challenges by severely impacting the livelihoods of women and girls. There are cases of ongoing struggles over limited resources and access to aid, often leading to tensions between host communities and IDPs because host communities are also affected by protracted conflict, drought, cyclical climatic shocks (drought and floods), locust invasion, political instability, socioeconomic vulnerability and deteriorating livelihoods. These combined shocks continue to fuel the humanitarian crises.

UN Women commissioned this study "Gender, Climate and Conflict Analysis in Somalia and Assessment of Opportunities for Climate Agriculture and Livelihood Opportunities for Crisis-affected and At-risk Women in Somalia" in collaboration partner ministries.

Its aim is to contribute to knowledge and information management on Gender, Climate and Conflict Analysis in Somalia and will support opportunities for climate smart agriculture and livelihood opportunities for crisis-affected and at risk women. The study identifies opportunities for climate smart agriculture and livelihood enhancement by transforming and reorienting agricultural systems through sustainable food production leading to increased productivity and incomes, and resilience.

The overall findings of the study covered the following points:

- Analyze and map potential climate risks, current challenges faced in agriculture farming and livestock farming and interlinkages with gender in crisis-affected and at risk women in Somalia;
- Identify existing conflicts impacting IDPs, and crisis-affected and at risk women and host communities and interlinkages with gender in Somalia;
- Conduct evidence-based analysis on the possible initiatives to strengthen resilience and adaptive capacities to climate-induced impacts and livelihood opportunities assessment for the crisis-affected women and aspect of gender in Somalia;
- Identify potential and promising opportunities for climate resilience crops, farming tools, techniques, livestock farming, drip irrigations and supply chain for the crisis-affected and at risk women in Somalia;
- Undertake an analysis on strategies and solutions to tackle climate change, gender barriers and conflict and promote women in leadership and economic empowerment in the IDPs and crisis-affected women in Somalia; and
- Recommend climate-resilient crops, techniques, livestock farming and process, tools, required climate actions and other livelihood opportunities for crisis-affected women and IDPs in Somalia.

EXECUTIVE SUMMARY

Background

The climatic conditions in Somalia challenge the cultivation of certain crops due to high temperatures and low rainfall levels. Thus, the majority of the population has resorted to pastoralism. From time to time, pastoralists must migrate with their livestock in search of better grazing lands. They often compete for the green grazing grounds and arable lands with individuals who are cultivating those lands, which frequently results in tensions and conflicts. The results of such conflicts have far-reaching effects, including displacement of populations from their homes into internally displaced person (IDP) sites. Once in those IDP sites, males are sometimes recruited into militant groups, while females are exposed to gender-based violence.

Generally, there is inadequate information regarding the impact of climate change and potential adaptation mechanisms among Somalis. This inhibits them from using more productive agricultural practices despite the unpredictable weather conditions. There is therefore a need to develop approaches that would enhance knowledge exchange among the populations living in Somalia, so as to empower them to adapt to and mitigate the changing climatic conditions. Thus, UN Women undertook a gender, climate and conflict Analysis with the aim of identifying opportunities for climate-smart agriculture and livelihood enhancement by transforming and reorienting agricultural systems through sustainable food production, leading to increased productivity, incomes and resilience.

Methods

As a first step in this activity, this desk review is undertaken to gather existing information and to document issues that are related to gender, climate and conflict in Somalia. This literature analysis entailed a review of existing documents from the various United Nations (UN) agencies, data from the Somalia Government and information from commercial sources. The majority of this literature was gathered from online sources. Additionally, quantitative data was gathered from 501 households, and qualitative data was collected from 35 key informant interviews, 18 focus groups and 4 case studies. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS), while qualitative analysis entailed grouping the responses by thematic areas and determining the recurring themes. Qualitative and quantitative data was triangulated to achieve an appropriate synthesis.

Results

Findings of this assessment reveal that there are gender disparities in access to services in Somalia. The country is ranked among the highest in terms of gender inequality – ranked sixth globally with an index of 0.776 (where 1.0 denotes complete inequality). On the same note, access to education also varies by gender, as men are more literate (49.8%) compared to females (37.8%). Because of these disparities, women do not are not afforded the same opportunities as men.



The country is ranked among the highest in terms of gender inequality – ranked sixth globally with an index of

0.776

Because only a small portion of the land is arable in Somalia, conflicts usually arise as farmers and pastoralists compete for the productive land. The lack of arable land, coupled with very unpredictable weather patterns, forces some communities to migrate from their homes and end up hosted as IDPs, thus deepening their vulnerability, especially women. There is inadequate access to farming opportunities at the IDP sites, such that the majority of IDPs (68%) do not practice agriculture because they do not have land. Most of those who practice agriculture do not use modern techniques and tools, such as pest control, which is practiced by only 5.3%, while chemical fertilizers are used by only 36.6% of the farmers. Other good practices that have not been adopted include irrigation, which is practiced by only 40.4% of the farmers. As a result, the majority of the farmers (80.7%) reported that their crops had experienced pest and disease attacks.

There are opportunities in agriculture that vulnerable women can adopt, including cultivation climate-resistant crops such as maize, sorghum and sesame; using improvised farming tools; using improved farming techniques in crop farming and livestock keeping; and engaging in climate-resilient agriculture.

Conclusion and Recommendations

In view of the situation in Somalia, particularly issues related to gender, climate and conflict, there is need to improve the livelihoods of people living in IDP sites; integrate climate risks into security planning to avert potential conflicts; develop a system that collects and reports data on sexual and gender-based violence (SGBV); support farmers in adopting climate-smart agriculture; and enhance the use of technology in agriculture. To achieve this, there is need to increase food security in IDP sites by subsidizing modern farm inputs and high-quality seeds; promote the use of technology in agriculture; and enhance training of households on progressive agricultural practices.



access to education also varies by gender, as men are more literate (49.8%) compared to females

(37.8%)

majority of IDPs

68%



do not practice agriculture because they do not have land

Few who practice agriculture use modern techniques

5.3%

pest control

40.4%

practiced irrigation

36.6%

use chemical fertilizers



1

BACKGROUND

Placing women's rights at the center of all its efforts, UN Women leads and coordinates the United Nations' (UN) system efforts to ensure that commitments on gender equality and gender mainstreaming translate into action throughout the world.

1.1. Introduction

UN Women, grounded in the vision of equality enshrined in the Charter of the United Nations, works for the elimination of discrimination against women and girls; the economic empowerment of women; and the achievement of equality between women and men as partners and beneficiaries of development, human rights, humanitarian action, and peace and security. Placing women's rights at the center of all its efforts, UN Women leads and coordinates the United Nations' (UN) system efforts to ensure that commitments on gender equality and gender mainstreaming translate into action throughout the world. It provides strong and coherent leadership in support of Member States' priorities and efforts, building effective partnerships with civil society and other relevant actors.

In Somalia, protracted conflicts and insecurities, violence, cyclical climatic shocks (drought and floods), locust invasion, political instability, socio-economic vulnerability and the prevailing COVID-19 pandemic continue to fuel the humanitarian crisis and negatively impact livelihoods, particularly for women and girls. The Gender-Based Violence Information Management System (GBVIMS) 2020 data reported an increase of over 61%¹ in gender-based violence (GBV) during COVID-19. In Somalia, the Leadership, Empowerment, Access and Protection (LEAP) project, funded by the Government of Japan, provides an opportunity for internally displaced persons (IDPs), particularly women, girls and their communities, to mitigate the impact of multiple crises on their livelihoods, exposure to GBV, and their decision-making capacities in Jubaland and the South West state by leveraging ongoing initiatives of other development partners.

Humanitarian needs in Somalia are largely driven by displacement,² with 2.6 million people internally displaced and drought listed as the main reason for 22% of displacement. In the past two decades, the frequency and duration of dry spells have increased, with unfavorable Gu (prolonged droughts) and Deyr rains (short rains) resulting in more intense and prolonged droughts. And though the mass scale-up of humanitarian assistance throughout 2017 prevented famine, both the displacement and the destruction of livelihoods that stemmed from the crisis have had wide-ranging effects that are still felt today. One-third of the total population (4.2 million people) require humanitarian assistance and protection. In 2021, the humanitarian situation was alarming, as drought was reported in 34 districts of Somalia and pockets of pre-drought conditions were seen in other areas. The unusually dry period was attributed to the poor Deyr rains in 2020. An estimated 83,393 people had been displaced across the country due to the drought between November 2020 and March 2021.³

With most Somalis dependent on livestock agriculture and forestry, climate change is also a major concern that drives humanitarian need in the country and has a huge impact on women's livelihoods. Women and girls are consistently more vulnerable to drought, as it places a triple burden on them to survive, care for their families and evade sexual violence. Evidence shows that food insecurity and poverty increase the prevalence of GBV, as do war and harmful gender norms and stereotypes. For example, women traveling greater distances on insecure routes to collect water and firewood due to droughts increase their exposure to GBV.

1 Gender-Based Violence in Somalia - Advocacy Brief April 2020.

2 [2019 Somalia Humanitarian Needs Overview - Somalia | ReliefWeb](#)

3 OCHA Situation overview March 2021.

4 [Causes of gender-based violence | Concern Worldwide \(concernusa.org\)](#)



Humanitarian needs in Somalia are largely driven by displacement, with

2.6 million people

internally displaced and drought listed as the main reason for 22% of displacement



The impact of droughts on infrastructure and resources also affects the availability and quality of GBV services, putting a further strain on GBV survivors. In addition, this project addresses the severe impact of COVID-19 on women's livelihoods and seeks ways to improve their protection against GBV and enhance their decision-making capacities. COVID-19 has exacerbated existing challenges by severely impacting the livelihoods of women and further restricting their ability to guide and participate in decision-making processes. Furthermore, there are cases of ongoing struggles over limited resources and access to aid, often leading to tensions between host communities and IDPs because host communities are also affected by protracted conflict, drought, and deteriorating livelihoods. This project will also engage traditional leaders as key decision-makers in addressing negative social norms to prevent sexual and gender-based violence (SGBV) and to remove structural barriers for engaging marginalized women and those with disabilities in agriculture and livelihood opportunities. The project geographically focuses on the districts of Kismayo (Jubaland) and Baidoa (South West), which are particularly affected.

1.2. Highlights of Somalia

Somalia has a land area of 637,660 square kilometers,⁵ but only 1.6% of the land is classified as arable. Just 0.04% of the land area is cultivated with permanent crops, such as cocoa, coffee and rubber, which occupy land for long periods and therefore do not need to be replanted after each harvest. The majority of the land is left for permanent pastures, estimated to cover about 470,000 square kilometers.⁶ Table 1 summarizes the country's statistics:

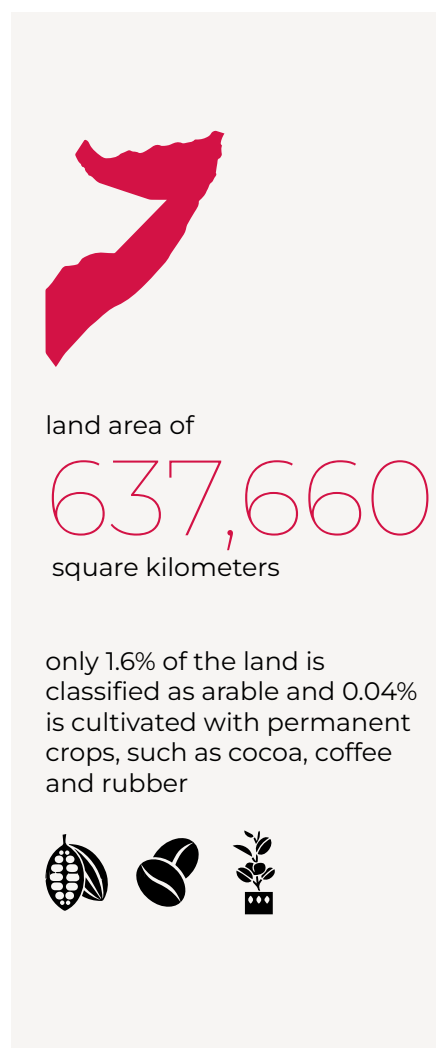


TABLE 1:
Somalia: Country Statistics⁷

Number	Item	Statistic
1	Total area	637,660 km ²
2	Total population	16,529,381*
3	Population ratio	49.9%(M):50.1% (F)
4	Population per km ²	24.92
5	Ethnic composition	Somali 98.3%; others 1.7%
6	Birth rate	41.6 ‰
7	Death rate	10.7 ‰
8	GDP	\$2.02 billion
9	Unemployment rate	13.10%
10	Corruption index	12

5 World Data: Somalia. [Somalia: country data and statistics \(worlddata.info\)](https://worlddata.info)

6 Fortune of Africa. Agriculture Land in Somalia. <https://fortuneofafrica.com/somalia/agriculture-land-in-somalia/>

7 World Data: Somalia. [Somalia: country data and statistics \(worlddata.info\)](https://worlddata.info)

1.3. Rationale

Findings from previous research have shown that people living in IDP sites lack access to decision-making and income-generating opportunities, and are vulnerable to insecurities and violence from the host communities over the resource opportunities and limited protection provided by the dominant subclans in the location. Additionally, gender-based discrimination and violence, particularly rape of young girls and women, is widespread. Women are often attacked when they go out to collect firewood or to earn a living for their families. Therefore, the project selected 10 locations for this study because they host a larger number of IDPs as a result of protracted conflict, insecurity, droughts, floods, etc.

The evidence, data and information on gender, climate and conflict analysis in Somalia points to opportunities for climate-smart agriculture and livelihood enhancement. Preliminary analysis for crisis-affected and at-risk women in select locations in Somalia, undertaken through consultations with partner agencies, revealed gaps in this area. To respond to the challenge of climate change, achieve food security and alleviate poverty, UN Women seeks to engage in actions needed to transform and reorient agricultural systems to effectively enhance the livelihood of crisis-affected communities. This will be achieved through enhancing sustainable food production and opportunities for economic empowerment thus strengthening resilience. Additionally, UN Women will engage clan elders and religious leaders in addressing patriarchy, traditional and cultural practices in many communities, and social norms that condone violence against women and girls and prevent the participation of women in meaningful livelihood activities.

UN Women conducted this assessment to examine the opportunities for climate-smart agriculture and livelihood opportunities for crisis-affected and at-risk women in select locations in Somalia. This assessment focused specifically on 10 locations

in Somalia – Kismayo, Dollow, Luuq, Baidoa, Hudur, Afgooye, Jowhar, Beletweyne, Garowe and Samareb – to deeply analyze the gender, climate and conflict environment and assess the livelihood opportunities for crisis-affected women in the project's target location. This assessment entailed collection, analysis and development of data and submission of a study report highlighting the findings from the data collected.

1.4. Objectives

This study intends to serve as a baseline for UN Women's LEAP project. To understand the opportunities for climate-smart agriculture and livelihood opportunities for crisis-affected and at-risk women in Somalia, the study has the following objectives:

- Analyze and map the potential climate risks, current challenges facing agriculture and livestock farming, and interlinkages with gender in crisis-affected and at-risk women in Somalia
- Identify the existing conflicts impacting the IDPs, crisis-affected and at-risk women, and host communities and reveal interlinkages with gender in Somalia
- AFG
- Identify promising potential opportunities for climate-resilient crops, farming tools, techniques, livestock farming, drip irrigation and supply chains for crisis-affected and at-risk women in Somalia
- Undertake an analysis of strategies and solutions to tackle climate change, gender barriers and conflict, and promote women in leadership and economic empowerment in the IDPs
- Recommend climate-resilient crops, techniques, livestock farming processes, tools, required climate actions and other livelihood opportunities for the crisis-affected women and IDPs in Somalia.



2

METHODOLOGY

This assessment used a mixed-methods approach in collecting data from different stakeholders.

