ADAPTATION FUND

FULLY DEVELOPED PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Transforming Communities: A Nexus of Climate-Smart Agriculture, Livelihood Diversification, and Women's Economic Empowerment
Country:	Ethiopia
Thematic Focal Area:	Food security, water security, ecosystem Adaptation
Type of Implementing Entity:	National Implementing Entity
Implementing Entity:	Ministry of Finance
Executing Entities:	Ministry of Water and Energy, Ministry of Agriculture
Amount of Financing Requested:	USD **9,999,328.00**
Letter of Endorsement (LOE) signed:	Yes ☒ No ☐

NOTE: The LOE should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☒ This proposal has been submitted before including at a different stage (concept, fully-developed proposal)

☐ This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that fully-developed proposal documents should not exceed 100 pages for the main document, and 100 pages for the annexes.

Project/Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

1. Background

Ethiopia, home to over 115 million people, ranks as the second most populous country in Africa. The majority of its population resides in rural areas, with only approximately 20 percent living in urban centers (World Bank, 2023). The nation's economy predominantly relies on agriculture, with coffee as the primary export. Additionally, cereals, pulses, oilseeds, and fruits play crucial roles in its agricultural production. However, Ethiopia has also made noteworthy strides in diversifying its economy, with manufacturing and services gaining prominence in recent years (Central Statistical Agency of Ethiopia, 2020).

Over the past decade, Ethiopia has witnessed significant economic growth, emerging as one of the fastest-growing economies in Africa. The impact of fast economic growth is reflected in the improvement in the monetary welfare levels of Ethiopian households. Based on the most recent Household Living Standards survey, Ethiopia's poverty levels fell by around 20 percent between 2011 and 2016 although they remain high especially in the rural areas and for the bottom 40 percent of the population[1]. The country's Gross Domestic Product (GDP) has been expanding at an impressive rate, driven by robust growth in various sectors such as agriculture, manufacturing, construction, and services. Government-led initiatives and strategic investments in infrastructure development, industrialization, and human capital have played a pivotal role in propelling Ethiopia's economic advancement. Moreover, the country's strategic geographical location, conducive investment environment, and a large and youthful population have attracted foreign investments and bolstered trade opportunities. As a result, Ethiopia has been able to sustain steady GDP growth, with the reform agenda expected to support growth that is projected to be slightly below or above 6.4 percent FY 2021/22 in the near term paving the way for improved living standards, poverty reduction, and increased access to essential services for its population[2]. However, challenges remain in ensuring inclusive and sustainable growth, addressing income disparities, and enhancing economic diversification to further consolidate and expand Ethiopia's position as a thriving economy in the region.

The country has witnessed remarkable progress in education accessibility, as primary school enrolment increased from 40 percent in 1994 to an impressive 95 percent in 2019. Despite this progress, challenges persist, particularly in rural regions[3]. Healthcare outcomes have shown improvement, with life expectancy rising from 49 years in 1990 to 66 years in 2019. Nevertheless, Ethiopia still faces significant health challenges, including high rates of maternal and child mortality[4].

Despite its potential, Ethiopia grapples with various hurdles. It is one of the world's poorest nations, with 23.9 percent of its population living below the national poverty line, necessitating continued efforts to reduce poverty through government programs and interventions[5]. The country's youthful and expanding population, coupled with abundant natural resources and a government committed to development, offer promise. However, addressing issues of poverty, inequality, and climate change will require sustained investment in education, healthcare, and infrastructure to achieve development goals.

Furthermore, Ethiopia faces a series of additional challenges. Ongoing conflicts, such as the one in the Tigray region, have resulted in widespread displacement and a humanitarian crisis (UN Office for the Coordination of Humanitarian Affairs, 2022). As one of the most vulnerable countries to climate change, Ethiopia is already grappling with the impacts of droughts, floods, and crop failures (United Nations Framework Convention on Climate Change, 2022). Moreover, high levels of inequality persist, with the wealthiest 10 percent controlling over 40 percent of the country's wealth (Oxfam International, 2021).

Despite these multifaceted challenges, Ethiopia's resilience and determination have led to significant progress. The country is well-positioned to continue advancing towards its development goals in the years ahead. With concerted efforts and strategic initiatives, Ethiopia can harness its potential and build a more sustainable and prosperous future for its people.

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[1] *Seventh Ethiopia Economic Update : Special Topic : Poverty and Household Welfare in Ethiopia, 2011-2016 (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/432421554200542956/Special-Topic-Poverty-and-Household-Welfare-in-Ethiopia-2011-2016*

[2] *https://www.worldbank.org/en/country/ethiopia/overview*

[3] *UNESCO Institute for Statistics, 2021*

[4] *World Health Organization, 2021*

[5] *World Bank, 2023*

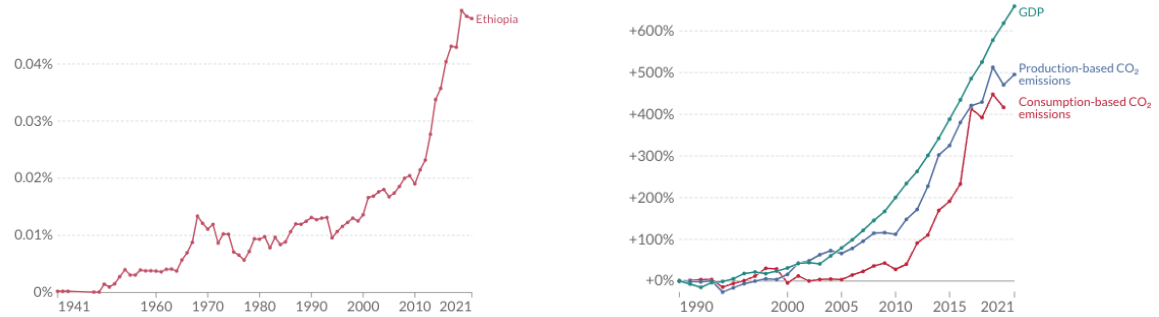
1.1 Socio-economic and development context

1. **Population and Demographics:** Ethiopia's population is diverse, with over 80 ethnic groups and numerous languages spoken throughout the country. The population continues to grow rapidly, presenting challenges and opportunities for development efforts.
2. **Agriculture-Based Economy:** Ethiopia's economy is primarily agrarian, with agriculture being the main livelihood for a significant portion of the population. Major crops include coffee, cereals, oilseeds, and pulses. However, the reliance on rain-fed agriculture makes the country vulnerable to climate variability and recurrent droughts.
3. **Poverty and Inequality:** Ethiopia faces high levels of poverty, particularly in rural areas. There are significant disparities in income and access to basic services between urban and rural populations. Efforts to reduce poverty and inequality have been ongoing, but they remain significant challenges.
4. **Infrastructure and Connectivity:** Infrastructure development is a priority for Ethiopia. The government has invested in improving transportation networks, including roads, railways, and airports, to enhance connectivity within the country and with neighbouring regions.
5. **Industrialization and Manufacturing:** Ethiopia has been striving to promote industrialization and attract foreign investment in manufacturing sectors. Industrial parks have been established to encourage export-oriented industries, particularly in textiles and garments.
6. **Health and Education:** Ethiopia has made significant strides in improving healthcare and education, with the expansion of health facilities, the reduction of child mortality rates, and increased school enrolment. However, challenges remain in providing quality healthcare and education services, especially in rural and remote areas.
7. **Environmental and Climate Challenges:** Ethiopia is susceptible to climate-related challenges, including droughts and floods. These events can have severe impacts on agriculture, food security, and livelihoods, making climate change adaptation and resilience-building crucial components of development efforts.
8. **Urbanization:** Ethiopia is experiencing rapid urbanization, with a growing number of people migrating to cities in search of better economic opportunities. Managing this urbanization process is essential to ensure sustainable urban development.
9. **Political Landscape:** Ethiopia has experienced political changes and challenges over the years, with the government working towards political reforms and democratization. However, there have been ethnic tensions and conflicts that have affected stability and development progress in some regions.

1.2 Access to Climate Finance

Ethiopia's contribution to the global GHG emission is infinitesimal (currently estimated at 0.37 percent)[6] but growing in par with the national GDP at +495 percent for production based and +416 percent for consumption based carbon emissions since 1990[7], see figure 1 below. Despite the commendable growth of Ethiopia's economy and the government's successful efforts to uplift the livelihoods of millions of the most impoverished, there is a concerning correlation between the growth of Ethiopia's carbon emissions and its national GDP. The government of Ethiopia having recognized the debilitating effect of climate change to its economic agenda and the well-being of its population, remains committed to the ambition of the Paris accord. Accordingly, progressive and integrated climate policies have been issued, proactively allocates resources from its limited budget to address climate challenge and fosters international cooperation to building resilience and sustainability in the face of a changing climate. However, Ethiopia's ambitious vision to meet with its climate ambition is conditional and requires mobilization of increased climate finance to meet with its NDC.

Figure 1 Ethiopia's share of global carbon emissions (Left) and Ethiopia's change in carbon emissions vs GDP (Right)



Ethiopia's capacity to access climate funds in comparison to other Least Developed Countries (LDCs) presents a mix of opportunities and challenges. As an LDC, Ethiopia benefits from being prioritized in international climate finance mechanisms due to its vulnerable status and high exposure to climate change impacts. The international community recognizes the urgent need to support countries like Ethiopia in their efforts to mitigate and adapt to climate change.

[6] *World Bank (2023), https://www.climatewatchdata.org/ghg-emissions*
[7] *Hannah Ritchie, Max Roser and Pablo Rosado (2020) - "CO_2 and Greenhouse Gas Emissions". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/co2-and-greenhouse-gas-emissions'*

This prioritization increases Ethiopia's chances of accessing various climate funds, which can provide critical financial resources for climate-related projects and initiatives.

However, accessing climate funds and reversing its growing emissions is not without its challenges. Ethiopia faces complex application procedures and strict eligibility criteria set by international climate finance institutions. The requirements demands specific technical expertise and detailed project proposals, which can be daunting for a country with limited resources and capacity. In addition, competition among LDCs for limited climate finance resources poses a significant obstacle. Ethiopia must compete with other developing nations in the same category, each vying for a share of available funds, each to address their unique climate-related challenges. Economic conditions and shifting priorities in donor countries also directly impact the availability and allocation of climate finance to developing nations.

1.3 Environmental context

Ethiopia's environmental context is characterized by a diverse range of ecosystems, natural resources, and environmental challenges. The country's topography is marked by high mountains, plateaus, fertile valleys, and arid lowlands, contributing to its rich ecological diversity. This diversity sustains a wide array of plant and animal species, making Ethiopia one of the most biodiverse countries in Africa. The country is renowned for its unique endemic species, including the Ethiopian wolf and the Gelada baboon, which require conservation efforts to protect their habitats and ensure their survival.

Ethiopia’s topography is characterized by large regional differences; it is considered an arid country, but precipitation trends exhibit high annual variability. Ethiopia has three rainy seasons: June–September (kiremt), October–January (bega), and February–May (belg). Kiremt rains account for 50–80 percent of the annual rainfall totals, and most severe droughts usually result from failure of the kiremt. The lowlands in the southeast and northeast are tropical, with average temperatures of 25°–30°C, while the central highlands are cooler, with average temperatures of 15°–20°C. Lowlands are vulnerable to rising temperatures and prolonged droughts, while highlands are prone to intense and irregular rainfall[8]. These climate-related events significantly affect agricultural productivity, water resources, and food security, particularly for communities heavily reliant on rain-fed agriculture and pastoralist that rely heavily on livestock for their livelihoods.

Ethiopia's environmental context is not without challenges. Deforestation remains a significant issue, driven by encroachment for agriculture, fuelwood collection, and illegal logging. The loss of forest cover poses a threat to biodiversity and contributes to soil erosion and land degradation in various regions. Unsustainable land use practices, such as overgrazing and improper agricultural methods, exacerbate soil erosion, leading to reduced agricultural productivity.

Water scarcity is another pressing concern. Ethiopia's major rivers, such as the Blue Nile and the Omo, play a crucial role in supporting agriculture and hydropower generation. However, climate change, deforestation, and over-extraction of water resources pose risks to their availability and quality, impacting both rural and urban communities.

Despite these challenges, Ethiopia possesses significant potential for renewable energy sources, including hydropower, solar, and wind energy. Developing and harnessing these renewable resources can play a pivotal role in meeting the country's energy needs while reducing dependence on fossil fuels and mitigating carbon emissions.

To address these environmental challenges, the Ethiopian government has developed various climate adaptation and resilience building policies and implemented various initiatives, including reforestation programs and sustainable land management projects. International cooperation and partnerships also support conservation and sustainable development efforts in the country.

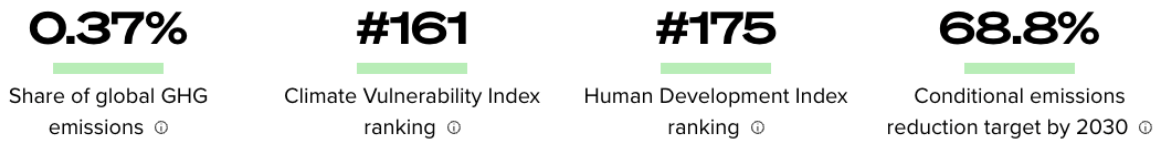
Balancing economic development with environmental conservation is critical for Ethiopia's future. Strengthening efforts to protect biodiversity, manage water resources sustainably, combat deforestation, and promote climate resilience are essential to preserve the country's unique environmental context and safeguard the well-being of its people and ecosystems.

1.3.1 Policies and strategies:

The climate context for Ethiopia highlights the pressing need for climate adaptation measures to tackle the challenges posed by climate change in various sectors of the economy and the welfare of its population. Integrated climate policies and international cooperation are essential for building resilience and sustainability in the face of a changing climate.

[8] *Netherlands Commission for Environmental Assessment. 2015. Ethiopia Climate Change Profile.*

Figure 2 Ethiopia's share of global GHG emission, climate vulnerability, human development and NDC reduction target



National Adaptation Program of Action (2007): Ethiopia's National Adaptation Program of Action (NAPA) was established in 2007 to address the country's vulnerability to climate change impacts. The NAPA outlines urgent and immediate adaptation measures, focusing on priority sectors like agriculture, water resources, health, and human settlement. It aims to enhance the adaptive capacity of communities and integrate climate change considerations into national development planning. Through extensive consultations with various stakeholders, the NAPA identifies specific adaptation projects, such as water management systems, climate-resilient agriculture, and early warning systems for extreme weather events. The document serves as a foundation for Ethiopia's climate adaptation efforts and has influenced subsequent strategies like the Climate-Resilient Green Economy (CRGE) Strategy. Ethiopia continues to advance its climate resilience initiatives through inclusive and targeted adaptation measures.

Climate Resilient Green Economy Strategy (2011): Ethiopia's Climate Resilient Green Economy (CRGE) strategy, introduced in 2011, outlines the country's commitment to pursuing sustainable economic growth while mitigating climate change impacts. The CRGE strategy presents a visionary and integrated approach to achieving a green economy by 2025, emphasizing the reduction of greenhouse gas emissions while ensuring climate resilience across all sectors. The strategy focuses on enhancing energy efficiency, promoting renewable energy sources, and implementing climate-smart agricultural practices. It also includes measures to expand sustainable forest management, conserve biodiversity, and improve water resource management. By aligning its development goals with climate resilience, Ethiopia aims to reduce poverty, build the adaptive capacity of vulnerable communities, and transition towards a low-carbon and environmentally sustainable economy. The CRGE strategy emphasizes the importance of international collaboration and climate finance to support the country's ambitious climate goals and pave the way towards a climate-resilient and green future for Ethiopia. Please note that further developments and updates may have occurred since my last update, and I recommend consulting official government sources for the most current information on Ethiopia's Climate Resilient Green Economy strategy.

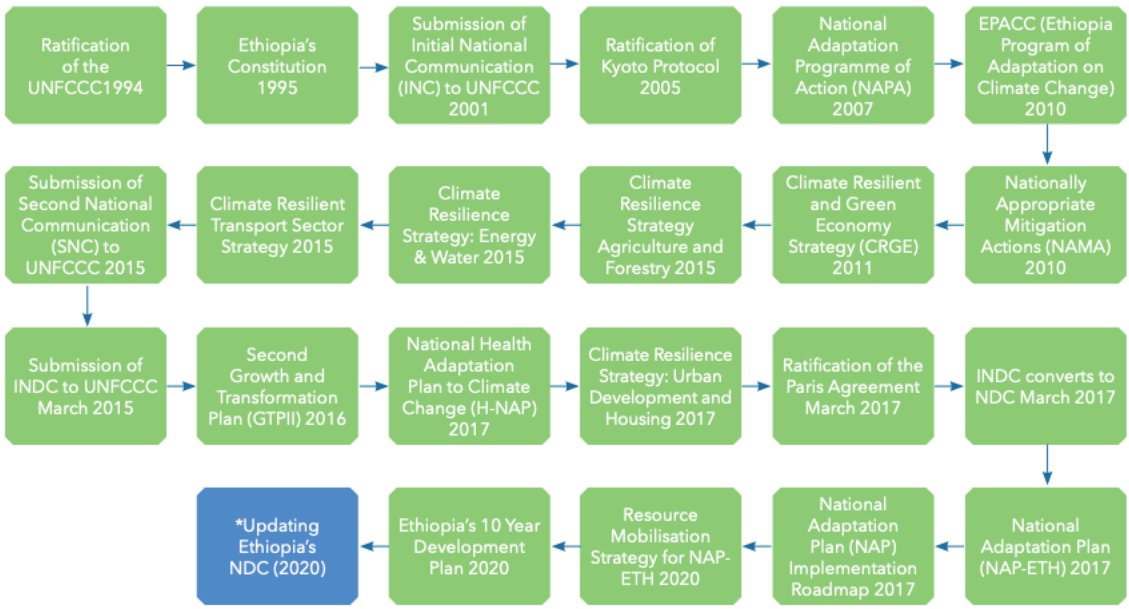
Climate Resilient Strategies (2011 - 2018): Ethiopia has further unpacked the CGRE strategy and developed sector and region specific Climate Resilient (CR) strategies to address the challenges posed by climate change. These strategies aim to enhance adaptive capacity and promote sustainable resource management in the face of climate impacts. In the agriculture sector, the focus is on adopting climate-smart practices to improve productivity and food security. Water resource management strategies emphasize water conservation and efficient use to cope with changing rainfall patterns. In the health sector, efforts are made to strengthen disease surveillance and healthcare services. The energy sector targets the promotion of renewable energy sources. Forestry strategies revolve around sustainable forest management and conservation. Urban planning incorporates climate-resilient infrastructure development, while community-based adaptation ensures localized and inclusive resilience measures. These CR strategies are region-specific and developed through inclusive processes involving stakeholders.

National Adaptation Plan (2017): Ethiopia has developed its National Adaptation Plan (NAP) to address the challenges posed by climate change and enhance the country's resilience to its impacts. The NAP is a comprehensive framework that outlines priority adaptation measures and strategies across various sectors, aiming to safeguard vulnerable communities and critical ecosystems. The plan focuses on integrating climate change considerations into national development policies and programs, aiming for a coherent and coordinated approach to climate adaptation. Through the NAP, Ethiopia aims to enhance the adaptive capacity of communities, promote sustainable resource management, and build climate resilience in sectors such as agriculture, water resources, health, and infrastructure. The plan emphasizes the importance of participatory approaches, engaging stakeholders at all levels, including local communities, to ensure inclusivity and ownership in the implementation process. By adopting the NAP, Ethiopia has demonstrated its commitment to building a climate-resilient future, ensuring that climate change considerations are integrated into the country's development pathway to better protect its people and environment from the impacts of a changing climate.

Nationally Determined Contributions (2021): Ethiopia had initially submitted an ambitious Nationally Determined Contributions (NDC) to the UNFCCC in 2015. The NDC outlines Ethiopia's commitments to reduce greenhouse gas emissions by 64 percent below business-as-usual levels by 2030, increase forest cover to 40 percent of the country's land area by 2030, and enhance the resilience of its communities and ecosystems to the impacts of climate change. Ethiopia will achieve these targets by increasing the share of renewable energy in the country's energy mix, improving energy efficiency, reducing deforestation and forest degradation, promoting sustainable forest management practices, afforestation and reforestation, strengthening early warning systems for climate-related disasters, promoting climate-smart agriculture, and investing in infrastructure to reduce the impacts of climate change.

Ethiopia updated its NDC and submitted it to the UNFCCC in 2021. The updated NDC showcases noteworthy improvements compared to its previous submission in 2015. Building on the ambitious vision of the Climate Resilient and Green Economy (CRGE) Strategy, the latest NDC aligns greenhouse gas (GHG) emissions projections with national development priorities and commits to reducing economy-wide emissions by at least 68.8 percent by 2030, going beyond its earlier commitments. Notably, the NDC specifies 40 adaptation interventions, recognizing Ethiopia's vulnerability to climate change due to its dependence on rain-fed agriculture and limited adaptive capacity. The NDC ensures monitoring and reporting align with international standards and Ethiopia's 10-year development plan, promoting integrated progress tracking. It also distinguishes between domestic and international financing, with a meaningful financial commitment from domestic resources and an expectation of international support to cover the majority of the implementation costs. Overall, Ethiopia's updated NDC reflects an enhanced commitment to climate action and a robust strategy for climate-resilient development.

Figure 3 Ethiopia's climate change policy road map[9]



1.3.2 Initiatives to action the climate policies and strategies:

Ethiopia has been actively engaging in climate adaptation and resilience-building initiatives[10]. In order to address the challenges posed by climate change, the Ethiopian government has launched a number of climate adaptation and resilience-building initiatives to adapt to the impacts of climate change and to build a more sustainable future for its people. These initiatives include the implementation of sustainable land and water management practices, the establishment of early warning systems for extreme weather events, and the promotion of climate-smart agricultural techniques[11]. Ethiopia has also been working to improve access to climate finance and to build partnerships with international organizations and donors to support its climate adaptation efforts[12]. These initiatives aim to enhance the country's capacity to cope with and adapt to the impacts of climate change on various sectors. Some of the key climate adaptation and resilience-building initiatives in Ethiopia include:

1. Climate-Smart Agriculture: Climate-smart agriculture (CSA) programs and projects in Ethiopia are designed to enhance agricultural productivity, sustainability, and resilience while mitigating the impacts of climate change. These initiatives recognize the challenges brought about by climate change and aim to promote practices that reduce greenhouse gas emissions, conserve natural resources, and improve the livelihoods of smallholder farmers. Examples of CSA projects in Ethiopia include the adoption of conservation agriculture practices like minimum tillage and crop rotation to reduce soil erosion and conserve moisture. Agroforestry initiatives integrate trees into agricultural landscapes to provide multiple benefits, such as carbon sequestration and improved soil fertility. Additionally, the promotion of climate-resilient crop varieties, efficient water management techniques, and the use of renewable energy for agriculture contribute to building a more climate-resilient and sustainable agricultural sector. Capacity-building and climate finance programs support the dissemination of knowledge and provide necessary resources for successful implementation. Through these efforts, Ethiopia aims to create a more resilient agricultural sector that can adapt to climate change challenges and ensure food security and rural development.

[9] *Environment, Forest and Climate Change Commission, Federal Republic of Ethiopia (2021). Updated Nationally Determined Contribution*
[10] *Ethiopian Ministry of Environment, Forests and Climate Change (MEFCC) (2019). Ethiopia National Adaptation Plan. Addis Ababa: MEFCC.*
[11] *Sustainable Development Goals Knowledge Platform (SDG-KP) (2020). Ethiopia Climate Change. New York: SDG-KP.*
[12] *World Bank (2018). Ethiopia Climate Resilient Green Economy Project. Washington, DC: World Bank.*

2. **Water Resource Management:** Water resource management programs and projects in Ethiopia are designed to promoting sustainable and efficient water use, addressing water scarcity, and improving water access for agriculture and communities. Given Ethiopia's reliance on agriculture and vulnerability to climate change, effective water management is crucial for the country's development. These initiatives encompass a range of strategies, including rainwater harvesting and water storage, irrigation development, integrated water resources management, watershed conservation, and community-based water management. Projects also focus on enhancing water infrastructure, groundwater management, water conservation, and water quality monitoring. Additionally, climate-resilient approaches are integrated into water management practices to adapt to changing environmental conditions. Through the collaborative efforts of the government, NGOs, development partners, and local communities, Ethiopia aims to ensure sustainable water use, enhance agricultural productivity, protect the environment, and improve access to clean water, ultimately supporting the well-being and prosperity of its people.

3. **Afforestation and Reforestation:** Ethiopia has undertaken large-scale afforestation and reforestation programs to increase forest cover and combat deforestation. Tree planting initiatives have been carried out to restore degraded landscapes and sequester carbon dioxide, contributing to climate change mitigation and adaptation. For instance, the "Green Legacy" initiative that was launched in 2019 aims to increase forest cover, mitigate the impacts of climate change, and promote sustainable environmental practices. One of the significant milestones of the campaign was set in 2019 when Ethiopia broke a world record by planting over 350 million trees in a single day. The "Green Legacy" initiative has garnered widespread participation from citizens, government agencies, and various organizations, with a focus on engaging local communities in tree planting and environmental conservation efforts.

4. **Early Warning Systems:** Early Warning Systems (EWS) projects and programs in Ethiopia aim to strengthen the country's capacity to detect and respond promptly to potential disasters and emergencies. Ethiopia faces various hazards, including droughts, floods, and food crises, making effective early warning systems essential for disaster risk reduction and response. These initiatives include drought, flood, and food security early warning systems that monitor relevant indicators and issue timely alerts to vulnerable communities and authorities. Additionally, climate-driven risks, livelihood assessments, and community engagement are integrated into the EWS projects. Technological solutions, capacity building, and collaboration among stakeholders further enhance the efficiency and effectiveness of these systems. By providing accurate and timely information, the EWS projects empower communities and decision-makers to take proactive measures, saving lives, safeguarding livelihoods, and enhancing overall resilience to disasters and emergencies in Ethiopia.

5. **Community-Based Adaptation:** In Ethiopia, Community-Based Adaptation (CBA) programs and projects are designed to empower local communities to effectively cope with the impacts of climate change and enhance their resilience. These initiatives prioritize community involvement in decision-making processes and customize adaptation strategies to suit the specific needs and circumstances of each community. Climate-smart agricultural practices, sustainable natural resource management, and disaster risk reduction efforts are implemented to improve agricultural productivity, preserve natural resources, and enhance disaster preparedness. Additionally, CBA projects focus on diversifying livelihood options, improving water and sanitation access, building climate-resilient infrastructure, and empowering women in adaptation activities. Capacity building, knowledge sharing, and collaboration among stakeholders play vital roles in these programs, fostering sustainable development and climate resilience at the local level in Ethiopia.

6. **Climate-Resilient Irrigation systems:** In Ethiopia, climate-resilient irrigation systems programs and projects aim to enhance water management practices and strengthen the adaptability of irrigation infrastructure to climate change impacts. Given the country's susceptibility to droughts and fluctuating rainfall patterns, these initiatives play a crucial role in supporting agricultural productivity and ensuring food security. These efforts include the promotion of water-efficient technologies like drip and sprinkler irrigation and solar-powered pumps to optimize water usage and reduce reliance on fossil fuels. Additionally, water harvesting and storage components are integrated into irrigation systems to capture rainwater during periods of abundance, providing a buffer against water scarcity. Targeting smallholder farmers and involving local communities in water management decisions further strengthens the effectiveness and sustainability of these climate-resilient irrigation projects. By adopting an integrated water resources management approach and investing in capacity building and research, Ethiopia aims to create a more resilient and productive agricultural sector while safeguarding the livelihoods of farmers.

7. **National Adaptation Programs:** Ethiopia has developed the National Adaptation Programs of Action (NAPAs) to identify priority areas and strategies for climate adaptation. These programs focus on sectors vulnerable to climate change, such as agriculture, water, and health, and outline specific actions to build resilience[13].

8. **International Climate Finance:** Ethiopia has been accessing international climate finance from various sources, including the Green Climate Fund (GCF), Adaptation Fund and other bilateral and multilateral climate funds. These

[13] *Ministry of Finance and Economic Development (MoFED). (2011). Ethiopia's Climate Resilience Green Economy*

funds have been supporting the implementation of climate adaptation projects and initiatives across the country[14].

Some of the initiatives currently being implemented to build the country's resilience to the impacts of climate change and promote sustainable development include:

1. **Ethiopia Resilient Landscapes for Biodiversity and Climate Change Adaptation Project (RLCA):** The RLCA is a US$ 50M project funded by the Green Climate Fund (GCF) and implemented by the Environment Protection Authority (EPA). The project aims to improve the resilience of Ethiopia's natural ecosystems and communities to the impacts of climate change. The project focuses on three key areas:
- Reducing deforestation and forest degradation
- Promoting sustainable land management practices
- Strengthening climate change adaptation and disaster risk reduction

2. **Ethiopia Sustainable Forest Management Project (SFMP)**: The SFMP is a US$ 60M project also funded by the GCF and is implemented by the Ethiopian Forest Development Authority. The project aims to improve the management of Ethiopia's forests and to reduce deforestation and forest degradation. The project focuses on three key areas:
- Strengthening forest governance and institutions
- Promoting sustainable forest management practices
- Increasing the benefits of forests for local communities

3. **Distributed Renewable Energy-Agriculture Modalities (DREAM) project**: The DREAM project will facilitate the implementation and private sector operation of nine renewable energy mini-grids and irrigation systems across Ethiopia. The project is one of the first initiatives supported under the Global Energy Alliance for People and Planet, a joint initiative by Rockefeller Foundation, IKEA Foundation and Bezos Earth Fund launched at COP26 in Glasgow. The project's key partners are the Ministry of Water and Energy (MoWE) of Ethiopia, the African Development Bank (AfDB) and the Agricultural Transformation Energy (ATA). The project will run from November 1, 2021, to October 31, 2023.

This is anticipated to provide reliable year-round irrigation for all farmers in the communities (1,545 hectares of irrigated farmland), making this the largest mini-grid powered irrigation project in Africa. It is expected to impact an estimated 11,500 people (2,500 households), seven schools and three health clinics/outposts. In addition, the project will implement various productive use activities to support a range of micro, small and medium enterprises (MSMEs), specifically electric vehicles for transporting goods and persons.

The project will make a comprehensive suite of detailed information and economic analysis, technical assistance facilities, grant funding, concessional debt, and risk mitigation facilities available to selected private sector companies. These companies will develop, deploy, and operate each of the nine identified sites. The project consists of three distinct components:
Mini-grids: Renewable energy generation and distribution to households, MSMEs and agricultural/irrigation anchor customers;
Irrigation services: implementation of large-scale water pumping and distribution systems to farmers;
Productive use of energy (PUE): Operation of electric vehicles and other productive use activities such as agricultural processing.