2.1 Introduction

This assessment used a mixed-methods approach in collecting data from different stakeholders. The target groups included IDPs and crisis-affected women, men, boys, girls, host communities, farmers, women leaders, traditional and religious business leaders, and youth groups. Relevant Government ministries and development and humanitarian partners were also targeted, including the Ministry of Agriculture, Food and Agriculture Organization (FAO), United Nations Development Programme [UNDP], United Nations Environment Programme [UNEP], Care International, and district administrations, women-led businesses and minorities. The approach encompassed:

- i. Extensive literature and documentation reviews
- ii. Qualitative research methods
- iii. Quantitative surveys focusing specifically on IDPs and host community farmers.

2.2 Desk Reviews

The content of desk review activity was based on information gathered through a systematic review of wide-ranging but focused literature and documentation related to gender, climate and conflict in Somalia. This required a review of both internal and external literature outlined below:

- a) **Internal Desk Research** – This entailed reviewing information on gender, climate and conflict, which has been generated internally within UN Women as a course of normal process. It also involved reviewing internal and existing organizational resources from the UN Women website and organizing the information gathered in a more efficient and usable format.
- b) **External Desk Research** – To complement information gathered from the materials within UN Women, a review of research done outside UN Women was undertaken with the aim of collecting relevant information.

As shown in Table 2, the desk review and analysis of existing various public domain data sets and reports made use of the Political, Economic, Social, Technological, Legal and Environmental (PESTLE)⁸ framework.

TABLE 2:
The PESTLE Analysis

Factor Classification	Description
Political factors	<ul style="list-style-type: none"> • Absence of a national Government for two decades • Militia are a threat to community livelihoods • Severe lack of capacity in every part of the country • Interclan and interfactional fights have flared with little warning • New constitution and new parliament representing diverse parties and factions
Economic factors	<ul style="list-style-type: none"> • Somalia is classified by the UN as a least developed country • Mainly pastoralist (rearing cattle) • Some communities living along the coastal areas practice crop farming and fishing • Unpredictability of local economic environment • Adverse weather conditions

8 PESTEL Analysis: Factors of PESTEL Analysis, Examples and Videos (toppr.com)

Social factors	<ul style="list-style-type: none"> • Increased public awareness of their own rights • Civil war • High poverty • Illiteracy • Changing conflict dynamics
Technological factors	<ul style="list-style-type: none"> • Poor or no internet/network coverage, especially in remote rural areas • Limited resources
Legal factors	<ul style="list-style-type: none"> • No national legal system • No definite explanation of laws • Delay in attending to legal matters • Ineffective legal system
Environmental factors	<ul style="list-style-type: none"> • Unpredictable climatic changes • Natural disasters like flood and drought • Most land is uncultivable and deserted • Increased land degradation as result of deforestation

2.3 Qualitative Research Methods

This assessment used qualitative approaches, such as key informant interviews (KIIs), focus group discussions (FGDs) and ethnographic studies, to gather additional information from respondents.

a) Key Informant Interviews

To ensure collection of in-depth data, key project stakeholders were targeted for interviews so as to gather their opinions; establish a comprehensive overview of the gender, climate and conflict situation in Somalia; identify gaps; and allow them to offer feasible recommendations on strategies and solutions to tackle climate change, gender barriers and conflict. As shown in Table 3, key informants such as women leaders, traditional and religious business leaders, youth groups leaders, relevant ministries and development and humanitarian partners (including Ministry of Agriculture, FAO, UNDP, UNEP and Care International), district administrators and women-led businesses were targeted.

TABLE 3:
Distribution of KIIs by Target Groups

No.	Target Group	Number of KIIs Targeted	Achieved
1	District Administrators	10	10
2	Women Leaders	10	10
3	Traditional and Religious Leaders	5	5
4	Youth Group Leaders	5	5
5	Women-Led Businesses	5	5
6	Ministry of Agriculture	1	0
7	FAO	1	0
8	UNDP	1	0
9	UNEP	1	0
10	Care International	1	0
	Total	40	35

b) Focus Group Discussions

Additionally, qualitative data was collected using FGDs. To ensure that the discussions were open and honest, FGDs were organized to meet the dynamics of the different target groups, which were women, men, youth, IDPs and minorities. In some cultures, the norms limit women's participation in group discussions that include men. It was envisioned that the respondents of these groups would share their general knowledge and opinions about the gender, climate and conflict environment in Somalia, their experiences, and the outcomes and impacts on their lives and families. It was also hoped that they would suggest recommendations on initiatives to strengthen resilience and adaptive capacities to climate-induced impacts and livelihood opportunities.

To cover the required content and meet the study objectives, 18 FGDs were targeted for this assessment, as shown in Table 4.

TABLE 4:
Distribution of FGDs by Target Groups

No.	Target Group	Number of FGDs Targeted	Achieved
1	IDPs	3	3
2	Women	3	3
3	Men	3	3
4	Girls	3	3
5	Boys	3	3
6	Minorities	3	3
	Total	18	18

c) Case studies

Case studies were used to generate in-depth and multifaceted understanding of gender, climate and conflict in Somalia, with specific cases identified for evaluation. This method was used to generate data from respondents, who were sampled to give an account of their real-life experiences in scenarios of interest. Of particular interest for inclusion were crisis-affected women, men, boys and girls who are victims and survivors of conflicts or SGBV, including rape, physical assault, emotional assault, forced early marriages and denial of resources, among others. This method sought to generate real and detailed data that would be used to build real, actionable recommendations and strategies to end the injustices meted to women, men, boys, girls and minority groups. As described in Table 5, this assessment targeted four groups.

TABLE 5:
Distribution of Case Studies by Target Groups

No.	Target Group	Number of Case Studies Targeted	Achieved
1	Women	1	1
2	Men	1	1
3	Boys	1	1
4	Girls	1	1
	Total	4	4

2.4 Quantitative Survey

This assessment employed quantitative approaches to gather data from IDPs and members of the host communities. These were face-to-face interviews at respondents' homes, using smartphones and tablets, aimed at providing numeric data used to analyze and map the potential climate risks, current challenges in agriculture farming and livestock farming, and interlinkages with gender in crisis-affected and at-risk women in Somalia. Findings from the survey were used to quantify the experiences from various groups of respondents and for triangulation with the outcomes from qualitative and desk review approaches. A total of 500 displaced and host community farmers from across the 10 study locations were targeted. As shown in Table 6, 501 respondents were interviewed.

TABLE 6:
Distribution of Quantitative Sample by Target Locations

No.	Location	Sample Size for Quantitative Survey	
		Targeted	Achieved
1	Kismayo	50	52
2	Dollow	50	51
3	Luuq	50	51
4	Baidoa	50	50
5	Hudur	50	49
6	Afgooyeye	50	53
7	Jowhar	50	49
8	Beletweyne	50	49
9	Garowe	50	47
10	Samareb	50	50
	Total	500	501



2.5 Preparation for Data Collection

Drafting, Reviewing, Pre-Testing and Programming Data Collection Tools

Data collection tools, which included the quantitative interviews tool and discussion guides for the FGDs and KIIs, were designed based on the objectives of this assessment. Upon approval, the final English tools were translated.

Translation of Tools: Based on the target program areas, the tools were translated into Somali.

Testing of Tools: The tools (both the English and translated versions) were pretested among a population of adults age 18 years and older with demographics representing residence location, clan and subclan identity, gender, etc. The learning from this pretest exercise was used to fine-tune the final tools.

Programming/Scripting of Tools: The tools were programmed into a computer-assisted personal interviewing (CAPI) format, using the SurveyToGo application, which runs on the Android system on the Dooblo platform (<http://www.dooblo.net/>). The CAPI tools mirrored the original paper versions in all aspects, including skips and logic checks, to ensure quality and consistency of the data. Once programmed, the CAPI tools were tested against the original versions to check for accuracy.

Recruiting, Vetting and Training the Field Team

Twenty college graduates with experience conducting surveys were recruited as interviewers. Two interviewers were recruited from each of the 10 target districts. The interviewers were taken through a three-day training on standard interviewer practices and research code of conduct. The formal training entailed two days of classroom training and one day of pilot training (field practice). The training covered background on the assessment, theoretical overview and content

of questionnaires and any other clarifications, step-by-step review of each question, practicing how to administer the questions and entering the responses. The rationale behind each question was explained, and all possible answers were simulated to get a full understanding of the questions and the interviewing process. To ensure appropriate qualitative data collection, the interviewers were taken through qualitative interviewing skills and the FGD and KII discussion guides.

The interviewers were supervised by one coordinator, who had technical skills in proper people and time management, conflict resolution, team cohesion and communication skills. The supervisor was trained on quality assurance protocols.

2.6 Data Collection Using CAPI

Prior to data collection, the teams sought the necessary approvals from the local administration before they proceeded to the specific study locations. Once in the study areas, they screened respondents for eligibility and consent, and administered the instruments.

For the quantitative survey, households were selected using systematic random sampling. A sampling interval of five was applied across the IDP camps and in host communities. In the randomly selected household, the interviewer sought to interview the female or male household head. Sampling for the qualitative approaches entailed purposive sampling to ensure the required target population and sample size were achieved. Participants were mobilized using a recruitment criterion that entailed provision of appointment cards with details of the FGD or KII venue, date and time. Logistics such as the venue, refreshments and incentives were provided. In addition, detailed, well-written notes and audio recordings were taken. Each FGD had eight participants to ensure adequate seating arrangements and to ensure adherence to World Health Organization (WHO) COVID-19 guidelines.

2.7 Confidentiality of Data, Data Security and Storage

During data collection, interviewers were trained to conduct all interviews in a private location.

In the field, all written records (such as consent forms) were kept securely in sealed envelopes. The mobile devices were password protected and configured to upload the data immediately at the end of the interview.

Additionally, soft copies of databases and field notes were stored in password-protected computers with access only to the research team. No respondent-identifying information was presented in the final data sets. The respondents' telephone numbers were kept in a database of contacts detached from the responses. These procedures ensured that no data was stored in the devices and no unauthorized persons had access to the data.

2.8 Data Analysis and Reporting

Analysis of qualitative data used a combination of NVivo and thematic content analysis. This entailed development of coding and analysis frames. Statistical Package for Social Sciences (SPSS) was used to analyze the survey data. Analysis of the quantitative data entailed drawing inferences from descriptive and inferential statistics.

Data from the two sources was triangulated to distill and interpret the outcomes upon which the narrative report and presentations were developed. The draft report was shared with the UN Women project team for review and comments, after which the comments were incorporated and second draft report submitted.

2.9 Ethical Considerations and Confidentiality

In adhering to international standards of carrying out research studies with human subjects, all the interviewers were trained on ethical considerations in research to enable them to uphold the highest levels of ethics and protocols. Recognizing the sensitivity of the subject under investigation in this assessment, the following ethical procedures were taken into consideration in collecting data:

- All respondents were given a detailed overview of this research and ethical procedures to be followed during data collection.

- Survey tools, language and questions were designed with high levels of sensitivity.
- The interviewers were trained on ethical research, consent and coercion, child safeguarding, child protection, no-judgmental data collection and ethical interviewing, as well as the specific use of the research tools, confidentiality and secure data handling.
- Respondents' names and sensitive information were excluded from any reporting or any information produced in the context of the study (except where consent was provided).
- Information was presented so as to not be directly attributed to informants.
- Participation of children was limited to qualitative FGD. Parents or guardians were asked for consent before children participated in this research. Child-friendly questions and a safe environment for the children were ensured.
- Participation in the survey was voluntary, and respondents participated only at will.
- The study data was stored in highly secured folders on our server, and only project staff were allowed access the data during analysis and reporting.

2.10 Limitations

Using the above-mentioned approaches to collect information often leads to errors of omission on some specific details and components, as well as chances of underreporting some items. Thus, data from desk reviews was triangulated with scientific data collected from the field to ensure valid conclusions and recommendations.

Additionally, some of the key informants, particularly those from international organizations and UN agencies, were not contacted during data collection. Analysis of the qualitative data excluded them.



3

DESCRIPTION OF STUDY PARTICIPANTS

The quantitative approach of this assessment collected views of men and women from 501 households

3.1 Participants in the Quantitative Survey

The quantitative approach of this assessment collected views of men and women from 501 households. In terms of distribution by the location where interviews were conducted, a slight majority (51.5%) of the interviews were conducted among households in the IDP sites, while the remaining 48.5% of the interviews were conducted with members of the host communities.

There was a good balance between the two genders, with more females interviewed compared to males. The proportion of females who participated in the survey was 56.9%. Considering the intention of this survey to include more women in the quantitative methods than men, this proportion is considered adequate. These proportions are almost a true reflection of the current sex ratio for adult population in Somalia, which stands at 96.48 males for every 100 females.⁹

Grouped by age categories, more than half (51.3%) of the respondents were between the ages 18 and 35 years, followed by those aged 36 to 60 years, who accounted for 43.3% of all the respondents. There was a small proportion (4.4%) of respondents who reported that they are older than 60 years.

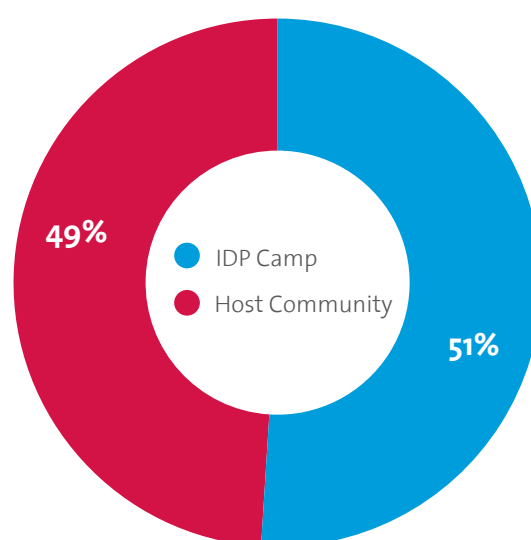
Approximately 78.2% of the respondents were married at the time of this survey. Only 9.0% of the respondents reported that they had separated or divorced their partners, and 6.4% were widowed. The majority (73.3%) of the respondents who reported that they did not live with their partners because of divorce or separation were female. On the same note, almost all the respondents (93.8%) who were widowed were females. In terms of their places of residence, 57.9% of those who did not have their partners were living in IDP sites – 62.5% were widowed, and 53.3% were divorced or separated.

9 Somalia male to female ratio, 1950-2020 - knoema.com

CHART 1:

Distribution of Quantitative Respondents by Location

DISTRIBUTION OF PARTICIPANTS BY PLACE OF RESIDENCE (N=501)





57.9% of those who did not have their partners were living in IDP sites – **62.5%** were widowed, and **53.3%** were divorced or separated.

In Somalia, access to formal education remains a big challenge. Previous studies have shown that only 30% of all school-age children have access to learning opportunities, and over 3 million children are out of school.¹⁰ In this survey, almost half (49.5%) of the respondents reported that they did not attend any formal education, of which 59.7% were females. Moreover, two-thirds of those who reported lack of formal education were living in

the IDP sites. Additionally, there were variations in respondents' highest level of education by residence status, such that one-third (34.8%) of the residents had no education. About half (50.9%) of the refugees and two-thirds (66.7%) of the IDPs also reported that they had no formal education.

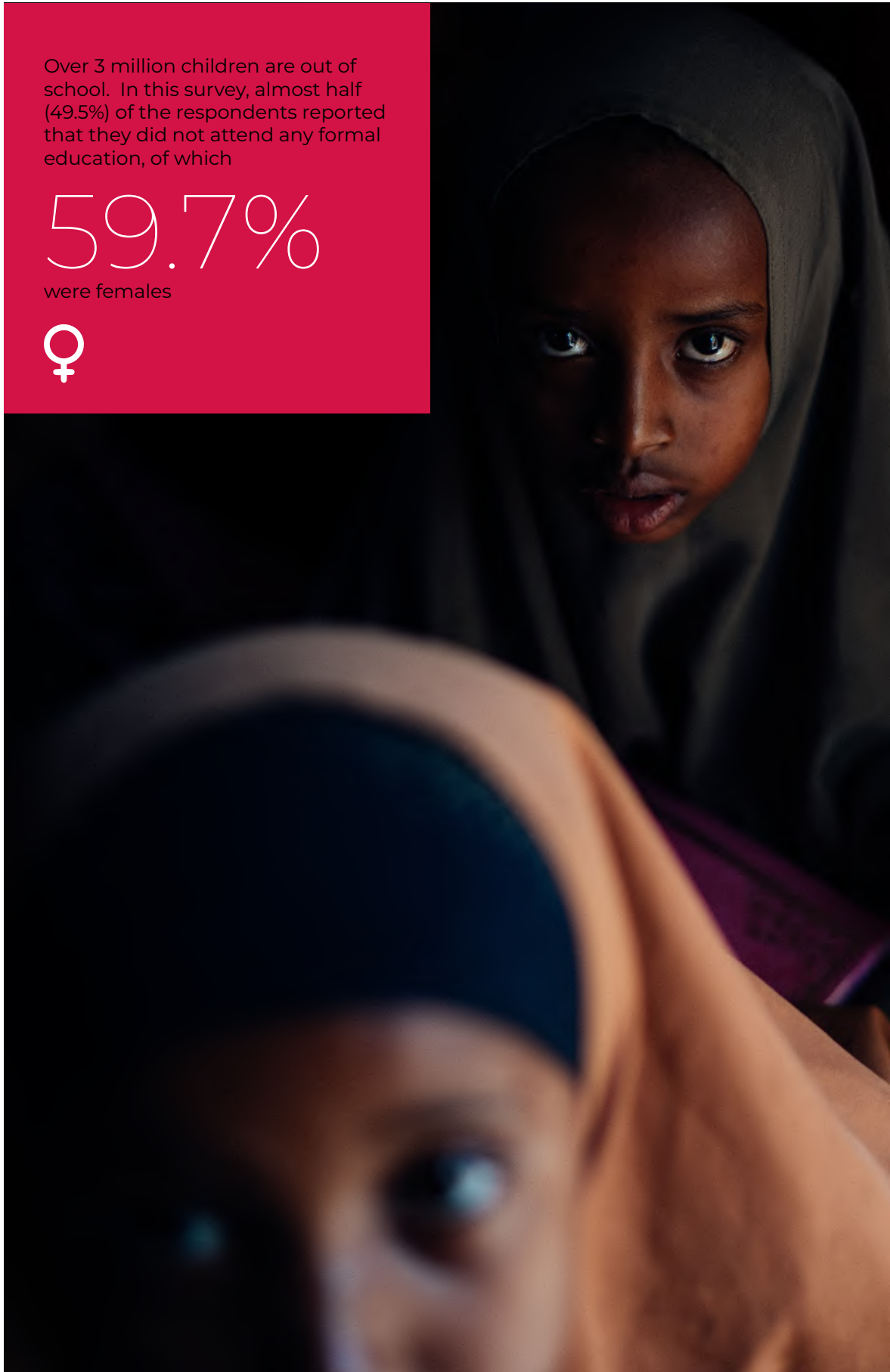
TABLE 7:
Description of Quantitative Participants by Selected Variables

Variable	Response categories	Number	Percent (%)
Residence status	Resident	244	48.7
	Refugee	53	10.6
	IDP	204	40.7
Length of stay in this location	Less than 6 months	24	4.8
	6 months to 1 year	27	5.4
	2 to 3 years	93	18.6
	4 to 5 years	125	25.0
	More than 5 years	231	46.1
	Refused to answer	1	0.2
Gender	Male	216	43.1
	Female	285	56.9
Age category	9–17 years	5	1.0
	18–35 years	257	51.3
	36–60 years	217	43.3
	60+ years	22	4.4
Marital status	Married	392	78.2
	Divorced/separated	45	9.0
	Widowed	32	6.4
	Never married/single	31	6.2
	Refused to answer	1	0.2
Level of education	No formal education	248	49.5
	Primary education	59	11.8
	Secondary education	55	11.0
	Tertiary education (university/college)	33	6.6
	Postgraduate (master's, MBA, PhD)	1	0.2
	Madrassa/Koranic school only	95	19.0
	Refused to answer	10	2.0
Total		501	100

¹⁰ Education in Somalia: challenges amid crisis and conflict (concernusa.org)

Over 3 million children are out of school. In this survey, almost half (49.5%) of the respondents reported that they did not attend any formal education, of which

59.7%
were females

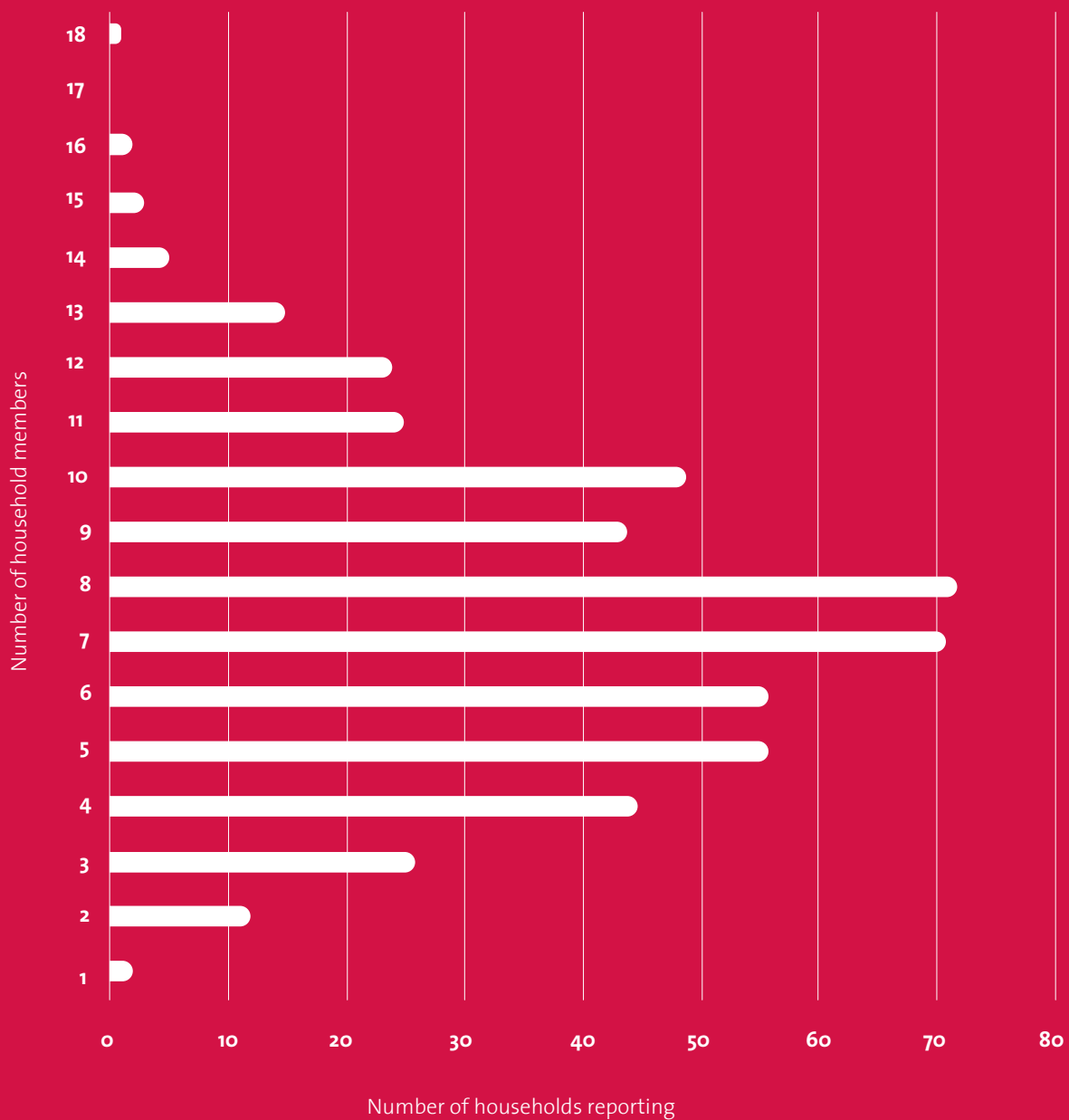


In relation of household size, the majority of households reported that they had more than seven household members at the time of the survey. The average household size for the households that participated in this survey was 7.4. As shown in Chart 2, seven and eight were the most commonly mentioned household sizes, while the median household size was seven.

CHART 2:

Household Size

REPORTED HOUSEHOLD SIZE



Respondents were asked to mention the main source of income for their households. More than one-third (36.9%) of the respondents reported that their household relied on unskilled labor, daily labor or domestic work. Another 13.6% reported that their households relied on livestock, including animals and animal products, as the main source of income. Only 7.8% mentioned salaries as the main source of income for their households.

TABLE 8:
Main Sources of Household Income

Main Source of Income	Number	Percent (%)
Livestock (including animal and animal products)	68	13.6
Unskilled wage labor/daily labor/domestic work	185	36.9
Sale of charcoal	27	5.4
Petty trading (e.g., sale of firewood, poles, thatch, wild greens)	57	11.4
Sale of food aid	9	1.8
Remittances and/or gifts from family/relatives	11	2.2
Begging/assistance	6	1.2
Skilled labor (artisan)	24	4.8
Salaries, wages (employees)	39	7.8
Fishing	7	1.4
Government allowance	5	1.0
Other	29	5.8
Cash-based interventions (i.e., cash-for-work)	30	6.0
Social protection	2	0.4
Refused to answer	2	0.4
Total	501	100.0

3.2 Participants in the Qualitative Survey

A total of 18 FGDs were conducted among IDPs, female and male members of the community, and selected minority groups. The FGDs were distributed across the 10 target districts as highlighted in Table 9.

TABLE 9:
Number of FGDs Completed

No.	District	IDP	Female	Male	Minority	Total
1	Samareb	-	1	-	1	2
2	Garowe	1	-	1	-	2
3	Beletweyne	-	1	1	-	2
4	Jowhar	-	1	-	-	1
5	Afgooyey	-	-	1	-	1
6	Kismayo	-	1	-	1	2
7	Baidoa	-	1	1	-	2
8	Luuq	-	-	1	1	2
9	Dollow	1	1	-	-	2
10	Hudur	1	-	1	-	2
TOTAL		3	6	6	3	18

Additionally, 35 key informant interviews were conducted among local administration officers (10), women leaders (10), traditional leaders (5), youth leaders (5), and women-led businesses (5). These were distributed across the 10 target districts as shown in Table 10.

TABLE 10:
Number of KIIs Completed

District	DC	Women Leader	Traditional Leader	Youth Leader	Women-led Business	TOTAL
Samareb	1	1	0	1	0	3
Garowe	1	1	1	1	0	4
Beletweyne	1	1	0	0	1	3
Jowhar	1	1	1	1	0	4
Afgooyey	1	1	1	1	0	4
Kismayo	1	1	0	1	1	4
Baidoa	1	1	1	0	1	4
Luuq	1	1	1	0	0	3
Dollow	1	1	0	0	1	3
Hudur	1	1	0	0	1	3
Mogadishu	0	0	0	0	0	0
TOTAL	10	10	5	5	5	35



4

ANALYSIS AND MAPPING OF POTENTIAL CLIMATE RISKS, CHALLENGES IN AGRICULTURE

Somalia is located at the Horn of Africa and experiences tropical climate, which makes it hot year-round.

4.1 The Climate of Somalia

Patterns of Rains

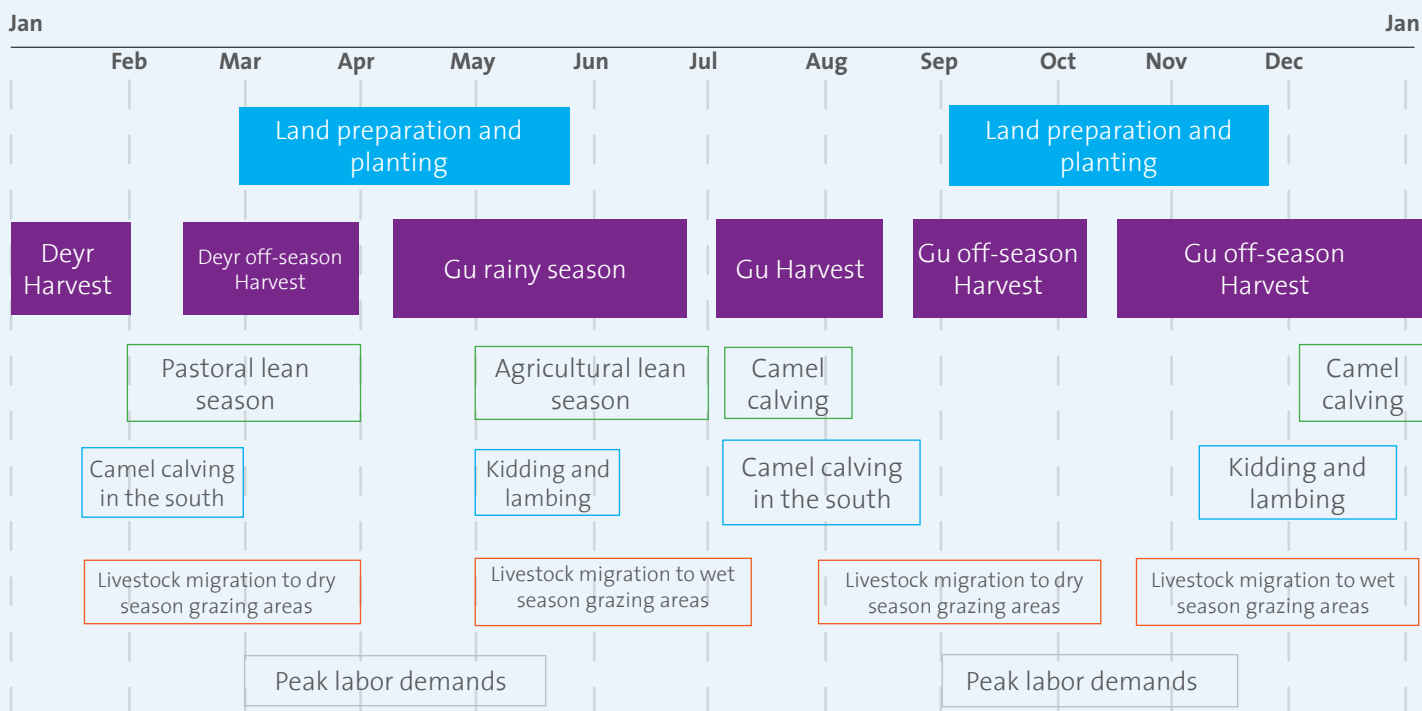
Somalia is located at the Horn of Africa and experiences tropical climate, which makes it hot year-round. Additionally, the country is generally dry, with majority of the land classified as desert or semi-desert, while the wet areas are occupied by savannah. The northern and central parts of the country experience arid climate, while much of the southern part experiences semi-arid climate. Only a small proportion of the southern region has humid climate that can support crop growing. This renders the majority of the country unsuitable for agriculture without employing improved agricultural techniques.

The rainfall patterns for Somalia are generally irregular from year to year. Despite this, the country experiences two rainy periods from March to late May (the Gu) and from October to early December (the Deyr). Typically, the wettest months are April to May and October to November, but there are some exceptions: on the northern coast,

where it rains very little, even these months remain dry; in the southern part of the coast, crossed by the equator, the first rainy season continues until July, while the second is generally very weak. The northern coast, which receives average annual rainfall of 50 millimeters, is the driest part of the country, while northwest and southwest areas are the rainiest and receive annual rains averaging 500 millimeters.¹¹

The rains usually occur in the form of short showers and thunderstorms. Given the aridity of the soil, which absorbs water with difficulty, when the storms are more intense than usual, they can give rise to flash floods. This usually happens in the south, in the valleys of the two main rivers, the Juba and Shabelle, in the Gu rainy season and until July (therefore, from March to July), but it can sometimes happen even in the north when one of the rare tropical cyclones reaches the area.