4. **Ethiopia Adaptation to Climate Change and Resilience Project (ACCR):** The ACCR is a US$ 10M project funded by the United Nations Development Programme (UNDP) and is implemented by the Ethiopian Ministry of Agriculture and Natural Resources. The project aims to support Ethiopia's efforts to adapt to the impacts of climate change. The project focuses on three key areas:
- Strengthening climate change adaptation planning and capacity
- Mainstreaming climate change adaptation into development policies and programs
- Supporting climate-smart agriculture

5. **Ethiopia Climate Change, Land Degradation, and Drought Risk Reduction Project (CCLD):** The CCLD is a US$ 40M project funded by the Global Environment Facility (GEF) and implemented by the Ethiopian Ministry of Agriculture and Natural Resources. The project aims to reduce the impacts of climate change, land degradation, and drought on Ethiopia's agriculture sector. The project focuses on three key areas:
- Improving land management practices
- Promoting drought-resistant crops
- Strengthening early warning systems and disaster risk management

[14] *UNDP (United Nations Development Programme). (2017). Ethiopia Climate Change Funding Framework*

1.4 Problem Statement

Ethiopia faces a distinct set of challenges and vulnerabilities due to its geographical location and socio-economic conditions. The irregularity of rainfall patterns leads to frequent droughts and floods, posing significant risks to various sectors of the economy and society. Consequently, adapting to climate variability becomes a crucial task for farmers struggling to maintain productivity and food stability.

a) **Droughts and floods:** Ethiopia is one of the most vulnerable countries to climate change. The country experiences frequent droughts and floods, which have severe impacts on agriculture, water resources, and food security[15]. In 2015, a severe drought affected over 10 million people in Ethiopia, leading to crop failures and food shortages[16]. In 2016, a series of floods caused widespread damage to infrastructure and crops, displacing over 200,000 people[17].
b) **Water scarcity:** Climate change is also exacerbating water scarcity in Ethiopia. The country's water resources are already under pressure due to rapid population growth and increasing demand for potable water and irrigation[18]. Prolonged droughts are further reducing water availability, particularly in rural areas[19]. In 2018, the Ethiopian government declared a national water crisis, warning that the country was facing its worst drought in 50 years[20].
c) **Biodiversity and natural ecosystems:** Climate change is also threatening Ethiopia's rich biodiversity and natural ecosystems[21]. Rising temperatures and changing rainfall patterns are disrupting the balance of ecosystems, affecting wildlife, plant species, and essential ecosystem services that support human well-being[22]. For example, a recent study found that the number of bird species in Ethiopia has declined by 12 percent since 1990, largely due to climate change[23].
d) **Health risks:** Climate change is also increasing health risks in Ethiopia[24]. Changing weather patterns are leading to the spread of vector-borne diseases such as malaria and dengue fever. In 2019, Ethiopia reported over 2.5 million cases of malaria, the highest number in the country's history[25]. Climate change is also increasing the risk of waterborne diseases such as cholera and typhoid[26].
e) **Internal migration and displacement:** Climate-induced disasters such as droughts and floods are also leading to internal migration and displacement in Ethiopia[27]. In 2019, an estimated 2.4 million people were displaced due to climate-related disasters. This displacement has put a strain on resources in host communities and has made it difficult for people to access basic services such as food, water, and shelter.[28,29]

The impact of climate change on Ethiopia's agriculture, water resources, and food security is considerable, especially in rural areas heavily reliant on rain-fed farming as their primary means of sustenance. The irregularity of rainfall patterns, rising temperatures, and more frequent extreme weather events, such as droughts and floods, pose considerable challenges to crop yields and productivity thus negatively affecting the progress made thus far. Reduced agricultural output and food insecurity result from these climate-induced impacts, negatively impacting rural communities[30]. Moreover, Ethiopia's water resources face vulnerability due to changes in precipitation patterns, leading to water scarcity and diminished availability for agriculture and domestic use. Prolonged droughts exacerbate the strain on water supplies, both surface water and groundwater sources[31]. Consequently, food security is compromised, leaving communities vulnerable to hunger and malnutrition[32]. The challenges extend to pastoralist communities that rely heavily on livestock for their livelihoods. Changes in temperature and rainfall patterns affect grazing land availability and water access, posing risks to livestock health and productivity[33]. Addressing these impacts necessitates adaptive measures and resilient strategies to ensure sustainable development and safeguard the well-being of Ethiopia's population.

1.4.1 Ethiopia's climatology and trend

Ethiopia's climate context for the current climatology (1901 – 2021), derived from observed and historical data provides a strong understanding of current climate conditions and also appreciate future climate scenarios and projected

[15] *World Bank (2023). Ethiopia - Country Climate Risk Profile. Washington, DC: World Bank.*
[16] *Food and Agriculture Organization of the United Nations (FAO) (2020). Ethiopia Country Profile. Rome: FAO.*
[17] *United Nations Office for the Coordination of Humanitarian Affairs (OCHA) (2016). Ethiopia Drought Response. New York: OCHA.*
[18] *International Water Management Institute (IWMI) (2019). Ethiopia Water Sector Performance Report. Colombo: IWMI.*
[19] *United Nations Development Programme (UNDP) (2018). Ethiopia Water Security Assessment. New York: UNDP.*
[20] *Ethiopian Ministry of Water, Irrigation and Energy (MoWIE) (2017). Ethiopia Water Sector Master Plan. Addis Ababa: MoWIE.*
[21] *Ethiopian Environmental Protection Authority (EPA) (2019). Ethiopia State of the Environment Report 2019. Addis Ababa: EPA.*
[22] *International Union for Conservation of Nature (IUCN) (2018). Ethiopia Biodiversity Profile. Gland: IUCN.*
[23] *Global Environment Facility (GEF) (2017). Ethiopia Resilient Landscapes for Biodiversity and Climate Change Adaptation Project. Washington, DC: GEF.*
[24] *World Health Organization (WHO) (2020). Ethiopia Country Cooperation Strategy 2020-2024. Geneva: WHO.*
[25] *Ethiopian Public Health Institute (EPHI) (2018). Ethiopia Malaria Situation Report. Addis Ababa: EPHI.*
[26] *Centers for Disease Control and Prevention (CDC) (2019). Ethiopia Dengue Fever Outbreak. Atlanta, GA: CDC.*
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[29] *Ethiopian Disaster Risk Management Agency (DRMA) (2018). Ethiopia Disaster Risk Management Report 2018. Addis Ababa: DRMA.*
[30] *United Nations Development Programme (UNDP) - "Climate Resilient Green Economy Strategy" (2011)*
[31] *Intergovernmental Panel on Climate Change (IPCC) - "Climate Change 2014: Impacts, Adaptation, and Vulnerability" (2014)*
[32] *Food and Agriculture Organization (FAO) - "Climate Change and Food Security in Ethiopia" (2016)*
[33] *United Nations Environment Programme (UNEP) - "Climate Change and Pastoralism: Impacts and Mitigation" (2010)*

change. Climate data visualization and analysis for both annual and seasonal data for the current climatology through spatial variation, the seasonal cycle, or as a time series has been presented below.

Ethiopia's vast land area and varied topography give rise to diverse climates throughout the country, resulting in significant differences in temperature and precipitation across its regions. The southern and southwestern regions, which encompass equatorial rainforests, experience high levels of rainfall and humidity. In contrast, the northern and northeastern lowlands, as well as the Afro-Alpine areas on the summits of the Semien and Bale mountains, face desert-like conditions. The central and northern highland regions of Ethiopia generally have cooler climates. On the eastern side of the country, the climate is extremely arid, with minimal rainfall. Ethiopia experiences a wide range of temperature profile, from as low as –15°C in the highlands to temperatures exceeding 25°C in the lowland areas.

Figure 4 Observed annual mean temperature, 1901 – 2021, Ethiopia[34]

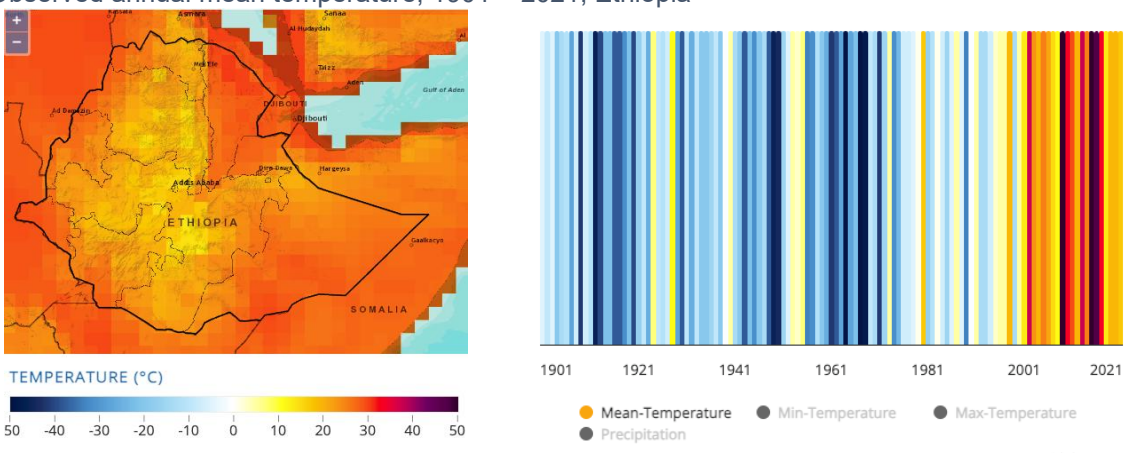
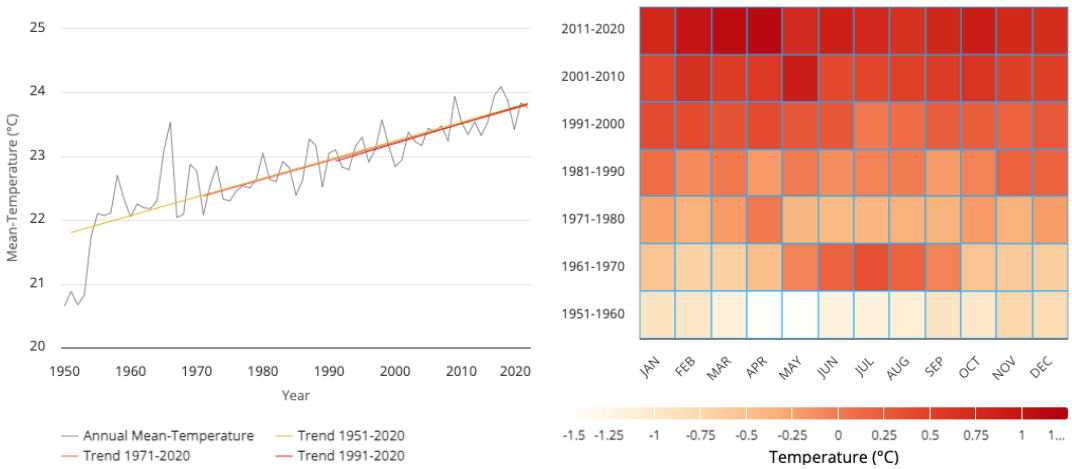


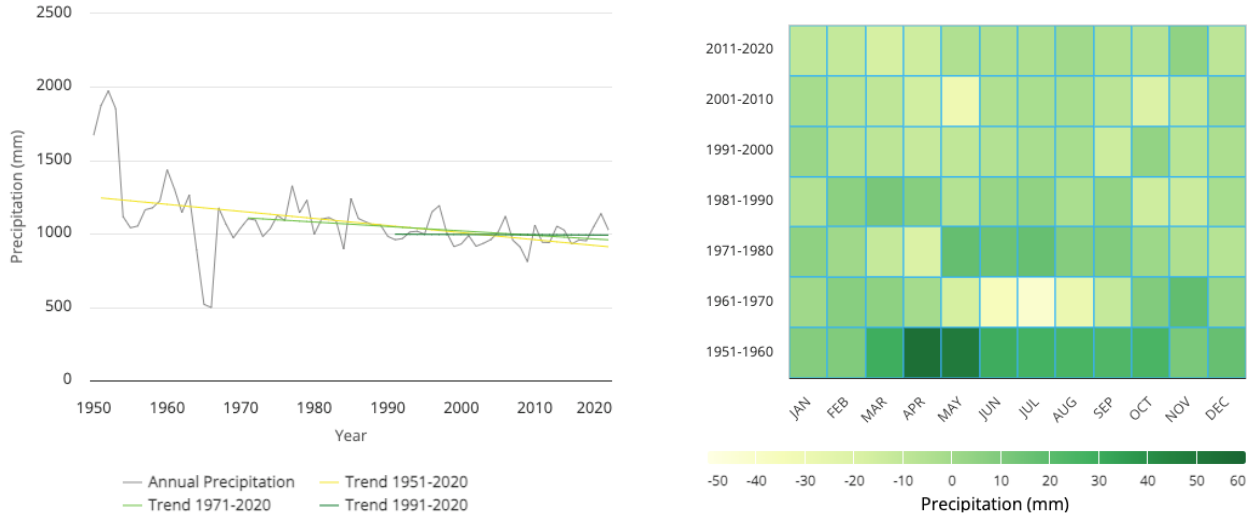
Figure 5 Observed average annual and monthly mean temperature of Ethiopia for 1901 - 2021[35]



The seasonal rainfall patterns in Ethiopia are largely influenced by the movement of the Inter-Tropical Convergence Zone (ITCZ), leading to substantial variations in rainfall from one year to another. Ethiopia observes three main rainfall seasons: Kiremt, Belg, and Bega. The primary rainy season, Kiremt, takes place from mid-June to mid-September and accounts for a significant portion of the annual rainfall (50–80 percent). Some central and northern parts of Ethiopia experience a secondary wet-season, Belg, which occurs from February to May and typically receives less rainfall. However, in the southern regions of the country, there are two distinct wet seasons: Belg (February to May) and Bega (October to December), with the latter being characterized by drier and colder conditions.

[34] *World Bank, Climate Change Knowledge Portal, 2021*
[35] *World Bank, Climate Change Knowledge Portal, 2021*

Figure 6 Observed average annual and monthly mean precipitation of Ethiopia for 1950 - 2020



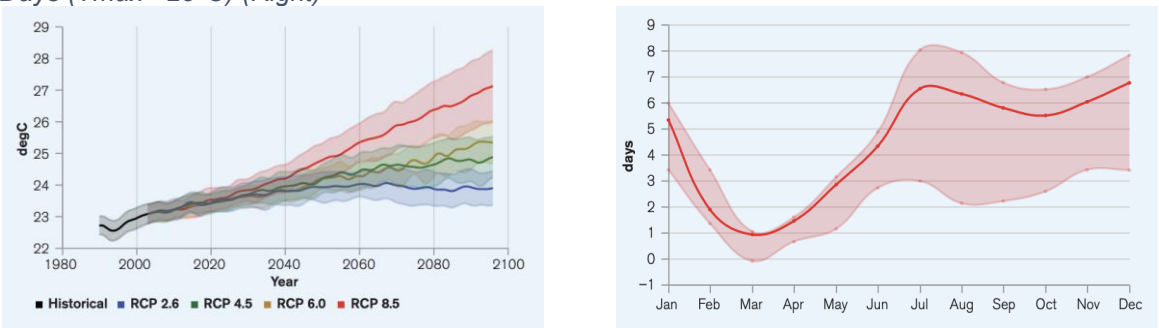
The distribution of mean annual rainfall varies widely across the country. The southwestern highlands receive an average of approximately 2,000 mm of rainfall, whereas the southeastern and northeastern lowlands receive less than 300 mm.

The recorded rising temperatures have led to reduced crop yields, increased water scarcity, and the proliferation of pests and diseases. Furthermore, the erratic rainfall patterns have disrupted agriculture and heightened the risk of crop failure. Observations indicate that Ethiopia's average temperature has already risen by approximately 1 degree Celsius since the late 19th century, and further warming of 1-2 degrees Celsius is projected by the century's end. Rainfall has decreased, especially in the north and east, and is anticipated to decline by 10-20 percent by the end of the century[36]. More frequent and intense extreme weather events, like droughts, floods, and heat waves, are causing significant disruptions to communities and the environment.

1.4.2 Climate change projections for Ethiopia

Temperature: According to the World Banks Climate trends and variability analysis results, temperatures in East Africa, particularly in Ethiopia, are expected to rise significantly in the coming decades. Mean monthly temperature changes are projected to increase by 1.8°C by the 2050s and by 3.7°C by the end of the century, assuming a high-emission scenario. This warming trend will lead to a substantial increase in the frequency of 'hot' days and nights in the future climate. Projections indicate that by the 2060s, 'hot' days will occur on 19-40 percent of days, and by the 2090s, they will be experienced on 26–69 percent of days annually. The most rapid temperature increases are expected during the July, August, and September season, figure 6 below.

Figure 7 Historical and projected average temperature for Ethiopia from 1986 to 2099 (Left) and Projected change in Summer Days (Tmax> 25°C) (Right)



Furthermore, hot nights are projected to increase more rapidly than hot days, particularly during the July, August, and September season. These temperature rises will also contribute to more intense heatwaves and higher rates of evapotranspiration, impacting various aspects of local economic development and agricultural productivity. As a result, crop yields are likely to decrease, leading to livestock losses, which will significantly affect food security.

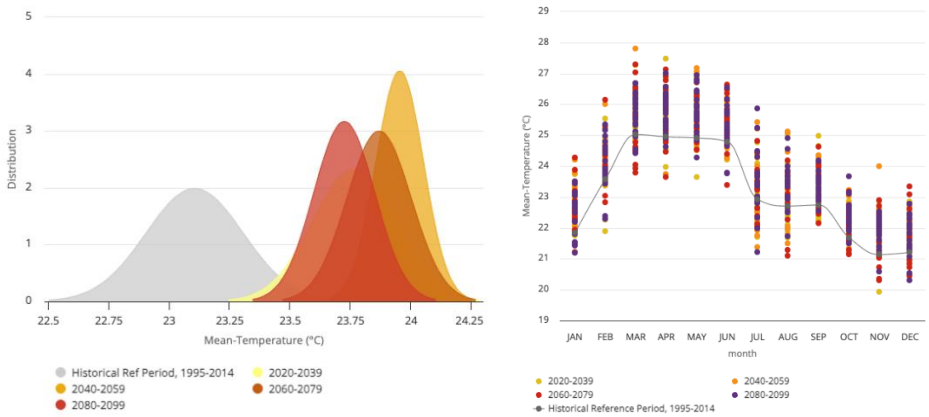
Throughout the rest of the century, regardless of the emission scenarios considered, temperatures in Ethiopia are expected to continue rising. Under a high-emission scenario, average temperatures will increase rapidly by the mid-

[36] *United Nations Framework Convention on Climate Change (UNFCCC), 2021*

century. Across the seasonal cycle, temperature increases will be most pronounced from January to June, see figure 7 below.

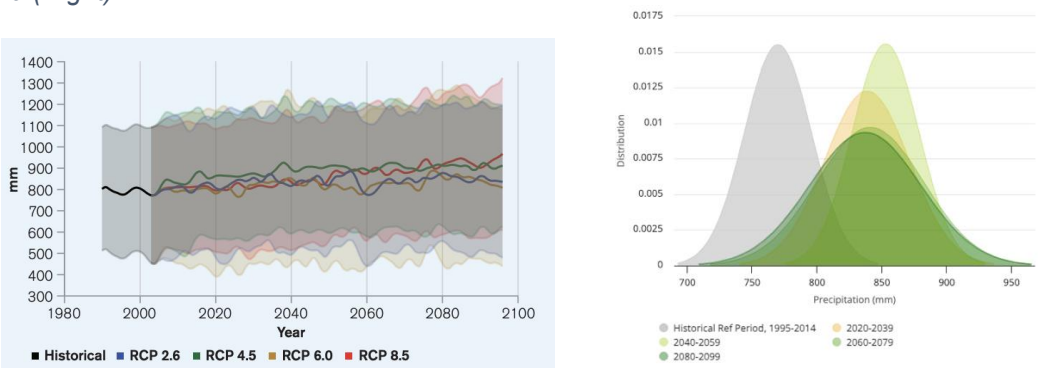
The escalation in heat and extreme heat conditions will have significant implications for human and animal health, agriculture, water resources, and ecosystems in Ethiopia. Adapting to these changing climate conditions and implementing strategies to mitigate their impacts will be crucial for the country's future well-being and resilience.

Figure 8 Projected Change in Distribution, Mean-Temperature, SSP1-1.9 Ethiopia, Multi-model Ensemble (Left) and Projected Variability and Trends of Mean-Temperature across Seasonal Cycle, 2020-2100; Ethiopia; SSP1-1.9, cams-csm1-0



Precipitation: According to the World Banks Climate trends and variability analysis results, Ethiopia exhibits a considerable level of year-to-year variation in climate conditions, and future projections of precipitation trends still hold significant uncertainty. The forecasts suggest that southern and central regions may experience up to a 20 percent decrease in spring and summer rainfall, while southwest and southeast areas could see an increase. Conversely, most northern areas are anticipated to face a general reduction in rainfall. These projections are compounded by the expected warming trends across the entire country, which could worsen the observed declines in rainfall, leading to heightened water stress. The water resources are likely to come under strain as evapotranspiration rates increase due to warmer temperatures, offsetting the benefits of any additional rainfall. Consequently, more frequent and severe droughts could have adverse effects on water availability, biodiversity, and hydropower generation. Additionally, the possibility of heightened floods presents a significant threat of water pollution, impacting the health of wetland and forest ecosystems, which provide crucial services for communities in Ethiopia. Figure 8 illustrates the projected change in annual average precipitation for Ethiopia, showing a slight increase by the end of the century under a high emissions scenario of RCP8.5.

Figure 9 Annual average precipitation for 1986 to 2099 (Left) and Projected change in distribution, Precipitation SSP 1 – 1.9, Ethiopia (Right)[37]



1.4.3 The impact of climate change in Ethiopia

Climate change is expected to intensify flooding and heighten the risk of water scarcity in Ethiopia. Increased rainfall in some regions will lead to more frequent and severe flooding, causing loss of life, infrastructure damage, soil erosion, and waterlogging of crops, ultimately reducing agricultural yields and worsening food insecurity. Conversely, rising temperatures and prolonged dry spells will increase aridity, intensifying water shortages, biodiversity loss, and

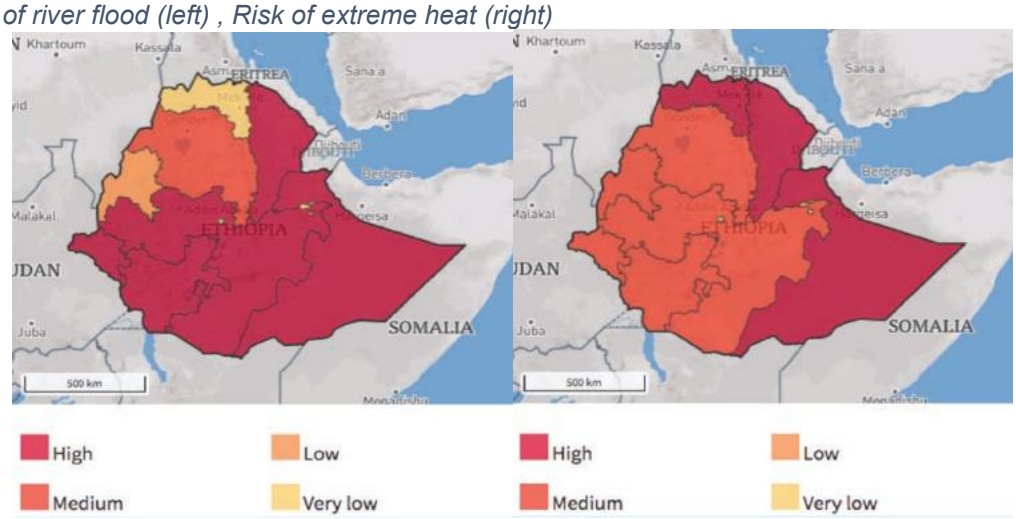
[37] *WBG Climate Change Knowledge Portal (CCKP, 2021). Interactive Climate Indicator Dashboard - Agriculture. Ethiopia. URL: https://climatedata.worldbank.org/CRMePortal/web/agriculture/crops-and-land-management?country=ETH&period=2080-2099*

competition for resources, potentially leading to conflicts. These conditions will also negatively impact livestock, crop production, and rural economies. [38]

Ethiopia's southern and eastern regions, including Afar, Somali, and Oromia, are particularly vulnerable to recurrent droughts, while Gambella experiences frequent flooding. These extreme weather events exacerbate poverty, disrupt livelihoods, and divert resources toward relief efforts instead of long-term development. [39] Changing rainfall patterns threaten agricultural productivity, especially in Oromia and western Somali regions, impacting both farming and pastoral communities. Droughts continue to be a major driver of food insecurity, leading to crop failures, livestock losses, malnutrition, and displacement.

Most Ethiopian farmers depend on slow-maturing crops that require consistent rainfall, making them highly vulnerable to shifting seasonal patterns. Small landholdings limit household food security and investment in climate-adaptive practices. While some highland areas may see short-term productivity gains due to warmer temperatures, long-term climate trends indicate increasing heat stress and soil degradation, potentially reducing agricultural output by over 6% annually by mid-century. [40]

Figure 10 Risk of river flood (left) , Risk of extreme heat (right)



2. Project Context

Ethiopia is constitutionally structured as a federation consisting of nine regional states based on ethnicity, along with two chartered cities. These Ethiopian regions are further subdivided into 68 or more zones, which, in turn, are composed of districts referred to as Woredas. Each Woreda is comprised of wards (kebele) or neighbourhood associations, representing the smallest units of local governance in Ethiopia. The focus of this initiative is at the kebele level, specifically targeting six particularly vulnerable woredas across six regions. Within each of these woredas, the project will be implemented in two to four of the most vulnerable kebeles.

Table 1 Target project Woreda's and Kebeles

#	Region	Woreda	Kebeles targeted
1	Oromia	Tullo	Burka Jelala, Oda Kebena, Efa Bas, Hunde Lafto
2	Amhara	Mida Weremo	Tegora, Dengore, A/Bayne
3	Tigray	Sewha Saese	Saesie, Koma Subuha
4	Afar	Awash Fentale	Kebena, Dudub
5	Somali	Shabelay	Wooble, Biyo-Cade
6	Central Ethiopia	Fofa	Semo Awasho, Upper Kesheli

These woredas were selected based on their susceptibility to climate-related risks, such as increased rainfall variability and heightened instances of drought, flood and fire. Their vulnerability to climate change, characterized by limited income diversification, crop and livestock breed variations including lack of small ruminants that can better cope to the effects of climate shocks, but also their lack to adapt to climate change, considering factors like water availability and proximity to markets, also influenced the selection. The kebeles targeted in this initiative were chosen in consultation

[38] *UNDP-Ethiopia (2013). Disaster Risk Management and Livelihoods Recovery Program. 2013 Annual Report. URL: http://www.et.undp.org/content/ethiopia/en/home/library/environment_energy/DRM_LR_2013AnnualReport.html*

[39] *UNDP-Ethiopia (2013). Disaster Risk Management and Livelihoods Recovery Program. 2013 Annual Report. URL: http:// www.et.undp.org/content/ethiopia/en/home/library/environment_energy/DRM_LR_2013AnnualReport.html*

[40] *USAID (2016). Climate Change Risk Profile – Ethiopia. Fact Sheet. URL: https://www.climatelinks.org/sites/default/files/asset/ document/2016 percent20CRM percent20Factsheet percent20- percent20Ethiopia_use percent20this.pdf*

with stakeholders from the respective regions and woredas, considering diverse agro-ecological conditions, market accessibility, and the degree of vulnerability to drought.

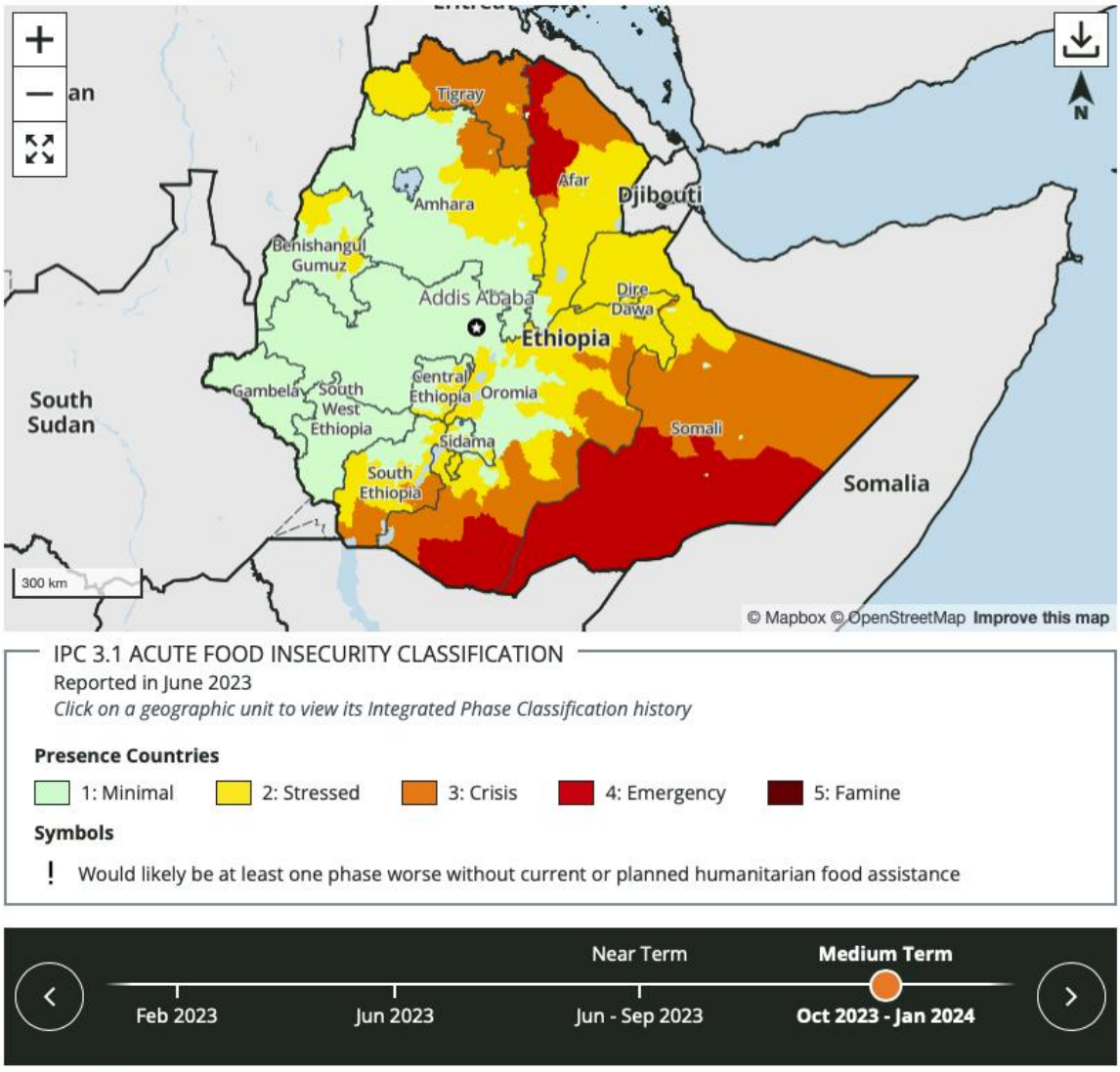
Furthermore, the selection process ensured that the chosen woredas and kebeles were not already covered by existing support programs. The proposal places significant emphasis on assessment and learning to ensure that insights are documented and applied for scaling up and informing future initiatives.

Socio-economic data for the five respective Woredas and five proposed Kebeles (except for Somali region) has been collected prior to identifying the Kebeles that have been the most impacted by the effects of climate change and targeted for this projects intervention.

2.1 Hotspot Woredas

Utilizing the Woreda hotspot classification exercise conducted at the regional level in January 2021 (following spot-checks and desk review post Meher/Dyer/Hagaya season) and incorporating input from the Federal Review Team in February 2021, the results indicated that as of January 2021, there were 305 Woredas classified as priority one, 178 as priority two, and 110 as priority three (refer to Figure 1). In total, 593 Woredas were categorized with a first, second, or third level of priority, constituting 55.6 percent of the 1067 Woredas nationwide.

Figure 11 Ethiopia Acute Food Insecurity (October 2023 - January 2024) projected outcome



***Famine Early Warning Systems Network (FEWS-Net)**

In comparing the Woreda classifications between January 2021 and July 2020, notable changes were observed. Priority one Woredas increased from 235 to 305, while priority two and three Woredas decreased from 183 to 178, and from 121 to 110 respectively. This significant increase is attributed to several factors, including the creation of new priority one Woredas, particularly in the Tigray Region (with more than 50 new Woredas), the impact of law enforcement operations in Tigray, a heightened number of internally displaced persons (IDPs) in Benishangul Gumuz

and Amhara Regions, rain failures during Dyre and Hagaya seasons in pastoralist areas (such as in Oromia, SNNPR, and Somali Regions), the influence of COVID-19 on market conditions, and the adverse impact of desert locusts on crops and pasture during the meher season.

2.2 GNI index and Poverty

Between 2010/11 and 2015/16, Ethiopia made significant strides in poverty reduction, with the national poverty rate declining from 30% to 24%, according to the World Bank.[41] Urban areas saw rapid progress, with per capita consumption increasing by 6% annually—three times the rural rate. However, inequality widened, as the poorest 20% in rural areas saw no improvement. By 2016, the Gini index stood at 35, reflecting relatively low inequality.
Human capital accumulation remained weak, particularly in rural areas, where half of adults had never attended school by 2021. In 2019, 37% of children under five were stunted. Poverty was particularly severe in peripheral drought-prone regions like Somali, Afar, and lowland areas of Oromia and SNNP, where economic and social indicators lagged.
Economic challenges have slowed poverty reduction. Despite annual GDP growth averaging 7.7%, growth has recently slowed, with agriculture-the primary employer-lagging behind other sectors. Labor market conditions have worsened, with workforce participation dropping by 12 percentage points and unemployment rising from 5% to 9% between 2013 and 2021. Conflict and drought led to sharp declines in household consumption, particularly in pastoral areas.
Multiple factors, including drought, conflict, global shocks like the war in Ukraine, and rising food prices, have heightened vulnerability, threatening past poverty reduction gains. Poverty remains high, especially in Tigray (27%), Benishangul Gumuz (26.5%), and Amhara (26.1%), while urban regions like Harari (7.1%) and Addis Ababa (16.8%) report the lowest rates. Despite progress, poverty in Ethiopia remains a major challenge.

2.3 Female Headed household and poverty

The gender of the household head is represented as a categorical variable, where zero signifies females and one indicates otherwise. In most Ethiopian rural households, the household head is typically male, unless the male head passes away or becomes incapacitated due to old age. Reports[42] contend that cultural and societal norms prevalent in rural areas often exert significant adverse effects on the nutritional well-being of women and children, rendering them vulnerable social groups. Notably, having a female household head is associated with a higher likelihood of poverty[43]. This association reflects the limited empowerment of females concerning valuable assets, such as land, in rural Ethiopia. Female farm managers in Ethiopia are reported to be 23 percent less productive than their male counterparts, attributed to factors such as less time allocated to farm work and cultivation of smaller plots, a significant portion of which is rented[44]. Female-headed households, particularly in rural Ethiopian areas, is therefore expected to have lower consumption levels.

2.4 Food Insecurity

Larger household size, lower level of educational attainment of the household head, and increase in the age of the household head are significantly associated with household food insecurity. Amhara Region shows the highest percentage of food insecure households (36.1 percent), followed by Afar (26.1 percent) and Tigray (24.7 percent). Nearly 22.7 percent of rural households and 13.9 percent of urban households are food insecure. Overall, rural households are more food insecure than urban households according to all indicators except calorie deficiency.

One in four (24.8 percent) households in Ethiopia fall under food poverty line, suggesting that they are unable to meet the recommended daily calorie requirements. Food poverty also remains substantially higher in rural Ethiopia (27.1 percent) as compared to urban Ethiopia (15.2 percent). Regionally, Addis Ababa, Harari, Tigray, and Dire Dawa, have the lowest percentage of households in the poorest quintile of wealth index. While pastoralist and agro- pastoralist regions, Somali and Afar, have the highest percentage of households in the poorest quintiles.

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The highest proportion of households report food shortages in July. Crop failure is a major after climate shock with 7 percent of households reporting that they had faced shocks during the last 12 months prior to the date of data collection, followed by a reduced income of households (3.5 percent). Of the 10.4 percent of households that reported that they had faced a food shortage during the last 12 months, approximately 76 percent had a shortage for one to

[41] *Poverty & Equity Brief Ethiopia Africa Eastern & Southern, April 2023, World Bank*
[42] *Workneh, N. (2008). Food security and productive safety net program in Ethiopia. In T. Assefa (Ed.), Digest of Ethiopia's national policies, strategies, and programs (pp. 1–22). Forum for Social Studies.*
[43] *Kebede & Sharma, Citation 2014; Teka et al., Citation 2019; Tsehay & Bauer, Citation 2012.*
[44] *World Bank. (2015). Ethiopia poverty assessment overview. Poverty Global Practice Africa Region*
[45] *Comprehensive Food Security and Vulnerability Analysis World Food Program and Central Statistics Agency report published in 2019*

four months. One in two households (52 percent) reported that their food shortage lasted two to three months while one in five households reported they experienced food shortage for five to eight months.

2.5 Baseline of the targeted Woreda's and Kebeles

2.5.1 Amhara Region

The Amhara region, located in northwestern and north-central Ethiopia, is one of the country's four largest regions, with a population of 21.1 million, 84% of whom live in rural areas and primarily depend on agriculture. The region produces crops such as teff, barley, wheat, sorghum, and maize and holds 27.9% of the country's livestock. It also has significant water resources, including Lake Tana, offering potential for irrigation development[46].

Despite progress in reducing poverty, major challenges remain in meeting SDG targets. Currently, 26% of the population lives below the national poverty line (target: 13%), and 31% falls below the food poverty line (target: 16%). Climate-related challenges, including droughts, frost, floods, and landslides, frequently impact farmers, with over 100,000 people at risk of flooding and 25,000 displaced in 2018.
Access to clean water remains limited, with 64% of households using improved drinking water sources, though only 17% rely on piped water. Water collection is largely a responsibility of women and girls, with 37% of households spending 30 minutes or more fetching water.

Gender inequality is a significant issue. Women face exclusion from property rights, high rates of gender-based violence, and early marriage, with 64% leaving school after marriage. Despite legal frameworks, gender mainstreaming remains poorly implemented in planning and budgeting. Addressing these disparities requires stronger enforcement of policies and greater efforts toward social change.[47]

Amhara Region: Mida Weremo Woreda

Mida Weremo woreda in the Amhara region has a population of 119,985 (60,381 women; 59,604 men). Literacy rates are low, with only 18% of men and 5% of women being literate. School enrollment is 75% for boys but only 39% for girls, primarily due to early marriage, household duties, and gender-based violence.

This project focuses on three kebeles: Tegora, Dengore, and A/Bayne, covering 12,348 hectares and home to 13,518 people (6,631 women; 6,887 men). These kebeles face ongoing drought impacts, with 5,671 people receiving aid. Access to clean water is limited-only 30% in Tegora and Dengore, and 38% in A/Bayne. Women and girls travel 3 km daily, spending 3 hours fetching water, exposing them to gender-based violence and waterborne diseases.

Women handle household and farm tasks like cleaning, cooking, childcare, water collection, weeding, and livestock management, while men focus on ploughing, herding, and post-harvest work. Alternative livelihoods include poultry farming, vegetable gardening, petty trade for women, and weaving, livestock fattening, and mining for men. Climate awareness is moderate among men but low for women and youth. Adaptation efforts include soil conservation, improved crops, composting, agroforestry, and small-scale irrigation.

2.5.2 Central Ethiopia Region

The Central Ethiopia Regional State was established in August 2023 following a referendum, formed from the northern part of the former Southern Nations, Nationalities, and Peoples' (SNNP) Region. It includes East Gurage, Gurage, Hadiya, Halaba, Kembata, Silte, and Yem Zones, as well as Kebena, Mareko, and Tembaro special woredas. Since the region is newly formed, available data largely pertains to the broader SNNP Region.
Located in southwestern Ethiopia, SNNP has an estimated population of 20 million, with 14% under five years old and nearly half (47%) below 17. The average household size is 5.2, and fertility rates are declining, currently at 4.4 for women aged 15-49. About 83% of the population lives in rural areas, engaged primarily in farming, alongside agro-pastoral and pastoral communities.[48]
The region's diverse geography includes highlands above 1,500m and lowland areas with grasslands and bushes. While higher elevations receive adequate rainfall for farming, southern lowlands experience little rain, sustaining pastoralist communities. Climate-related risks, including extreme temperatures, prolonged droughts, and floods, pose ongoing threats. Population growth, land competition, poverty, youth migration, environmental degradation, and limited infrastructure exacerbate vulnerability, with women and girls disproportionately affected.
Despite frequent challenges, monetary poverty has declined, with 10.4% living below the national poverty line and 12.3% below the food poverty line. However, rural poverty (22%) remains higher than urban poverty (14%). Maternal healthcare has improved, with antenatal care coverage rising from 27% in 2011 to 69% in 2019, and facility-based

[46] *UNICEF, 2018*
[47] *UNICEF, 2019*
48 Central Statistics Agency (CSA), 2017

deliveries reaching 48%.[49]
Water access remains uneven, with 59% of households using improved sources, though many pastoralists rely on unsafe water. Women and girls bear the burden of water collection, with 36% of households spending over 30 minutes fetching water. Gender inequality persists, with early marriage (median age 18.2), high female genital mutilation rates (62%), and entrenched gender roles limiting women's opportunities in public and private life.[50]

Central Ethiopia: Fofa Woreda

Fofa woreda in Central Ethiopia has a population of 49,889 (28,568 women; 21,321 men). This project focuses on two kebeles, Semo Awasho and Upper Kesheli, covering 2,476.48 hectares with a total population of 6,251 (3,544 women; 2,707 men). There are 224 female-headed and 950 male-headed households.
Over the past five years, the kebeles have faced floods, landslides, and fires, with 133 people receiving assistance. Clean drinking water is scarce, with only 33% of Semo Awasho and 67% of Upper Kesheli residents having access. Water sources include piped systems, deep wells, and springs, but contamination leads to diseases like giardia, typhus, and amoeba. Women and girls walk 2.2 km (Semo Awasho) and 1.3 km (Upper Kesheli) daily, spending up to 2.3 hours fetching water. Small irrigation covers 27.9 hectares, benefiting 401 male- and 101 female-headed households.
Women and girls manage household chores, water collection, and farming, while men and boys focus on farming and livestock. Heavy domestic responsibilities limit girls' education, while boys struggle with unemployment. Alternative livelihoods include vegetable farming, weaving, and petty trade. Climate awareness is high among men but lower among women and youth. Adaptation efforts include soil conservation and tree planting.

2.5.3 Oromia Region

Oromia is Ethiopia's largest region, covering 34% of the land area and home to 37% of the country's population, which exceeds 37 million. More than half (54%) of the population is under 18. The region has a high fertility rate of 5.4, above the national average of 4.6, with an average household size of 5.2 people.[51]
Oromia's diverse agro-ecological zones support rain-fed farming and livestock production in the highlands, while the lowlands are home to pastoralist communities. Administratively, the region has 20 zones, with 84% of its population residing in rural areas. Strong agricultural growth and social programs, such as the Productive Safety Net Program (PSNP), have contributed to economic improvement. From 2004/05 to 2015/16, monetary poverty fell by 16%, though the poverty rate remains at 23.9%, slightly above the national average.[52]
Despite economic progress, Oromia faces recurring droughts, leading to widespread food insecurity. Between 2016 and 2018, it had the highest number of relief food beneficiaries. In 2022, conflicts and climate shocks displaced 792,686 people.[53] Malnutrition is a persistent issue, with 36% of children under five stunted and 28% of child deaths linked to undernutrition. Poor maternal healthcare further exacerbates health challenges, with only 44% of births attended by skilled professionals.[54] Education access is limited, with pre-primary enrollment rates at 29.4%, below the national average of 40.7%. Only 46% of students complete grade four, and the dropout rate (20%) exceeds the national average. Barriers include child labor, early marriage, school distance, and climate-induced migration.[55] Water access is slightly below the national average, with 63% of households using improved sources. However, women and girls bear the burden of water collection, with 28% of households traveling over 30 minutes.[56] Schools lack proper sanitation, leading to high absenteeism among girls, particularly due to menstruation.
Climate change threatens Oromia's future, with rising temperatures, erratic rainfall, and prolonged droughts expected. These conditions exacerbate poverty, food insecurity, and gender disparities. Women and girls face greater risks during climate-induced crises, including increased gender-based violence. Despite some progress in reducing child marriage, it remains prevalent at 48%.[57] Patriarchal norms continue to restrict women's roles to domestic responsibilities, reinforcing gender inequality.

Oromia Region: Tullo Woreda

Tullo woreda in Oromia has a population of 200,656 (97,920 women; 102,736 men). This project focuses on four kebeles-Burka Jelala, Oda Kebena, Efa Bas, and Hunde Lafto-covering 5,132 hectares with a total population of 24,013 (11,747 women; 12,266 men). These kebeles have 878 female-headed and 4,126 male-headed households.
Over the past five years, the kebeles have suffered from drought and flooding, with 5,477 people receiving assistance. Clean water access remains low, with only 16% in Burka Jelala, 44% in Oda Kebena, 39% in Efa Bas, and 41.5% in Hunde Lafto having reliable sources. Water sources include rivers, springs, and wells, but poor access contributes to

49 UNICEF 2019
50 Ethiopia Demographic and Health Survey (EDHS) (2016)
51 Central Statistics Agency (CSA), 2017
52 Federal Democratic Republic of Ethiopia, 2017
53 International Organization for Migration, 2022
54 Ethiopian Public Health Institution, 2019
55 Ministry of Education, 2018
56 Central Statistics Agency (CSA), 2016
57 Central Statistics Agency (CSA), 2016

diseases like diarrhea, giardia, and worm infections. Women and girls walk between 1.8 km and 2.7 km daily, spending up to three hours fetching water. Small irrigation covers 267 hectares, benefiting 600 male- and 76 female-headed households.
Women and girls handle domestic work, childcare, water collection, and small-scale farming, while men and boys manage farming, land clearing, and livestock production. Key challenges include deforestation, water scarcity, poor market access, soil erosion, and climate-related issues like erratic rainfall and overgrazing. Climate risk awareness is moderate among men and youth but remains low for women.

2.5.4 Somali Region

The Somali regional state, located in eastern and southeastern Ethiopia, covers approximately 350,000 square kilometers, making it the country's second-largest region after Oromia. It has a population of around six million, with 16% under five years old and 64% below 19. The fertility rate, at 7.2 in 2016, is the highest in Ethiopia. The majority of residents are pastoralists, followed by agro-pastoralists, with a small proportion engaged in riverine farming or urban livelihoods. Livestock sales, crop production, petty trade, and remittances are key income sources. Despite economic improvements, the region remains one of Ethiopia's Developing Regional States due to widespread poverty. In 2016, 22.4% of the population lived below the national poverty line, with 25.5% below the food poverty line. Uniquely, urban poverty (23%) is higher than rural poverty (22%).[58]
Malnutrition is widespread, with chronic food insecurity persisting despite improved health infrastructure. Only 30.2% of pregnant women received antenatal care, and just 26% gave birth in a health facility in 2019. Postnatal care rates were even lower at 10%, and neonatal mortality remained high at 41 deaths per 1,000 births in 2016. Water scarcity is a major challenge, with only 42% of households accessing improved drinking water. Borehole breakdowns are common, and most communities rely on groundwater. Less than 20% of households report men as primary water collectors, making water shortages particularly burdensome for women and girls. [59]
Gender inequality is severe. Female genital mutilation affects 99% of women aged 15-49. While 68% of women decided on their first marriage, 50% were married before 18. Women's economic participation is limited, as they lack access to financial services and bear heavy household responsibilities. Education access is low, with 54% of children aged 7-14 out of school, and girls' enrolment rates significantly lower than boys'.[60] Climate change exacerbates existing challenges, threatening water and pasture availability. Women and girls face disproportionate burdens, including increased risks of gender-based violence during climate-related emergencies. [61]

Somali Region: Shabelay Woreda

The target woreda in Somali region, Shabelay, has a total population of 343,850 (F= 168,718; M= 175,132). Two kebeles, Wooble and Biyo-Cade are selected for this project. The kebeles have a total area of 4,821 ha. The total population of these kebeles is 30,139 (F=13,550; M=16,589). There are 1,931 FHHs and 2,484 MHHs in the kebeles. In the past five years, the kebeles have been affected by drought and 3,292 people are being provided with support. There is shortage of clean drinking water sources and only 19 percent and 10 percent of the total population in Wooble and Biyo-Cade have access to clean water, respectively. The sources of water available include deep wells, seasonal rivers, springs, and rainwater harvesting. On average women walk for 3 and 2 kms each day and spend 2, and 1.3 hours/day to collect water in Wooble and Biyo-Cade, respectively. A total of 2,467 ha land is under small irrigation and 3,563 MHHs and 1,216 FHH benefit from these schemes.
In the kebeles women are mostly responsible for household chores including water and firewood collection and the girls held me cleaning houses, cooking, and firewood collection. Women and girls also work in the farm mostly weeding. Men are responsible for farming and livestock management while boys are encouraged to focus on education. Women and girls are the least educated in the kebeles.

2.5.5 Tigray Region

Tigray, located in Ethiopia's dry northern region, has an estimated population of 5.4 million. In 2018, female-headed households made up 34% of the population, higher than the national average of 25%. Although three-quarters of residents depend on agriculture, urbanization is expanding at an annual rate of 4.6%. Despite strong agricultural growth and increased social spending, Tigray had the country's highest monetary poverty rate in 2016. About 13.5% of people lived below the national poverty line, while 16.5% faced food poverty. Women are disproportionately affected, with 43% experiencing monetary poverty and 24% food poverty, compared to 22% and 11% for men, respectively. [62]
The region has made progress in maternal and child health, performing above the national average in antenatal care, largely due to a strong focus on reducing maternal mortality. Access to improved drinking water is the highest in Ethiopia, with 72.1% of households using safe sources. However, one-third of households still travel over 30 minutes to fetch water, a burden primarily on women and girls. [63]

58 UNICEF, 2019
59 UNICEF, 2019
60 Presler-Marshall et al., 2022
61 UNICEF, 2019
62 UNICEF, 2019
63 UNICEF, 2019

Gender-based violence remains prevalent, with 65% of women and 31% of men believing spousal abuse is justified. Early marriage rates have declined to 43%, and female genital mutilation, at 24.2%, is the lowest in Ethiopia. Tigray is highly vulnerable to climate shocks, including droughts, floods, and environmental degradation. Extreme temperatures and erratic rainfall threaten agriculture and water supply. Studies show that 97% of respondents identified drought as the most significant climate-related challenge, followed by flooding (76%) and pests (62%). Female-headed households face greater hardship due to limited resources, income, and technology access. Coping strategies include soil and water conservation, irrigation, diversifying income sources, and adapting planting schedules.[64] Women in Tigray face economic and political limitations due to deep-rooted gender inequalities. While their participation in politics is growing, grassroots involvement remains low/

Tigray Region: Sewha Saese Woreda

The target woreda in Tigray region, Sewha Saese, has a total population of 66,004 (F= 34,305; M= 31,699). Two kebeles, Saesie and Koma Subuha are selected for this project. The kebeles have a total area of 10,143.62 ha. The total population of these kebeles is 15,726 (F=8,141; M=7,585). FHH in the kebeles are slightly higher than MHH - 1,698 and 1,627, respectively. In the past five years, the kebeles have been affected by drought and 13,624 people are being provided with support. There is shortage of clean drinking water sources and only 38 percent and 25 percent of the total population in Saesie and Koma Subuha have access to clean water, respectively. The sources of water available include hand dug wells, DW, SHW and spring development. On average women walk for 5 kms each day and spend 3 hours/day to collect water. A total of 133.5 ha is under small irrigation and 1,090 MHH and 493 FHH benefit from these schemes.

2.5.6 Afar Region

The Afar region, located in northeastern Ethiopia, has an estimated population of 1.9 million. [65] It has some of the country's poorest reproductive health indicators, with only 50.7% of women receiving at least one antenatal care visit. The fertility rate was 5.5 in 2016, but 84% of births occur at home without skilled medical supervision. Afar has the highest rate of teenage pregnancies and the lowest percentage of women seeking to limit childbearing. The median age of first marriage is 16.4, and complications during pregnancy and childbirth are the leading cause of death for women aged 15-19. Female genital mutilation affects 98% of women, and 20% of women are in polygamous unions. [66]

Child marriage remains legal and has increased since 2000. Marriages are arranged, often with maternal cousins, leaving girls with no choice. Only 12% of sexually active young women use contraception, and the region has Ethiopia's highest adolescent motherhood rate at 23.4%. Education access is extremely low due to the region's nomadic lifestyle. Many communities lack schools, and those that exist face shortages of teachers, materials, and clean water. Nationally, 20% of children aged 7-14 are out of school, but in Afar, the figure is 66%. Girls face greater barriers, with enrolment rates at just 9% compared to 11% for boys. Women's economic participation is limited, primarily relying on livestock and small trade. They face significant challenges in accessing credit, saving, and borrowing. Their responsibilities-collecting water, household chores, and childcare-leave little time for economic activities.[67]

While poverty declined by 32% between 2000 and 2016, 24% of the population remained below the national poverty line in 2015/16, with food poverty at 28.3%. Rural areas suffer more than urban ones.[68] Malnutrition is widespread, with a 43% stunting rate among children. Mothers' education strongly influences child nutrition. Gender inequality is deeply rooted. Women lack inheritance rights, control over earnings, and decision-making power. They face increased hardship during droughts and resource shortages, often prioritizing men's and boys' food consumption over their own. Women's health deteriorates under these conditions, exposing them to malnutrition, violence, and exploitation. Gender-sensitive adaptation measures are essential to improving resilience.[69]

Awash Fentale Woreda

In the Awash Fentale Woreda, two kebeles, Kebena and Dudub are selected for this project. The kebeles have a total area of 74,200 ha. The total population of these kebeles is 12,609 (F=7,644; M=4,965). In the past five years, the kebeles have been affected by flood and 593 people are being provided with support. Similarly, several droughts in the past 10 years have resulted in lack access to grazing land and water access.Overall, there is a major shortage of clean drinking water sources and only 65 percent of the total population in each kebele have access to clean water.

The sources of water available include river and deep wells. Rivers in this woreda include the Awash and its tributary the Germama. A large portion of this woreda is occupied by the Awash National Park.

On average women walk for 5 and 6 kms each day and spend 3 and 4 hours/day to collect water in Kebena and Dudub, respectively. A total of 1,222 ha land is under small irrigation and 1,712 MHHs and 1,521 FHH benefit from these schemes.

64 Assefa & Gebrehiwot, 2023
65 UNICEF, 2019
66 Desalegn et al., 2020
67 Presler-Marshall et al., 2022
68 Federal Democratic Republic of Ethiopia, 2017
69 Balehey et al., 2018

Table 2 Summary of regional population and climate risks

Region	Regional population (in Millions)	Population living below poverty line (in Millions)	Livestock (in Millions)	Key risks
Oromia	37	8.84	Cattle, Sheep, Goats, Poultry (25.0, 9.3, 7.5, 16.7)	Rising temperatures, extraordinary rainfall events and more intense and prolonged droughts and floods
Amhara	21.1	5.5	Cattle, Sheep, Goats, Poultry(16.3, 10.4, 6.8, 16.8)	Drought, frost, hailstorms, flood, and landslides
Tigray	5.4	0.73	Cattle, Sheep, Goats, Poultry (4.9, 2.1, 0.8, 6.3)	Drought, floods, pests and disease
Afar	1.9	0.46	Cattle, Sheep, Goats, Poultry (1.9, 4.0, 8.5, 0.092)	Drought, floods, pests and disease
Somali	6	1.3	Cattle, Sheep, Goats, Poultry (3.6, 9.1, 17.0, 0.3)	Drought, flooding and soil erosion
Central Ethiopia	20	2.08	Cattle, Sheep, Goats, Poultry (12.4, 4.7, 4.8, 7.3)	Flood, landslide, and fire

Table 3 Summary of targeted Kebele beneficiaries

Region	Woreda	Woreda Population	Target Kebeles	Kebele Population	Area of land available (ha)	Land irrigated (ha)	Access to potable water
Oromia	Tullo	200,656 (F= 97,920; M= 102,736)	Burka Jelala, Oda Kebena, Efa Bas, and Hunde Lafto	24,013 (F=11,747; M=12,266) with 878 FHHs and 4,126 MHHs	5,132	267 (5 percent) 600 MHHs and 76 FHH	16%, 44%,39%, and 41.5%
Amhara	Mida Weremo	119,985 (F= 60,381; M= 59,604)	Tegora, Dengore, and A/Bayne	13,518 (F=6,631; M=6,887) with 871 FHH's and 2,2127 MHH's	12,348.00	130.5 (1 percent) 592 MHHs and 80 FHH	30% and 38%
Tigray	Sewha Saese	66,004 (F= 34,305; M= 31,699)	Saesie and Koma Subuha	15,726 (F=8,141; M=7,585) with 1,698 FHH's and 1,627 MHH's	10,143.62	133.5 (1.3 percent) 1,090 MHH and 493 FHH	38% and 25%
Afar	Awash Fentale	58,016 (F = 29,908 M = 28,108)	Kebena and Dudub	12,609 (F=7,644; M=4,965)	74,200	1222 (1.6 percent) 1,712 MHHs and 1,521 FHH	
Somali	Shabelay	343,850 (F= 168,718; M= 175,132)	Wooble and Biyo-Cade	30,139 (F=13,550; M=16,589) with 1,931 FHHs and 2,484 MHHs	4,821	2467 (51 percent) 3,563 MHHs and 1,216 FHH	19% and 10%
Central Ethiopia	Fofa	49,889 (F = 28,568; M = 21,321)	Semo Awasho and Upper Kesheli	6,251 (F = 3,544; M = 2,707) with 224 FHHs and 950 MHHs	2,476.48	27.9 (1 percent) 401 MHHs and 101 FHH	33% and 67%

Project/Programme Objectives:

List the main objectives of the project/programme.

The main objective of the project is to build self-reliant, climate-resilient communities in Ethiopia by adopting a comprehensive and integrated approach to climate adaptation and sustainable development. Through strengthening climate risk reduction and adaptation planning at the local level, improving water security and empowering women in resource management, promoting climate-smart agriculture and sustainable livestock practices, and facilitating livelihood diversification, the project seeks to mitigate climate risks while enhancing the well-being and livelihoods of the communities involved.

The ultimate goal is to create a sustainable and adaptive environment where the local population, including women, is actively engaged in climate adaptation efforts, fostering long-term resilience to climate change. This approach ensures that communities can overcome climate challenges, secure food and water resources, diversify income opportunities, and thrive in a changing climate, contributing to economic stability and improved quality of life. The specific objectives of the project include:

- To strengthen climate risk reduction and adaptation planning.
- To enhance water security and promote women's empowerment
- To promote climate-smart agriculture and sustainable livestock practices
- To facilitate climate-smart livelihood diversification

Expected Project Outcomes and Results

- **Outcome 1:** All target Kebele communities and local authorities have improved capacity and ownership in climate risk reduction and adaptation planning, resulting in well-coordinated and effective climate adaptation strategies integrated in 100% of local development plans.
- **Outcome 2:** Additional 16,500 households are benefiting from enhanced agricultural and livestock resilience to climate change in project target areas, as measured by improved access to potable water and enhanced irrigation systems.
- **Outcome 3:** At least 2,000 women headed households achieve a 20% increase in agricultural productivity and enhanced food security through the implementation of climate-smart agricultural practices and sustainable livestock management systems.
- **Outcome 4:** A minimum of 4,000 households demonstrate increased economic stability and climate resilience, evidenced by diversified income sources, reduced dependence on climate sensitive activities and increased participation of gender-responsive income generation activities.

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

The Climate Smart Agriculture project integrates four key components to enhance climate resilience and sustainable development in vulnerable Ethiopian communities. The first component strengthens climate risk reduction and adaptation planning by raising awareness, conducting capacity-building workshops, and integrating climate adaptation into local development plans through participatory assessments. The second component focuses on water security and women’s empowerment, improving water access through potable sources, small-scale irrigation, and renewable energy while promoting women’s leadership in water management. The third component advances climate-smart agriculture and sustainable livestock practices, emphasizing drought-resistant crops, conservation agriculture, and improved livestock management to enhance food security and reduce emissions. The fourth component supports climate-smart livelihood diversification, encouraging alternative income sources such as apiculture, poultry farming, and horticulture while ensuring gender-responsive approaches to economic stability. Collectively, these components create a comprehensive strategy to build resilient, self-sufficient communities. The next section will provide a detailed breakdown of each component's objectives, expected outcomes and amount of financing allocated.

Table 4 Project components and financing

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
1. Strengthening Climate Risk Reduction and Adaptation Planning at the local level	▪ *Output 1.1 Increased awareness and capacity of communities and local experts on climate risk vulnerabilities assessment and climate smart planning* ▪ *Output 1.2 Strengthened capacity of local authorities and stakeholders to effectively engage in climate risk reduction and adaptation planning* ▪ *Output 1.3 Enhanced monitoring, supervision and safeguard management capabilities, at national, regional and woreda levels*	▪ **Outcome 1:** All target Kebele communities and local authorities have improved capacity and ownership in climate risk reduction and adaptation planning, resulting in well-coordinated and effective climate adaptation strategies integrated in 100% of local development plans.	**733,073**
2. Enhance Water Security, Climate Resilience, and Promote Women's Empowerment	▪ *Output 2.1 Improved access to clean water sources* ▪ *Output 2.2 Improved agricultural water use and reduced climate-related risks* ▪ *Output 2.3 Strengthened skills and participation of women in water management and agriculture*	▪ **Outcome 2** Additional 16,500 households are benefiting from enhanced agricultural and livestock resilience to climate change in project target areas, as measured by improved access to potable water and enhanced irrigation systems.	**4,981,994**
3. Promote climate-smart agriculture and sustainable livestock practices	▪ *Output 3.1: Increased resilience through diverse crop varieties* ▪ *Output 3.2 A sustainable and resilient livestock sector through improved health, increased productivity, and adaptability of the herds* ▪ *Output 3.3 Sustainable land use, protected ecosystems and enhance agricultural productivity* ▪ *Output 3.4 Improved decision-making based on weather information*	▪ **Outcome 3:** Atleast 2,000 women headed households achieve a 20% increase in agricultural productivity and enhanced food security through the implementation of climate-smart agricultural practices and sustainable livestock management systems.	**1,746,843**
4. Climate Smart Livelihood diversification	▪ *Output 4.1 Reduced reliance on a single source of income* ▪ *Output 4.2 Improved income and better market access for community members*	▪ **Outcome 4:** A minimum of 4,000 households demonstrate increased economic stability and climate resilience, evidenced by diversified income sources, reduced dependence on climate sensitive activities and increased participation of gender-responsive income generation activities.	**1,544,688**
▪ 6. Project/Programme Execution cost			**558,490**
▪ 7. Total Project/Programme Cost			**9,565,088**
▪ 8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			**434,240**
▪ **Amount of Financing Requested**			**9,999,328**

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Table 5: Projected Calendar:

Milestones	Expected Dates
Start of Project/Programme Implementation	
Mid-term Review (if planned)	18 months after project commencement
Project/Programme Closing	36 Months after project commencement
Terminal Evaluation	36 Months after project commencement
Milestones	**Expected Dates**
Start of Project/Programme Implementation	
Mid-term Review (if planned)	18 months after project commencement
Project/Programme Closing	36 Months after project commencement
Terminal Evaluation	36 Months after project commencement

PART II: PROJECT/PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

Ethiopia's Climate change vulnerabilities, risks and impacts
Ethiopia faces profound vulnerabilities to climate change, primarily due to its heavy reliance on rain-fed agriculture, which accounts for 42-52% of GDP and employs 80-85% of the population, making smallholder farmers particularly susceptible to erratic weather patterns, soil degradation, and limited access to resources like credit and extension services.[70] Key risks include rising temperatures (0.1-0.25°C per decade, projected to increase by 1.4-5.5°C by 2100), decreasing and variable rainfall, recurrent droughts, floods, and increased pest outbreaks, which exacerbate water scarcity and threaten fragile ecosystems in regions like the Nile Basin and Ethiopian highlands.[71] These factors have led to severe impacts, such as reduced crop yields (e.g., up to 20% losses in staples like teff and sorghum), livestock declines (e.g., 26% herd reductions during droughts), chronic food insecurity affecting 10-38 million people since the 2000s, economic losses (e.g., US$997-1,277 per hectare in revenue drops), and socio-economic challenges including malnutrition, poverty exacerbation, migration, and weakened community resilience, particularly among women-headed households and pastoralists in drought-prone areas like the Rift Valley and southern Ethiopia.[72]

These vulnerabilities and risks shape the design of the project: **Component 1** strengthens local capacity for climate risk reduction and adaptation planning to ensure communities are better prepared for extreme weather events; **Component 2** addresses water insecurity by improving access to clean water, irrigation, and renewable energy solutions; **Component 3** promotes climate-smart agriculture and resilient livestock management to reduce dependence on rain-fed systems and safeguard food security; and **Component 4** diversifies livelihoods, especially for women, to build economic resilience against climate shocks. Collectively, these interventions respond directly to Ethiopia's climate vulnerabilities and aim to safeguard development gains in the face of escalating climate impacts.

Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the local level: Building Awareness, Understanding, and Ownership
This component focuses on empowering communities and local authorities to actively engage in climate risk reduction and adaptation planning. Given Ethiopia's vulnerability to climate change, it is crucial to enhance the capacity of local stakeholders to assess risks, plan responses, and integrate adaptation measures into local development strategies. This component will ensure that communities understand the potential impacts of climate change and are equipped to develop strategies that enhance resilience. As part of the initial project design and planning stage, the project will also conduct a gender analysis to identify the gender dimensions of vulnerability to climate change and develop strategies to address specific gender inequalities, risks and opportunities. This will ensure that there is a good understanding of gender roles, and a disaggregation of women's and men's specific interests, needs, and priorities as they relate to the project to maximise the effective participation of women in project interventions. Empowering stakeholders to take proactive actions towards climate adaptation will lead to more effective and sustainable responses to climate change impacts. The project's collective efforts will contribute to the long-term well-being and resilience of communities and ecosystems in the face of climate challenges.

The main focuses of this component are as follows:
- **Awareness to climate change risks:** To raise awareness and understanding of climate change risks and its potential impacts on communities and ecosystems.
- **Knowledge sharing and capacity building:** To facilitate knowledge sharing and capacity-building activities to enhance climate resilience at the community and local levels.
- **Community engagement:** To promote inclusive and participatory climate risk reduction processes, ensuring ownership and commitment from all stakeholders.
- **Climate adaptation plans:** To develop actionable climate adaptation plans that address the specific needs and vulnerabilities of different regions and communities.

Outputs and Activities:
Output 1.1: ***Increased awareness and capacity of communities and local experts on climate risk vulnerabilities assessment and climate smart planning*** The project will implement a Climate Risk Awareness Campaign aimed at

[70] DERESSA TT, HASSAN RM, RINGLER C. Perception of and adaptation to climate change by farmers in the Nile basin of Ethiopia. *The Journal of Agricultural Science*. 2011;149(1):23-31. doi:10.1017/S0021859610000687
[71] Declan Conway, E. Lisa F. Schipper, Adaptation to climate change in Africa: Challenges and opportunities identified from Ethiopia, Global Environmental Change, Volume 21, Issue 1, 2011,
[72] Demem MS. Impact and adaptation of climate variability and change on small-holders and agriculture in Ethiopia: A review. Heliyon. 2023 Aug 5;9(8):e18972. doi: 10.1016/j.heliyon.2023.e18972. PMID: 37636452; PMCID: PMC10457510.

building a deep understanding of climate change impacts and vulnerabilities within the target communities. Through this campaign, workshops, community meetings, and seminars will be organized to engage local authorities, stakeholders, and the wider community in discussions on regional vulnerabilities and potential adaptation strategies. Public events, such as climate fairs and exhibitions, will be held to foster broad community participation, providing platforms for knowledge-sharing and creating an interactive learning environment. Educational materials, including brochures and visual aids, will be developed to effectively communicate key climate-related information, ensuring that even the most marginalized community members can access and understand adaptation strategies relevant to their context.

In parallel, the project will facilitate Community Engagement and Participatory Vulnerability Assessments to directly involve local populations in identifying their specific climate-related vulnerabilities and adaptive capacity. This process will utilize community knowledge and perceptions, ensuring that the findings reflect the lived experiences of the most vulnerable groups, including women and marginalized populations. Translating previously funded Adaptation Fund guidelines into local languages, the project will ensure that the materials are culturally relevant and accessible. The assessment process will engage local translators, community experts, and language specialists, creating a meaningful, inclusive dialogue. This participatory approach will culminate in a detailed report with key findings, recommendations, and an action plan to implement community-specific adaptation measures, ensuring that local voices drive the climate adaptation efforts.

1.1.1. Climate Risk Awareness Campaign:

The Climate Risk Awareness Campaign is a pivotal activity under Output 1.1, designed to foster a comprehensive understanding of climate change impacts, vulnerabilities, and adaptation strategies within targeted communities. Recognizing that effective climate action starts with informed communities, this campaign will engage a wide range of stakeholders, including local authorities, community members, and vulnerable groups, through a series of workshops, seminars, and information sessions. These events will provide participants with the knowledge needed to assess climate risks specific to their region and understand the importance of climate-smart planning.

The campaign will employ a multi-faceted approach to reach diverse audiences, using educational materials such as brochures, posters, and visual aids, designed to simplify complex climate concepts for easy comprehension. Public events like climate fairs and exhibitions will serve as interactive platforms where communities can not only learn but also engage in knowledge-sharing with experts and peers. These fairs will showcase adaptation strategies, climate-smart technologies, and best practices relevant to local livelihoods, encouraging wider community participation and action. The project will support the following sub-activities.

- Conduct workshops and community meetings to raise awareness about climate change impacts, regional vulnerability, and potential adaptation strategies. Fifty percent of participants in these workshops and meetings will be women and efforts will be made to include other marginalized groups such as youth and persons with disabilities. Facilitators will ensure inclusive and safe environments by considering factors such as appropriate meeting times, locations and childcare support where needed, to enable the full participation of all community members.
- Develop educational materials, brochures, and visual aids that are culturally relevant and accessible to diverse audiences including women, youth, persons with disabilities and non-literate individuals to effectively communicate climate-related information to diverse audiences. Materials will be designed using inclusive language and imagery that reflects the diversity of the community.
- Organize public events, such as climate fairs and exhibitions, that are accessible and inclusive, to engage the wider community in climate discussions and promote knowledge-sharing.

1.1.2. Community Engagement and Participatory Vulnerability Assessments:

The Community Engagement and Participatory Vulnerability Assessments activity is a vital component of Output 1.1, focused on empowering local communities to identify and address their specific climate vulnerabilities and adaptation needs. This activity emphasizes the use of a participatory approach to ensure that community members, particularly marginalized groups such as women and vulnerable populations, are actively involved in the assessment process. By engaging local knowledge and perceptions, the project aims to provide a more accurate and culturally relevant understanding of climate-related risks and the adaptive capacities of the target communities.

The process will begin by translating the Adaptation Fund guidelines into local languages, ensuring that the material is accessible and understandable for community members. The translation team will include individuals fluent in local dialects, community experts, and language specialists to ensure accuracy, cultural sensitivity, and relevance. This step is crucial to ensure that the guidelines resonate with the local population and reflect the cultural and social dynamics of the communities involved. Translators will actively engage with the community to address their preferences, ensuring the process is inclusive and respectful. The participatory nature of this initiative will foster community ownership of the process, enhancing the effectiveness of climate adaptation strategies.

Following the translation, participatory vulnerability assessments will be conducted, involving direct engagement with community leaders, women's groups, and marginalized populations. These assessments will use local knowledge to identify the most pressing climate-related vulnerabilities, risks to livelihoods, and impacts on local ecosystems. Through interactive sessions, communities will map out their adaptive capacity, identifying potential strategies to address these risks. This inclusive approach ensures that all voices are heard, particularly those often overlooked in decision-making processes.

The entire process will be documented with images and audio recordings, creating a comprehensive record of the community's participation. This documentation will be shared with stakeholders, including local governments, NGOs, and other relevant actors, to ensure transparency and continuity. After the assessments, a detailed report will be prepared, summarizing the findings, key vulnerabilities, and recommendations. The report will also outline an action plan for implementing community-specific adaptation measures. Collaborating with local NGOs and community-based organizations, this activity will build long-term capacity and foster sustained community engagement and empowerment in climate adaptation efforts.

- Conducting a gender-responsive vulnerability assessment at the local level using community knowledge and perceptions. Ensure that 50% of participants are women and include representation from female headed households, youth, and other marginalized groups.
- Identifying climate-related vulnerabilities, risks, and impacts on local ecosystems and livelihoods of all community members, with particular attention on how these challenges disproportionately affect vulnerable and underrepresented groups including women and marginalized communities.
- Mapping out the community's adaptive capacity and potential strategies through an inclusive process that ensures the voices of women, girls, female headed households and other marginalized group are heard.
- Engage with community leaders, women's groups, and marginalized populations to ensure inclusivity and representation in the assessment process.
- Translate the guidelines based on the feedback received during the community consultation.
- Prepare a detailed gender disaggregated report on the vulnerability assessment, including key findings and recommendations and a gender-responsive action plan to implement community-specific adaptation measures in consultation with local stakeholders.
- Collaborate with local NGOs and community-based organizations to foster meaningful engagement and empowerment.

Output 1.2: Strengthened capacity of local authorities and stakeholders to effectively engage in climate risk reduction and adaptation planning. This output focuses on building the technical and operational capacities of local authorities and stakeholders to effectively engage in climate risk reduction and adaptation planning. Through a series of capacity-building workshops, the project will equip participants with the necessary knowledge and skills to analyze climate data, assess risks, and design effective adaptation strategies. Specialized training sessions will be organized on topics such as climate risk assessment methodologies, adaptation planning tools, and climate-resilient practices, including sustainable agriculture and disaster preparedness. These workshops will also offer technical assistance to ensure that participants can confidently apply the strategies in their respective sectors. By enhancing the skills of key actors, this activity aims to foster a well-prepared and technically capable group of local leaders who can effectively manage climate-related risks.

The second aspect of this output involves mainstreaming climate adaptation into local development plans. In collaboration with local governments, the project will work to ensure that climate resilience is integrated across key sectors such as agriculture, water resources, infrastructure, and disaster management. This integration will be achieved by identifying opportunities for embedding climate adaptation into existing policies and development plans. Recommendations will be made based on scientific evidence and stakeholder feedback, ensuring that proposed strategies are both feasible and locally relevant. By embedding climate adaptation into official policies and development frameworks, the project ensures that resilience becomes a core aspect of sustainable development, reducing long-term vulnerability to climate change.

1.2.1. Capacity-building Workshops:

The Capacity-building Workshops are designed to equip local authorities and stakeholders with the necessary technical expertise to effectively engage in climate risk reduction and adaptation planning. These workshops will offer specialized training sessions on essential topics such as climate data analysis, risk assessment methodologies, and the use of adaptation planning tools. By enhancing participants' understanding of these topics, the workshops aim to build their capacity to assess climate risks and incorporate climate adaptation into their decision-making processes. The training will provide local authorities and stakeholders with the practical skills to analyze regional climate risks and vulnerabilities, allowing them to make informed, evidence-based decisions.

In addition to technical training, the workshops will focus on promoting climate-resilient practices that can be applied in sectors such as agriculture and disaster preparedness. Participants will be introduced to techniques such as sustainable agriculture, water conservation, and disaster preparedness, which are crucial for mitigating the impacts of climate change. Through hands-on sessions and technical assistance, participants will gain practical knowledge that can be applied in their local contexts to build more resilient communities. This component will not only empower participants to develop and implement climate adaptation strategies but also provide ongoing technical support to ensure the successful execution of these plans in the field. By fostering long-term capacity, these workshops will contribute to building a strong local foundation for climate resilience.

- Organize specialized training sessions for local authorities and key stakeholders ensuring, where possible, 50% participation by women, including all relevant women experts on climate data analysis, risk assessment methodologies, and adaptation planning tools.
- Facilitate workshops on climate-resilient practices, such as sustainable agriculture techniques, water conservation, and disaster preparedness with equal opportunities for women and marginalized groups to participate ad lead.

- Provide technical assistance and support to enhance the skills of participants with a focus on empowering women and marginalized groups in effectively implementing adaptation strategies.

1.2.2. Mainstreaming Inclusive Climate Adaptation into development plans:

The Mainstreaming inclusive Climate Adaptation into Development Plans activity focuses on integrating climate resilience measures into local governance and development frameworks to ensure long-term sustainability and equitable adaptation to climate change. This initiative will work closely with local governments and institutions to embed gender-responsive and socially inclusive climate adaptation considerations into policies and development plans, particularly in critical sectors such as agriculture, water resources, infrastructure, and disaster management. By ensuring that climate adaptation is at the forefront of planning processes, the project aims to build resilient communities that can effectively mitigate and respond to the impacts of climate change.

The project will engage with policymakers including those focusing on women and social affairs to identify opportunities for integrating climate resilience measures into local and regional development strategies. Through collaborative discussions, gender balanced workshops, and inclusive consultations, the project will highlight the importance of embedding climate considerations in planning, providing practical solutions tailored to each sector. Based on scientific evidence and stakeholder input, the project will produce policy briefs and recommendations to guide the adaptation of existing policies and inform the development of new ones. This process will ensure that adaptation measures are not only context-specific but also align with broader regional and national strategies. The overall aim is to create a robust policy environment where inclusive climate adaptation becomes a core element of sustainable development, ensuring that communities are better prepared to withstand future climate challenges.

- Integration of inclusive climate adaptation considerations into local government policies and development plans ensuring that the different needs and contributions of women and men are addressed.
- Collaborate with policymakers to identify opportunities for incorporating climate resilience measures into local plans, such as agriculture, infrastructure, and land use.
- Provide policy briefs and recommendations based on scientific evidence and inclusive stakeholder input.

Output 1.3: Enhanced monitoring, supervision and safeguard management capabilities, at national, regional and woreda levels.

To ensure the successful implementation and oversight of the project's four components, a comprehensive project management, monitoring, and supervision system will be established at multiple administrative levels—national, regional, and woreda. A dedicated project management team will operate at the CRGE Facility and CRGE units across key ministries, with roles cascading down to regional and local levels. These teams will coordinate closely to ensure smooth execution and effective communication. Regular coordination meetings with stakeholders will be essential for fostering alignment, while specific task forces, such as water management committees and agricultural task forces, will be established to oversee critical areas such as water source development, infrastructure, crop diversification, and livestock management. Additionally, community engagement sessions will be a cornerstone of the project, maintaining transparency and providing regular updates on progress. The monitoring and evaluation (M&E) framework will be critical in assessing the project's impact, with regular progress assessments for key activities like climate awareness campaigns, agricultural workshops, and livelihood diversification efforts. The M&E system will also include baseline and post-intervention assessments to track improvements in clean water access and the adoption of climate-smart agricultural practices. Feedback from communities will guide ongoing adjustments to improve the project's effectiveness.

In addition to project management and monitoring, a robust environmental and social safeguard management system will be implemented to address potential risks. The project will formulate and enforce safeguard policies to ensure that environmental and social concerns are systematically addressed throughout the project lifecycle. This will include capacity-building initiatives to equip staff and stakeholders with the necessary skills for effective safeguard management, along with impact assessments to identify potential environmental and social risks. When risks are identified, corrective actions will be swiftly implemented to mitigate any adverse effects, ensuring that the project adheres to best practices for sustainability and social responsibility. By focusing on safeguard management, the project aims to minimize negative impacts on both the environment and the community, fostering long-term, positive outcomes in alignment with national and international standards.

1.3.1 Project Management, monitoring and supervision

Effective project management is pivotal for the successful implementation of the project's four components. A dedicated project management team will be established at the CRGE Facility and CRGE units at the line Ministries and cascaded at the regional and local level, with well-defined roles and responsibilities, ensuring streamlined coordination and communication. Regular coordination meetings with identified stakeholders will be conducted to foster alignment and facilitate effective information exchange. Specific measures, such as forming water management and irrigation users committee and agricultural task forces, will be implemented to oversee key aspects like water source development, infrastructure upgrades, crop diversification, and livestock management. Additionally, inclusive community engagement sessions will be scheduled to maintain open communication channels and provide regular updates on project progress. This comprehensive project management approach aims to create a structured framework for successful execution and collaboration across all project components. The monitoring and evaluation framework will play a crucial role in gauging the project's impact and ensuring its effectiveness. Regular progress

assessments will be conducted for activities like awareness campaigns, workshops, and vulnerability assessments. Baseline and post-intervention assessments will be employed to monitor inclusive participation as well as the improvement of clean water access and the efficiency of water distribution systems. For agriculture and livestock management, continuous monitoring of the adoption of climate-resilient practices and their impact on productivity will be carried out. Similarly, livelihood diversification activities will undergo regular evaluations, measuring success through income generation and market access. Integrated monitoring and reporting systems will provide a holistic overview, incorporating both qualitative and quantitative indicators. The feedback mechanism will be a vital component, gathering insights from communities to facilitate ongoing adjustments and improvements.

- Set up a project management team at the CRGE Facility and CRGE units at various governmental levels (line Ministries, regional, and local) including representatives from women and social affair offices at different levels, with clearly defined roles and responsibilities.
- Conduct regular coordination meetings with identified stakeholders and organize community engagement sessions , ensuring 50% participation by women, including female headed households and other marginalized groups to maintain open communication channels and provide project updates.
- Design and implement a robust, gender-responsive M&E system that includes regular progress assessments, (including those on the GAP) baseline and post-intervention evaluations, and an integrated reporting system with both qualitative and quantitative indicators and includes gender disaggregated data that also tracks the involvement of female-headed households and other marginalized groups.

1.3.2 Environment Social Safeguard Management

The implementation of comprehensive environmental and social safeguard measures encompasses the formulation and enforcement of robust safeguard policies, the establishment of a systematic monitoring framework, and the proactive addressing of potential environmental and social risks throughout the project's lifecycle. Activities include;

- Capacity-building initiatives focused on effective safeguard management,
- Impact assessments to ascertain potential ramifications,
- Implementation of corrective actions to mitigate and address identified environmental and social concerns.

Through these measures, the project aims to ensure responsible and sustainable practices, minimizing adverse effects on the environment and fostering positive social impacts in alignment with established safeguard standards.

Component 2: Enhance Water Security, Climate Resilience, and Promote Women's Empowerment

Water scarcity is one of the most pressing issues in rural Ethiopia, profoundly affecting the livelihoods of these communities, especially women. Limited access to safe and reliable water sources contributes to a wide range of problems, including health risks from waterborne diseases and constraints on agricultural productivity. Women, who are primarily responsible for water collection and management, bear the brunt of these challenges, spending significant time and effort on water-related activities. This, in turn, limits their participation in productive activities, reinforcing existing gender inequalities.

Moreover, the agricultural sector in rural Ethiopia, which is highly dependent on rain-fed systems, is increasingly vulnerable to the unpredictable impacts of climate change, such as erratic rainfall and prolonged droughts. These climatic challenges directly affect food security and the economic stability of rural households, exacerbating the already difficult conditions for many.

To tackle these interconnected challenges, Component 2 adopts an integrated approach that addresses water security, climate resilience, and women's empowerment in tandem. The project will improve access to clean and reliable water sources by developing and rehabilitating water infrastructure, including decentralized systems like solar-powered pumps and small-scale irrigation schemes. These interventions will not only ensure water availability for domestic and agricultural use but also strengthen community resilience to climate-induced water scarcity. By integrating climate resilience measures, the project aims to reduce agricultural dependence on erratic rainfall, promoting water-efficient farming techniques and the use of drought-tolerant crops. This will help stabilize food production, mitigate the economic impacts of climate variability, and enhance overall community resilience. At the heart of this component is the empowerment of women, ensuring their active participation in water resource management and decision-making processes related to agriculture. Women will be provided with training and leadership opportunities to manage water resources and take on key roles in community-level climate adaptation efforts.

A key feature of this approach is collaboration with local governments, NGOs, and community-based organizations, ensuring that interventions are tailored to local needs and cultural contexts. The project will engage a diverse range of stakeholders, from policymakers to grassroots organizations, in the design and implementation of water management and climate adaptation strategies. By pooling local knowledge and resources, the project will promote sustainable and community-led solutions. Through this comprehensive and collaborative effort, Component 2 seeks to deliver transformative change. Water security will be enhanced, agricultural practices will become more resilient to climate risks, and women will emerge as empowered leaders in their communities. These improvements will not only address immediate needs but also lay the foundation for long-term sustainability and resilience, ensuring that rural communities in Ethiopia are better equipped to navigate the challenges of a changing climate.

The main aims of this component are as follows:

- **Enhance inclusive Water Security**: Improve access to safe and reliable water sources for rural communities, reducing their vulnerability to water scarcity.

- **Reduce Climate Risks in Agriculture**: Strengthen the resilience of agricultural practices against climate uncertainties, ensuring food security and economic stability.
- **Empower Women**: Promote gender equality and women's active participation in water management, agriculture, and decision-making processes.

Outputs and Activities:

Output 2.1 Improved access to clean water sources

The project aims to tackle the urgent issue of water scarcity that plagues rural communities in Ethiopia by significantly improving access to clean and reliable water sources. These communities, particularly women and children, face tremendous challenges in accessing safe water, leading to health crises, economic disruptions, and exacerbated gender inequality. Through comprehensive hydrological assessments, the project will identify the most viable water sources such as wells, boreholes, and springs in the targeted regions. These sources will be developed and protected from contamination, ensuring sustainable access to safe water for both drinking and agricultural use. This initiative will not only address water security but will also alleviate the immense burden on women, who are primarily responsible for water collection, and improve overall community health by reducing the prevalence of waterborne diseases. A critical aspect of this initiative will be the training of community members in sustainable water management, empowering them with the skills needed to protect and maintain water sources, ensuring that these vital resources are preserved for future generations.

In addition to water source development, the project will focus on upgrading and expanding water infrastructure to ensure efficient and equitable water distribution. By constructing storage tanks and expanding distribution networks closer to households, the project will make water access more equitable, reducing the time and effort required to collect water. Promoting the use of gravity-fed systems will further enhance efficiency by reducing energy consumption. The formation of Inclusive Water Users Associations will be a key component, empowering communities to manage their own water systems and maintain their infrastructure. These associations will be responsible for collecting user fees, ensuring that the systems remain operational, and managing necessary repairs. To support this, the project will provide spare parts and technical training to local technicians and operators, enabling them to conduct routine maintenance and troubleshoot issues as they arise. Furthermore, the installation of Decentralized Renewable Energy (DRE) Systems, such as solar-powered water pumps, will provide a sustainable solution for powering water supply systems in areas without access to the national grid. These systems will offer a reliable and environmentally friendly method for ensuring water access, reducing reliance on labor-intensive methods and avoiding carbon emissions. By integrating renewable energy with gender-responsive into water governance and infrastructure, the project will contribute to environmental sustainability and advance women’s empowerment while ensuring that communities have continuous access to the water they need for both domestic and agricultural use, ultimately promoting long-term resilience and development.

2.1.1 Water Source Development and Protection:

The targeted areas often struggle with inadequate water sources, affecting their daily lives and agricultural activities. The Water Source Development and Protection activity focuses on alleviating the chronic water scarcity in rural Ethiopia by identifying and developing sustainable water sources, with the goal of improving both daily life and agricultural productivity. The project recognizes that many targeted areas suffer from inadequate access to clean and reliable water, which not only impedes household water needs but also undermines agricultural activities crucial for community livelihoods. Through detailed hydrological assessments, and inclusive stakeholder consultation the project will identify potential water sources, such as wells, boreholes, and springs, that can be developed to provide a sustainable supply of clean water.

Women, from both male and female headed households, will be actively involved in the design, decision-making and implementation of water infrastructure. This will be ensured through their participation in consultations during the planning phase to understand gender-specific water needs and preferences for energy access. To ensure accessible and secure locations are selected, Issues such as proximity to homes, paths frequently used by women, safety etc. will be taken into consideration during participatory mapping with women and if possible, girls. These sources will be strategically selected based on factors such as proximity to households, agricultural needs, and environmental sustainability. Once identified, water source development projects will be initiated, with the construction of wells, boreholes, and spring development being prioritized in the most vulnerable areas. By providing consistent access to safe water, the project will alleviate the burdens of water collection, particularly for women and children, and reduce the risks of waterborne diseases, which are prevalent due to unsafe water sources.

In addition to the development of these water sources, a major focus of the activity is ensuring the protection and sustainable management of the resources to prevent contamination and overuse. Protective measures will be implemented, including fencing and other physical barriers, to safeguard water sources from contamination by livestock and other pollutants. Moreover, the project will establish community-led initiatives to monitor water use, ensuring that extraction rates are controlled and sources are not depleted. To enhance sustainability, the project will offer training to community members with equal participation of women on best practices for water management, equipping them with the skills necessary to maintain the sources and manage water distribution effectively. This training will also emphasize the importance of conservation and the responsible use of water, especially in light of the increasing impacts of climate change. By fostering local ownership and management of water resources, the project aims to build long-term resilience, ensuring that these water sources remain viable for future generations. Through this comprehensive

approach, the activity will not only secure access to safe and clean water but also promote improved health, food security, and community empowerment in the face of water scarcity challenges.

- **Conduct comprehensive hydrological assessments** that involves inclusive stakeholder consultations to identify potential water sources, including wells, boreholes, and springs, considering factors such as groundwater availability, proximity to communities, and agricultural needs.
- **Develop water sources** by implementing infrastructure projects, including the construction and rehabilitation of wells, boreholes, and spring development, ensuring they meet the water demand of the community and agricultural use.
- **Install protective measures** to safeguard water sources from contamination and over-extraction, such as fencing, source protection structures, and community monitoring systems to maintain water quality and availability.
- **Train community members in sustainable water management**, ensuring 50% participation of women from both male- ad female-headed households, focusing on maintenance, responsible water usage, and water conservation practices to ensure long-term sustainability of the water sources.
- **Establish water governance structures**, such as Water Users Associations or local water management committees that equally participate women, to oversee the equitable distribution and protection of water resources, including the collection of user fees for maintenance.
- **Raise community awareness** on the importance of water conservation, hygiene practices, and the protection of water sources through local campaigns, workshops, and school outreach programs with targeted outreach to women and girls including female-headed households to ensure inclusive participation and voice.
- **Monitor water quality and usage** through regular assessments and community feedback mechanisms, ensuring the infrastructure remains functional and sustainable over time.
- **Introduce low-cost water purification techniques**, such as household-level filters or chlorination kits, to improve water quality and safety for drinking purposes ensuring equitable involvement of female headed households.

2.1.2 Efficient Water Infrastructure Upgrade and expand water supply systems for efficient distribution including sustainability options:

To mitigate water scarcity, upgrading water supply systems is essential. This activity aims to significantly enhance water distribution systems in rural communities by upgrading and expanding existing infrastructure to provide reliable, equitable access to water for both household and agricultural use. One of the core objectives is to address the current inefficiencies in water distribution that often lead to inequitable access, with many households and farms struggling to secure adequate water supplies. By constructing storage tanks and developing distribution networks closer to households, prioritizing accessibility for female-headed households, who often face greater barriers to water access due to social and economic exclusion. By doing so, the project will reduce the time and labor required for water collection, a burden that disproportionately affects women and girls. The new water supply systems will ensure a steady flow of water that meets the needs of the entire community, including critical agricultural applications that are highly vulnerable to water scarcity. To promote energy efficiency and cost-effectiveness, the project will implement gravity-fed systems, which utilize natural elevation and terrain to distribute water without relying on electricity, thereby lowering operational costs and environmental impact. These systems are particularly suited to rural regions where electricity access is limited or unreliable, making them a sustainable solution for long-term water management.

A vital aspect of this activity is the establishment of Water Users Associations (WUAs), which will take on the responsibility of managing the newly developed infrastructure. These bodies will be structured to ensure equal participation and leadership by women, enabling them to shape decisions about water and infrastructure management. The associations will be equipped with the knowledge and tools necessary to ensure the effective operation and maintenance of the water supply systems. They will oversee the collection of user fees to fund ongoing maintenance and repairs, ensuring the financial sustainability of the infrastructure. Additionally, the project will provide capacity-building sessions for local technicians and operators giving priority to women, training them in routine maintenance, troubleshooting, and system repairs. By building local capacity, the project aims to create a sustainable system in which communities can independently manage and maintain their water resources. To further enhance sustainability, the project will supply spare parts sufficient to maintain the systems for at least two years, minimizing the risk of breakdowns and service interruptions. Collaborative efforts with local communities, including involvement in the construction and maintenance processes, will foster local ownership of the systems, ensuring long-term success. Additionally, community awareness and training sessions will be conducted to inform households targeting 50% women participation including those from female headed households about the benefits of Decentralized Renewable Energy (DRE) systems, which will be integrated into the water infrastructure. This will provide a dual benefit of addressing both energy and water needs, while reducing the community's reliance on non-renewable energy sources. Through this multifaceted approach, the project will ensure that water distribution systems are not only efficient and equitable but also sustainable, resilient, and community-driven. The following sub-activities will be implemented under this activity

- Construct storage tanks and distribution networks to provide water closer to households, ensuring female headed households are given priority.
- Promote gravity-fed systems to reduce energy consumption.

- Conduct awareness and training sessions, with 50% participation of women, for the community on the benefits and operation of DRE systems and establish Inclusive Water Users Associations, with equal representation and leadership role for women, to manage the systems and collect user fees.
- Train local technicians and operators to handle routine maintenance and troubleshoot issues
- Provision of spare parts good enough for at least two years.
- Promote inclusive construction and maintenance processes, where community members – including women, are engaged not just as beneficiaries but as active contributors and decision-makers..

2.1.3 Implementation of Gender Responsive Decentralized Renewable Energy (DRE) Systems:
The implementation of Decentralized Renewable Energy (DRE) Systems will address the urgent need for reliable energy and water access in rural communities where conventional electricity grids are either non-existent or unreliable. These solar-powered systems will provide a sustainable and cost-effective solution to operate water pumps for both potable water supply and irrigation, directly tackling the critical issues of water security and energy access. The project will identify optimal locations for the installation of solar panels and water pumps, ensuring that the systems are strategically positioned to maximize solar potential and serve the greatest number of households and farms, ensuring fair benefit across diverse households, especially those headed by women. By converting solar energy into electricity, DRE systems will reduce the dependency on labor-intensive water collection methods, particularly benefiting women and girls, who typically bear the burden of this task. Additionally, the use of renewable energy will significantly reduce carbon emissions and contribute to climate mitigation efforts. Women, from both male and female headed households, will take active roles in the design, decision-making and implementation of DRE systems. This inclusive approach will be implemented through structured consultations and engagement sessions during the planning and design phases, facilitating women's voices in defining system features, siting priorities, and access mechanisms.
This investment will enhance the resilience of communities by ensuring equitable access to clean water for drinking and productive agricultural use, improving food security and reducing waterborne health issues. The project will procure the necessary equipment, including solar panels, inverters, and water pumps, and ensure the installation follows industry standards and safety protocols to guarantee efficient and long-term operation. Training will be provided to local technicians and community members to maintain and manage the systems, fostering local ownership and operational sustainability. By integrating renewable energy solutions into the water infrastructure, the project will not only provide immediate access to essential resources but also contribute to the long-term economic and environmental resilience of the communities. The following sub-activities will be implemented.

- **Conduct site assessments** to identify optimal locations for solar panel installations and water pump sites, taking into account equitable access, solar potential, water demand, and local topography for efficient energy and water distribution.
- **Design DRE system infrastructure** tailored to the needs of each community, incorporating solar energy capture systems, storage solutions, and water distribution networks to maximize efficiency and sustainability.
- **Procure high-quality DRE equipment**, including solar panels, inverters, batteries, and water pumps, ensuring compliance with industry standards, durability, and suitability for local environmental conditions.
- **Install DRE systems** at designated sites, following best practices for installation to ensure the longevity and optimal performance of the solar-powered water pumping systems.
- **Train local technicians and operators** on system installation, operation, and maintenance, providing hands-on guidance to build local expertise and ensure sustainability with a focus on recruiting and capacitating women in all technical roles.
- **Develop operational manuals** and provide technical support to ensure that local technicians and operators can troubleshoot, repair, and maintain the DRE systems independently.
- **Conduct equitable community education programs** ensuring meaningful participation of women to inform households and farmers about the benefits of using renewable energy for water access, emphasizing reduced energy costs, improved water security, and environmental sustainability.
- **Establish long-term maintenance and monitoring plans**, ensuring that spare parts are available, and local operators are equipped to manage routine maintenance and address any technical issues that may arise.
- **Monitor the performance and environmental impact** of DRE systems, tracking energy usage, equitable water access improvements, and reductions in carbon emissions to assess the overall benefits and sustainability of the project.