FIGURE 1:
Key Activities in Somalia's Seasonal Calendar



11 Climate: Somalia. Somalia climate: average weather, temperature, precipitation, when to go (climatestotravel.com)

Potential Climate Risks

Somalia is among the most vulnerable countries in the world to climate change.¹² This vulnerability is complex, differentiated, multidimensional and a function of several factors, including high exposure to climate risks, continued instability, weak governance, gender inequality and widespread poverty. It is anticipated that the nation's vulnerability to climate change will be intensified by its extremely high dependency on the natural resource base and low human development indicators. Effects of climate change are also seen in the declining ground water levels whose consequences are increased water processing and increased likelihood of conflicts over water.



In relation to temperatures, Somalia experiences generally hot temperatures throughout the year. Median daily maximum temperatures range from 30°C to 40°C, and the median annual temperatures increased up to 1.5°C over the past three decades. It is projected that this trend will continue in the long term and that median annual temperatures will increase between 3.2°C and 4.3°C by the year 2100. With the high temperatures and limited rainfall, the country has limited opportunities for crop growing and livestock rearing. This limits the inhabitants to keeping livestock that are basically drought resilient, such as camels and goats. There are a few who still grow crops in these climatic conditions. But, due to a lack of good agricultural practices and limited land sizes, their crops don't really do well.



Additionally, whenever it rains heavily in Somalia, flash floods are triggered as well as causing riverine flooding. Over the years, flash floods and riverine floods have displaced people from their villages, inundated farms, or killed humans and their livestock. Frequent floods are experienced by populations living along the major rivers in the country – the Shabelle, Juba, Ewaso Ng'iro and Dawa Rivers. Most at risk are the populations that live in Beletweyne of Hiran region and Dollow of Jubaland. When the floods occur, populations are forced to migrate and live in IDP sites.



The invasion of desert locusts also poses a serious threat to crop production in a country already facing economic crises. Along with Yemen and Sudan, Somalia has been identified as a key locust breeding area.¹³ Since 2019, highly mobile swarms of desert locusts have affected produce on farms and stripped vegetation in this dry country. Such swarming locusts can cause large-scale agricultural and environmental damage, as a single locust plague can lead to a loss of 170 000 tonnes of grain, enough to feed 1 million people for a year.¹⁴ If unchecked, this new generation poses a real risk to crop production throughout Somalia and the wider region.

12 Rankings // Notre Dame Global Adaptation Initiative // University of Notre Dame (nd.edu)

13 Somalia | Monitoring Desert Locusts: FAO in Emergencies

14 Somalia | Monitoring Desert Locusts: FAO in Emergencies

15 Somalia National Adaptation Programme of Action on Climate Change (NAPA) - Somalia | ReliefWeb

The ravages of drought, floods and locust infestations are linked to patterns of climate change and pose the most severe hazards to the country. Severe droughts are usually interrupted by devastating floods, which occur frequently, resulting in large-scale starvation and the death of thousands of people and livestock. In an attempt to identify the effects of climate change on livelihoods of the people of Somalia, UNDP identified droughts, floods, extreme high temperatures and strong winds as the major climate-related hazards experienced in Somalia.¹⁵ However, floods and droughts are considered the most severe climate risks.

Due to climate change, there are vulnerabilities in several sectors, including water resources, agriculture and food security; animal husbandry, grazing and rangelands; health; marine and coastal resources; biodiversity; and natural disasters. Vulnerability to climate change also varies by place of residence, as rural populations are more vulnerable than people residing in urban centers, and pastoralists tend to be more vulnerable than other groups, including agricultural farmers. Again, women and youth are considered particularly vulnerable groups. Many of the drivers of climate vulnerability are also root causes of insecurity.



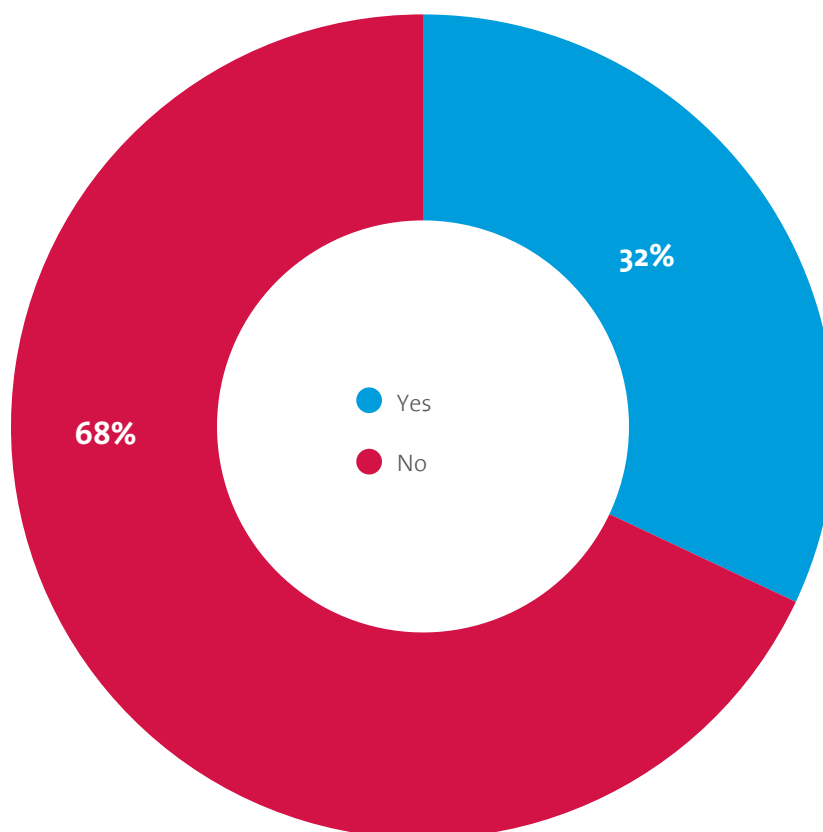
4.2 Agricultural Challenges in Somalia

There are several challenges that affect crop farming and livestock rearing in Somalia. These challenges range from climate-related issues to unavailability of land for farming, inadequate use of modern farm equipment and technology, and pests and diseases. Findings of this assessment reveal that only about one-third (32.1%) of those who were interviewed had a piece of land where they could farm, of which 44.7% reported that they had parcels that were less than 10 *jibals*¹⁶. Only 7.5% of the respondents reported they have parcels above 100 *jibals*.

In terms of soil type and fertility, the majority (54.3%) of the respondents reported that the soils in their regions were black (cotton). Another 23.7% reported that their soil was red, and 15% said they have brown (loamy) soil. From the responses, it is evident that the majority of sections of the Dollow, Afgooyeye, Jowhar and Beletweyne regions have black (cotton) soils, while the Hudur and Samareb regions have red soil. Baidoa and Luuq regions have a mix of black (cotton) and brown (loamy) soil types. Gray (clayish) soil type is mainly found in the Garowe region.

CHART 3:
Access to Farm Land by Households

HOUSEHOLDS WITH SOME PIECE OF LAND (N=501)



¹² Jibal is a measure of land mass commonly used in Somalia: 1 jibal = 1/5 acre; 16 jibals = 1 hectare

TABLE 11:
Soil Types by Region

Location	Black (cotton)	Brown (loamy)	Gray (clayish)	Red soil	Yellow (sandy)	Total
Kismayo	50.0	0.0	0.0	50.0	0.0	100
Dollow	75.0	18.8	0.0	0.0	6.3	100
Luuq	35.7	42.9	7.1	14.3	0.0	100
Baidoa	32.0	48.0	16.0	4.0	0.0	100
Hudur	0.0	0.0	4.2	95.8	0.0	100
Afgooyeye	81.8	4.5	0.0	13.6	0.0	100
Jowhar	96.6	3.4	0.0	0.0	0.0	100
Beletw-eyne	95.7	0.0	0.0	0.0	4.3	100
Garowe	0.0	0.0	66.7	33.3	0.0	100
Samareb	0.0	25.0	0.0	75.0	0.0	100
Total	54.3	15.0	5.8	23.7	1.2	100

While the majority of the regions have black (cotton) soil type, the fertility levels of the soils are considered average. According to this study, the majority (55.5%) of the respondents reported that their soils had medium fertility, and another 26.0% of them reported high soil fertility.

TABLE 12:
Respondents' Perception of Soil Fertility Levels

Soil type	Soil fertility			Total
	Low	Medium	High	
Black (cotton)	11.7	57.4	30.9	100
Brown (loamy)	19.2	73.1	7.7	100
Grey (clayish)	30.0	50.0	20.0	100
Red soil	26.8	43.9	29.3	100
Yellowish (sandy)	100.0	0.0	0.0	100
Total	18.5	55.5	26.0	100

That only 18.5% of the respondents reported low soil fertility, it is safe to say that the soils of Somalia are generally good for agriculture. This finding is in line with the views of respondents from the qualitative approaches, who said that the soils are generally productive across the regions.

“The type and color of the soil is black cotton which is preferred type in farming. The fertility rate of the soil is high and productive.”

Woman Leader, Kismayo

“The color of the soil in the project target districts is reddish and dark brownish and is the type of clay soil that is good for farming activities. I can rate the soil type in the project districts as one of the best types of soils in Somalia that can be used for crop farming, and you know these districts produce large quantities of crops mainly sorghum and maize, and it is due to the type of soil on which the crops are grown. The soil is very fertile, and with the introduction of soil enhancements, I believe that production will be doubled than it is now. Unfortunately, sustainable agro-projects and activities are not available and farmers use the traditional methods of farming, lacking advanced agricultural tools and inputs.”

District Commissioner, Baidoa

It is evident that the soils of Somalia are generally fertile and agricultural yields are greatly determined by other factors, including availability of rainfall/ water and the common agricultural practices among farmers, as highlighted by key informants:

“There are different types of soils. There is black, red and white in color (loam, sandy and clay). Unless you do crop rotation, the soil may not be able to produce high-quality and -quantity productions. This is because when the land is virgin and cultivation is done, the production is very high but when you just use a land that has been previously under cultivation, the production is lower than the virgin one.”

District Commissioner, Dollow

“The soil color is not dark reds (red mud soil) like southern Somalia, but it is a mixture of sand and red soil and it is good for growing crops. ... The land is quite reproductive and fertile, only that it has a shortage of water.”

Religious Leader, Garowe

“When it comes to farming it is suitable for farming in every district that’s part of Galmudug state. For example, Dusamareb is among the districts in which both old Somali version farming and modern farming is taking place. Its soil is normal and can be done farming and as well used for plantations.”

Youth Leader, Samareeb

Among crops grown in these types of soil are maize, beans, fruits, vegetables, sesame, as well as fodder for livestock. Responses from the participants indicate that maize is the most commonly grown crop in Somalia, followed by beans.

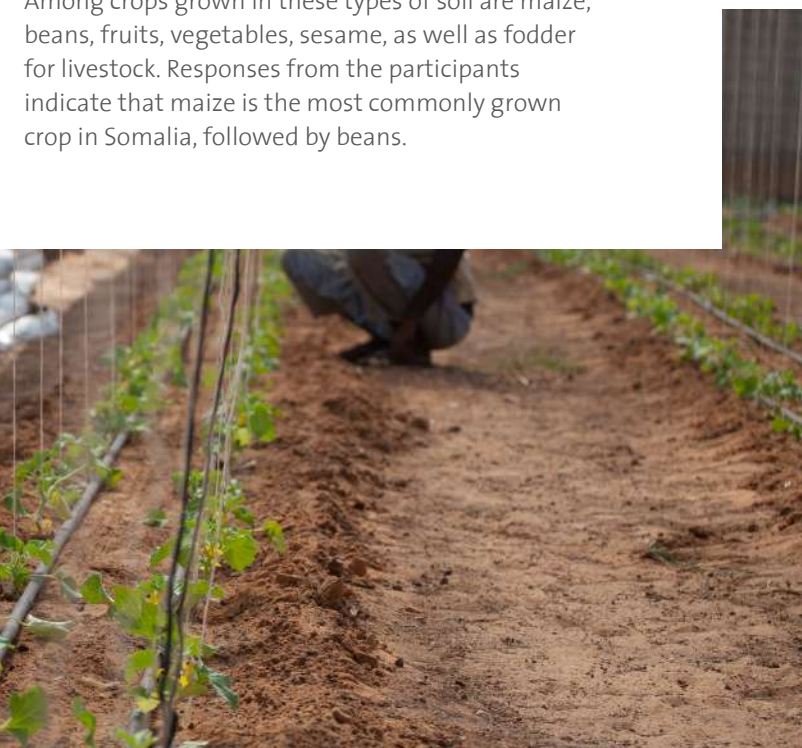
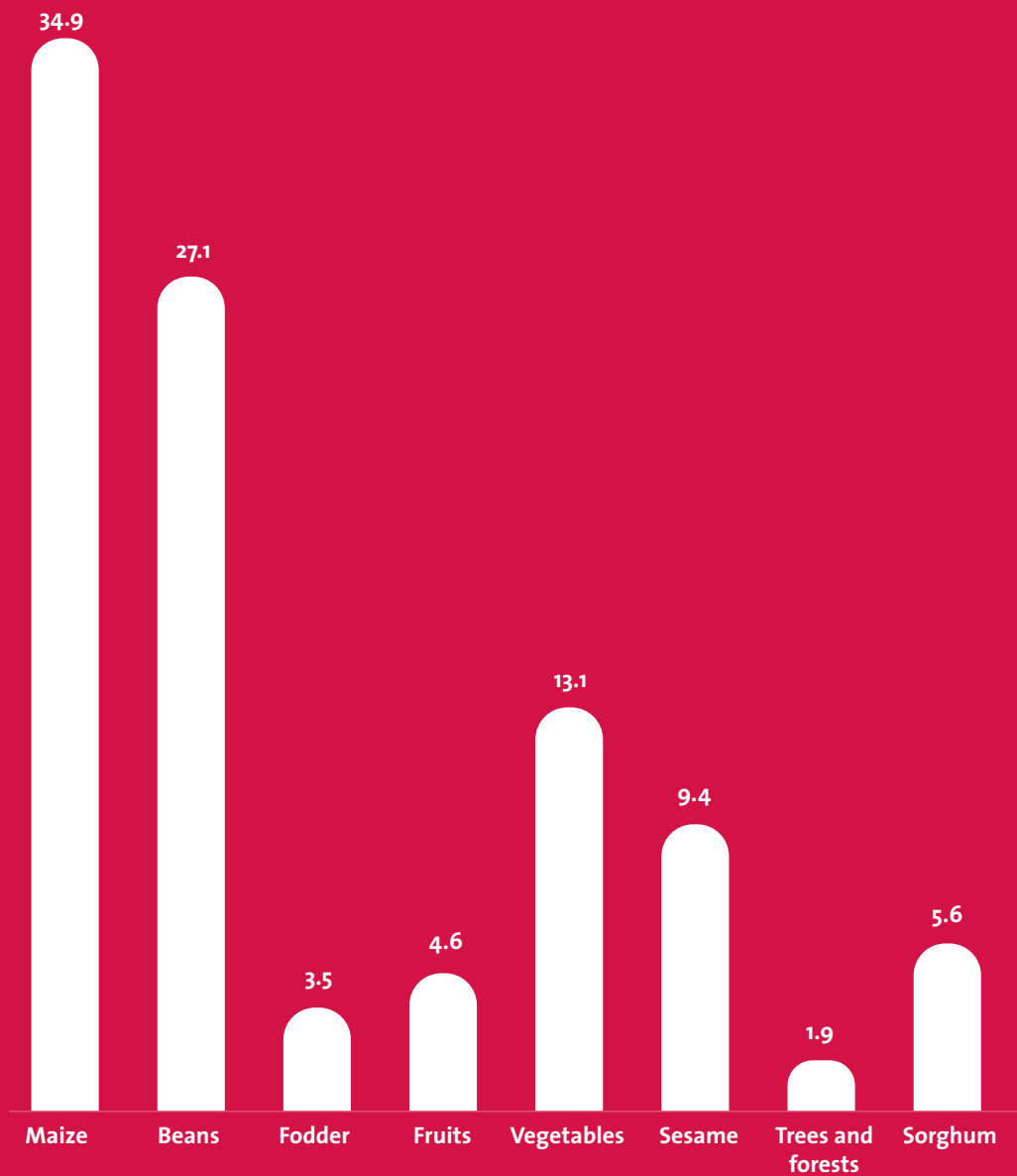


CHART 4:
Crops That Are Commonly Grown in Somalia

COMMON CROPS GROWN
BY FARMERS IN SOMALIA



Farmers also reported inadequate use of modern farm inputs, farm equipment and technology to improve agricultural produce. Despite the aridity that is experienced in Somalia, about two-fifths (40.4%) of the respondents were not practicing any form of irrigation. Of those irrigating their lands, 70.8% rely on a canal system of irrigation, while another 26.1% reported that they use water that is collected from the river or water which is harvested. According to respondents from the FGDs, their preference for the canal system is due to the readily available water from the rivers.