2.2 Output: Improved agricultural water use and reduced vulnerability to climate related risks
This output focuses on addressing the challenges faced by rural communities due to water scarcity and the increasing impacts of climate change on agriculture. The project will introduce small-scale irrigation systems, such as drip and sprinkler irrigation, designed to optimize the use of limited water resources. These systems will enable farmers to maintain crop productivity, even during periods of erratic rainfall and droughts, by delivering water directly to the root zone, minimizing wastage through evaporation and runoff. Farmers will be trained in water-efficient irrigation practices and optimal irrigation scheduling to maximize the effectiveness of these systems, ensuring that water is used judiciously, particularly in water-stressed regions.
In addition to the irrigation systems, the project will invest in improving water storage infrastructure, such as building and upgrading storage tanks and reservoirs, which will allow farmers to store water during periods of surplus for use during dry spells. This infrastructure will not only support irrigation but also enhance the overall climate resilience of

agricultural activities, safeguarding crops from the impacts of water shortages. By promoting water-use efficiency and building the capacity of farmers to manage their water resources, the project will help reduce vulnerability to climate-related risks, improve food security, and contribute to the long-term sustainability of agricultural practices in rural Ethiopia. This comprehensive approach ensures that rural farming communities are better equipped to withstand the challenges posed by a changing climate, leading to more stable and productive livelihoods.

2.2.1 Small-Scale Irrigation and Water Use Efficiency

The project seeks to address water scarcity and enhance agricultural productivity by introducing gender responsive small-scale irrigation systems, including drip and sprinkler irrigation, in rural communities. These systems are designed to optimize water use, delivering water directly to crops with minimal wastage through evaporation or runoff. Drip irrigation, in particular, allows water to reach the root zones of plants, maximizing efficiency and increasing crop yields, even in regions prone to drought and erratic rainfall. By constructing these irrigation systems from storage tanks to farmlands, the project will ensure a reliable, equitable and consistent water supply for agricultural purposes, enabling farmers to sustain production during dry seasons.

The success of these irrigation systems will be further enhanced through inclusive farmer training programs focused on water-efficient practices and optimal irrigation scheduling. Farmers will be equipped with the knowledge and skills to manage their water resources effectively, applying water at the right time and in the correct quantities to meet crop needs without wasting valuable water supplies. These training programs will ensure that irrigation systems are used to their full potential, improving water productivity and reducing vulnerability to climate-related risks, such as water shortages.

Moreover, the project will also invest in upgrading water storage infrastructure, which is critical for capturing and storing water during periods of surplus and making it available during dry periods. This will help farmers better manage seasonal variations in water availability and reduce their reliance on erratic rainfall. By combining advanced irrigation technologies, farmer capacity building, and improved water storage, the project will significantly enhance the resilience of agricultural systems in rural communities, contributing to food security, income generation, and the long-term sustainability of farming livelihoods in the face of climate change. The following sub-activities will be implemented under this activity.

- Identify and assess suitable farmlands for the installation of drip and sprinkler irrigation systems, based on crop types, water needs, and soil conditions ensuring that land owned or cultivated by female headed households and other marginalized groups is prioritized.
- Construct and install small-scale irrigation systems, including drip and sprinkler systems, connecting them to storage tanks and ensuring proper coverage of agricultural plots.
- Conduct farmer training sessions on water-efficient irrigation practices and optimal scheduling, focusing on how to use the systems effectively and minimize water wastage. Ensure women and men are equally represented and that sessions are scheduled at times and locations convenient for all. Use gender-sensitive training materials and include female trainers where possible.
- Upgrade and expand water storage infrastructure, such as constructing storage tanks or reservoirs to capture and store water for agricultural use during dry periods. Involve women in the design and planning stages to ensure infrastructure addresses their specific water access challenges.
- Monitor and evaluate the effectiveness of the installed irrigation systems and farmer practices, ensuring they contribute to improved water efficiency, crop yields, and climate resilience. Ensure collection of sex-disaggregated data and include women in participatory evaluation teams.

Output 2.3: Strengthened skills and participation of women in water management and agriculture.

This output seeks to transform the role of women in water management and agriculture by equipping them with the necessary skills and fostering their participation in decision-making processes. Traditionally, women have been marginalized in these areas, limited to labor-intensive roles without significant influence. Through targeted capacity-building workshops, the project will provide women with training in modern water management techniques, sustainable agricultural practices, and leadership. These skills will enable women to not only improve productivity but also take on leadership roles in their communities. The establishment of women-led community groups will ensure that women have a structured platform to influence decisions related to resource management, thereby promoting gender equity. By creating these opportunities, the project will empower women to contribute meaningfully to their communities' climate resilience and food security strategies.

The project will also launch gender-responsive awareness campaigns to address entrenched gender norms and promote broader acceptance of women’s participation in water management and agriculture. These campaigns will engage men and community leaders as advocates for gender equality, recognizing that lasting change requires the active involvement of all members of society. By highlighting women’s successes and showcasing their contributions to improved water and agricultural systems, the project aims to change community perceptions, encouraging a more inclusive environment. The combined efforts of capacity-building, the formation of women-led groups, and societal awareness campaigns will result in a stronger, more inclusive approach to sustainable development, where women are key stakeholders in the management of vital resources.

- **Organize and deliver training sessions** focusing on modern water management techniques, sustainable agricultural practices, and leadership skills to empower women in these sectors.

- **Create and support structured platforms** for women to influence decisions related to resource management, promoting their active participation and leadership in community affairs.
- **Develop and implement community-wide campaigns** to address entrenched gender norms and promote acceptance of women's participation in water management and agriculture.
- **Organize targeted outreach and involvement activities** to enlist men and community leaders in supporting and promoting gender equality in water management and agricultural practices.

2.3.1 Women-Centric Capacity Building:
This activity aims to address the historical marginalization of women by equipping them with critical skills in water management, agriculture, and leadership, empowering them to take on more prominent roles in their communities. Through tailored workshops and training sessions, women will gain technical knowledge in areas such as irrigation management, crop diversification, and sustainable resource use. These sessions will also include leadership training, enabling women to step into influential positions within their communities, challenging traditional gender norms. In addition, the project will facilitate the formation of women-led community groups, providing women with a structured platform where they can collectively engage in decision-making processes related to water and agricultural initiatives. By positioning women as active leaders in community resource management, this activity not only boosts their personal agency but also strengthens the community's ability to manage climate-related risks. The project recognizes that increased female participation in resource management leads to more effective and sustainable outcomes, especially in areas like water conservation and agricultural resilience. This approach will be supported by evidence from success stories, demonstrating the positive impact of women-led initiatives in other regions. By fostering women's leadership and technical skills, the project ensures that women are not only participants but also decision-makers in the future sustainability and resilience of their communities. The following sub-activities will be implemented.

- **Deliver targeted workshops** that focus on practical training in areas such as water conservation techniques, climate-resilient agricultural practices, and conflict resolution, paired with leadership development modules that empower women to take on decision-making roles.
- **Establish women-led community groups** for water and agricultural initiatives, ensuring these groups have access to resources and support networks to drive local projects and influence policy decisions.
- **Facilitate mentorship and peer-learning programs**, connecting women with successful female leaders and experts to enhance skills, share best practices, and foster confidence in taking leadership roles within the community.
- **Organize community engagement sessions** to integrate women's leadership into broader community decision-making processes, ensuring that women's voices are considered in local governance structures and resource management strategies.

2.3.2 Gender-Responsive Awareness Campaigns:
This activity focuses on fostering gender equality by challenging traditional gender norms and promoting women's active participation in water management and agriculture through targeted awareness campaigns. The campaigns will be designed to engage both men and women, as well as community leaders, in advocating for women's leadership and contributions in these sectors. By emphasizing the importance of gender equality in resource management, the campaigns will help shift societal perceptions and create a more inclusive environment where women's voices are valued. Special attention will be given to involving men as allies, ensuring their support for women's participation in decision-making processes. To reinforce these efforts, the project will celebrate and showcase success stories of women who have made significant achievements in water and agriculture, demonstrating the positive impact of gender inclusion. By combining awareness-raising with active community engagement, this activity aims to promote long-term attitudinal and behavioural changes that support gender equity in resource management and development.

- **Design and launch targeted awareness campaigns** that highlight the importance of gender equality in water management and agriculture, focusing on the positive impact of women's participation in decision-making and resource management.
- **Engage men, community leaders, and influential stakeholders** to advocate for gender equality, positioning them as allies in promoting women's active involvement and leadership in water and agricultural sectors.
- **Host community dialogue sessions** to facilitate open discussions on traditional gender norms, challenge existing barriers to women's participation, and create a supportive environment for change.
- **Showcase and celebrate success stories** of women who have made significant achievements in water and agriculture through community events, social media platforms, and local media outlets to inspire broader societal acceptance of gender equity.

Component 3: Promote climate-smart agriculture and sustainable livestock practices
Climate change poses significant challenges to agriculture in rural Ethiopia, impacting food security, livelihoods, and the environment. To address these challenges, this component outlines a comprehensive strategy for implementing gender responsive climate-smart agriculture practices that enhance agricultural resilience and boost productivity. By combining adaptive techniques with inclusive and sustainable approaches, the project will promote more resilient farming systems, mitigate climate risks, and support sustainable and equitable development in rural communities.
Key activities include promoting climate-resilient crops and diversified farming systems that are both environmentally sustainable and socially inclusive. The project will work with agricultural experts, research institutions, and local

knowledge holders including active participation from women farmers, to identify crops suited to the local environment and resistant to climate stresses like drought and pests. Farmers will be trained in conservation agriculture techniques- such as minimal soil disturbance and crop rotation- that improve soil health, water retention, and long-term productivity. Community seed banks will ensure continued access to climate-adaptive seeds, supporting biodiversity and enhancing the resilience of farming systems.

The project will also focus on fortifying livestock production through the introduction of drought-tolerant forage seeds and advanced livestock management practices. In drought-prone regions, resilient forage varieties will provide reliable livestock feed, reducing dependence on water-intensive crops. Training on forage development and livestock husbandry will equip farmers with the skills to maintain healthier herds, ensuring food security and economic stability. Sustainable land use and ecosystem protection are central to this effort. Multipurpose nurseries will produce forage, tree, crop, and horticulture seedlings, supporting agro-biodiversity and providing diversified income sources especially for women. Afforestation and reforestation initiatives will rehabilitate degraded landscapes, combat soil erosion, and enhance carbon sequestration. Soil and water conservation techniques, such as terracing and check dams, will be implemented to address land degradation and manage water resources, increasing overall agricultural productivity.

To enhance climate adaptation, localized weather information systems will be developed. A mobile alert system will provide real-time weather forecasts and advisories to farmers and herders, helping them plan for unpredictable weather. By delivering this information in local languages, the project will empower communities to make informed decisions about planting, harvesting, and livestock management, reducing the impact of climate-related hazards.

Through these targeted activities, the livelihoods of rural farmers will be improved while contributing to broader climate change mitigation efforts. Collaborative partnerships with local communities, governmental bodies, NGOs, and agricultural experts will ensure the successful implementation of these initiatives. Ultimately, the integration of climate-smart practices will foster a resilient, productive, and sustainable agricultural sector in rural Ethiopia.

The main areas of focus for this component are as follows:

- **Promoting Climate-Resilient Crops & Farming Systems:** Introduce climate-adaptive crops and sustainable agricultural practices such as conservation agriculture, crop diversification, and community seed banks to enhance resilience against climate stresses.
- **Strengthening Livestock Resilience:** Implement drought-tolerant forage seeds and advanced livestock management techniques to improve livestock health and productivity in the face of droughts and changing weather patterns.
- **Sustainable Land & Ecosystem Management:** Promote land rehabilitation through afforestation, reforestation, and soil and water conservation practices, as well as establish multipurpose nurseries to support agro-biodiversity and enhance soil health.
- **Enhancing Climate Adaptation through Weather Information Systems:** Provide localized, real-time weather information via mobile alerts to help farmers and herders make informed decisions on agricultural and livestock activities, reducing the impact of climate-related risks.
- **Inclusive Collaboration & Capacity Building:** Foster partnerships with local communities, experts, and governmental bodies, while delivering gender inclusive training farmers in climate-smart agriculture and livestock practices to ensure sustainable development and increased resilience.

Outputs and Activities:

3.1 Output: Increased resilience through diverse crop varieties.

This output focuses on empowering farming communities to adapt to changing climatic conditions by promoting climate-resilient crop varieties and diversified farming systems. The project will collaborate with agricultural experts, research institutions, and local indigenous knowledge holders to identify and promote crop varieties that are not only suited to the local environment but also resistant to pests, drought, and other climate-related stresses. Through inclusive capacity-building workshops and hands-on field demonstrations, farmers will be trained in the cultivation of these crops, focusing on their ability to withstand unpredictable weather patterns while maintaining productivity. Additionally, the project will introduce conservation agriculture practices, including minimal soil disturbance, crop residue retention, and crop rotation, which will further enhance the soil's ability to retain water, reduce erosion, and improve long-term soil health.

To ensure continued and inclusive access to climate-adaptive seeds, community seed banks will be established and managed with equitable participation of women and men farmers, providing them with a sustainable resource for preserving and exchanging diverse crop varieties. This approach will not only reduce dependency on external seed suppliers but also support local biodiversity. The integration of crop diversification will help mitigate risks associated with pest and disease pressures, contributing to the overall resilience of the farming system. These efforts will lead to improved food security, diversified income sources, and a positive environmental impact, as farmers will use fewer resources and cultivate crops that are better adapted to their surroundings. By strengthening both the technical capacity of farmers and their access to resilient seeds, the project will create a sustainable, resilient agricultural system capable of withstanding future climate challenges in the targeted woredas.

3.1.1 Climate-Resilient Crop Selection and Diversification:

This activity focuses on enhancing the resilience of farming communities, with equal participation of women farmers and female-headed households, by promoting the adoption of climate-resilient crop varieties and conservation

agriculture practices. These practices, which involve minimal soil disturbance, maintaining crop residues on the field, and diversifying crop rotations, play a pivotal role in building resilience against the impacts of climate change. By improving soil health, reducing soil erosion, and increasing water retention, conservation agriculture provides a buffer against erratic weather conditions, such as droughts or unpredictable rainfall patterns. Additionally, crop diversification helps mitigate the risks associated with pests and diseases, further enhancing the adaptive capacity of farming communities and reducing their vulnerability to single climate-related risks.

In collaboration with agricultural experts, research institutions, and indigenous knowledge holders, the project will identify and promote crop varieties that are resilient to changing climate patterns. These varieties will be chosen for their ability to resist pests, conserve water, and thrive in local ecosystems. Through capacity-building workshops and hands-on field demonstrations, farmers will be trained in cultivating, managing, and nurturing these crops. The workshops will provide platforms for knowledge exchange, where insights into climate-adaptive crops and diversified planting strategies will be shared. Recognizing the unique knowledge, needs, and contributions of both women and men, the project will ensure that 50% of the trainees are women, including those from both female-and male-headed households. Furthermore, the establishment of community-based seed banks will ensure continuous and equitable access to climate-resilient seeds, supporting local biodiversity and securing seed supply for future farming cycles.

- **Collaborate with agricultural experts, research institutions, and indigenous knowledge holders, ensuring women participation,** to identify climate-resilient crop varieties that are pest-resistant, water-efficient, and suited to local ecosystems.
- **Organize inclusive capacity-building workshops** to train farmers, with equal participation of women farmers, on climate-resilient agricultural practices, including conservation agriculture techniques such as minimal soil disturbance, maintaining crop residues, and crop rotation.
- **Conduct hands-on field demonstrations** to showcase the benefits of diversified cropping systems and teach both men and women farmers the practical steps involved in cultivating and managing climate-resilient crops.
- **Establish community-based seed banks** accessible to all and with a commitment that all FHH have access to them. The seed banks will be used to store and distribute climate-resilient seeds, ensuring farmers have continuous access to diverse, locally adapted crop varieties.
- **Promote conservation agriculture techniques** to improve soil health, reduce soil erosion, and increase water retention, providing farmers with tools to buffer against the unpredictable impacts of climate change.
- **Facilitate equitable knowledge exchange** during workshops to share experiences and best practices among women and men farmers, agricultural experts, and indigenous knowledge holders on crop diversification and climate-adaptive strategies.

3.2 Output: A sustainable and resilient livestock sector through improved health, increased productivity, and adaptability of the herds.

This output focuses on fortifying livestock production systems in climate-vulnerable regions by introducing drought-tolerant forage seeds and promoting advanced livestock management practices. In areas prone to drought and erratic rainfall, these improved forage varieties provide a reliable source of feed for livestock, reducing dependence on water-intensive crops and irrigation systems. By cultivating climate-resilient forages, farmers can maintain healthier herds during periods of water scarcity, ensuring consistent access to nutritious feed. The project also emphasizes equitable capacity-building through training on forage development, cultivation, harvesting, and storage, equipping farmers with the necessary knowledge to ensure year-round feed availability and more efficient land use. This not only supports livestock health but also enhances the sustainability of agricultural systems by reducing overgrazing and soil degradation.

In addition to forage development, the project will promote improved livestock husbandry practices, such as enhanced hygiene to prevent disease outbreaks and better feeding strategies to minimize waste. Farmers will also be introduced to advanced breeding technologies, including artificial insemination, to select livestock traits that improve resilience to drought and disease, strengthening the adaptive capacity of herds. These practices will support the development of more robust livestock that can thrive in increasingly challenging environmental conditions. Through these integrated efforts, the project aims to build long-term resilience in livestock production, contributing to economic stability, food security, and climate adaptability for farming communities in the targeted regions.

3.2.1 Climate-Resilient Livestock Production and Management:

The provision of drought-tolerant forage seeds is an essential component of climate-resilient livestock production. The targeted areas, which are vulnerable to prolonged droughts and changing precipitation patterns, these seeds serve as a lifeline for livestock. Drought-resistant forage varieties not only ensure a consistent feed supply but also reduce the dependency on scarce water resources for irrigation. By cultivating these varieties, farmers can maintain healthy livestock herds, as these forages are better suited to withstand water scarcity and provide essential nutrients.

To ensure equitable benefits, this intervention is designed to be explicitly inclusive of women farmers and female-headed households (FHHs). Distribution of forage seeds will prioritize the participation of both men and women, with attention to the specific constraints women face in accessing agricultural inputs, extension services, and markets

Capacity building in forage development and utilization is a fundamental aspect of climate-resilient livestock management. Farmers and livestock keepers are trained in sustainable forage cultivation, harvesting, and storage practices. This knowledge equips them to make informed decisions about forage selection and utilization during different seasons, ensuring year-round feed availability. Capacity building programmes will incorporate gender-

sensitive training approaches that accommodate women's time constraints, caregiving responsibilities, and knowledge levels.

Enhanced livestock husbandry practices encompass multiple facets of animal care. Improved hygiene practices help prevent disease outbreaks within herds, ensuring the health and productivity of livestock. Additionally, the integration of advanced breeding technologies, such as artificial insemination, enables the selection of climate-resilient traits in livestock, including drought tolerance, disease resistance.

- **Distribute drought-tolerant forage seeds** equitably to male and female farmers and livestock keepers in areas highly vulnerable to droughts and erratic rainfall, ensuring a reliable and sustainable feed source that reduces reliance on water-intensive crops.
- **Train farmers and livestock keepers (at least 50% women)** in the **cultivation, harvesting, and storage** of drought-tolerant forage crops, ensuring they can produce and maintain a year-round supply of nutritious feed for their livestock.
- **Establish demonstration plots** for hands-on inclusive training, showcasing the cultivation of climate-resilient forage varieties and effective storage techniques that enhance long-term feed availability.
- **Promote improved livestock husbandry practices**, focusing on **hygiene and disease prevention**, to ensure healthier, more productive herds that are less vulnerable to climate-related stressors.
- **Introduce advanced breeding technologies** such as artificial insemination, enabling both men and women farmers to select livestock with climate-resilient traits, such as drought tolerance and disease resistance, enhancing the adaptive capacity of herds to thrive in changing environmental conditions.
- **Conduct awareness campaigns** to educate both men and women farmers on efficient forage utilization, minimizing feed wastage, and supporting sustainable land use practices that reduce overgrazing and soil degradation.

3.3 Output: Sustainable land use, protected ecosystems and enhance agricultural productivity

This output aims to promote sustainable land use and the protection of ecosystems while simultaneously enhancing agricultural productivity in rural communities. By implementing comprehensive natural resource management practices, the project will address critical environmental challenges such as land degradation, water scarcity, and the loss of biodiversity, ensuring the long-term resilience of both natural ecosystems and local livelihoods. A central element of this effort is the establishment of multipurpose nurseries for the production of forage, tree, crop, and horticulture seedlings. These nurseries will support agro-biodiversity, contributing to soil conservation and providing farmers with diversified income sources. Community members will be trained in nursery management, ensuring a continuous supply of high-quality seedlings for future planting.

The project will also focus on afforestation and reforestation initiatives to restore degraded landscapes, improve soil stability, and enhance carbon sequestration. Native trees and plants will be planted to combat soil erosion, rehabilitate ecosystems, and provide sustainable sources of wood and non-timber forest products. Furthermore, biological and physical soil and water conservation practices will be implemented to manage soil erosion and water resources effectively, especially in areas prone to erosion. The cultivation of cover crops and the construction of terracing and check dams will improve soil stability and water retention, while integrated soil fertility management will use both organic and inorganic methods to boost soil health and productivity. Additionally, area closure and invasive species control will protect fragile ecosystems and natural habitats, allowing biodiversity to recover and ensuring the long-term resilience of local environments. These comprehensive natural resource management strategies will not only protect and restore ecosystems but also increase agricultural productivity, foster sustainable livelihoods, and build community resilience to climate change.

3.3.1 Natural Resource Management:

A comprehensive natural resource management will promote sustainable land use, protect ecosystems, enhance agricultural productivity, and ensure the long-term well-being of rural communities. Recognizing that women and men often interact with natural resources differently and that women are disproportionately affected by environmental degradation, this intervention integrates gender considerations to ensure inclusive benefits. This activity will address the challenges of land degradation, water scarcity, and loss of biodiversity while strengthening the resilience of both the environment and livelihoods. One of the fundamental sub-activities in natural resource management is the establishment of multipurpose nurseries for the production of various seedlings. These nurseries yield forage, tree, crop, and horticulture seedlings, fostering agro-biodiversity and enhancing resource sustainability. Local communities will be trained in nursery management, ensuring a continuous supply of high-quality seedlings. At least 50% of nursery trainees and managers will be women, and nursery sites will be located with attention to accessibility for both women and men. Trainings will be scheduled and designed to accommodate women's workload and roles. This approach will contribute to soil conservation, biodiversity, and diversified income sources for farmers.

Community led afforestation and reforestation initiatives are vital in rehabilitating degraded landscapes. Native trees and plants will be planted to restore ecosystems, combat soil erosion, and enhance carbon sequestration. These initiatives not only improve environmental resilience but also provide sustainable wood and non-timber forest products, supporting livelihoods and enhancing biodiversity. These initiatives will actively engage women and youth in planning, implementation and benefit-sharing, ensuring equitable participation. The implementation of both biological and physical soil and water conservation practices is integral to natural resource management. Biological approaches include the cultivation of cover crops and vegetation for soil stabilization. Physical practices, such as terracing and

check dams, will help in controlling soil erosion and managing water resources effectively, particularly in hilly terrains. Gender-inclusive community mobilization and training will ensure both women and men are engaged in constructing and maintaining these structures, with fair distribution of labour and benefits.

Integrated soil fertility management practices encompass organic and inorganic methods to enhance soil health. This approach will involve the use of organic matter, compost, and balanced fertilization to maintain and improve soil fertility, ultimately boosting agricultural productivity while promoting sustainable soil management. Special attention will be given to training women, who often manage household gardens and small plots, in sustainable soil health techniques, and supporting their access to inputs. Area closure, through temporary or permanent land use restrictions, helps protect fragile ecosystems and natural habitats. It prevents overgrazing and habitat degradation, facilitating the recovery of biodiversity and enhancing ecosystem resilience.

Controlling invasive species is crucial to maintain the balance of local ecosystems. This sub-activity involves the identification and removal of invasive species to protect native flora and fauna. It helps in restoring ecological balance and preserving biodiversity. Both women and men will be trained in ecosystem monitoring and control practices that incorporate local traditional knowledge.

- **Establish multipurpose nurseries** for the production of forage, tree, crop, and horticulture seedlings, supporting agro-biodiversity, soil conservation, and providing farmers with diversified income sources.
- **Train local communities in nursery management**, ensuring they have the skills to produce and maintain high-quality seedlings for sustainable agricultural practices and ecosystem restoration.
- **Implement community-led afforestation and reforestation initiatives**, planting native tree and plant species to rehabilitate degraded landscapes, combat soil erosion, and enhance carbon sequestration.
- **Develop biological soil conservation practices**, including the cultivation of cover crops and vegetation to stabilize soil and improve water retention, especially in erosion-prone areas.
- **Construct physical soil and water conservation structures**, such as terracing and check dams, to manage water resources and control soil erosion, particularly in hilly terrains.
- **Promote integrated soil fertility management** by training farmers to use both organic and inorganic methods, such as composting and balanced fertilization, to improve soil health and boost agricultural productivity.
- **Facilitate area closure initiatives** to protect fragile ecosystems and natural habitats by temporarily or permanently restricting land use, preventing overgrazing and promoting biodiversity recovery.
- **Identify and remove invasive species** to protect native flora and fauna, restore ecological balance, and preserve biodiversity within local ecosystems.

3.4 Output: Improved decision-making based on weather information.

This output seeks to empower rural communities, particularly farmers and herders, by providing them with real-time, localized weather information that enables them to anticipate and respond to the increasing unpredictability of weather patterns. In regions where erratic rainfall, prolonged droughts, and extreme weather events have created significant uncertainty, access to timely and reliable weather information is critical for effective agricultural planning and livestock management. By disseminating this information in local languages, the project will ensure that even the most isolated communities, including women and other marginalized groups, have the resources they need to adapt to changing climatic conditions.

The core of this initiative will be the development of a simple, text-based mobile alert system, which will deliver weather forecasts, warnings, and advisories directly to the mobile devices of community members. Special efforts will be made to ensure that women, particularly those in female-headed households or with limited access to technology, receive the alerts and can act upon them. This may include using existing or new local women's groups as dissemination hubs. This system will provide vital information that can reduce the impact of weather-related hazards by helping farmers make informed decisions about when to plant, harvest, irrigate, or take protective actions. Additionally, gender responsive training sessions will ensure that users understand how to access, interpret, and act on weather alerts effectively. By doing so, the project will enhance the community's ability to protect their crops, livestock, and water resources from climate-related risks, ultimately leading to improved food security and increased resilience against climate-induced disasters. The initiative draws on proven successes, such as the 2015 flood warning by Ethiopia's National Meteorological Agency, which allowed communities to evacuate in time, avoiding fatalities and loss of livelihoods.

3.4.1 Weather Information Dissemination:

With unpredictable weather events, shifting rainfall patterns, and prolonged droughts affecting agriculture, water availability, and overall livelihoods, this initiative becomes a critical lifeline. Weather information a dissemination has been shown to be effective in reducing the impact of weather-related hazards in Ethiopia. For example, in 2015, the National Meteorological Agency (NMA) issued a flood warning for the city of Mekelle. The warning allowed residents to evacuate their homes before the floodwaters arrived, and no deaths were reported. Erratic rainfall patterns, prolonged droughts, and unexpected weather extremes have left farmers and herders grappling with uncertainty. The provision of localized weather information in the native language will bridge the information gap that often separates rural communities from the resources they need to adapt to climate change effectively. Through this effort, farmers and herders gain access to timely and accurate weather information and advisories in their local language, empowering them to make informed decisions about planting, harvesting, managing livestock and implement protective measures.

- **Collaborate with the National Meteorological Agency (NMA)** and other relevant institutions to ensure accurate and localized weather information is provided through the alert system, focusing on regions vulnerable to erratic weather events and climate-related hazards.
- **Conduct training sessions for community members,** with attention to women and female headed households, on how to receive, understand, and act on weather alerts via their mobile devices, empowering them to take protective measures in response to changing weather conditions.
- **Organize inclusive and participatory workshops for farmers and herders** to interpret weather forecasts and advisories, teaching them how to use this information to make informed decisions about planting, harvesting, irrigation, and livestock management.
- **Create a feedback mechanism** for farmers and herders to report on the effectiveness of weather alerts, helping to refine the alert system and improve its relevance to local agricultural and livelihood needs.

Component 4: Climate Smart Livelihood diversification

This component aims to enhance the climate resilience and livelihoods of the targeted communities by promoting livelihood diversification through the cultivation of cash crops, vegetables, fruits, and apiculture. The integration of these diverse agricultural activities offers rural communities valuable opportunities to shift away from subsistence farming and towards sustainable, income-generating ventures. By diversifying income sources, these communities will reduce their dependence on a single crop and enjoy a more consistent revenue stream. Additionally, cash crops, vegetables, and fruits are often in higher demand and have wider market accessibility, which can significantly improve economic outcomes.

The initiative emphasizes empowering women by facilitating the identification and management of diverse livelihood activities that align with local resources and market demands. Technical training will provide women with the necessary skills to cultivate these crops and engage in apiculture, ensuring they can effectively manage their operations. Through community demonstration plots and knowledge-sharing workshops, women will be equipped to cultivate crops that are resilient to climate impacts while also exploring new markets. This approach ensures that women and their communities are well-prepared to transition from subsistence-based practices to sustainable income-generating activities.

Beekeeping (apiculture) plays a crucial role in this diversification strategy. Not only does it offer a low-cost, accessible source of income, but it also enhances biodiversity and improves crop pollination. By providing women with technical training and resources, beekeeping will be seamlessly integrated with existing agricultural activities. Honey and beeswax production will further diversify income streams, offering economic benefits even during off-seasons.

To maximize the impact of these activities, the project will foster market linkages by forming women-led collectives and cooperatives. These collectives will enable women to pool resources, negotiate better market terms, and access larger buyers, retailers, and even export markets. By addressing barriers such as limited access to market information and capital, women will be empowered to secure fair pricing and consistent demand for their products.

Ultimately, this initiative seeks to build long-term resilience and economic stability within rural communities. By reducing reliance on a single income source and linking diversified agricultural products with larger markets, the project will improve food security, increase income potential, and foster sustainable development. Through this strategy, the livelihoods of community members, particularly women, will be transformed, enhancing their ability to withstand climate change impacts and economic shocks.

The main areas of focus for the component are:

- **Livelihood Diversification & Women's Empowerment:** Promote income diversification through cash crops, vegetables, fruits, and beekeeping, with a focus on empowering women through technical training and entrepreneurship.
- **Market Linkages & Income Stability:** Establish women-led cooperatives to enhance market access and create sustainable income-generating ventures.
- **Climate Resilience & Environmental Sustainability:** Implement climate-resilient farming and beekeeping practices to improve food security, biodiversity, and community resilience against climate change.

Outputs and Activities:

4.1 Output: Reduced reliance on a single source of income

This output focuses on empowering women in rural communities by facilitating the successful identification, implementation, and management of diversified livelihood activities. By shifting away from traditional, single-income sources, this initiative fosters economic stability and resilience. Through a comprehensive assessment of local resources, market demands, and women's unique needs and skills, diverse and sustainable income-generating activities will be identified, with a specific focus on women's empowerment. The introduction of gender-responsive diversification options such as cash crops, vegetables, fruits, and beekeeping will provide women with multiple income streams, reducing their vulnerability to economic shocks and environmental risks.

Technical training and knowledge sharing will equip women with the necessary skills in modern agricultural practices, animal husbandry, entrepreneurial activities, and sustainable resource management, ensuring they are well-prepared to manage these new ventures. Hands-on demonstration plots and model farms will serve as community learning centers, providing practical experience in cultivation, processing, and marketing of diversified products. These centers will also encourage knowledge exchange and foster collective decision-making among women, building social cohesion and collaboration.

The **implementation of diversification activities** will involve direct engagement with women in preparing land, procuring resources, and establishing farming plots and beekeeping infrastructure. Continuous support will be provided to ensure the adoption of sustainable practices and effective resource use. Women's active participation in monitoring and troubleshooting during the implementation phase will enhance their ownership of the process, ultimately improving their livelihoods and resilience. The outcome will be a sustainable model of women-led economic diversification, contributing to long-term income generation, community empowerment, and rural development.

4.1.1 Identification of Gender Responsive Diversification Options: This activity centers on the analysis of potential income-generating activities beyond traditional livelihood practices within a specific context, with a particular focus on women. It involves a targeted approach to engage and collaborate with women in the community, along with experts and relevant stakeholders, to identify a range of viable alternatives. Through assessments of local resources, market demand, women's skills, and existing capabilities, this step aims to pinpoint diverse options that align with the preferences and economic prospects of women. The identification process lays the foundation for creating a strategic roadmap for diversification, considering the unique needs and opportunities of women in the community, while fostering economic stability and resilience from a women-centric perspective.

- **Conduct a detailed community assessment** focusing on women's needs, existing agricultural practices, available resources, market access, and local preferences to identify gaps and opportunities for diversification.
- **Identify barriers and opportunities** specific to women in the community for adopting diversified activities such as cash crops, vegetables, fruits, and beekeeping, considering cultural, social, and economic factors.
- **Engage with women, local experts, and stakeholders** to collaboratively explore potential livelihood diversification options that align with women's skills, preferences, and market demand within the local context.
- **Develop a strategic roadmap for diversification**, integrating women's unique needs and ensuring economic stability, resilience, and alignment with the community's overall development objectives.
- **Facilitate consultations and focus groups** with community members to validate identified options and ensure that women's voices are central to the decision-making process regarding new income-generating activities.

4.1.2 Technical Training and knowledge sharing: These elements revolve around tailored training programs designed to equip women in the community with the essential skills and knowledge required to effectively embrace and manage new income-generating activities. These training sessions encompass various aspects, including modern agricultural practices, animal husbandry techniques, processing methods, entrepreneurial skills, and sustainable resource management, with a specific focus on women's needs and empowerment. The goal is to empower female participants with practical expertise that enables them to proficiently engage in a range of diversified activities, taking into account their unique perspectives and aspirations.

Furthermore, knowledge sharing serves as a platform for women to exchange experiences, share best practices, and foster innovative ideas among community members. This collaborative approach encourages the transfer of local wisdom and lessons learned, creating a supportive network that enhances the collective capacity of women to address challenges and seize opportunities.

The combination of technical training and knowledge sharing establishes a dynamic learning ecosystem, where women in the community not only acquire new skills but also develop a deeper understanding of the broader socio-economic and environmental landscape. This synergy empowers them to make well-informed decisions, adapt adeptly to shifting circumstances, and collectively drive the sustainable advancement of diversified livelihoods in rural settings with a women-centric focus.

- **Organize targeted training sessions** for women on the selected income diversification options, focusing on modern agricultural practices, integrated pest management, soil health, animal husbandry, and sustainable beekeeping techniques to enhance their skills in managing new income-generating activities.
- **Facilitate entrepreneurial and resource management training**, providing women with the knowledge needed to effectively run and scale their diversified ventures, including financial literacy, marketing, and business planning.
- **Create knowledge-sharing platforms** by establishing women-led farmer groups, cooperatives, or associations, fostering collective decision-making, peer learning, and mutual support to strengthen community bonds and improve overall outcomes.
- **Set up demonstration plots and model farms** where women can observe and participate in hands-on activities, including the cultivation of cash crops, vegetables, fruits, and beekeeping techniques. These practical centers will serve as real-time examples of successful diversified livelihoods.
- **Encourage continuous learning and feedback loops**, enabling women to share their experiences, best practices, and lessons learned with each other, while building a support network that drives innovation and collective problem-solving in rural development contexts.

4.1.3 Implementation of Diversification Activities: This activity focuses on translating the identified diversification options into tangible actions that empower women and contribute to enhancing their families livelihoods and resilience. Central to this process are community engagement, collaboration, and adaptive management, all with a specific focus on the women in the community. Initially, women play an active role in preparing the land, procuring necessary resources like seeds, equipment, or livestock, and establishing the infrastructure required for their chosen activities. This may involve setting up new farming plots, constructing beehives, or developing processing facilities. Ongoing

technical guidance will be provided to ensure that the women correctly implement techniques, adhere to sustainable practices, and efficiently use resources. Monitoring and evaluation mechanisms will be put in place to track progress, identify challenges, and make necessary adjustments. Regular field visits, data collection, and feedback loops will enable continuous improvement and responsive decision-making. These activities will empower women to take charge of their diversification initiatives, fostering a sense of ownership and control.
Collaboration among women in the community is essential during implementation. It encourages collective learning, problem-solving, and the sharing of experiences, innovative ideas, and solutions to common challenges. This collaboration helps build social cohesion, mutual support, and a conducive environment for collective progress. Ultimately, the implementation of diversification activities, with a women-centric focus, acts as the bridge between plans and outcomes, transforming women's aspirations into tangible improvements in their livelihoods, economic well-being, and resilience within the rural landscape.

- **Distribute quality seeds, seedlings, saplings, and beehives** to interested women and community members, ensuring timely access to essential resources for the successful cultivation of selected crops, vegetables, and fruits, and the establishment of sustainable beekeeping practices. This distribution will focus on species and varieties that are climate-resilient and suited to local environmental conditions.
- **Facilitate hands-on training and resource procurement** to support women in preparing the land, installing beekeeping infrastructure, and managing the agricultural inputs effectively. This process will include workshops on how to maintain soil fertility, conserve water, and utilize organic farming techniques for long-term sustainability.
- **Provide continuous technical guidance and mentorship**, offering tailored support to women during the implementation phase. Field experts will conduct regular site visits to monitor the use of sustainable practices, assist in troubleshooting issues, and ensure that women can confidently manage their diversified activities.

4.2 Improved income and better market access for community members

This output focuses on ensuring that the diverse activities undertaken by women and rural communities evolve from subsistence-based practices into sustainable income-generating ventures by promoting robust market linkages. By identifying and establishing strong connections between local producers and larger markets, including buyers, distributors, retailers, agribusinesses, and even export channels, the project creates a pathway for community members to access broader market opportunities. This shift not only improves the economic viability of diversified activities but also enhances the income potential for women and their communities.
The project emphasizes forming women-led producer collectives or cooperatives that empower communities to pool resources, negotiate favourable terms, and collectively enter larger markets with more leverage. These collectives are instrumental in addressing barriers that rural women face, including limited access to market information, transportation, and capital. Through collaborative marketing and shared resources, women can secure better prices for their products, ensuring fair pricing and steady demand for goods such as cash crops, vegetables, fruits, and honey. By developing local market partnerships and integrating farmers with agribusinesses and processing units, the project fosters an environment where rural producers have reliable buyers and a supportive market infrastructure that guarantees long-term demand for their products.
This initiative not only empowers women to take control of their economic futures but also builds economic resilience in rural communities, reducing reliance on single-income sources and fostering sustainable progress. By linking women's diverse offerings with larger markets, the project significantly amplifies their economic well-being, improves livelihood security, and strengthens the overall financial prospects of their communities.

4.2.1 Promotion of Market Linkages:

This activity focuses on the deliberate creation of strong connections between the diverse offerings of women in rural communities and the broader market. It ensures that the products and services provided by women and the community reach potential consumers, securing the economic sustainability and viability of their newly diversified ventures. By actively promoting market linkages, these diversified efforts evolve from local subsistence activities into income-generating initiatives with the potential to make a substantial contribution to the livelihoods of women in the community. Through the nurturing of connections between women in rural communities, the community in general and larger markets, this initiative strengthens economic resilience, enhances income opportunities, and facilitates sustainable progress. The emphasis will be on empowering women to bridge the gap between their products and a wider market, thereby amplifying their economic well-being and financial prospects.

- **Identify and assess potential buyers, distributors, retailers, and export channels**, ensuring women and community members have streamlined access to desired markets that align with their diversified products, such as cash crops, honey, and vegetables.
- **Facilitate the formation of women-led producer collectives or cooperatives** to enable collaborative marketing efforts, allowing women to pool resources, collectively negotiate better terms, and access larger markets with more bargaining power.
- **Conduct market analysis and establish market information systems** to provide community members with insights into demand trends, pricing, and competitive opportunities, helping them strategically position their products in broader markets.

- **Establish partnerships between farmers and local markets, agribusinesses, and processing units**, ensuring a steady demand for produced goods while supporting fair pricing structures that improve income stability for community members.

Theory of Change

In the Ethiopian rural context, where drought is a recurrent climate-induced shock impacting rural communities and a significant driver of poverty and food insecurity, a comprehensive strategy is essential to address this cyclic challenge. Recognizing the multifaceted effects of climate change-related hazards on livelihoods and the environment, a holistic and coordinated approach is necessary to enhance the resilience of communities. This entails bolstering absorptive, adaptive, and transformative capacities:

- **Absorptive Capacity:** Strengthening coping strategies, risk management, and savings mechanisms to withstand and recover from climate-related shocks like drought.
- **Adaptive Capacity:** Enhancing the use of assets, motivation, livelihood diversification, and human capital to adapt to changing climate conditions and variability.
- **Transformative Capacity:** Developing governance mechanisms, policies, infrastructure, community networks, and formal safety nets to drive long-term transformative change in response to climate challenges.

To address these challenges, this project has been developed within a climate-smart and landscape-based framework. This initiative combines improved water access, resource rehabilitation, and management with livelihood diversification. The project, closely aligns with Ethiopia's national climate change strategy and medium-term development plan, employs an integrated approach to achieve adaptation impacts and build resilience among vulnerable communities.

The project encompasses various dimensions of resilience, encompassing economic, technological, environmental, infrastructure, and institutional aspects. By repairing or enhancing assets, restoring landscapes, improving skills, and accessing new markets, the project aims to elevate livelihood security and income, ultimately reducing vulnerability to climate risks.

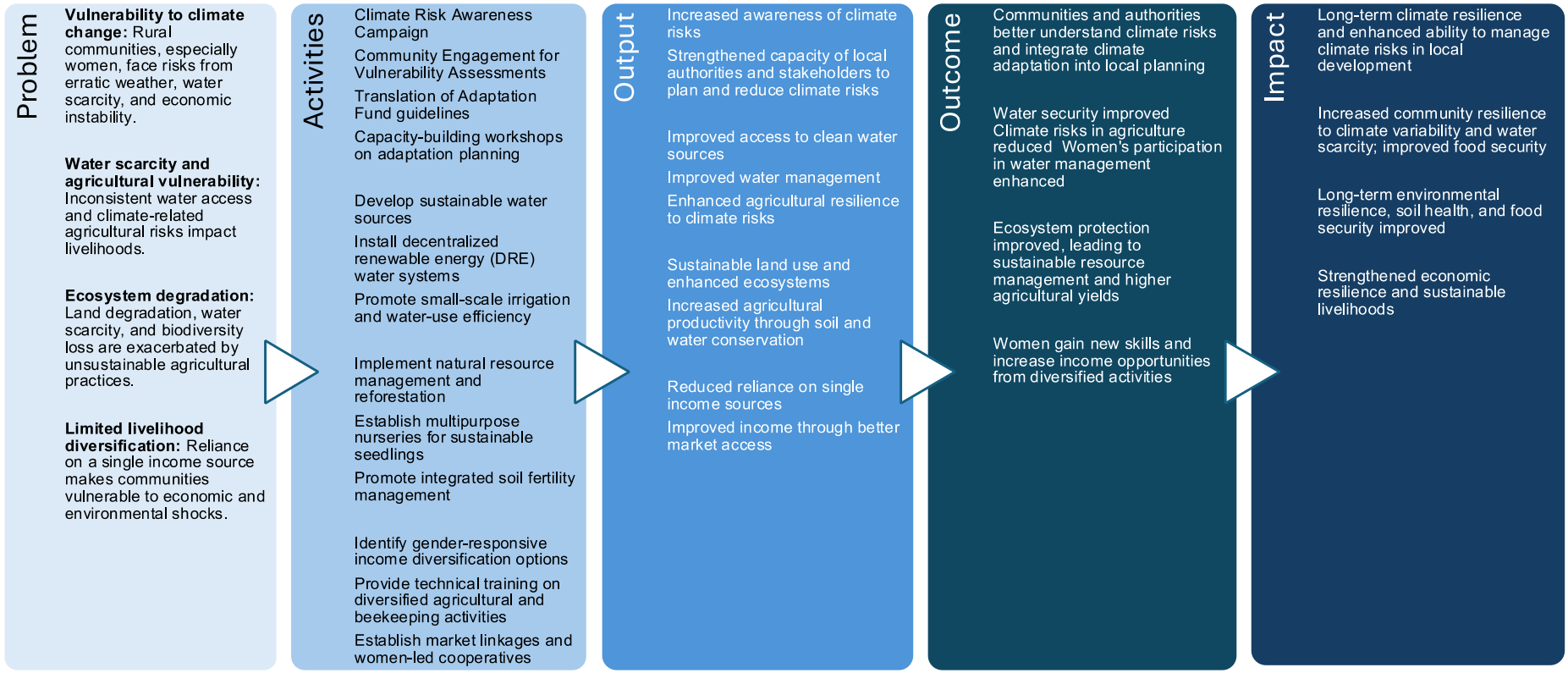
A web of interlinked pathways of change is necessary for the sustainable development of resilience within communities. The project's cross-cutting features create synergies among components and empower local and national administrations to embed climate change considerations into rural planning. Notably, vulnerable households will experience improved agricultural productivity through soil and water conservation, afforestation, and reforestation. These activities contribute to stabilizing water resources and enhancing natural resource management, leading to decreased soil erosion and increased agricultural productivity.

A participatory approach that prioritizes women's involvement will foster a conducive environment for long-term sustainability. The project's success hinges on the orchestrated implementation of diverse interventions tailored to specific agro-ecological zones, underpinned by integrated planning and climate-responsive strategies.

Recognizing that no single intervention can single-handedly break the cycle of drought, the project emphasizes the importance of a comprehensive suite of activities for sustainable resilience building. By fostering a diversified range of productive activities aligned with local habitats and ecosystems, the project seeks to ensure long-term sustainability and replicate its success in other regions.

The project emphasizes the significance of sharing knowledge and enhancing capabilities to reinforce climate resilience within the targeted communities and has weaved these activities under each component. It encompasses the dissemination of climate-related insights, impacts, and adaptive strategies, alongside the development of essential skills and competencies. By equipping community members and local leaders with the tools needed to understand and address climate challenges, the project strives to empower them to take informed actions. The activities concentrate on boosting the ability of these communities to withstand and recover from climate-induced adversities, ultimately bolstering their well-being and livelihoods. This approach operates at the grassroots level, recognizing the diversity of climate impacts across regions and tailoring interventions to match specific needs, challenges, and opportunities. Overall, the project aims to create community-level resilience by fostering awareness, skills, and collaborative practices that enable communities to proactively manage climate risks and enhance their adaptive capacity.

Theory of Change (TOC) Diagram



Assumptions

1) Communities and local governments are willing and able to participate in the planning process.
2) Political stability and support from local authorities facilitate project planning and implementation.
3) Water resources will be sufficient to meet community needs throughout the project period.
4) Women will have the opportunity and agency to participate in leadership roles.
5) Farmers will adopt and maintain climate-smart agricultural practices.
6) Training programs will be accessible and relevant for both men and women.
7) Diversified livelihoods will be economically viable and culturally accepted by the target communities.

Risks

1) Lack of local expertise in operating and maintaining SWP systems and modern irrigation infrastructure may hinder project implementation.
2) High capital costs and currency fluctuations could increase project costs, making it difficult to scale or maintain systems post-project.
3) Resistance from farmers and communities to adopting new technologies or practices due to entrenched reliance on traditional methods.
4) Limited participation of women and marginalized groups due to social and cultural barriers.
5) Ongoing conflict in certain parts of Ethiopia, such as the northern regions, could disrupt project activities and access to key intervention areas.

Explanation of the Theory of Change

1) **Problem Identification:** Rural communities in the targeted localities of Ethiopia are facing increasing vulnerabilities due to climate change, including erratic weather patterns, water scarcity, and reliance on subsistence farming. These factors contribute to reduced economic stability, food insecurity, and environmental degradation. Women are disproportionately affected due to limited access to resources and decision-making roles.
2) **Activities:** The project focuses on a combination of climate risk awareness, capacity building, and the development of climate-smart infrastructure. Activities include community engagement in identifying climate vulnerabilities, water security through developing water assets through solar powered systems for productive use, promoting diversified livelihood options such as climate-resilient crops and beekeeping, and building market linkages for women-led collectives.
3) **Outputs:** These activities will lead to specific outputs such as increased awareness of climate risks, improved water access, strengthened local governance on climate planning, reduced reliance on a single income source, and enhanced agricultural productivity through natural resource management. Women's roles are emphasized in income diversification and community leadership.
4) **Outcomes:** As a result of these outputs, communities become better equipped to handle climate risks through improved planning and decision-making. Agricultural and water management practices are more resilient to climate change, and women play a more prominent role in economic activities. By developing diverse income sources and market access, rural women and their communities gain greater economic stability and food security.
5) **Impact:** The long-term impact of these interventions is the creation of climate-resilient, economically sustainable communities. Improved water for potable and productive use and land management lead to healthier ecosystems and greater food security, while women's empowerment in decision-making contributes to broader community resilience and contribution to the national economy.

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Economic Benefits

The first component enhances economic resilience by integrating climate risk awareness into decision-making, reducing financial losses from climate shocks. Capacity-building workshops equip local authorities with the skills to implement climate adaptation strategies that align economic policies with resilience planning. Community engagement fosters informed decision-making, mitigating economic vulnerabilities.

Under the second component, improved water access strengthens economic productivity, particularly in agriculture and livestock. Upgraded infrastructure enhances water distribution and storage efficiency, while decentralized renewable energy (DRE) systems reduce reliance on costly fossil fuels, lowering expenses and carbon emissions. Small-scale irrigation and water management improve agricultural yields, boosting local incomes. Women-focused capacity building fosters inclusive economic participation.

The third component promotes climate-smart agriculture and sustainable livestock practices, diversifying income sources and reducing economic risks. Sustainable land management enhances long-term productivity, while weather information services enable farmers to make financially sound decisions.

The fourth component introduces climate-smart livelihood diversification, equipping communities with technical skills and market linkages to support income generation. Gender-responsive approaches enhance financial inclusion and improve access to economic opportunities.

Social Benefits

Economic advancements drive social improvements. The first component fosters community cohesion through climate risk awareness and participatory planning. The second component strengthens public health by ensuring water security and empowering women, promoting gender equality and social inclusion. Climate-resilient agriculture and livestock practices in the third component improve nutrition and food security, enhancing community well-being. Weather information dissemination helps communities prepare for climate-related challenges, reducing social vulnerability. The fourth component supports gender-responsive livelihood diversification, strengthening social networks and knowledge exchange. Market linkages integrate communities into broader economic systems, fostering collective well-being.

Environmental Benefits

The first component increases climate risk awareness, promoting informed decision-making that reduces environmental degradation. Water security initiatives in the second component protect natural ecosystems by improving water access and distribution while promoting DRE systems that minimize environmental impact. Climate-smart agriculture in the third component enhances biodiversity and ecosystem resilience. Sustainable land use and livestock management protect natural resources, ensuring long-term agricultural productivity. Finally, the fourth component supports environmentally friendly livelihood diversification, promoting sustainable resource use and community resilience. Together, these efforts create lasting economic, social, and environmental transformation.

Impact on Gender

The initiative adopts a comprehensive, gender-responsive approach to addressing disparities and empowering women across all components. It is designed to facilitate women's engagement to shape and lead efforts in building resilience, advancing economic stability, and driving sustainable development. The design of the project is informed by community consultations and participatory planning with local institutions, ensuring the integration of local knowledge and gendered priorities, which are detailed in the consultation summary.

The initiative enhances women's understanding of climate risks and ensures their equal and meaningful participation in decision-making processes. Women will be equally engaged in leadership roles, capacity-building workshops, and participatory vulnerability assessments. These inclusive approaches enable women not only to contribute to climate-resilient strategies but to co-create them, shifting the narrative from passive recipients to active agents of change.

Recognizing the disproportionate burden of water-related challenges on women, the project improves access to clean water—targeting at least 30% of female-headed households (FHH). This intervention supports improved health outcomes, reduces time and labor spent on water collection, and frees up time for income-generating activities. Women also gain equal access to training and participation in water user groups, ensuring their voices are reflected in water governance and infrastructure management.

The introduction of decentralized renewable energy systems is designed with women and girls in mind, providing sustainable energy alternatives for both household and agricultural use. These systems reduce drudgery, improve safety, and expand opportunities for productivity and education.

Women are supported in making informed decisions on crop selection, livestock practices, and natural resource management. Equal access to training, extension services, and employment opportunities ensures their full inclusion in climate-smart agriculture. Access to weather and climate information via mobile platforms and other mechanisms further enables women to adapt agricultural techniques, increase productivity, and minimize climate-related risks.

The project promotes women's economic empowerment by identifying and supporting gender-responsive livelihood opportunities. Women's full participation is ensured through targeted technical training and entrepreneurship support tailored to their needs. Market linkages are facilitated, with 80% of beneficiaries expected to be women, enhancing financial independence and long-term economic resilience.

A dedicated Gender Coordinator will oversee the implementation of the Gender Action Plan (GAP), ensuring women's equal participation in governance, decision-making, and project execution. Capacity building for women's organizations will strengthen leadership and advocacy roles, while gender-sensitive recruitment strategies will promote female representation in project management and implementation structures. A robust monitoring and evaluation framework will track gender-disaggregated data to assess participation rates, empowerment outcomes, and adaptation impacts.

Table 6: Gender inequality risks and proposed mitigation measures

Component	Risk	Level	Mitigation
Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the Local Level	• Limited inclusivity in awareness campaigns • Gender-based participation gaps • Limited inclusion of women in decision-making • Gender-blind development plans • Insufficient gender-disaggregated data • Gender-based environmental vulnerabilities	• Medium • High • High • • Low • Medium • Medium	• Tailored campaigns ensuring 50% representation of genders. • Promote equal participation through targeted outreach by creating conducive consultation environment to women • Facilitate inclusive community engagement and constructive consultations to empower women to voice concerns and be part of the leadership in project activities • Integrate gender considerations into development planning through participation and endorsement of women • Implement robust monitoring systems with gender-specific indicators and gender disaggregated data • Implement safeguards considering differential impacts on genders
Component 2: Water Security, Climate Resilience, and Women's Empowerment	• Unequal water access • Limited female involvement in water system management • Gender-specific energy access challenges • Unequal benefits from irrigation • Capacity building brings limited impact without addressing gender roles • Ineffective awareness campaigns due to gender insensitivity	• Low • Medium • High • Medium • Medium • • Medium	• Ensure equitable water source distribution, prioritizing women and ensuring at least 30% beneficiaries are FHH • Provide training with 50% training participants and water user group members being women and support for women's active participation by facilitating conducive meeting environments. • Design energy systems considering women's needs and participation based on women's feedback during consultation • Incorporate mechanisms for women's equal participation and benefit-sharing ensuring 50% of FHH households in the project sites benefit • Empower women with tailored capacity-building, considering their roles in water management based on capacity need assessments • Craft campaigns recognizing and challenging traditional gender roles and collect feedback that show at least 50% households report improved decision making power.
Component 3: Climate Smart Agriculture and Livestock Rearing	• Limited adoption by women farmers • Gender disparities in livestock management • Unequal access to and benefit from resources • Limited accessibility of weather information for women	• Medium • Medium • High • Low	• Provide targeted support and education to women for crop diversification ensuring 50% participation by women from FHH and MHH households • Ensure equal training opportunities and resources for women in livestock rearing with 50% participation in forage development, improved livestock management practices and provision of improved forage seeds. • Implement sustainable resource management practices with 50% participation of women in trainings and employment opportunities in nurseries. • Provide trainings to access disseminated weather information (50% being women) on mobile devises and design mechanism to address those without devises.
Component 4: Climate Smart Livelihood Diversification	• Women excluded from diversified livelihood options • Gender-based training gaps • Unequal implementation outcomes from diversification activities • Gender-based market access challenges	• Low • Medium • Low • Low	• Engage women in identifying and selecting livelihood options and collecting feedback with the aim to improve income in 70% of women beneficiaries • Ensure gender-responsive training programs and knowledge sharing based on identified needs • Facilitate women's active participation and leadership in assessment to identify livelihood diversification activities • Support women's access to markets through targeted promotion and linkages with 80% of beneficiaries being women

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

The proposed project adopts a cost-effective strategy by prioritizing low-cost, high-impact interventions that are deeply embedded in local systems. Rather than relying on capital-intensive infrastructure or short-lived relief programs, the project focuses on rehabilitating existing assets, strengthening community institutions, and promoting nature-based solutions. Across four components, the design emphasizes reuse and upgrading of local infrastructure, deployment of decentralized renewable energy, and promotion of climate-smart production systems. Each measure aligns with Ethiopia's CRGE Strategy and enhances sustainability by avoiding high operational and maintenance costs, ensuring long-term value for money and resilience outcomes.

Component 1 focuses on strengthening climate risk reduction and adaptation planning at the local level through community-driven processes. With an investment of USD 764,073, this component will benefit approximately 14,600 people in 15 kebeles, resulting in a per capita cost of USD 52.33. Compared to conventional alternatives such as engaging external consultants or delivering one-off NGO-led workshops which may cost over USD 100 per beneficiary, this approach ensures embedded planning capacity and participatory governance. By investing in local capacity building, awareness campaigns, and integration of adaptation into kebele development plans, the component builds institutional ownership and resilience. The approach also avoids costly post-disaster response and ensures sustainability through embedded knowledge, making it significantly more effective and scalable than external consultancy-driven planning.

Component 2 enhances water security, climate resilience, and women's empowerment through targeted infrastructure and governance investments totaling USD 4,981,994. The component benefits approximately 13,426 households (around 67,130 people) across 15 kebeles, at a cost of USD 74.21 per beneficiary. In contrast, drilling new boreholes or implementing diesel-based systems costs USD 100-150 per person due to high infrastructure and fuel needs. Trucking water incurs recurring expenses and is often unreliable in remote areas. The selected approach rehabilitates existing infrastructure, utilizes solar-powered pumps, and includes spring development for irrigation-all of which are more sustainable and less maintenance-intensive. Additionally, involving women in WASH leadership and irrigation agronomy ensures operational effectiveness, enhances community ownership, and promotes equity. These solutions deliver rapid, decentralized benefits at a fraction of the cost of large-scale systems while reducing carbon emissions and enhancing adaptive capacity.

Component 3 supports climate-smart agriculture and livestock rearing with an investment of USD 1,746,843. This benefits approximately 112,217 households (or 561,085 people), with a per capita cost of just USD 3.11, far below the costs associated with chemical-intensive farming and mechanized agriculture, which can reach USD 25-40 per person annually due to input and maintenance costs. The project adopts regenerative approaches such as drought-tolerant seeds, sustainable grazing practices, soil conservation, and weather information services. These interventions enhance productivity without degrading ecosystems, helping communities adapt to climate shocks while preserving their natural resource base. In contrast to conventional input-heavy agriculture, which depletes soil and increases dependency, the selected approach reduces external input costs over time, builds resilience at scale, and offers long-term economic and ecological benefits.

Component 4 promotes gender-responsive livelihood diversification with a budget of USD 1,544,688, reaching approximately 4,000 households (or 20,000 people) in 15 kebeles. The per beneficiary cost is USD 77.23. This is substantially more cost-effective than emergency cash transfers, public employment, or relocation schemes which often cost USD 100-300 per person and provide only temporary relief. Instead, this component fosters long-term resilience by developing women-led enterprises, offering vocational training, and linking producers to markets. These investments build sustainable livelihoods aligned with local resources and market demands. By strengthening women's adaptive capacity and enabling community-level economic transformation, the project ensures enduring benefits that reduce vulnerability and dependency on external support.

The table below presents a consolidated analysis of the cost-effectiveness of each project component and output. It compares the total cost, number of beneficiaries, and cost per beneficiary of each intervention against realistic alternatives. It also provides a comparative assessment highlighting adaptation benefits and explaining why the selected interventions are more appropriate, efficient, and sustainable.

Table 7: Consolidated Cost-Effectiveness and Alternatives Analysis

Project Component / Output / Intervention	Total Cost of Intervention (USD)	Beneficiaries (Kebeles & HHs/People)	Cost per Beneficiary (USD)	Alternative Option	Alternative Cost per Beneficiary (USD)	Analysis (Adaptation Benefits and Justification)
Component 1: Strengthening Climate Risk Reduction and Adaptation Planning	764,073	15 kebeles; ~14,600 people	52.33	Conservation-only initiatives lacking livelihood integration, and externally driven, NGO-led workshops or consultant-based planning efforts	100-120	The proposed intervention delivers long-term adaptation benefits by embedding planning capacity into kebele governance structures and empowering communities through participatory risk assessments, early warning systems, and integration into local development plans. At USD 52.33 per beneficiary, it is far more cost-effective than short-term, consultant-led workshops which cost USD 100-120 per beneficiary. Compared to top-down alternatives, this model builds anticipatory capacity and institutional ownership, significantly reducing vulnerability to climate shocks. It also promotes inclusive planning by training 200 government officials, 2,400 community representatives, and integrating safeguards and gender equality into 15 kebele plans. Unlike alternatives that offer limited continuity or relevance, the proposed design improves disaster preparedness, strengthens governance, and ensures that climate information and tools are embedded into local decision-making processes
Component 2: Water Security, Climate Resilience & Women's Empowerment	4,981,994	15 kebeles; ~13,426 HHs (~67,130 people)	74.21	Large-scale dams, extended irrigation canals, and grid-based water pumping systems.	100-150	By rehabilitating 11 existing water systems and replacing diesel pumps with solar-powered alternatives, this component significantly reduces long-term operational and maintenance costs. The intervention benefits over 67,130 people at USD 74.21 per beneficiary, compared to USD 100-150 for trucking or diesel-based systems, which are vulnerable to price shocks and breakdowns. It addresses drought and water scarcity through decentralized water harvesting and delivery solutions that are quickly deployable and scalable. By involving 3,177 women in irrigation agronomy and promoting women-led water governance, the intervention enhances social equity and long-term sustainability. In contrast, large-scale dams and grid extension projects require years of preparation, high capital investment (e.g., >USD 50 million or USD 10,000–50,000/km), and pose climate and environmental risks. The solar-powered model provides faster, reliable access, reduces emissions, and builds local management capacity-all critical for adaptive water security in rural Ethiopia.

Project Component / Output / Intervention	Total Cost of Intervention (USD)	Beneficiaries (Kebeles & HHs/People)	Cost per Beneficiary (USD)	Alternative Option	Alternative Cost per Beneficiary (USD)	Analysis (Adaptation Benefits and Justification)
Component 3: Climate-Smart Agriculture & Livestock	1,746,843	15 kebeles; ~112,217 HHs (~561,085 people)	3.11	High-input, chemical-intensive farming and mechanized large-scale agricultural models	25-40 annually	With a per-beneficiary cost of only USD 3.11, this component delivers large-scale climate resilience to over 560,000 people through regenerative agriculture, drought-tolerant crops, and improved livestock practices. Alternatives like high-input or mechanized farming cost USD 25-40 per beneficiary annually and result in soil degradation within 5-7 years, alongside ecosystem harm and input dependency. In contrast, the proposed solution avoids heavy chemical use, instead promoting organic soil enhancement, watershed rehabilitation (9,908 ha), and ecosystem-based approaches that improve productivity and natural resource management. It addresses multiple climate risks—including erratic rainfall, soil erosion, and pasture decline—through low-cost, nature-based solutions that are accessible to smallholder farmers. By integrating early warning systems and local extension services, the component enhances data-driven decision-making, contributing to more resilient agricultural systems and food security.
Component 4: Climate Smart Livelihood Diversification	1,544,688	15 kebeles; ~4,000 HHs (~20,000 people)	77.23	Relocation programs, public employment schemes, or external subsidies such as unconditional cash transfers	100-300	The intervention supports 20,000 vulnerable people, particularly women, at a cost of USD 77.23 per beneficiary-well below the cost of relocation, public employment, or cash transfer models (USD 100-300). Unlike alternatives which may provide temporary relief or trigger dependency, the project invests in skill development, beekeeping, agro-processing, and nutrition-sensitive agriculture tailored to local contexts. These livelihoods generate self-sustaining income and reduce ecosystem pressure, while aligning with climate-resilient value chains. Compared to conservation-only or PES models, which may lack financial incentives or rely on external donor streams, this component fosters market access, community ownership, and inclusive economic growth. It mitigates livelihood vulnerability by strengthening local autonomy and enabling households-especially female-headed ones-to withstand and adapt to climate and economic shocks.