“In Dusamareb, there is no river which passes through and farming cannot be done in the winter. The only irrigation system people rely on for farming is the natural downpours from God and this happens during the Deyr and Gu seasons. There sometimes these expected rainy seasons fails and the people might end up not farming on Deyr and Gu seasons.”

KII with a Youth Leader, Samareeb.

“Yes, we use irrigation and we mostly use canals because we are close to river and because pipes usually break.” Respondent of FGD with women,

Dollow.

Moreover, of the 132 farmers who reported that they are practicing weed control (this represents 82.0% of all farmers), only seven (5.3%) mentioned that they are currently using herbicides as a weed control technique. The rest were still using hand weeding, a traditional method of removing weeds from the farms.

“Yes, we use our hands to weed or uproot for the small weeds, while also we hire workers to cut the big trees during farm clearing and preparation. Most of the people in this area cannot afford paying costs of the machine to prepare for their lands and instead use hands to weed their farms.”

Respondent of FGD with IDPs, Hudur.

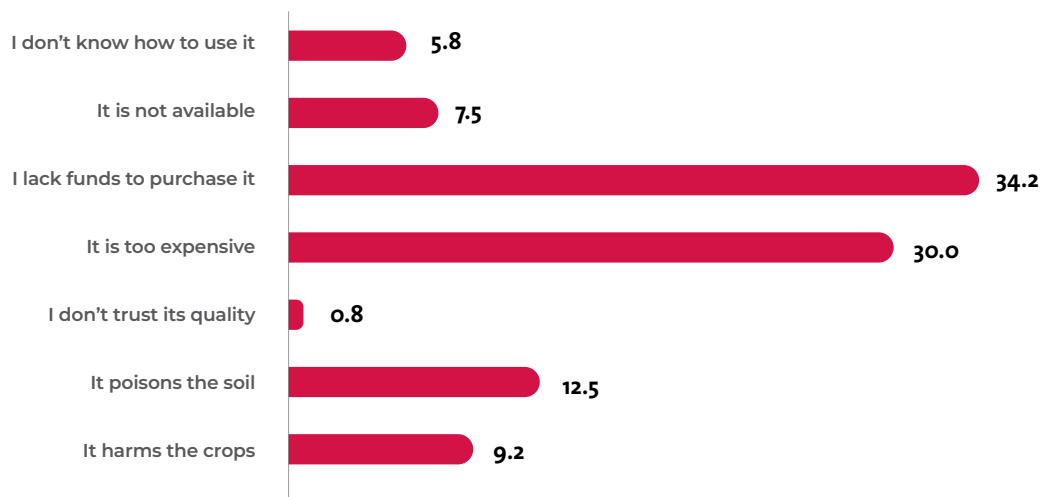
“For weeding, we use our hands and sometimes people hire others to do it, how much to pay depends on the size of your farm. People are not the same.”

Respondent of FGD with minority groups, Kismayu.

The few farmers who reported use of herbicides mentioned that they usually get the product from local agro-dealers, the Government, farmers' associations or from their fellow farmers. For those farmers who don't use herbicides, the majority were concerned about the prices of the products available on the market, as well as the perceived negative effects of the herbicides on the crops and soil.

CHART 5:
Main Reasons for Not Using Fertilizers

REASONS WHY FARMERS DON'T USE HERBICIDES (%)



This corroborates with the feedback received from the key informants, who reported that they don't use herbicides on their farms because it is expensive. Others highlighted that they don't trust herbicides on their farms.

"No, we do not use herbicides because it may be expensive, we do not use it."
Respondent of FGD with women,

Dollow

"They do not use the herbicides because they are afraid of it and feel endangered when using it."

KII with a religious leader, Jowhar.

"The price of the pesticides ranges from \$45 to \$50, so those who don't afford them cannot even come to think of it." KII with a woman leader,

Baidoa.

Only 36.6% of the farmers reported that they use chemical fertilizers on their lands to increase yields. The main reasons among farmers for not using fertilizers are their prices, the economic ability of the farmers, lack of knowledge on how to use the fertilizers, the unavailability of the fertilizers locally and a belief by the farmers that their parcels of land are fertile enough to produce good yields.

"No, I didn't use any chemical fertilizer because of too expensive for me."
Respondent of FGD with IDPs,

Garowe

"Farmers mostly doesn't use chemicals fertilizer because most of the farmers couldn't afford to buy it."

KII with a woman leader, Hudur

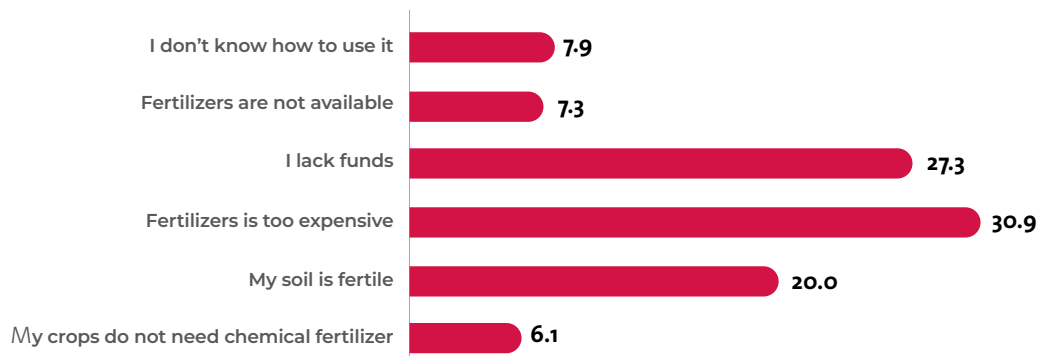
"According to my knowledge and observation, I haven't seen any farmer engaging chemical fertilizers due to the lack of large-scale farmer who has the capability of purchasing this chemical fertilizer."

KII with a youth leader, Samareeb

CHART 6:

Main Reasons for Not Using Fertilizers

REASONS WHY FARMERS DON'T USE FERTILIZERS (%)



The majority (80.7%) of the farmers reported that they had experienced pest and disease attacks on their crops in the farms. As shown in Chart 7, common pests they listed include desert locust (22.5%), cut worms (15.6%) and white fly (13.4%), while the commonly experienced crop diseases are root rot (14.1%) and leaf spot and blight (12.2%). Of the respondents who had experienced pest and disease attacks on their crops, 63.15% reported moderate effect, with another 23.1% reporting severe attack. This was also highlighted by respondents of the FGDs.

“Pests attacks are frequent, like last year almost all farms on Beledweyne were invaded by locusts, rapidly reducing the harvest. However, the locals tried all means to scare them away, unfortunately, it has affected all and eaten up all. Locusts affected our farms terribly. The community alone cannot fight locust invasion, it needs support from the Government to do aerial spray. There are also ways to deal with the birds, like scarecrows, catapult elastic bands to chase them away or erect a metallic steel object that will make noise when the wind comes.”

Respondent of FGD with women, Beletweyne

“The farmers have been experienced pests and diseases, especially the existence of locusts and some diseases worms, which wipe away all the planted crops in the farms. This made the farmers to suffer a lot and the rainfall was not enough in these catastrophic seasons, leading to prolong drought in the past two times of harvesting periods with nothing to consume and to sell. Farmers never had any controls and prevention measures, which give a difficult moment in this period and they are not even able to buy chemical pesticides, hence leading to excess suffering and therefore they loss.”

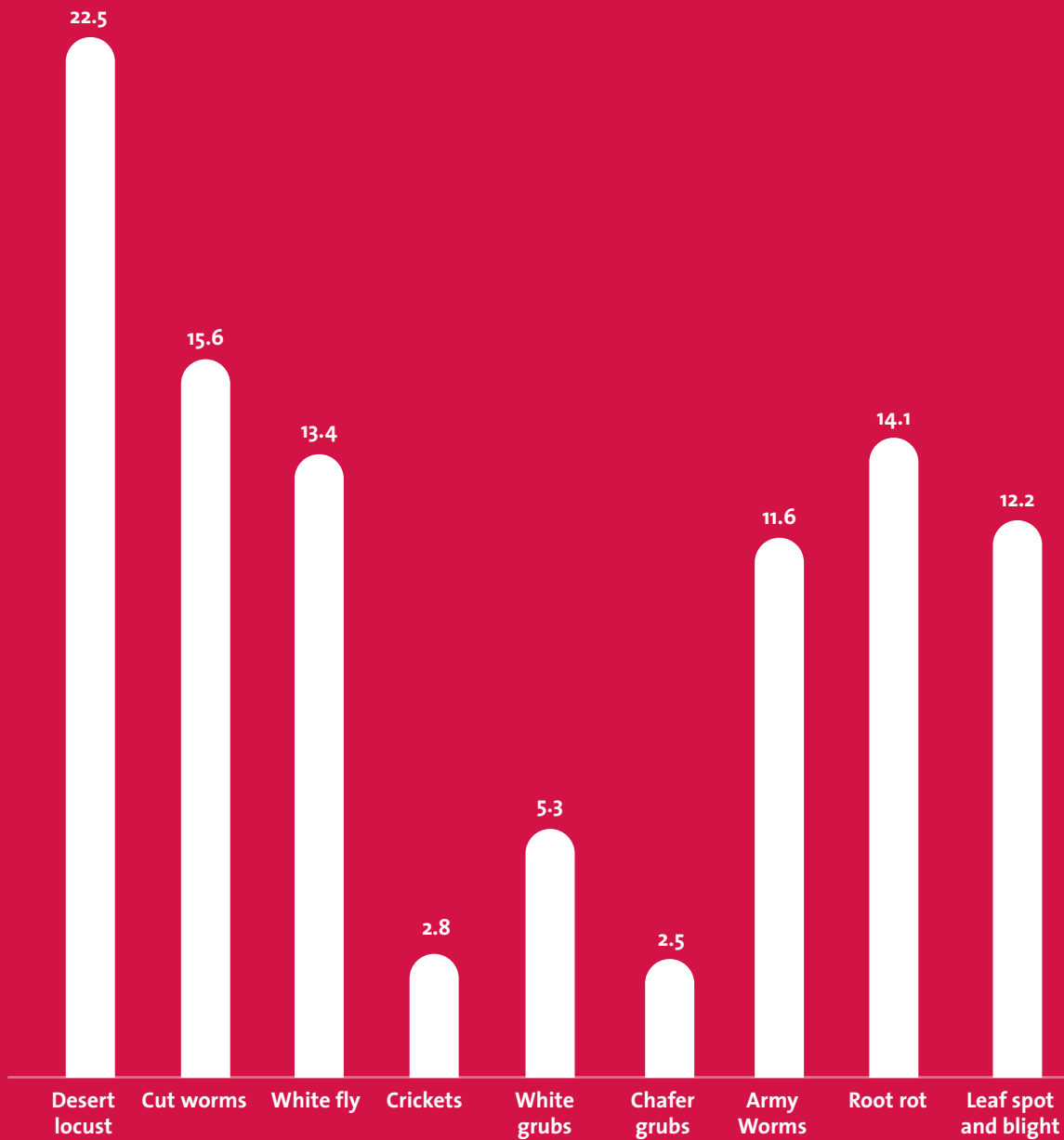
KII with a female leader, Hudur.

While these pests and diseases affect their crops, the farmers believed that chemical pesticides are effective on them, with a majority (81.5%) of the farmers affirming their effectiveness. Those who cited ineffectiveness attributed it to the infiltration of poor quality or fake pesticides in the market, their practice of spraying late, inability to get the correct mixtures and cases where they use incorrect pesticides.

CHART 7:

Common Pests and Diseases in Somalia

COMMON PESTS AND DISEASES THAT AFFECT CROPS IN SOMALIA





4.3 Livestock Rearing in Somalia

Livestock rearing is common among households in Somalia. According to the respondents, the common livestock that they rear include cows, camels, goats, sheep, poultry and donkeys.

“Yes, people living in Beledweyne engage in livestock farming, most of the animals kept are cows and camels. Since farmers produce corn stovers from their harvests, fence a boma next to the farm and feed them corn stovers after the harvest. Most of the farmers keep goats and cows.”

Respondent of FGD with women, Beletweyne

Of the respondents who reported that they undertake agriculture, over one-third (34.8%) reported that they keep livestock on their farms. Cows, camels and goats are mainly kept because of their milk and meat. Those who keep donkeys do so because the animal supports transportation of commodities across long distances.

“Yes, we use milk from cows, goats and camels, we don’t use liters but tin cans to measure the milk. For cows, it is sold at \$0.8 per full tin can, \$1 for camel milk per tin can. Cows and camels milk is favorite and most used here.”

Respondent of FGD with women, Beletweyne

4.4 Agriculture among Crisis-Affected and At-Risk Women

Women living in IDP sites are less likely to participate in agricultural activities compared to their counterparts in host communities. Of the women living in IDP sites, only 20.5% reported that they had parcels of land and were engaged in agriculture. Additionally, these crises-affected and at-risk women were less likely to participate in good agricultural practices. As shown in Table 13, they also had limited access to agricultural training and financial services.

These views were corroborated by discussants of FGDs who also mentioned that, because of lack of land in the IDP sites, they are unable to undertake any agriculture like they did before they migrated from their original lands.

“I personally used traditional methods of farming before, but currently I don’t have land to practice farming.”

Respondent of FGD with IDPs, Garowe

“Personally, I don’t have livestock and I think most of the people in this area didn’t rear livestock.”

Respondent of FGD with IDPs, Hudur

TABLE 13:

Common Agricultural Practices of Crisis-Affected and At-Risk Women

Agricultural Practice	Practicing	Not Practicing	Sample (n)
Engaged in agriculture	20.6	79.4	170
Attended a training on agricultural management	8.8	91.2	170
Has access to credit facilities	18.8	81.2	170
Using chemical fertilizers on their farms	25.7	74.3	35
Using herbicides for weed control	0.0	100.0	30
Engaged in livestock farming	25.7	74.3	35
Practicing artificial insemination	0.0	100.0	9





5

EXISTING CONFLICTS
THAT IMPACT IDPS AND
CRISIS-AFFECTED AND
AT-RISK WOMEN AND
HOST COMMUNITIES

5.1 Gender Situation in Somalia

According to World Statistical Data for 2021, Somalia has a population of 16,529,381, of which 8,289,228 are females.¹⁷ Considered a highly fragile country with high mortality rates, Somalia is among the 10 countries with the lowest life expectancies in the world, currently at 57.5 years.¹⁸ Life expectancy varies between females and males, with women's life expectancy (59.13 years) fairly higher than men's (55.73 years).

Because the country is patriarchal, men are typically the decision makers in almost every aspect of their households.¹⁹ This limits women's participation in decision making in the social, economic and political spheres, thereby perpetuating narrow gender-based roles and inequalities. Women in the country continue to face high maternal mortality, rape, female genital mutilation (FGM), child marriages and violence against women and girls.²⁰ Due to women's limited access to healthcare in Somalia, the country now has a very high maternal mortality ratio of 732 deaths per 100,000 live births, making it the third highest in the world.²¹ Women's participation in politics is also significantly limited, and a study that measured Somali women's participation in politics established that, in 2014, women occupied only 9.6% of political seats in the national parliament.²² With the introduction of legislation that required 30% women representation by 2016, women representation in the national parliament has since increased to 24%.²³ This representation, however, has not met the constitutional threshold, and more needs to be done to achieve it.