Table 8 below summarizes the adaptation benefits of each major project intervention across the four components. It presents the total cost, number of beneficiaries, cost per beneficiary, and a comparison with relevant alternative measures. As shown, the selected interventions deliver significant social, environmental, and economic co-benefits including improved water access, food security, ecosystem restoration, gender

empowerment, and institutional capacity-while maintaining lower per-beneficiary costs than conventional alternatives. These interventions are context-appropriate, designed to enhance community ownership and sustainability, and tailored to address the specific climate risks identified in the target regions. By maximizing impact per dollar spent, the project demonstrates high cost-effectiveness and transformative adaptation value.

Table 8 Summary of benefits from project interventions

Project Component	Benefits
Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the local level: Building Awareness, Understanding, and Ownership	This intervention will equip the targeted rural communities with the necessary awareness, skills, and community-driven strategies to effectively address and adapt to the challenges posed by climate change. Through these initiatives, localities are better prepared to navigate the complexities of a changing climate and build resilience for a sustainable future.
Component 2: Water Security, Climate Resilience, and Women's Empowerment	Households with access to improved water supply were 14 percent more likely to participate in income-generating off-farm employment than those without access (statistically a highly significant difference), and participation in off- farm employment was found to significantly decrease household poverty. Furthermore, close to 1 million hectares of land is economically and biophysically suitable for small scale irrigation. When it comes to solar irrigation, between 155,103 and 204,103 hectares[73] of land could be suitable and provide smallholder farmers with the option to either pump from small reservoirs or shallow groundwater. More than 5.8 million smallholder farmers could directly benefit from expanding small scale irrigation. Advantages include greater economic access to food, better nutrition for women and children, and increased incomes thanks to the potential of irrigated livestock fodder and high-value crops generating $2.6 billion each year[74]. Communities' participation in small-scale irrigation has robust and positive effect on most of the livelihood indices and expansion of irrigation schemes is a good strategy in the water-stressed and drought-prone areas of Ethiopia.[75]
Component 3: Climate Smart Agriculture and Livestock Rearing	Adopting CSA technologies on a quarter of Ethiopia's maize and wheat land increases annual gross domestic product (GDP) by an average 0.18 percent (US$49.8 million) and reduces the national poverty rate by 0.15 percentage points (112,100 people). CSA is more effective than doubling fertilizer use on the same area, which increases GDP by US$33.0 million and assists 73,300 people out of poverty. [76] Another study in Ethiopia supports the economic viability of small-scale irrigation by reporting a doubling of net gross margin for farmers, with irrigated study sites achieving an average net gross margin of approximately US$323/ha. This stands in stark contrast to the calculated average net gross margin for rain-fed agriculture, which is US$147/ha[77]. Evaluation findings indicate that embracing low levels of climate-smart practices elevates household food and nutrition security by 28 percent and 4.3 percent, respectively. Moderate adoption of climate-smart practices results in a 43 percent increase in food and nutrition security, with a 20 percent boost for high-level adoption. The highest levels of climate-smart practices lead to a significant 56 percent improvement in food and nutrition security, while higher levels contribute a 19 percent increase, both surpassing the outcomes for very low adopter households[78].
Component 4: Climate Smart Livelihood diversification	In a study conducted in Ethiopia, concluded that there was a positive relationship between diversification and food security. Their findings revealed that due to lower adoption of diversification strategies, a majority of the households were food insecure[79]. Empirical studies found that non-farm income accounts for as much as 40-45 percent of the average household's income. In a study conducted in Ethiopia, majority (83.1 percent) of the farmers were able to

[73] *Petra Schmitter, Kefyalew S. Kibret, et.al. Suitability mapping framework for solar photovoltaic pumps for smallholder farmers in sub-Saharan Africa, Applied Geography,Volume 94,2018,Pages 41-57*
[74] *https://ilssi.tamu.edu/files/2019/12/facts-sheet-on-activities-in-ethiopia.pdf*
[75] *Zeweld, Woldegebrial & Van Huylenbroeck, Guido & Hidgot, Assefa & Mysore, Chandrakanth & Speelman, Stijn. (2015). Adoption of Small-Scale Irrigation and Its Livelihood Impacts in Northern Ethiopia. Irrigation and Drainage. 64. 10.1002/ird.1938.*
[76] *Komarek, Adam M.; Thurlow, James; Koo, Jawoo; and De Pinto, Alessandro. Economywide effects of climate-smart agriculture in Ethiopia. Agricultural Economics 50(6): 765-778.*
[77] *Hagos, F., Makombe, G., Namara, R. E., Awulachew, S. B., (2009), Importance of irrigated agriculture to the Ethiopian economy: Capturing the direct net benefits of irrigation. Colombo, Sri Lanka: International Water Management Institute. 37p. (IWMI Research Report 128).*
[78] *Beyan Ahmed, Jema Haji, Mengistu Ketema & Kedir Jemal (2023) Impacts and adaptation extents of climate smart agricultural practices among smallholder farmers of Ethiopia: Implication to food and nutrition security, Cogent Economics & Finance, 11:1, DOI: 10.1080/23322039.2023.2210911*
[79] *Etea BG, Zhou D, Abebe KA, Sedebo DA (2019) Household income diversification and food security: evidence from rural and semi-urban areas in Ethiopia. Sustainability 11(12). 10.3390/su11123232*

	diversify their livelihoods into either off-farm or non-farm or combined income activities, whereas the remaining 16.91 percent of the households were unable to diversify; often lacking the means to engage in any form of income-generating activity apart from agricultural activities[80]. Diversification into non-farm activities plays a significant role in the context of inadequate and rain-fed-dependent agricultural income households. Households who diversified their livelihood activities are the ones who able to build better asset and less vulnerable than the undiversified ones.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

The project is in accordance with both national and local policies, as well as strategies and plans related to development, agriculture, disaster risk reduction, water, forests, climate change, and environmental management. At the highest level, the project aligns with the Constitution of the Federal Democratic Republic of Ethiopia (FDRE), serving as the overarching framework for sustainable development, planning, and implementation in the country. Moreover, it is in harmony with Ethiopia's long-term development vision to achieve middle-income status by 2025, fostering a green and resilient economy. This vision emphasizes high economic growth through the modernization of agriculture, fortification of the industrial base, and expansion of exports.

1. Consistency with Development Strategies: The proposed interventions are highly consistent with Ethiopia's national and sub-national sustainable development strategies, particularly the Climate-Resilient Green Economy (CRGE) strategy, Sustainable Land Management Policy (SLMP), Gender Equality Policy, ADLI and GTP. Below is a detailed explanation of this alignment:

a) Climate Risk Awareness Campaigns (1.1): These campaigns align with the CRGE's focus on adaptation and resilience by empowering communities to understand and respond to climate risks.
b) Capacity-building Workshops (1.2): These workshops strengthen local institutions and stakeholders, supporting the CRGE's goal of institutional strengthening and public-private partnerships.
c) Participatory Vulnerability Assessments (1.3): These assessments ensure that adaptation strategies are community-driven and context-specific, aligning with the CRGE's emphasis on participatory approaches and local ownership.
d) Mainstreaming Climate Adaptation into Development Plans (1.4): This intervention ensures that climate resilience is integrated into local policies, supporting the CRGE's objective of sustainable and climate-resilient development.
e) Climate-Smart Agriculture: The proposed interventions promote practices such as water harvesting, crop diversification, and sustainable soil management, which are key components of the SLMP and CRGE strategy.
f) Livelihood Diversification: While the focus remains on agriculture, the proposed interventions also include beekeeping and fruit production, which align with the CRGE's goal of diversifying livelihoods in rural areas.
g) Water Harvesting and Management: The interventions include measures to improve water efficiency and storage, aligning with the CRGE's focus on climate-resilient water resources.
h) Forest Restoration: The proposed interventions include activities such as afforestation and reforestation, which support the CRGE's goal of enhancing carbon sequestration and biodiversity.
i) Community Engagement: The participatory nature of the proposed interventions ensures that communities are actively involved in disaster risk reduction, aligning with the National Policy and Strategy for Disaster Risk Management (NPS-DRM)'s focus on community preparedness.
j) Climate-Resilient Practices: The interventions promote practices that reduce vulnerability to climate-related disasters, such as droughts and floods, supporting the NPS-DRM's goal of enhancing resilience.

80 Gebru, G.W., Ichoku, H.E. & Phil-Eze, P.O. Determinants of livelihood diversification strategies in Eastern Tigray Region of Ethiopia. Agric & Food Secur 7, 62 (2018).

2. Proposed Interventions vs. Large-Scale Infrastructure Projects

a) **Large-Scale Infrastructure vs. Community-Based Solutions**: Large-scale infrastructure investments, such as major irrigation projects and centralized energy grids, can provide long-term benefits but require substantial capital, long implementation periods, and ongoing maintenance costs. Instead, the project prioritizes decentralized, community-driven interventions that are quicker to implement, cost-effective, and adaptable to local conditions.
b) **Alternative Livelihood Programs vs. Climate-Smart Diversification**: Generic livelihood diversification programs often lack climate resilience, whereas this project incorporates climate-smart strategies such as sustainable agriculture, small-scale irrigation, and renewable energy integration, ensuring long-term sustainability.
c) **Standalone Adaptation Projects vs. Integrated Approaches**: Many adaptation projects address only specific climate risks, such as drought or floods, without considering economic and environmental sustainability. This project adopts an integrated strategy, addressing multiple sectors-agriculture, water, energy, and livelihoods-aligning with Ethiopia's broader development priorities.
d) **Limited Flexibility:** Infrastructure projects are often rigid and cannot easily adapt to changing climate conditions or community needs. The proposed interventions, on the other hand, are flexible and can be adjusted based on ongoing monitoring and feedback from local stakeholders.

E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The project will adhere to the national laws, legislation, and standards that are applicable to its implementation. At the core of the national legal framework is the Ethiopian Federal Democratic Republic Constitution of 1995, which serves as the supreme law of the land, establishing overarching principles and guidelines.

The Constitution (1995): According to the Constitution, any law, customary practice, or decision contravening its provisions is deemed ineffective. The Constitution governs matters related to the ownership and use of resources, environmental concerns, and more. It affirms the right of every individual to reside in a clean and healthy environment, with the government obligated to ensure the provision of such an environment. Additionally, the Constitution places responsibility on both the government and the people of Ethiopia for the preservation of natural resources and the maintenance of ecological balances.

Environmental Law
The foundational principles for environmental conservation and management in Ethiopia are derived from the Constitution of the Federal Democratic Republic of Ethiopia (FDRE). The Constitution serves as the overarching legal framework, supplemented by accompanying proclamations to facilitate its implementation. The key legal instruments encompassing environmental laws include:

- **Environmental Policy (1997):** This policy document outlines the strategic approach and principles for environmental management and conservation.
- **Development, Conservation, and Utilization of Wildlife:** Proclamation No. 541/2007: This proclamation focuses on regulating the development, conservation, and sustainable utilization of wildlife resources.
- **Ethiopian Wildlife Development and Conservation Authority Establishment:** Proclamation No. 575/2008: This proclamation establishes the Ethiopian Wildlife Development and Conservation Authority, defining its roles and responsibilities in wildlife management and conservation.
- **Environmental Impact Assessment** Proclamation No. 299/2002: This proclamation provides the legal framework for conducting environmental impact assessments, ensuring that potential environmental effects of proposed projects are systematically evaluated.
- **National Conservation Strategy, Volume II, 1994**: This strategy document elaborates on the national approach to conservation efforts, outlining specific measures and objectives.
- **National Biodiversity Strategy and Action Plan (2005):** This document outlines strategies for the conservation and sustainable use of biodiversity in Ethiopia, aiming to address the country's unique ecological diversity.

- **Ethiopia's Pollution Control Proclamation and Standards** (Proclamation No. 300/2002): This proclamation establishes regulations and standards for pollution control, outlining measures to mitigate and control environmental pollution.

Together, these legal instruments provide a comprehensive framework for environmental protection, conservation, and sustainable management in Ethiopia. The Constitution, serving as the foundational document, sets the guiding principles that are operationalized through specific proclamations addressing various aspects of environmental governance.

The foundation for safeguarding, conserving, and promoting the environment in Ethiopia lies in the environmental policy and other relevant laws. The practical implementation of these laws involves the utilization of tools such as Strategic Environmental Assessments (SEAs) and Environmental Impact Assessments (EIAs). These tools serve as guides for integrating environmental and climate change considerations into various sectors, encompassing both agricultural and non-agricultural domains. A crucial aspect of project evaluation in the country is the mandatory requirement for both environmental and social impact assessments (ESIA) for development projects, activities, and programs.

The oversight and coordination of the ESIA process are primarily entrusted to key entities, including the Environment Protection Authority (EPA) the CRGE Facility within the Ministry of Finance (MoF), and the Ministry of Planning and Development (MPD). Furthermore, there are specific manuals and guidelines associated with the CRGE Facility, operation manuals, and appraisal guidelines. These documents collectively ensure adherence to environmental and social safeguards within the Facility/CRGE, emphasizing the importance of social inclusion in the implementation of projects.

Environmental and Social Management Framework (ESMF)

The project, including its procurement process, will adhere to the Environmental and Social Management Framework (ESMF) for the Climate-Resilient Green Economy (CRGE) initiative, which received approval in 2015. The ESMF is crafted in alignment with best practices, encompassing the screening and categorization methodologies of environmental and social safeguards policies from prominent institutions such as the World Bank, the Global Environmental Facility, the African Development Bank, and the European Investment Bank. Developed by the Government of Ethiopia (GoE), the ESSF aims to proactively address potential environmental and social issues arising from CRGE investments, integrating principles from national environmental and social policies, including the Constitution and the Environmental Impact Assessment Proclamation. This integration is designed to contribute to sustainable development by:

- Establishing internationally recognized standards and frameworks for environmental and social safeguards within CRGE investments.
- Mitigating, minimizing, or avoiding any direct, indirect, or potential adverse environmental and social impacts associated with CRGE investments.
- Defining roles and responsibilities for all relevant stakeholders and institutions throughout the life cycle of CRGE investment initiatives.
- Ensuring effective mechanisms are in place for safeguard compliance during CRGE investment implementation.

The ESMF operates based on several guiding principles, including the early application of environmental and social safeguards to foster sustainable development, stakeholder participation at all stages of CRGE investments, transparent information dissemination, prevention and mitigation of adverse impacts, and accountability and transparency by all entities involved in CRGE implementation. The framework applies to all projects financed through the CRGE Facility, encompassing screening processes to identify projects requiring an Environmental Impact Assessment (EIA) and addressing social issues as needed. Compliance with the CRGE manual and guidelines, particularly in terms of environmental and social safeguards, is integral to the operational process outlined in the CRGE Operations Manual, providing guidance on appraisal and ensuring alignment with the Facility/CRGE's principles of social inclusion.

Water Law

The Water Law in Ethiopia operates within the constitutional framework established in 1995 and the Water Policy of 1999. Central to this legal framework is the Water Resources Management (WRM) Proclamation 197/2000, which governs the utilization, conservation, protection, and administration of water resources in the country. The Constitution and the proclamation delineate the respective mandates of the Federal Government and Regional States in the domain of Water Resources Management.

Key legislative instruments include:

- Constitution of the Federal Democratic Republic of Ethiopia Proc. 1/1995

- Ethiopian Water Resources Management Proclamation Proc.197/2000
- Ethiopian Water Resources Management Regulation Reg. 115/2005
- River Basin Councils and Authority Proclamation Proc. 534/2007
- Abbay Basin Authority Reg. No. 151/2008

The Constitution confers authority upon the Federal Government, particularly empowering it to enact laws governing water management. Importantly, federal law jurisdiction extends to waters that traverse two or more regional states and those with an outlet beyond the national territory (Article 51/11).

It is noteworthy that private property, whether owned individually or collectively, is considered inviolable in Ethiopia. However, exceptions can be made in cases of public interest, with due compensation provided to owners. These policies, laws, and regulations fall under the purview of line ministries involved in the project design, and they will play a pivotal role in the implementation process. The project is committed to strict compliance with the relevant laws and regulations throughout its implementation phase. In instances where the project is undertaken by government institutions, the issuance of licenses is not deemed necessary.

Forest Law: In the forestry sector, the Forest Development, Conservation, and Utilization Proclamation (No. 542/2007) stand as the primary federal legislation in Ethiopia, superseding the Forest Conservation, Development, and Utilization Proclamation No. 94/1994. This legislation recognizes two forms of forest ownership – state and private forests. It outlines provisions for the designation, demarcation, and registration of major forestlands as state forests, offering legal acknowledgment to privately held forests. Moreover, the proclamation introduces incentives for non-state entities, including local communities and the private sector, encouraging their engagement in the management of forest reserves or the rehabilitation and reforestation of new areas.

Supporting this legal framework, there are associated policies and strategies, such as the Forest Development, Conservation, and Utilization Policy and Strategy (2007), reinforcing the overarching principles established in the Constitution. The adherence to these legal instruments, including Proclamation No. 542/2007, ensures that the project aligns with national laws and regulations governing the forestry sector in Ethiopia.

Land Law: The primary foundation for the fundamental laws governing land ownership, management, and administration in Ethiopia is the Ethiopian Constitution of 1995, which holds supreme authority and cannot be superseded. The guiding principles for land policies are centered on social equity and tenure security. In pursuit of social equity, the Constitution, alongside other Federal and Regional Land Proclamations, emphasizes providing access to agricultural land to ensure equality among citizens in its utilization. The constitutional mandate prohibits the sale and exchange of land, asserting that land is owned exclusively by the state or public, and is considered common property of the Nations, Nationalities, and Peoples of Ethiopia, explicitly safeguarded against sale or exchange.

Article 40(3) of the constitution establishes that the right to ownership of rural and urban land, as well as natural resources, resides solely with the State and the people of Ethiopia. Consequently, land is recognized as common property and is not subject to commercial transactions. The Constitution grants user rights, as outlined in Article 40(4), which also serves as the legal basis for Ethiopian peasants to acquire land without payment and ensures protection against eviction from their possession. The most recent legal framework in this regard is the Federal Democratic Republic of Ethiopia Rural Land Administration and Use Proclamation of 2005. This proclamation is rooted in the fundamental objective of fostering sustainable rural land use planning, delineating the size and use rights of various landholdings across the country, establishing mechanisms for conflict resolution between farmers and agricultural investors, and creating a conducive system for the administration of rural land.

Table 9 Summary of applicable standards that will be followed in the implementation of the project

Standard	Compliance	Application

Potable Water	The **Ethiopian Standard CES-58 (Drinking Water Specification)**[81] was first introduced by the Ethiopian Standards Agency (ESA) in 2013, replacing the earlier ES 261:2001. Now in its fourth edition (updated in 2022), CES-58 serves as the **mandatory national benchmark for drinking water quality in Ethiopia**. It defines the essential physical, chemical, and bacteriological requirements that water must meet to be considered safe for human consumption and household use. The ESA, which developed and maintains this standard, operates under ISO 9001:2015 certification. It aligns with WHO guidelines and is critical for projects ensuring safe drinking water access (e.g., Output 2.1: water system upgrades for 50,000 households). **Ethiopian Climate Resilient Water Safety Pla-n (CRWSP) Guidelines**: Developed by the Ministry of Water and Energy (MoWE), these guidelines provide a framework for urban utilities to manage piped drinking water supplies, focusing on risk assessment and contamination prevention along the water service chain (source, storage, treatment, distribution). They are informed by WHO's Water Safety Plan Manual and are vital for addressing water quality issues in urban and rural settings.	The proposal's water interventions (e.g., developing springs and wells) must adhere to CES 58 for potable water quality
Irrigation Water	**Ethiopian Standard ES 1302:2013 (Water Quality for Irrigation)**: This ESA standard outlines permissible limits for salinity, sodium adsorption ratio (SAR), residual sodium carbonate (RSC), and other parameters to ensure water suitability for irrigation. Values of salinity and combined effect salinity and sodicity levels must be below the FAO guidelines of water quality for agriculture, irrigation and drainage restriction limit. **FAO Guidelines for Irrigation Water Quality**: While not a national code, Ethiopia's irrigation projects often reference FAO standards for assessing water quality (e.g., electrical conductivity, pH, and ion concentrations) to ensure crop health and soil fertility.	The proposal's irrigation interventions (e.g., 200 km of drip/sprinkler systems, Output 2.2) must comply with ES 1302:2013 to ensure water quality supports resilient agriculture, addressing water scarcity and drought.
Construction Safety Standards for Public Infrastructure	**Ethiopian Building Code of Standards (EBCS)**: Managed by the Ministry of Urban Development and Construction, the EBCS (e.g., EBCS-10:2013 for Structural Design, EBCS-8:1995 for Concrete Structures) governs construction safety for public infrastructure, including water systems and irrigation canals. These standards specify requirements for structural integrity, material quality, and worker safety, ensuring resilience against environmental stressors like floods. **Occupational Safety and Health Directive (2017)**: Issued by the Ministry of Labor and Social Affairs, this directive outlines workplace safety requirements, including risk assessments, protective equipment, and training for construction workers. It is critical for infrastructure projects like this project, which emphasized third-party supervision to minimize resource wastage.	The proposal's infrastructure activities (e.g., water systems, irrigation canals) must adhere to EBCS standards for structural safety and incorporate third-party supervision to ensure efficient construction.
Land Tenure and Use Compliance	**Proclamation No. 456/2005 (Rural Land Administration and Use)**: This federal proclamation, amended by Proclamation No. 1161/2019, governs rural land tenure, assigning state ownership of land while granting use rights to farmers and pastoralists. It restricts forced redistribution to irrigation development areas, promoting tenure security for project beneficiaries. **Ethiopian Land Use Planning and Management Guidelines**: Issued by the Ministry of Agriculture, these guidelines promote sustainable land use, including conservation agriculture and watershed management.	The proposal's land-based interventions (e.g., conservation agriculture, Output 3.3) must comply with Proclamation No. 456/2005 to secure land use rights for farmers and align with land use guidelines to protect ecosystems, for community-driven land restoration.

Core Impact Indicators and Alignment with AF Results Framework

In line with the Adaptation Fund's Core Impact Indicator Methodologies, the following core impact indicators have been integrated into the design, implementation, and monitoring of this project. These indicators will guide the assessment of the project's progress in achieving environmental, social, and gender-responsive adaptation outcomes:

81 Ethiopian Drinking Water Quality Standards, 2013

Table 10 Core Impact Indicators and Alignment with AF Results Framework

Core Impact Indicator	Project Application / Relevance
1. Number of Beneficiaries (direct and indirect)	▪ Approximately 124,000 people (estimated from 22,500 households) will directly benefit from improved water access, resilient agriculture, and livelihood diversification. Beneficiaries will be tracked by gender and vulnerability status.
2. Assets produced, improved, or strengthened	▪ Solar-powered water systems ▪ Small-scale irrigation infrastructure ▪ Climate-resilient seed and livestock packages ▪ Community-managed productive-use assets (e.g., for apiculture and food processing)
3. Natural assets protected or rehabilitated	▪ Agricultural land under conservation farming and irrigation (estimated hectares defined in logframe) ▪ Vegetation cover increased through agroforestry and fodder production
4. Early Warning Systems	▪ Local climate risk assessments ▪ Dissemination of seasonal weather information via SMS and community meetings
5. Capacity of institutions to reduce climate risks	▪ Training provided to community groups, water user associations, and local authorities ▪ Integration of adaptation plans in Woreda-level development strategies
6. Gender-responsive results	▪ At least 2,000 women-headed households directly benefit from climate-smart agriculture interventions ▪ Women represented in all water and livelihood groups, including leadership roles ▪ Gender-disaggregated M&E applied across all outputs

These indicators will be monitored throughout the project's implementation and reported at baseline, mid-term, and completion stages, in accordance with the Adaptation Fund's guidance. Disaggregated data collection (by gender, age, and vulnerability status) will ensure inclusive tracking of adaptation impacts, especially on marginalized populations.

Methodology for reporting Adaptation Fund core Impact indicators

In line with the Adaptation Fund's guidelines, the project has identified and aligned with the most relevant core impact indicators to systematically track its contributions to building climate resilience. These include the number of beneficiaries, disaggregated by gender and youth, who directly or indirectly benefit from project interventions; the assets produced, developed, improved, or strengthened, covering both physical infrastructure and livelihood-related assets that enhance adaptive capacity; and the natural assets protected or rehabilitated, reflecting improvements in ecosystems and land under sustainable management. For each of these indicators, baseline and target values at project approval have been established, ensuring consistency with the project results framework. The reporting tables presented below provide a structured basis for monitoring and reporting against these core indicators throughout the project cycle, thereby ensuring transparency, accountability, and alignment with Adaptation Fund methodologies.

Core Indicator 1: Number of Beneficiaries (Direct and Indirect)

Date of Report				
Project Title	*Transforming Communities: A Nexus of Climate-Smart Agriculture, Livelihood Diversification, and Women's Economic Empowerment*			
Implementing Agency	Ministry of Finance			
Project Duration				
Beneficiary Category	**Baseline (absolute number)**	**Target at Project Approval (absolute number)**	**Adjusted Target (First Year)**	**Actual at Completion**
Direct beneficiaries (individuals)	0	120,000 (from ~22,500 households)	N/A	N/A
Female direct beneficiaries	0	60,000 (≥50% of direct total)	N/A	N/A
Youth (15–24) direct beneficiaries	0	36,000 (≥30% of direct total)	N/A	N/A

Indirect beneficiaries (individuals)	0	≈150,000 (additional ~27,500 households benefiting from community water access & ecosystem services)	N/A	N/A
Female indirect beneficiaries	0	≈75,000 (estimated ~50% of indirect)	N/A	N/A
Youth (15–24) indirect beneficiaries	0	≈45,000 (estimated ~30% of indirect)	N/A	N/A

Core Indicator 4: Assets Produced, Developed, Improved, or Strengthened

Date of Report						
Project Title	*Transforming Communities: A Nexus of Climate-Smart Agriculture, Livelihood Diversification, and Women's Economic Empowerment*					
Implementing Agency	Ministry of Finance					
Project Duration						
Sector	**Targeted Asset**	**Baseline**	**Target at Project Approval**	**Adjusted Target (First Year)**	**Actual at Completion**	**Changes/Quantity (planned)**
Water	Solar-powered community water supply systems (springs and wells with distribution)	11 systems	25 systems	N/A	N/A	+14 systems (developed/rehabilitated). 10 springs and 15 hand-dug wells equipped with solar pumps, improving safe water access for 50,000 households.
Agriculture	Small-scale irrigation infrastructure (drip/sprinkler systems and irrigated land)	560 ha; 150 km	800 ha; 200 km	N/A	N/A	+240 ha of farmland under irrigation and +50 km of new drip/sprinkler lines installed, strengthening drought resilience for farmers.
Agriculture	Climate-resilient seed packages (drought-tolerant crop varieties)	0	150 quintals of forage seeds distributed	N/A	N/A	High-yield, drought-tolerant seeds provided to 5,000 farmers (for improved pasture and crop production).
Agriculture	**Climate-resilient livestock packages** (improved breeds, feed, vet services)	0	3,000 households supported	N/A	N/A	Climate-adapted livestock management packages delivered (training/veterinary support) to **3,000** farmers to boost herd resilience.
Livelihoods	**Community productive assets** (women-led apiculture and food-	0	*TBD* (demand-driven)	N/A	N/A	Establishment of community-run **beekeeping and agro-processing facilities** (e.g. honey production, food storage/processing)

	processing units)					in target areas to enhance livelihood diversification for women's groups.

Core Indicator 5: Natural Assets Protected or Rehabilitated

Date of Report					
Project Title	*Transforming Communities: A Nexus of Climate-Smart Agriculture, Livelihood Diversification, and Women's Economic Empowerment*				
Implementing Agency	Ministry of Finance				
Project Duration					
Natural Asset/Ecosystem Type	**Baseline (ha)**	**Target at Project Approval (ha)**	**Adjusted Target (First Year)**	**Actual at Completion**	**Change in State (qualitative)**
Agricultural land under climate-smart management (crop and rangeland under conservation farming, improved irrigation)	0 ha	8,000 ha (climate-resilient cultivation)	N/A	N/A	Degraded farmlands rehabilitated; soil erosion reduced; improved water retention and crop yield on 8,000 ha.
Vegetation cover (forests, woodlots, and agroforestry areas) restored or enhanced	0 ha	4,000 ha (reforestation and fodder/trees planted)	N/A	N/A	Native tree cover and community woodlots expanded; biodiversity and canopy cover increased on 4,000 ha.
Total area of natural assets improved	0 ha	12,000 ha	N/A	N/A	Enhanced ecosystem resilience and resource base across project landscapes.

F. Describe if there is duplication of project/programme with other funding sources, if any.

The project does not overlap with other funded initiatives in the selected woredas and kebeles. The site selection followed a rigorous, transparent process to ensure no duplication, focusing on climate vulnerability, degraded land, and inadequate water infrastructure. These criteria were validated through stakeholder consultations to prioritize underserved areas with urgent needs.

During the Stakeholders' Consultation Workshop in Adama (October 2023), stakeholders from federal, regional, and local levels confirmed that no similar projects exist in the targeted areas. The absence of other funding sources, including Adaptation Fund-financed projects, was a strict exclusion criterion. Areas with ongoing or recent international development projects were explicitly excluded to prevent duplication and ensure efficient resource allocation.

The following table is a short list of initiatives that are well-aligned with Ethiopia's climate challenges. The initiatives are aligned with the interventions outlined in the project outputs (e.g., water system improvements, crop diversification, and women's training) and respond to the risks noted in the climate risk assessment (e.g., agricultural vulnerability). These initiatives also emphasize gender equity, with explicit targets such as 50% female beneficiaries and support for women's land rights, mirroring the proposed project's focus on women-headed households and female empowerment.