There are wide disparities in literacy levels between Somali men and women. Moreover, these disparities are evident in access to education. Whereas the total literacy rate for the country stands at 37.8%, literacy levels are much higher among males (49.8%) than females (25.8%).²⁴ This is a reflection of the literacy situation that was reported by UNDP in 2012, which indicated lower literacy levels among females (26%) compared to their male counterparts (36%).²⁵ This highlights gender inequality in education, which is attributed to lower enrolment in schools among girls – only 30% of children in Somalia are enrolled in school, of which only 40% are girls. Moreover, Somali girls are subject to gender expectations, such as staying home to complete domestic work or to help in raising younger children, which prevent them from receiving education. Other factors that contribute to low enrolment in school are early marriages and FGM.

SGBV is rampant in Somalia, mostly perpetrated by men against women. Women and girls in Somalia are exposed to SGBV resulting from protracted conflict, gender inequalities and the humanitarian crises that the country experiences. These women and girls are usually subjected to rape, and there are many cases of attempted rape that are reported – these are mainly fueled by perennial clashes among clans related to disputes over land as well as the fragile security situation in IDP sites. In south and central Somalia, widespread conflict, violence and exploitation are perpetrated by defense forces.

17 World Statistical Data: Somalia Population. [Somalia Population \(2021\) - PopulationStat](#)

18 World Population Review: Life Expectancy by Country, 2021. [Life Expectancy by Country 2021 \(worldpopulationreview.com\)](#)

19 Plain, Charlie. (2017). Men May Be Key to Cervical Cancer Prevention Among Somali Women and Children. University of Minnesota. [Men May Be Key to Cervical Cancer Prevention Among Somali Women and Children - School of Public Health - University of Minnesota \(umn.edu\)](#)

20 <http://www.trust.org/trustlaw/news/factsheet-the-worlds-most-dangerous-countries-for-women>

21 The Borgen Project. Maternal Mortality in Somalia. [Maternal Health in Somalia - The Borgen Project](#)

22 [Women Empowerment: Key in Promoting Development in Somalia | Foreign, Commonwealth & Development Office Blogs \(fcdo.gov.uk\)](#)

23 [Somali_women's_political_participation_and_leadership_Evidence_and_opportunities_Final_Policy_Briefing_Note.pdf \(publishing.service.gov.uk\)](#)

24 The Borgen Project. Literacy in Somalia. [Literacy in Somalia - The Borgen Project](#)

25 United Nations Development Programme (2012). Somalia Human Development Report 2012: Empowering Youth for Peace and Development

Historically, domestic abuse has been an accepted cultural practice in Somalia. This means that many women are forced to endure domestic violence, including physical and sexual assault but are unable to report these social injustices because of limited channels of reporting as well as the fact that culture requires that women remain submissive to

male members of the society. Since 2020, there have been increased incidents of SGBV against women and girls resulting from restrictions that were imposed by the Government due to the COVID-19 pandemic, in addition to persistent communal conflicts, armed conflicts and natural disasters.



Somalia has a population of 16,529,381, of which

8,289,228

are females

Women's life expectancy in Somalia is

59.13

years

Somalia, the country now has a very high maternal mortality ratio of

732

deaths per 100,000 live births

Only 30% of children in Somalia are enrolled in school, of which only

40%

are girls

The total literacy rate for the country stands at 37.8%, literacy levels are much higher among males (49.8%) than females

(25.8%)

The fact that many people lost their livelihoods due to closure of businesses, as well as disruptions in school calendars and restrictions placed on movements, contributed to an upsurge in sexual violence and intimate partner violence.²⁶

Respondents drawn from the IDP camps cited the same sources of conflict, with threats from al-Shabaab appearing among some of their responses.

Conflicts due to limited resources were most frequently mentioned (29.6%). According to the respondents, there are limited parcels of productive land, which are often accessed by pastoralists. When pastoralists trespass into the sections left aside for farming, fights usually arise between the farmers and the pastoralists. Other conflicts are instigated by the political class who seek political relevance.



26 United Nations Populations Fund. (2021). Overview of Gender-Based Violence in Somalia. Advocacy Brief, 2021. [Overview of Gender-Based Violence in Somalia - Advocacy Brief, 2021 | United Nations in Somalia](#)

CHART 8:

Common Types of Conflicts in Somalia

COMMON TYPES OF CONFLICTS EXPERIENCED BY RESPONDENTS

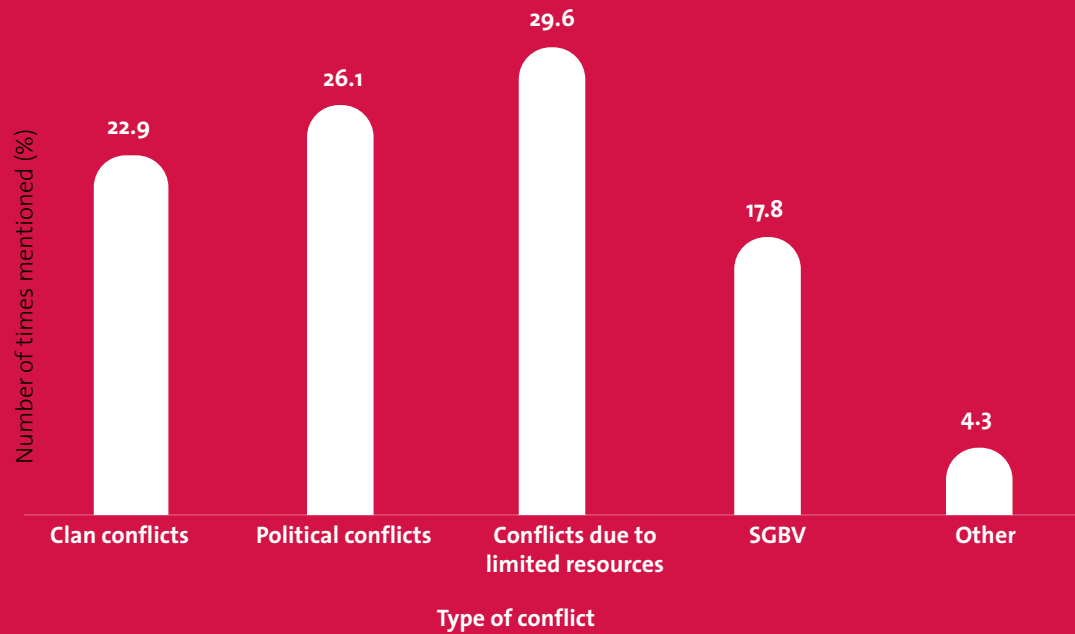
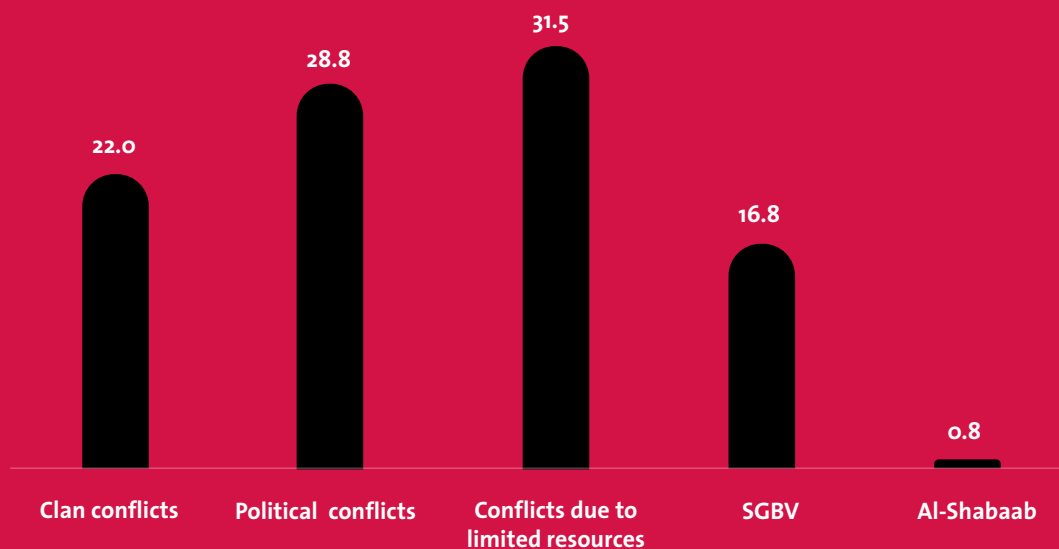


CHART 9:

Common Conflicts Experienced by Crisis-Affected and At-Risk Women

CONFLICTS EXPERIENCED BY RESPONDENTS LIVING IN IDP SITES

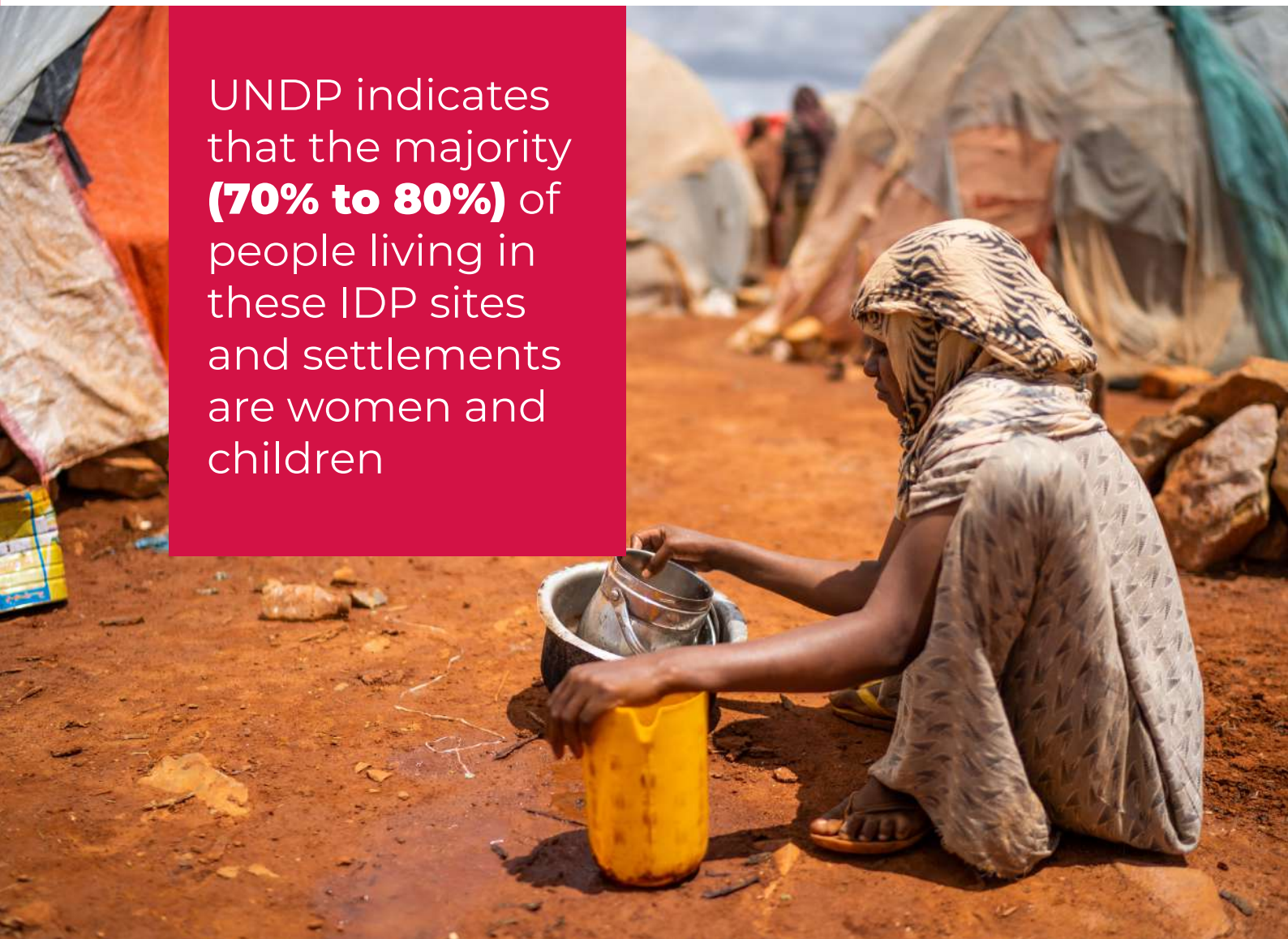


Effects of Conflicts on Women

Rampant conflicts in Somalia have led to an increased number of people who are displaced and are now living in IDP sites. As of January 2021, there were almost 3 million IDPs in Somalia, the majority of whom were in South Central zone (over 2 million IDPs), Somaliland (about 572,000 IDPs) and Puntland (about 390,000 IDPs). In the year 2020, for instance, thousands of populations living in Somalia were displaced following the intensified attack by the al-Shabaab militant group. In 2019, the militant group was responsible for 88% of all terror-related deaths in Somalia.²⁷

Most of the individuals who bear the burden of conflicts and insecurity in Somalia are women. UNDP indicates that the majority (70% to 80%) of people living in these IDP sites and settlements are women and children²⁸ whose husbands or male relatives have died or have been recruited by armed groups in the course of ongoing conflict. Conflicts also result in separate migration, as each member of the household seeks a livelihood or economic opportunities.

UNDP indicates that the majority **(70% to 80%)** of people living in these IDP sites and settlements are women and children



27 Somalia: IDPs by zone 2021 | Statista

28 Gender in Somalia Brief 2.pdf (reliefweb.int)



6

INTERRELATIONSHIP BETWEEN GENDER, CLIMATE AND CONFLICT IN SOMALIA

Women's participation in agricultural activities also varies depending on where they live. Women living in their regular settings were more likely to participate in agriculture compared to their counterparts who live in IDP sites.

Women’s participation in agricultural activities also varies depending on where they live. Women living in their regular settings were more likely to participate in agriculture compared to their counterparts who live in IDP sites. Furthermore, women’s involvement in agriculture is influenced by gender imbalances. Findings from this survey reveal that more men reported involvement in agriculture compared to their female counterparts. Whereas 41.7% of the males who participated in this survey reported involvement in agriculture, only 24.9% of the females mentioned that they undertake crop growing or livestock rearing.

Women’s relatively low level of participation in agriculture is affected by their inability to access financial services from lending institutions. About three-quarters (74.1%) of women who participated in this survey revealed that they did not have access to any financial or credit facilities. This lack of access, according to the women, was mainly attributed to not qualifying for loan

services (44.3%), the tradition of not allowing women to take loans (16.3%), unavailability of financial institutions in the areas (4.9%) and the women’s lack of interest in accessing loans (4.5%). The female participants highlighted challenges they experience when accessing credit facilities, including lack of financial literacy (29.0%), the requirement by financial institutions that there must be a male guarantor (24.9%), lack of security to access loans (19.8%), capping of the amount of money that women can access (16.6%) and a long distance to the financial institutions (3.5%).

Despite their limited participation in agriculture, it was noted that women who practice agriculture were more likely to undertake good agricultural practices compared to their male counterparts. From this survey, more female farmers (69.0%) reported that they practiced irrigation, compared to 52.2% of men. Moreover, more women (84.5%) reported that they used weed control methods compared to the male farmers (80.0%).

TABLE 14:
Gender Differentials in Agricultural Practices

Good Agricultural Practice	Gender	Practicing	Not Practicing	Total (n=161)
Practice irrigation	Men	52.2	47.8	90
	Women	69.0	31.0	71
Plow before planting	Men	77.8	22.2	90
	Women	74.6	25.4	71
Practice weed control	Men	80.0	20.0	90
	Women	84.5	15.5	71
Use natural fertilizers	Men	54.4	45.6	90
	Women	50.7	49.3	71
Use chemical fertilizers	Men	33.3	66.7	90
	Women	40.8	59.2	71
Grow drought-resistant crops	Men	65.6	34.4	90
	Women	64.8	35.2	71
Sell extra farm produce	Men	36.7	63.3	90
	Women	32.4	67.6	71
Engage in livestock farming	Men	34.4	65.6	90
	Women	35.2	64.8	71

The United Nations High Commissioner for Refugees (UNHCR) estimates that, because of conflict, insecurity and harsh climate, particularly drought and floods, about 2.9 million people have been displaced in Somalia and are living in IDP sites.²⁹ These sites are substandard and lack basic amenities because of inconsistent service provision the IDPs are excluded from accessing humanitarian support. Management and coordination of activities targeting the IDPs are largely informal, with little accountability and noncompliance to minimum standards. Consequently, there are many cases of reported evictions, which puts further stress on the IDPs and their families, thereby limiting their ability to integrate into social structures.³⁰

Displacement also increases the vulnerability of women and girls to SGBV. Despite that it has been difficult to assess the prevalence of SGBV among the internally displaced girls and women, it is believed to be widespread but goes unreported. This has been compounded by the fact that many women and girls are not willing to report rape because of fear of reprisals from the perpetrators,

ostracism and stigma, lack of trust in local Government officials, presence of informal judicial systems and ignorance on the part of the victims.

The consequences of climatic change, including droughts, erratic rains, flash floods, strong winds, sand storms and increased temperature, are being experienced across Somalia. These consequently affect livelihoods and contribute to local grievances and community tensions. Climatic changes such as drought and floods fuel farmer-herder conflicts because farmers and livestock herders must compete for the available parcels of land, leading to displacements. In 2019, for instance, 53,000 people migrated from their homes due to crop failure and reduced livestock productivity resulting from drought. These factors increase the risk of escalated conflicts, and those affected are more likely to join armed groups to survive as their livelihoods are threatened. While studies have not pointed to a direct relationship between climate change and conflict, researchers argue that change may exert an indirect and conditional effect on the risk of conflict.

29 CCCM Cluster, Somalia. [Situation CCCM Somalia Overview \(unhcr.org\)](#)

30 CCCM Cluster Somalia Strategy. (2020). [CCCM Cluster Somalia Strategy \(April 2020\) - Somalia | ReliefWeb](#)



7

GOOD AND PROMISING OPPORTUNITIES IN AGRICULTURE IN SOMALIA

Despite the gender, climatic and conflict situation in Somalia, there are opportunities to ensure crop farming and livestock rearing thrive.

Despite the gender, climatic and conflict situation in Somalia, there are opportunities to ensure crop farming and livestock rearing thrive. Opportunities exist in identifying and growing climate-resilient crops, improvising farming tools, improving farming techniques, promoting good practices in crop and livestock farming, as well as improving the supply chain to ensure farmers can market and sell their extra farm produce.

7.1 Identifying and Growing Climate-Resilient Crops

Previous research activities have pointed to the need for populations living in arid and semi-arid locations to embrace cultivation of climate-resilient crops. These are crops that are capable of withstanding various harsh conditions that could otherwise affect harvests and food stores. Growing such crops ensures that farmers can recover or become immune to climate challenges, thus increasing their farming productivity and, consequently, enhancing food security.

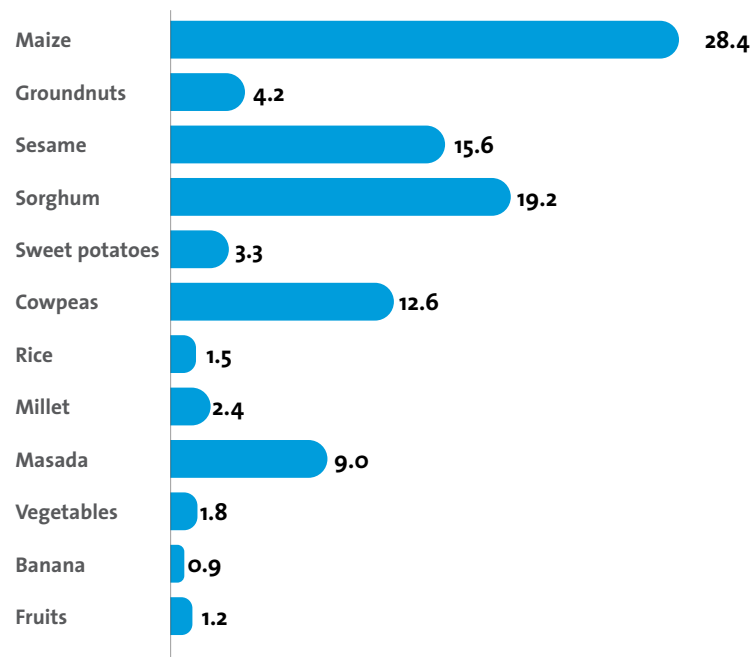
In Somalia, farmers reported that they are cultivating a variety of crops on their farms. Maize was mentioned as the most commonly grown crop (26.2%), followed by sorghum (16.7%), sesame (14.4%) and cowpeas (12.5%). Out of the 161 farmers, 65.2% reported that they are already growing drought-resistant crops on their farms. This was also highlighted by FGD participants.

“They grow crops like maize, sorghum, beans and other vegetables. Some crops are intercropped like maize and beans together, sorghum and beans, tomato and green pumpkin, et cetera. though recently potato farming was increased in the vegetable farm.” Respondent of FGD with women, Beletweyne

Of these farmers growing drought-resistant crops, the majority mentioned that they are already growing drought-resistant maize (28.4%). Other commonly grown drought-resistant crops were sorghum (19.2%), sesame (15.6%) and cowpeas (12.6%).

CHART 10
Drought-Resistant Crops That Are Common in Somalia

COMMONLY GROWN DROUGHT-RESISTANT CROPS (N=334)



It is noted that only 34.5% of the farmers mentioned that they are already selling part of their farm produce. Moreover, only 37.1% of farmers who grow drought-resistant crops reported that they sell some of their yields. Because some farmers are already engaging in cultivating other drought-resistant cash crops, such as rice, bananas, fruits and vegetables, there is an opportunity to encourage more farmers to invest more in increasing yields from such crops. With increased production of such crops for sale, the farmers will have the advantage of sending additional harvest to the market and consequently increasing their household income.

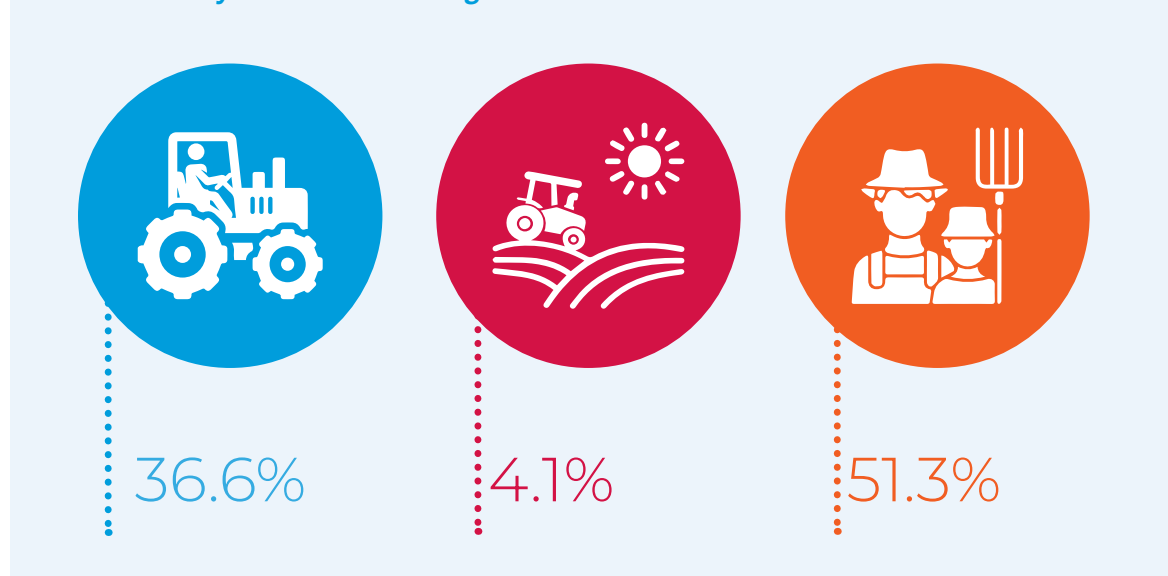
7.2 Improving Farming Tools

The quality of tools used in agricultural production is directly associated with the output from the farms. Modern farm tools should be used from the time of land preparation to the time the produce is stored. This ensures high yields and enhances the quality of the produce.

The majority (76.4%) of farmers who participated in this assessment mentioned that they plow their land before planting their crops. About two-fifths (59.3%) of those who plow their land before planting use manual labor, while only 36.6% are already using a tractor in plowing their lands.



FIGURE 2:
Methods Used by Farmers in Plowing



Respondents mentioned that they preferred to use manual labor in plowing because it is cheaper than other methods.

“Hand weeding is less expensive compared to when tractor is used, which costs Ssh.500 per hour.”

KII with a religious leader, Jowhar.

“Yes, they plow, there was a time they used to do plowing using their hands, but now mostly plowing machines are used, as it was said by my sister it is \$70 per hour. It is very expensive; it depends on the size of your farm.”

Respondent of FGD with women, Beletweyne

“I am not practicing farming at the moment, but we used to plow using bull in the farm when I used farm.”

Respondent of FGD with IDPs, Garowe

There is, however, opportunity for farmers in Somalia to use improved tools for farming, including hand ridgers, seed treatment drums, fertilizer broadcasters, seed drills, dibblers, four-row paddy drum seeders, two-row and four-row rice transplanters, twin wheel hoes, cono weeders, improved sickles, groundnut strippers, groundnut decorticators (sitting and standing type), tubular maize shellers, rotary maize shellers, cotton stalk pullers (wheel type), pedal-operated paddy threshers, paddy winnowers and hanging-type grain cleaners.

Use of such mechanizations may, however, require involvement of the Federal Government and organizations implementing agricultural interventions to support farmers in the identification and shipment of equipment that is not locally available. This could be achieved collaboratively.

7.3 Improving Farming Techniques

Good farming techniques, just like improved tools, enhance the quality and quantity of agricultural yields. Such practices include modern weed control methods, use of improved irrigation approaches as opposed to traditional ones, use of certified quality seeds, use of fertilizers to boost soil fertility, use of pesticides to control crop pests and diseases, as well as production of cash crops for sale to complement the already existing subsistence production.

Implementation of strategic irrigation

With low levels of rain and irregular rainfall patterns in Somalia, farmers can start practicing irrigation to ensure their farms remain sufficiently moistened while the crops are growing. The use of improved irrigation approaches, particularly drip irrigation and modern moisture sensors, is desirable. Drip irrigation ensures that water is delivered to the crops in a manner that reduces evaporation and also ensures that each crop receives adequate water. In circumstances where drip irrigation is not applicable, farmers should be encouraged to use modern sensors to first determine the moisture content of their farms, then use that information to tailor their irrigation strategies appropriately. In livestock farming, there are some good practices that Somali farmers could use. These include the use of artificial insemination for breeding, growing fodder for animals, and keeping livestock for sale or sale of their products, such as milk and meat. Additionally, farmers can take advantage of opportunities for value addition to ensure that these practices would enhance livestock production among pastoralists.

Use of certified high-quality seeds

From this assessment, it is evident that a sizeable proportion (35.2%) of the farmers reported that they had never bought certified quality seeds. There is need to increase access to these quality seeds so all farmers can benefit from high-yield varieties for a longer period. This can be achieved by storing seeds from the previous harvest and using them in the next planting season.

Use of environment-friendly weed and pest control practices

Some of the respondents in this assessment were coy about using herbicides to control weeds and pesticides to control pests on their farms, citing the potential dangers they can cause to the ecosystem. There is an opportunity to introduce farmers to biological methods for controlling pests and herbs, such as introducing predatory species like praying mantises, ladybugs, green lacewings and certain wasps, which prey upon pests. Farmers could also use greener forms of liquid pesticides, such as essential oils, to keep unwanted organisms at bay.

Use of organic fertilizers

Discussions with key informants of this assessment revealed that the fertility of farms in Somalia has continually deteriorated due to continuous farming and continued use of fertilizers. In such circumstances, there is an opportunity for farmers to safely return soil fertility levels by using organic fertilizers, such as animal manure, kelp, oyster shells and bone meal. These substances are more environment-friendly compared to synthetic fertilizers.

Practicing intercropping

Feedback from the qualitative discussions revealed that the majority of farmers in Somalia practice monocropping – the practice of growing a single variety of crop on a piece of land. However, literature has shown that this practice can deplete the soil of its nutrients. To enhance retention of soil fertility, farmers should be encouraged to practice intercropping – growing different crops within the same farm. This consequently boosts the health of the crops and creates symbiotic relationships between the crops, thus boosting yields.

Practicing cover cropping

With most of the agriculture land in Somalia bare and prone to the effects of floods and wind, such as erosion, there is need to protect the land from soil erosion. Cover cropping ensures that land is protected from surface erosion and also reintroduces vital nutrients into the soil. There is an

opportunity for farmers in Somalia to plant cover crops, such as legumes, to reintroduce nitrogen into the soil and protect the land from surface erosion.

Practicing artificial insemination

From this assessment, it was established that none of the farmers who were interviewed were practicing artificial insemination to increase livestock development. There is opportunity for farmers to embrace artificial insemination of their livestock by utilizing germplasm of bulls of superior quality with the goal of improving livestock quality.

7.4 Opportunities for Climate-Resilient Agriculture in Somalia

Changing rainfall patterns and shifting seasons are some of the effects of climate change. Climate change affects poor and vulnerable populations the most, particularly women and girls, as the existing structural inequalities that they face in many rural societies are exacerbated by the effects of climate change on their lives and livelihoods. The vulnerability to climate change is shaped by the capacity of men and women to adapt; their ability to access resources, information and alternative livelihood options; and by existing decision-making processes and power dynamics that impact the social distribution of resources or support.

There is need to engage women more in agriculture to change this situation; thus, the concept of climate-smart agriculture (CSA). CSA is an integrated approach to managing landscapes – cropland, livestock, forests and fisheries – that addresses the interlinked challenges of food security and accelerating climate change. CSA aims to simultaneously achieve three outcomes:³¹

1. **Increased productivity:** Produce more and better food to improve nutrition security and boost incomes, especially of 75% of the world's poor who live in rural areas and mainly rely on agriculture for their livelihoods.

³¹ The World Bank. Climate Smart Agriculture. [Climate-Smart Agriculture: Development news, research, data | World Bank](#)

2. **Enhanced resilience:** Reduce vulnerability to drought, pests, diseases and other climate-related risks and shocks, and improve capacity to adapt and grow in the face of longer-term stresses like shortened seasons and erratic weather patterns.
3. **Reduced emissions:** Pursue lower emissions for each calorie or kilo of food produced, avoid deforestation from agriculture and identify ways to absorb carbon out of the atmosphere.

CSA has the potential to sustainably increase agricultural productivity and incomes, and help Somali women adapt and build resilience to climate change. Implementation of CSA interventions should be gender-responsive and should aim to transform gender inequalities, considering their major role women play in in agriculture. According to the Food and Agriculture Organization (FAO) and Care International (2019), gender-transformative CSA programs are meant to advance gender equality through activities that target changes in three domains – building agency, changing gender relations and transforming structures³² – as shown in Table 15.

TABLE 15:
Good Practices in CSA

Domain	Good Practice
Building agency	Build confidence, self-esteem and aspirations of both men and women in addition to the knowledge, skills and capabilities they need to thrive
Changing gender relations	Transform the power relations through which men and women live their lives through intimate relationships and social networks, through group membership and activism, and in citizen and market negotiations.
Transforming structures	Support the transformation of discriminatory social norms, customs, values and exclusionary practices (all within the informal sphere), and laws, policies, procedures and services (in the formal sphere).

32 FAO and CARE. (2019). Good Practices for Integrating Gender Equality and Women's Empowerment in Climate-Smart Agriculture Programmes. Atlanta. 108 pp. License: CC BY-NC-SA 3.0 IGO



8

STRATEGIES AND SOLUTIONS TO TACKLE CLIMATE CHANGE, GENDER BARRIERS AND CONFLICT

8.1 Strategies to Tackle Climate Change

Nature-based solutions

Nature works in a unique way in regulating the climate and ensuring a good balance of air components. Thus, there is need to conserve existing forests and wetlands, practice regenerative agriculture and plant trees. Protection and improvement of existing forests has the potential to reduce emissions. Recent research has shown that leaving forests to regrow on their own is a useful strategy for protecting forests³³

More often than not, human disturbances have prevented trees from growing or replanting themselves. One such activity is charcoal burning. Burning and sale of charcoal is common in Somalia and remains a livelihood for many households. A strategy that provides alternative sources of income to individuals and households that are engrained in charcoal burning will not only save the forests from depletion but also ensure reduced emissions.

To achieve collective responsibility in forest protection and planting of trees in Somalia, there is need for incentives to communities to realize the benefits of nature conservation. Communities should be encouraged to grow trees in their idle farms, and this process could be incentivized by providing free seedlings, fertilizers and maintenance of the trees. Programs that have interest in agro-forestry may also lease these pieces of land and use them to plant drought-resistant trees. Again, agriculture-focused interventions may consider putting aside sections of the land as model centers where communities come and learn tree planting and its benefits.

Still, since there are farmers who practice mixed cropping in Somalia, other farmers there should be encouraged to do the same – planting their regular crops and growing trees in between the crops. Such practices provide the opportunity for nature to stabilize the climate.

Promoting smart clean energy policies³⁴

Over the past few decades, there has been increased demand and utilization of renewable sources of energy, such as solar and wind. This has been accompanied by increasing affordability of these sources. The cost of some of the most commonly used renewable energy sources, such as solar, geothermal, bioenergy, hydropower and onshore wind, are already at par with or even cheaper than fossil fuels.

Working with the Federal Government of Somalia, there is need for engagement with policy makers on the need to increase the use of renewable energy to provide smart and cleaner energy to citizens and improved energy efficiency.

Building resilience

It is estimated that weather-related disasters cost the global economy \$250 billion every year³⁵. Effects of unpredictable rainfall, constant flash floods and hot temperatures throughout the year ensure that communities living in Somalia are unable to practice the agriculture of their preference and in some circumstances are forced to leave their homes for IDP camps.

Working with local communities to increase their resilience to climatic conditions is very critical. Local communities must be introduced to existing climate resilient crops and agricultural practices, and shown coping mechanisms in the various diverse weather conditions.

8.2 Solutions to Gender Barriers

Supporting women's organizations to work toward gender equality

Designing activities that seek to promote gender equality is important. To achieve this, there is need to empower local women's organizations so that they can design and implement their own agenda toward gender equality. This can be achieved by supporting women's analytical, networking and organizational capacity and providing support for women's advocacy activities that bring together both men and women in social and political engagements.

33 Forests that regrow naturally may store more carbon (nature.org)

34 Renewable power generation costs in 2017: Key findings and executive summary (irena.org)

35 Building Coastal Resilience (nature.org)

Working with men to promote equality for women

There is need to promote sensitization of men, including husbands and male leaders, with the aim of enhancing male participation in matters that target women. This can be accomplished by increasing dialogue and involvement of men with the aim of achieving sustainable benefits for women and changing gender relations in the society.

8.3 Solutions to Conflicts

Preventing and managing conflicts requires multipronged and multisectoral approaches that aim to strengthen the resilience of communities. There is need to incorporate peace-building strategies to address the drivers of conflict, violence and instability, such as politics of exclusion, entrenched corruption, impunity and capacity deficits. As highlighted in the US Strategy to Prevent Conflict and Promote Stability,³⁶ the following approaches have been proven to be effective in preventing conflicts and promoting stability.

Prevention of conflicts

This entails building the capacity of local communities to anticipate and prevent instability and violence before they erupt, and to engage in peace-building. Prevention of conflicts requires short-term and long-term strategies for mitigating the potential risks of conflict escalation and to address the underlying vulnerabilities of violent conflicts. Organizations working in conflict prevention should ensure reinforcement of inclusive, participatory and legitimate governance, which includes improvement of protection and promotion of human rights; mitigation of

health, education, economic, environmental and food dimensions of conflicts; strengthening the oversight, accountability and administration in the security and justice sectors; and monitoring and mitigating the impacts of disinformation, propaganda and incitement to violence.

Stabilization in the context of conflicts

This seeks to achieve locally driven political solutions to violent conflicts and large-scale violence. Stabilization entails supporting inclusive political processes with the aim of ending ongoing conflicts; emphasizing meaningful participation of women, youth and marginalized groups; encouraging respect for democracy and human rights; promoting compliance with international law, including humanitarian law and principles; endorsing institutional transparency and accountability; and advocating environmental sustainability. To achieve this, organizations working in this space should consider integrating diplomatic, development and military-related efforts, understanding their potential political impact, as well as supporting efforts by local authorities to reduce violence, establish stability and peaceably manage conflict.

Building partnerships

It is important to work together with other like-minded institutions or organizations with an eye to promoting burden-sharing, coordination and mutual accountability. To achieve sustainable solutions to fragility and conflict, it is important that local and national leadership are involved in all the activities. Building partnerships ensures creation of conditions for long-term regional stability and for fostering private sector-led growth.

36 2020 - United States Strategy to Prevent Conflict and Promote Stability



9

STRATEGIES TO PROMOTE WOMEN IN LEADERSHIP AND ECONOMIC EMPOWERMENT

There have been numerous efforts that seek to empower women and ensure their involvement in Somali leadership. Despite that, only a small proportion of women have managed to scale up the leadership ladder to become managers. To reverse the situation, below are some of the most significant steps that can help to promote female leadership.

Providing women with training opportunities

Providing training opportunities for women can significantly boost their leadership skills. Gender equity training is a transformative process that seeks to provide information, strategies and resources to help people improve skills and make positive improvements in their attitudes and behaviors. To enhance women's leadership, it is important that their confidence, leadership coaching and chances to network are improved.

Organizations attempting this should consider offering formal training, such as structured training courses and seminars, to encourage women to become fit for higher roles. Such organizations also may consider periodic informal training to encourage other women to share their expertise and experiences. Women should be encouraged to enroll in leadership and programs organized by reputable establishments with the best female life coaches. These programs targeted at women's advancement in a women-only environment will allow them to pursue their careers. It also allows them to recognize, resolve and take responsibility for their growth and development, and teaches them how to effect changes in their leadership style.

Assigning women to special projects or assignments

Research has shown that women are often restricted to tasks that can hinder them from stretching their skills or getting noticed by people responsible for making promotion decisions. They are also less likely to be given leadership responsibilities, like project management or client presentations, which will improve their leadership capabilities. Organizations working on women leadership should build more equal growth opportunities by recognizing females whose talents and career aspirations make them well suited for upcoming projects.

Encouraging women-friendly culture

There is need to create a culture that supports women. Women will not be able to rise to leadership positions until they are handled fairly and evaluated based on their abilities and expertise rather than their gender. Some of the ways to create a women-friendly culture include unbiased career mapping for female employees, flexible work schedules for female employees and family support provisions.

Recruiting women employees actively

To assist women in achieving prominent positions, it is important that they are actively recruited from different leadership positions in businesses and companies. Organizations and industries that hire workers should develop meaningful equality policies which ensure women are represented in the workforce in equal measure with men.



10

CONCLUSION AND RECOMMENDATION

10.1 Conclusions

Women's involvement in agriculture

From these analyses, it is evident that the majority of women in Somalia do not practice agriculture because of factors such as limited productive land and inadequate agricultural skills and equipment, among others. The most disadvantaged are crisis-affected and at-risk women who have been affected by conflicts or floods and have been forced to live in IDP sites, where they are unable to access farms for agriculture. Women who are practicing agriculture are usually doing it in small parcels of land and mainly for household consumption.

Across Somalia, farm mechanization has not been significantly embraced, and farmers rely on traditional techniques and tools for land cultivation and animal rearing. The few women who undertake some agriculture – cultivating land and keeping livestock – have seen their yields greatly affected by poor farming techniques and tools. Moreover, these female farmers often experience the effect of crop and animal pests and diseases that affect the quality of their yields.

Effect of climate change

It is evident that climate change and environmental degradation are a major source of local conflicts in Somalia. Political elites and individuals or groups with more wealth, privilege, power or influence often take advantage of existence of such conflicts, which leads to escalated conflicts. When such conflicts occur, populations are forced to migrate from their homes, thus leaving them without any protection from the family or clan. Thus, they find themselves in IDP sites and settlements, which leaves them vulnerable to recruitment into militant groups. When males join the militia groups, the female members of the Somali community are left in the IDP sites as they face injustices, including SGBV and loss of autonomy.

In this context, women in Somalia are more disadvantaged compared to their male partners, considering their position in the society as well as their inability to access some basic services, such as maternal healthcare and shelter. Moreover, the high prevalence of gender-based violence in Somalia has, for a long time, been normalized and seen as tradition; thus, women and girls fail to

report injustices that they are subjected to by their male counterparts.

Way forward

There is need for greater and continuous efforts to address gender inequalities and empower women by increasing their access to resources, land, education, information, health, advisory services and other basic human rights. It is also crucial to overcome women's social exclusion from decision-making processes and labor markets so that they can better cope with and adapt to climate change impacts. Special provisions and investments in cash, time or labor are also needed to introduce innovative adaptation practices.

In addressing gender inequalities and climate-related challenges, it is important to integrate the economic, environmental and social dimensions of sustainable development. Hence, CSA is viewed as an innovative strategy toward increasing agricultural productivity and incomes, supporting adaptation and building resilience to climate change. This is important in achieving sustainable development and can only be achieved when the crucial role of women is recognized and they are fully involved.

10.2 Recommendations

Because conditions in IDP sites are deplorable, there is urgent need for organizations, in Somalia context, to develop a strategy that would improve the living conditions and provide protection to IDPs in the sites and settlements. The LEAP project can leverage the efforts of such organizations to improve food security of the households in IDP sites training them on valuable agricultural practices, providing them with subsidized high-quality seeds and availing modern farm input. Furthermore, there is need to ensure equitable access to services and amenities among the people living in the IDP sites and settlements. This should be achieved by implementing interventions that are sustainable and by ensuring proper engagement with the IDPs, the host communities and their authorities.

There is need for the Government to integrate climate risks into security planning so as to prevent climate-related violence. This will also be useful in preventing armed groups, such as

al-Shabaab, from taking advantage of climate impacts. Development partners should support the Government in integrating responses to climate-related security risks.

Since many SGBV cases meted on women and girls living in IDP sites in Somalia usually go unreported, development partners should consider developing and implementing a system that collects data and reports cases of SGBV as soon as they happen. These development partners should devise a means to navigate the stigma that surrounds SGBV, which has greatly contributed to low reporting of SGBV cases in Somalia.

Women in Somalia should be encouraged to engage in CSA so as to enhance their economic empowerment and resilience. To achieve this, some of the following good practices could be adopted:

- **Increasing voice and influence:** It is vital to elevate the status of women as champion farmers and increase investment in smarter, affordable and innovative solutions for female small-scale farmers.
- **Facilitating women's access to information:** A women-focused extension approach can help female farmers build the required skills to grow more food and increase their access to markets to sell at a profit.
- **Increasing women's access to credit facilities:** It is important to help female farmers access the credit they desperately need to invest in improved agricultural inputs and practices. Without this start-up capital, the investments that new techniques require would be out of reach for most female farmers
- **Empowering women with tools and resources:** There should be a concerted effort to support women to adopt agricultural technologies and

to organize gender-sensitive training. A greater focus should be placed on farm productivity and the promotion of conservation techniques for agriculture.

- **Setting up structures to promote sustainability:** In addition to promoting women's participation at the farm level, there is a need to mobilize resources to enable small-scale female farmers to invest in farm enterprise diversification, productivity-enhancing technologies, and non-farm economic activities and livelihood strategies contributing to food security.
- **Giving women more access to markets:** There is need to provide relevant market and extension information, and to increase access to markets for women in rural settings, who have always been constrained by limited mobility.
- **Facilitating dialogue between men and women:** Getting women and men to discuss social norms that might erode gender relations in an informal setting allows them to confront negative practices in the context of improving productivity.

Agriculture in Somalia should be geared toward increasing yields. Already, there are farmers who have adopted modern practices in their farming and livestock rearing. There is opportunity for farmers en masse to adopt practices such as improved irrigation methods, use of herbicides as pest control methods, use of fertilizers to increase land productivity, application of pesticides to remove pests and diseases on farm produce, artificial insemination to improve livestock production, adoption of drought-resistant crops and livestock, as well as accessing financial institutions for credit and financial information.

This would include;



Solar-powered irrigation – Somalia is dry for most of the year. However, there are rivers that cut through the region that can provide water for irrigation. Farmers should be trained on implementation of drip irrigation and moisture sensors to maximize the use of limited water resources. With vast parts of the equatorial country having access to copious sunlight, irrigation can be solar-powered with the aim to save on energy costs.



Subsidies on agricultural implements – To enhance use of modern technology and techniques on farms, there is need to provide subsidies for farm equipment and implements. With subsidized agricultural material, such as fertilizers, herbicides and pesticides, there is guaranteed increased agricultural production.



Environment-friendly implements – Farmers should be introduced to the various biological methods of controlling pests and weeds, including introducing predatory species, such as praying mantises, ladybugs, green lacewings, and certain wasps, which prey upon pests; and using greener forms of liquid pesticides, such as essential oils, to keep unwanted organisms at bay.

Additionally, increasing yields in the midst of harsh climatic conditions requires that communities embrace climate-resilient crops. From this research, it was established that households are already engaging in growing climate-resilient crops, such as maize, sorghum, sesame, cowpeas and masado. These are already available locally, and households should be encouraged to grow more of them. Moreover, crisis-affected and at-risk women should be trained on strategies to store the seeds of these climate-resilient crops so that they are not destroyed by pests before the next farming season.

In livestock farming, there has been a push to adopt strategies with the intent to mitigate the impact of drought on livestock. Such strategies include the camel leasing³⁷ approach, which entails negotiation of leases between dairy companies and pastoralists for lactating camels. In a camel leasing arrangement, the dairy companies are expected to cover the management costs for the leased animals (feed, water and veterinary services), and pastoralists received a fixed portion of the dairy companies' profits from milk sales.

37 Camel Leasing in Somalia: Phase I Research | Agrilinks

**UN WOMEN IS THE UN ORGANIZATION
DEDICATED TO GENDER EQUALITY
AND THE EMPOWERMENT OF WOMEN. A
GLOBAL CHAMPION FOR WOMEN AND
GIRLS, UN WOMEN WAS ESTABLISHED
TO ACCELERATE PROGRESS ON
MEETING THEIR NEEDS WORLDWIDE.**

UN Women supports UN Member States as they set global standards for achieving gender equality, and works with governments and civil society to design laws, policies, programmes and services needed to ensure that the standards are effectively implemented and truly benefit women and girls worldwide. It works globally to make the vision of the Sustainable Development Goals a reality for women and girls and stands behind women's equal participation in all aspects of life, focusing on four strategic priorities: Women lead, participate in and benefit equally from governance systems; Women have income security, decent work and economic autonomy; All women and girls live a life free from all forms of violence; Women and girls contribute to and have greater influence in building sustainable peace and resilience, and benefit equally from the prevention of natural disasters and conflicts and humanitarian action. UN Women also coordinates and promotes the UN system's work in advancing gender equality.



UN Women
East and Southern Africa Regional Office
UN Complex, Gigiri, Block M, Ground Floor
P.O Box 30218 – 00100
Tel: +254207624365
Nairobi, Kenya