Table 11 Listing of relevant national and donor-supported initiatives

Initiative	Lead Organization(s)/Donors	Objectives	Key Interventions	Complementarity and Potential Synergies
Productive Safety Net Programme (PSNP) – Climate-Smart Initiative (CSI)	Government of Ethiopia, World Bank, USAID, UK DFID, Irish Aid, FAO	Enhance food security, build climate resilience, and promote sustainable livelihoods through public works and income support.	▪ Soil and water conservation (e.g., terracing, watershed management). ▪ CSA practices (e.g., drought-tolerant crops) ▪ Livelihood diversification and cash/food transfers. ▪ GIS-based watershed mapping for climate risk analysis.	CSI developed climate-smart public works and planning tools for PSNP/HABP. The project will adopt these (e.g., watershed SLM measures, drought-tolerant crops) in new target areas, not CSI sites, to avoid duplication. It will apply CSI's GIS watershed mapping and public-works training protocols while focusing on communities not previously served, extending CSI's piloted approaches rather than repeating them.
GCF-Funded Resilient Landscapes and Livelihoods Project (FP136)	World Bank, Government of Ethiopia, GCF	Improve climate resilience, land productivity, and carbon storage in vulnerable rural watersheds; diversify livelihoods.	▪ Sustainable land management (e.g., reforestation, soil conservation). ▪ Low-emission CSA practices (e.g., drought-resistant crops). ▪ Enhanced land tenure for women. ▪ Community-driven adaptation planning.	The project will scale up FP136-proven practices (terracing, reforestation, CSA) in its own watersheds, targeting areas not covered by FP136 to prevent overlap. It will reinforce FP136's gender gains by empowering women in land/asset decisions and integrating gender-responsive livelihoods, amplifying FP136 outcomes.
GCF-Funded Climate-Resilient Community Access to Safe Water (FP243)	GCF, Government of Ethiopia	Enhance water security and climate resilience in drought-prone regions (Kobo-Girana Valley, Borena Zone).	▪ Solar-powered water systems for communities and schools. ▪ Water infrastructure (e.g., wells, distribution systems). ▪ Training on water management and climate adaptation. ▪ Community-based water governance.	The project's water-security component (renewable-powered wells/irrigation) will coordinate with FP243 to avoid overlap-focusing on adjacent/underserved kebeles rather than FP243 localities. It will adopt FP243's gender-sensitive governance (e.g., women's associations) and cost-recovery lessons, expanding access in new areas and strengthening community water governance.
Second Ethiopia Resilient Landscapes and Livelihoods Project (RLLP II, P174385)	Government of Ethiopia, World Bank	Strengthen sustainable land management, improve livelihoods, and enhance climate resilience in rural areas.	▪ Soil and water conservation (e.g., terracing, reforestation). ▪ CSA practices (e.g., crop diversification, agroforestry). ▪ Livelihood diversification and market access. ▪ Resettlement Policy Framework (RPF) for fair compensation.	Shares objectives on watershed restoration and livelihood diversification. The project will implement similar SLM and CSA in neighbouring communities beyond current RLLP II watersheds, leveraging existing maps/guidelines and beneficiary data to inform targeting. It adds emphasis on small-scale irrigation and women's enterprises, complementing RLLP II's scale with community-level value-chain and gender-focused interventions.
FAO-GCF Partnership Projects	FAO, GCF	Scale up climate-resilient agrifood systems and sustainable livelihoods in vulnerable regions.	▪ CSA training (e.g., water-efficient crops). ▪ Water management (e.g., irrigation canals, wells).	The project will operationalize FAO-GCF guidance at field level, using readiness-developed curricula/tools for farmer training and deploying FAO-endorsed CSA technologies (e.g., solar irrigation kits, drought-

Initiative	Lead Organization(s)/Donors	Objectives	Key Interventions	Complementarity and Potential Synergies
			▪ Ecosystem restoration and value-chain development. ▪ Climate information services (e.g., SMS weather alerts).	tolerant seed) in target communities, thus translating national/program-level outputs into local demonstrations.
Climate-Smart PSNP (GCCA+)	Government of Ethiopia, DAI, EU (GCCA+)	Mainstream CSA into PSNP to enhance resilience and adaptive capacity in rural woredas.	▪ Climate risk analysis and planning for public works. ▪ Training on CSA practices (e.g., crop diversification). ▪ GIS mapping of micro-watersheds. ▪ Livelihood business planning with climate-risk focus.	Builds on GCCA+ outputs (hazard maps, CSA protocols, watershed guidelines) by applying them directly in community interventions. Rather than re-training the same officials, the project embeds these best practices in Component 1 risk assessments and Component 3 SLM/CSA works, reinforcing mainstreaming without duplication.
Food Systems Integrated Program (FSIP)	FAO, IFAD, GEF	Transform agrifood systems to be sustainable, resilient, and inclusive, focusing on crops, livestock, and aquaculture.	▪ Drought-tolerant crops (e.g., maize, wheat). ▪ Sustainable livestock and aquaculture practices. ▪ Market access and value chains. ▪ CSA technologies (e.g., solar-powered irrigation).	Aligns with FSIP priorities by piloting village-level innovations (drought-resilient varieties, small-scale irrigation, women's market access). Field results and lessons will feed FSIP knowledge platforms. Country-program investments are complemented, not duplicated, by targeted demonstrations in specific kebeles.

The project introduces interventions tailored to climate-resilient agriculture, water management, and livelihood diversification. Its comprehensive selection process guarantees that it addresses unmet needs in areas without similar support, making it a strategic and necessary investment for vulnerable communities.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

The implementation of the project's four components and associated activities promises valuable insights and learnings that can significantly contribute to enhancing climate resilience and sustainable development in rural areas. Each component unfolds a unique set of impacts aimed at addressing the multifaceted challenges posed by climate change.

Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the Local Level
The Climate Risk Awareness Campaign seeks to elevate understanding and awareness of climate risks among communities and stakeholders. Concurrently, Capacity-building Workshops aim to empower local authorities and stakeholders, fostering their ability to actively engage in effective climate risk reduction and adaptation planning. Community Engagement and Participatory Vulnerability Assessments endeavour to install a sense of community ownership and comprehension of climate risks, fostering informed decision-making. Additionally, Mainstreaming Climate Adaptation into Development Plans strives to embed climate adaptation measures into local policies and plans, demonstrating a commitment to comprehensive integration.

Component 2: Water Security, Climate Resilience, and Women's Empowerment
This component unfolds with Water Source Development and Protection, envisioning improved access to clean water sources. Efficient Water Infrastructure Upgrade amplifies water distribution and storage capacities, while Decentralized Renewable Energy (DRE) Systems facilitate water provision through renewable energy. Small-Scale Irrigation and Water Use Efficiency enhance agricultural water use and mitigate climate-related risks. Women-centric Capacity Building and Gender-Responsive Awareness Campaigns contribute to strengthened skills, increased participation of women in water management and agriculture, and improved gender roles. Collectively, these activities aim to empower communities, improve water access, boost agricultural productivity, and foster gender equality.

Component 3: Climate Smart Agriculture and Livestock Rearing
This component focuses on Climate-Resilient Crop Selection and Diversification to enhance resilience through diverse crop varieties. Similarly, Climate-Resilient Livestock Production and Management strive for a sustainable and resilient livestock sector. Natural Resource Management aims at sustainable land use, protected ecosystems, and increased agricultural productivity. Weather Information Dissemination improves decision-making based on weather information. Overall, the component envisions empowered communities with enhanced resilience, food security, and environmental sustainability through the adoption of climate-smart agriculture practices.

Component 4: Climate Smart Livelihood Diversification
The Identification of Gender-Responsive Diversification Options ensures a well-informed, women-centric selection of diverse livelihood options aligned with local resources, capabilities, and market demand. Technical Training and Knowledge Sharing equip women and community members with the skills necessary for the effective implementation and management of diversified livelihood activities. The Implementation of Diversification Activities aims for the successful establishment and management of diversified activities, reducing reliance on a single income source. Promotion of Market Linkages enhances economic viability, leading to improved income and better market access. This component envisions vibrant rural communities with diversified livelihoods, economic resilience, and reduced vulnerability to external shocks.

The dissemination of project results will extend beyond the project areas through established information-sharing networks and forums. The CRGE Facility, in collaboration with executing entities, will actively identify and participate in relevant scientific, policy-based, and other networks, enhancing project implementation through shared lessons learned. Additionally, the CRGE and relevant ministries will systematically identify, analyze, and share valuable insights to inform the design and implementation of similar future programs. A reciprocal flow of information will be maintained between this project and others with a similar focus.

The integration of action research throughout the project, with the active engagement of communities and research and development partners, will enable the incorporation of their recommendations to refine future approaches. The lead ministries' ongoing collaboration with academic and research institutions will be strengthened during project implementation. Development-oriented research will be conducted to identify avenues for creating or fortifying knowledge, collective learning processes, or institutions.

The CRGE Facility, as the coordinator of climate-related projects in Ethiopia, has developed a monitoring, evaluation, and learning guideline to ensure that programs/projects build on lessons from previous or ongoing climate change initiatives. This proposal, developed with insights from key lessons in Section F, adopts an integrated, multi-sectoral approach as a strategic outcome of the analysis of past initiatives. Furthermore, this proposal, developed with insights from the implementation of the Adaptation Fund's "Climate Smart Integrated Rural Development Project" (CSIRDP). The CSIRDP provided critical lessons on effective climate adaptation, which have been systematically integrated into this proposal to enhance resilience, sustainability, and stakeholder engagement.

The CSIRDP highlighted several operational, technical, and institutional lessons that have shaped this proposal:

1. **Integrated Approach for Transformative Impact** (CSIRDP Lesson #1): The CSIRDP demonstrated that combining landscape restoration, improved agricultural practices, alternative income generation, and water access significantly transforms livelihoods and builds resilience. This proposal incorporates an integrated approach by combining water system upgrades (e.g., 10 springs, 15 wells, 200 km of irrigation systems), diversified cropping (training 5,000 farmers), and livelihood diversification (supporting 4,000 households), ensuring holistic resilience against water scarcity and drought.
2. **Community-Led Reforestation** (CSIRDP Lesson #2): Community-driven reforestation was found to be more effective and sustainable than external efforts. This proposal prioritizes community-led conservation agriculture and multi-purpose nurseries under Output 3.3, engaging local stakeholders to restore degraded ecosystems, informed by CSIRDP's success in mobilizing communities for sustainable land use.
3. **Third-Party Supervision for Infrastructure** (CSIRDP Lesson #3): The CSIRDP emphasized the need for independent supervision of infrastructure projects (e.g., irrigation canals) to minimize resource wastage. This proposal includes quarterly monitoring missions (Output 1.3) with third-party oversight to ensure efficient implementation of water systems and irrigation infrastructure, reducing delays and costs.
4. **Robust Training for User Groups** (CSIRDP Lesson #4): Strong business and financial management training was critical for user groups in the CSIRDP. This proposal enhances training programs under Output 4.1, providing 8,000 women with entrepreneurship, financial management, and agricultural skills to support diversified livelihoods, building on CSIRDP's emphasis on capacity building.
5. **Long-Term Measurement of Benefits** (CSIRDP Lesson #5): The CSIRDP showed that measuring risk reduction benefits within 3–4 years is challenging. This proposal adopts a long-term monitoring framework, with annual performance assessments and a terminal evaluation to capture adaptation outcomes over time, aligning with CRGE's M&E guidelines.
6. **Irrigation for Agricultural Productivity** (CSIRDP Lesson #6): Access to irrigation significantly increased agricultural yields and food security in the CSIRDP. This proposal scales up irrigation systems (Output 2.1, 2.2) to benefit 50,000 households, directly addressing water scarcity and informed by CSIRDP's success in linking water access to productivity.
7. **Capacity Assessments for Partners** (CSIRDP Lesson #7): Limited partner capacity hampered CSIRDP implementation. This proposal mitigates this risk by conducting capacity assessments at the design and inception phases, ensuring implementing partners (e.g., EFD, BoA) are equipped to deliver project activities effectively.
8. **Solar Pump Technology** (CSIRDP Lesson #8): The introduction of solar pumps was a significant success in the CSIRDP. This proposal incorporates solar-powered irrigation systems under Output 2.2, enhancing sustainability and reducing reliance on fossil fuels, building on CSIRDP's technological innovation.
9. **Utilizing Abandoned Lands** (CSIRDP Lesson #9): The CSIRDP showed that abandoned lands can be repurposed for agriculture. This proposal supports conservation agriculture on degraded lands (Output 3.3), engaging communities to restore and utilize such areas, informed by CSIRDP's findings.
10. **Regional Government Commitment** (CSIRDP Lesson #10): Political commitment from regional governments, including support for water drilling, was critical in the CSIRDP. This proposal establishes a Joint Project Coordination Platform (JPCP) to secure regional government buy-in, ensuring sustainability and resource support.
11. **Government Structure Engagement** (CSIRDP Lesson #11): Working through government structures enhanced ownership in the CSIRDP. This proposal collaborates with regional CRGE

steering committees and woreda-level sector heads to channel lessons and build capacity, ensuring strong institutional ownership.

12. **Women's Economic Empowerment** (CSIRDP Lesson #12): The CSIRDP showed that empowering women economically enhances household decision-making and confidence. This proposal prioritizes women's training and livelihood diversification (Outputs 2.3, 4.1), targeting 8,000 women to foster gender equity and resilience.
13. **Improved Seed Varieties** (CSIRDP Lesson #13): Improved seed varieties were more productive in the CSIRDP. This proposal distributes 150 quintals of drought-tolerant forage seeds (Output 3.1), informed by CSIRDP's success in boosting agricultural productivity.
14. **Grass Production and Area Closure** (CSIRDP Lesson #14): Grass production in closed areas was successful in the CSIRDP but required protection. This proposal supports area closures for grass production under Output 3.3, ensuring ecosystem protection and sustainable fodder production.

The project builds on operational, institutional, and technical lessons from several major initiatives in Ethiopia, including the Ethiopia Resilient Landscapes and Livelihoods Project (RLLP), the Participatory Small-Scale Irrigation Development Program (PASIDP), and the AF-funded Climate Smart Integrated Rural Development project. These programs, which also targeted rural climate vulnerabilities, have provided critical insights into the design and delivery of integrated resilience solutions. In particular, from the RLLP, the project draws lessons related to the need for decentralized and inclusive monitoring systems. RLLP's centralized M&E approach limited real-time data flow and community engagement. In contrast, this project adopts a more localized model by establishing community-level monitoring and reporting teams, ensuring both bottom-up learning and timely adaptation of implementation strategies. The project also reflects PASIDP's experience, particularly in linking water access with livelihood outcomes, but improves on this by integrating gender empowerment and sustainability safeguards that were underemphasized in PASIDP.

Learning and knowledge management components

The implementation of the project's four components and associated activities promises valuable insights and learnings that can significantly contribute to enhancing climate resilience and sustainable development in rural areas. Each component unfolds a unique set of impacts aimed at addressing the multifaceted challenges posed by climate change.

Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the Local Level

The Climate Risk Awareness Campaign seeks to elevate understanding and awareness of climate risks among communities and stakeholders. Concurrently, Capacity-building Workshops aim to empower local authorities and stakeholders, fostering their ability to actively engage in effective climate risk reduction and adaptation planning. Community Engagement and Participatory Vulnerability Assessments endeavour to install a sense of community ownership and comprehension of climate risks, fostering informed decision-making. Additionally, Mainstreaming Climate Adaptation into Development Plans strives to embed climate adaptation measures into local policies and plans, demonstrating a commitment to comprehensive integration.

Component 2: Water Security, Climate Resilience, and Women's Empowerment

This component unfolds with Water Source Development and Protection, envisioning improved access to clean water sources. Efficient Water Infrastructure Upgrade amplifies water distribution and storage capacities, while Decentralized Renewable Energy (DRE) Systems facilitate water provision through renewable energy. Small-Scale Irrigation and Water Use Efficiency enhance agricultural water use and mitigate climate-related risks. Women-centric Capacity Building and Gender-Responsive Awareness Campaigns contribute to strengthened skills, increased participation of women in water management and agriculture, and improved gender roles. Collectively, these activities aim to empower communities, improve water access, boost agricultural productivity, and foster gender equality.

Component 3: Climate Smart Agriculture and Livestock Rearing

This component focuses on Climate-Resilient Crop Selection and Diversification to enhance resilience through diverse crop varieties. Similarly, Climate-Resilient Livestock Production and Management strive for a sustainable and resilient livestock sector. Natural Resource Management aims at sustainable land use, protected ecosystems, and increased agricultural productivity. Weather Information Dissemination improves decision-making based on weather information. Overall, the component envisions empowered communities with enhanced resilience, food security, and environmental sustainability through the adoption of climate-smart agriculture practices.

Component 4: Climate Smart Livelihood Diversification
The Identification of Gender-Responsive Diversification Options ensures a well-informed, women-centric selection of diverse livelihood options aligned with local resources, capabilities, and market demand. Technical Training and Knowledge Sharing equip women and community members with the skills necessary for the effective implementation and management of diversified livelihood activities. The Implementation of Diversification Activities aims for the successful establishment and management of diversified activities, reducing reliance on a single income source. Promotion of Market Linkages enhances economic viability, leading to improved income and better market access. This component envisions vibrant rural communities with diversified livelihoods, economic resilience, and reduced vulnerability to external shocks.

The dissemination of project results will extend beyond the project areas through established information-sharing networks and forums. The CRGE Facility, in collaboration with executing entities, will actively identify and participate in relevant scientific, policy-based, and other networks, enhancing project implementation through shared lessons learned. Additionally, the CRGE and relevant ministries will systematically identify, analyze, and share valuable insights to inform the design and implementation of similar future programs. A reciprocal flow of information will be maintained between this project and others with a similar focus.

The integration of action research throughout the project, with the active engagement of communities and research and development partners, will enable the incorporation of their recommendations to refine future approaches. The lead ministries' ongoing collaboration with academic and research institutions will be strengthened during project implementation. Development-oriented research will be conducted to identify avenues for creating or fortifying knowledge, collective learning processes, or institutions.

The CRGE Facility, as the coordinator of climate-related projects in Ethiopia, has developed a monitoring, evaluation, and learning guideline to ensure that programs/projects build on lessons from previous or ongoing climate change initiatives. This proposal, developed with insights from key lessons in Section F, adopts an integrated, multi-sectoral approach as a strategic outcome of the analysis of past initiatives. Furthermore, this proposal, has been developed with insights from the implementation of the Adaptation Fund's "Climate Smart Integrated Rural Development Project" (CSIRDP). The CSIRDP provided critical lessons on effective climate adaptation, which have been systematically integrated into this proposal to enhance resilience, sustainability, and stakeholder engagement. Highlights of several operational, technical, and institutional lessons from the CSIRDP that have shaped this proposal include:

1. **Integrated Approach for Transformative Impact** (CSIRDP Lesson #1): The CSIRDP demonstrated that combining landscape restoration, improved agricultural practices, alternative income generation, and water access significantly transforms livelihoods and builds resilience. This proposal incorporates an integrated approach by combining water system upgrades (e.g., 10 springs, 15 wells, 200 km of irrigation systems), diversified cropping (training 5,000 farmers), and livelihood diversification (supporting 4,000 households), ensuring holistic resilience against water scarcity and drought.
2. **Community-Led Reforestation** (CSIRDP Lesson #2): Community-driven reforestation was found to be more effective and sustainable than external efforts. This proposal prioritizes community-led conservation agriculture and multi-purpose nurseries under Output 3.3, engaging local stakeholders to restore degraded ecosystems, informed by CSIRDP's success in mobilizing communities for sustainable land use.
3. **Third-Party Supervision for Infrastructure** (CSIRDP Lesson #3): The CSIRDP emphasized the need for independent supervision of infrastructure projects (e.g., irrigation canals) to minimize resource wastage. This proposal includes quarterly monitoring missions (Output 1.3) with third-party oversight to ensure efficient implementation of water systems and irrigation infrastructure, reducing delays and costs.
4. **Robust Training for User Groups** (CSIRDP Lesson #4): Strong business and financial management training was critical for user groups in the CSIRDP. This proposal enhances training programs under Output 4.1, providing 8,000 women with entrepreneurship, financial management, and agricultural skills to support diversified livelihoods, building on CSIRDP's emphasis on capacity building.
5. **Long-Term Measurement of Benefits** (CSIRDP Lesson #5): The CSIRDP showed that measuring risk reduction benefits within 3–4 years is challenging. This proposal adopts a long-

term monitoring framework, with annual performance assessments and a terminal evaluation to capture adaptation outcomes over time, aligning with CRGE's M&E guidelines.

6. **Irrigation for Agricultural Productivity** (CSIRDP Lesson #6): Access to irrigation significantly increased agricultural yields and food security in the CSIRDP. This proposal scales up irrigation systems (Output 2.1, 2.2) to benefit 50,000 households, directly addressing water scarcity and informed by CSIRDP's success in linking water access to productivity.
7. **Capacity Assessments for Partners** (CSIRDP Lesson #7): Limited partner capacity hampered CSIRDP implementation. This proposal mitigates this risk by conducting capacity assessments at the design and inception phases, ensuring implementing partners (e.g., EFD, BoA) are equipped to deliver project activities effectively.
8. **Solar Pump Technology** (CSIRDP Lesson #8): The introduction of solar pumps was a significant success in the CSIRDP. This proposal incorporates solar-powered irrigation systems under Output 2.2, enhancing sustainability and reducing reliance on fossil fuels, building on CSIRDP's technological innovation.
9. **Utilizing Abandoned Lands** (CSIRDP Lesson #9): The CSIRDP showed that abandoned lands can be repurposed for agriculture. This proposal supports conservation agriculture on degraded lands (Output 3.3), engaging communities to restore and utilize such areas, informed by CSIRDP's findings.
10. **Regional Government Commitment** (CSIRDP Lesson #10): Political commitment from regional governments, including support for water drilling, was critical in the CSIRDP. This proposal establishes a Joint Project Coordination Platform (JPCP) to secure regional government buy-in, ensuring sustainability and resource support.
11. **Government Structure Engagement** (CSIRDP Lesson #11): Working through government structures enhanced ownership in the CSIRDP. This proposal collaborates with regional CRGE steering committees and woreda-level sector heads to channel lessons and build capacity, ensuring strong institutional ownership.
12. **Women's Economic Empowerment** (CSIRDP Lesson #12): The CSIRDP showed that empowering women economically enhances household decision-making and confidence. This proposal prioritizes women's training and livelihood diversification (Outputs 2.3, 4.1), targeting 8,000 women to foster gender equity and resilience.
13. **Improved Seed Varieties** (CSIRDP Lesson #13): Improved seed varieties were more productive in the CSIRDP. This proposal distributes 150 quintals of drought-tolerant forage seeds (Output 3.1), informed by CSIRDP's success in boosting agricultural productivity.
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The project builds on operational, institutional, and technical lessons from several major initiatives in Ethiopia, including the Ethiopia Resilient Landscapes and Livelihoods Project (RLLP), the Participatory Small-Scale Irrigation Development Program (PASIDP), and the AF-funded Climate Smart Integrated Rural Development project. These programs, which also targeted rural climate vulnerabilities, have provided critical insights into the design and delivery of integrated resilience solutions. In particular, from the RLLP, the project draws lessons related to the need for decentralized and inclusive monitoring systems. RLLP's centralized M&E approach limited real-time data flow and community engagement. In contrast, this project adopts a more localized model by establishing community-level monitoring and reporting teams, ensuring both bottom-up learning and timely adaptation of implementation strategies. The project also reflects PASIDP's experience, particularly in linking water access with livelihood outcomes, but improves on this by integrating gender empowerment and sustainability safeguards that were underemphasized in PASIDP.

Recognizing the value of learning, the CRGE Facility institutionalizes practices of high value. This understanding is incorporated into this proposal through a learning and knowledge transfer component. The program will enrich its implementation processes and contribute to other development programs and policies by gaining lessons in the following ways:

- **Capturing Lessons:** Relevant stakeholders, guided by the facility's monitoring, evaluation, and learning guideline, will capture and collate lessons at various implementation levels.

- **Regional Coordination:** The program management unit will collaborate directly with the regional CRGE steering committee and sector heads at the woreda level, channelling key lessons, especially at the kebele level, to the facility through this structure.
- **Archiving and Accessibility:** Captured lessons will be archived in the CRGE registry, providing accessibility to all stakeholders for immediate application or further analysis. Workshops, exchange visits, lesson reports, engagement with the media, and policy brief development will be employed to share lessons widely.
- **Refinement and Presentation:** Lessons and feedback from this program, along with other nationwide initiatives, showing high impact or innovation in addressing climate change issues, will be refined and presented to inform high-level policy makers.
- **Learning Events:** Key lessons and outcomes will be shared during learning events, facilitating wider stakeholder participation. These events will not only disseminate lessons but also guide the institutionalization of key insights and inform CRGE strategy implementation at the national level.
- **Incorporation into Development Plans:** Lessons refined through these processes will be incorporated into the development of annual and mid-term plans, shaping the overall development strategy of the country. This iterative process ensures continuous improvement and informs future policy directions.

To maximize synergy and avoid overlap, the project has established coordination protocols with key implementing entities, including the Ethiopian Forestry Development (EFD), the Bureau of Agriculture (BoA), and the Ministry of Water and Energy (MoWE). A Joint Project Coordination Platform (JPCP) will be established, bringing together focal persons from these entities and other co-financed or related project teams to facilitate information sharing, activity alignment, and joint field planning. In addition, the project will leverage existing shared data systems, including geospatial and beneficiary mapping tools developed under RLLP and the Climate Resilient Green Economy (CRGE) Facility, to ensure that target kebeles, institutions, and community groups are not already covered by other projects.

As a result of this coordination, project sites have been selected through a multi-criteria geospatial screening, accounting for vulnerability indices, implementation gaps of ongoing projects, and potential for scaling best practices. These coordination mechanisms and lessons learned contribute to the project's strategic additionality, ensuring it complements rather than duplicates existing adaptation finance streams, while filling critical institutional and geographic gaps.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

In the context of this proposal, consultation events were organized as part of the project preparation process. This was conducted to ensure that the voices and concerns of relevant stakeholders and local communities, particularly vulnerable groups, were integrated into the design and implementation of the climate-smart agriculture initiative. Several stakeholders were engaged throughout the project's planning stages including representatives from government bodies drawn from federal, regional and woreda levels, vulnerable groups such as women and pastoral communities. The consultations provided a platform for open dialogue, where participants could express their concerns, share their experiences with the impacts of climate change, and contribute ideas for building resilience. Special attention was given to marginalized groups, ensuring that their unique perspectives, especially regarding water access, agricultural productivity, health risks, and gender-based challenges, were captured and addressed in line with the project's goals. Through these discussions, the project sought to align its interventions with the real needs and priorities of those most affected by climate change. Furthermore, the consultative process was structured to align with the ESIA requirements ensuring compliance with the Adaptation Fund's Environmental and Social Policy and Gender Policy.

Expert Group Consultation

The expert group consultation took place on **2 and 3 October 2023** in Adama, Ethiopia, with around over 50 participants drawn from federal Ministry of Agriculture, Ministry of Water and Energy, experts from the CRGE Facility at the Ministry of Finance and relevant experts from **Oromia, Tigray, Afar, Somali, and Central Ethiopia** regions and from the project target woredas attended the workshop.

During the two days event, participants reflected positively on the outcomes of the previous Adaptation Fund-financed project, expressing their appreciation for the significant improvements in water access, strengthened climate resilience, and enhanced livelihoods within the target communities. Many participants highlighted how the project had successfully empowered local communities, particularly women and vulnerable groups, through capacity-building initiatives and improved access to resources. These achievements were seen as critical foundations on which the current project could build. Participants emphasized the importance of integrating these positive experiences and lessons learned into the design and implementation of the new project to further enhance its effectiveness and long-term impact. In addition to these reflections, participants emphasized the need to ensure the **sustainability of the project's outcomes**, particularly in relation to climate-smart agriculture and water security initiatives. They stressed that providing local communities with the necessary skills and resources would be crucial to ensuring that the benefits of the project endure long after its completion. **Capacity-building measures** and local ownership were identified as key factors in achieving this sustainability.

Participants also highlighted the importance of **water security and quality** in the target regions and woredas. They emphasized the need for advanced water management technologies, such as solar-powered irrigation systems to address water scarcity and improve water quality in these drought-prone areas, enhancing the resilience of local communities.

Participants from regional governments also emphasized the need for **better coordination between federal and regional authorities**. They highlighted the importance of clear communication channels and coordination mechanisms to ensure smooth project implementation and avoid delays. Clear delineation of roles between federal ministries, regional bureaus, and local authorities was seen as essential to achieving project objectives.

Finally, participants stressed the **importance of capacity building and knowledge sharing** as essential to the project's success. They emphasized the need for ongoing training programs at the woreda and kebele levels to ensure that local communities are equipped with the skills necessary to implement and sustain the project's interventions effectively.

Community Consultations

In terms of community consultation, two rounds of consultations took place in July 2024 and May 2025. These field visits and public consultation events were carried out at each participating woreda level. These consultations were led by two experts from the Ministry of Finance, who are involved in safeguards implementation.

Particularly in May 2025, extensive stakeholder consultations were conducted between 13 and 16 May, across four climate-vulnerable woredas in Afar, Oromia, Somali, and Southwest Ethiopia Regions. These consultations aimed to identify climate risks, understand local adaptation needs, and ensure that the voices of marginalized groups, especially women, are fully integrated into the project design.

A participatory and inclusive approach was applied using a mix of focus group discussions, key informant interviews, and woreda-level workshops. Participants included smallholder farmers, pastoralists, traditional leaders, local government experts, and representatives from women's and youth associations.

Key themes emerged across all woredas:

- Communities are experiencing increasingly severe climate shocks, particularly recurrent droughts, erratic rainfall, and soil degradation.
- Women and girls disproportionately bear the burden of water collection and suffer from limited access to livelihood opportunities and decision-making platforms.
- Local institutions lack the technical capacity, coordination mechanisms, and resources to integrate climate risk planning into existing governance processes.
- Participants identified critical needs such as solar-powered water systems, drought-resilient crop and livestock options, small-scale irrigation, gender-responsive livelihood diversification, and improved access to markets.

Community feedback directly shaped the project's components, including the establishment of Local Climate Committees (Component 1), rehabilitation of water systems and solar energy integration (Component 2), climate-smart agriculture and livestock practices (Component 3), and targeted livelihood support for women-headed households (Component 4). Stakeholder recommendations on

governance and institutional capacity were also used to inform the design of participatory M&E and knowledge systems.

In total, over 270 participants were engaged across the four woredas, with a strong emphasis on gender balance and inclusion of vulnerable groups. The consultations demonstrated a high level of community ownership and provided critical insights to ensure the project is locally relevant, socially inclusive, and institutionally embedded for long-term sustainability. The Table below provides a summary of the consultation that was conducted at the level of each woreda.

Table 12 Summary on community consultation conducted

Date	Location	Consolidated Consultation Objectives	Methods Used	Key Outcomes / Feedback Integration	Stakeholders Consulted	Participants (M/F)
Afar Region (Awash Fentale Woreda)						
13 May 2025	Sabure Kebele	• Understand local climate risks and impacts • Assess current coping mechanisms • Identify water-related challenges • Explore gendered livelihood constraints and opportunities • Discuss potential identified environmental and social impact of the project • Consult on how the project intends to use communal land and associated bylaws (this includes discussion on land rights).	Focus group discussion, Key informant interviews (KII), Plenary discussions	• Participants highlighted worsening drought, degraded pasture, shrinking water points, and reduced livestock productivity. • Women raised concerns on water collection burden, fuelwood reliance, and lack of livelihood diversification. • Community emphasized the need for solar-powered water systems, rangeland rehabilitation, and seed/feed access. • These inputs were incorporated under Components 2.1-2.3, 3.2, and 4.2 - 4.3, ensuring gender-targeted livelihood support and participatory planning.	Pastoralist women, clan leaders, Kebele leaders, elders, woreda experts	39 (19M / 20F)
14 May 2025	Awash Town	• Assess institutional capacities and planning gaps • Validate stakeholder engagement and gender inclusion mechanisms • Discuss potential identified environmental and social impact of the project	Workshop, KIIs	• Woreda officials highlighted poor coordination among sectors, absence of climate-risk data in planning, and lack of gender-responsive budgeting. • They requested training, planning tools, and support to formalize Local Climate Committees. • These findings directly informed Component 1.2, 1.4, and 1.5, including institutional capacity building, mainstreaming adaptation into woreda plans, and formalizing participatory M&E and gender mechanisms.	Woreda offices of Agriculture, Water, Women's Affairs, Disaster Risk Management	28 (14M / 14F)
Southwest Ethiopia Region (Fofa Woreda)						
14 May 2025	Bita Kebele	• Understand local climate risks and impacts • Assess current coping mechanisms • Identify water-related challenges • Explore gendered livelihood constraints and opportunities • Discuss potential identified environmental and social impact of the project • Consult on how the project intends to use communal land and associated	Focus group discussions, KIIs, plenary discussions	• Community members cited erratic rainfall, crop failure, reduced soil fertility, and high reliance on natural forests. • Women expressed that water collection is time-consuming and livelihood opportunities are limited. Preferred solutions included small-scale irrigation, improved seeds, agroforestry, and women-led value chains. • These insights informed Components 2.4, 3.1, and 4.1-4.3, including gender-responsive livelihood and agroecological adaptation measures.	Farmers, women's groups, traditional elders, agriculture DAs	46 (25M / 21F)

		bylaws (this includes discussion on land rights).				
15 May 202	Fofa Town	• Assess institutional capacities and planning gaps • Validate stakeholder engagement and gender inclusion mechanisms • Discuss potential identified environmental and social impact of the project	Workshop, key informant interviews	• Sector offices identified weak inter-sectoral collaboration, lack of formal guidance for climate integration in local plans, and gender underrepresentation in planning processes. • Recommendations included creating Local Climate Committees, integrating adaptation into kebele and woreda plans, and providing ToT for agriculture and water staff. • These guided the design of Components 1.1 to 1.4, especially participatory planning, mainstreaming, and gender equity.	Woreda office of Agriculture, Water, Women's Affairs, Natural Resource Offices	24 (16M / 8F)
Somali Region (Sheblay Woreda)						
13 May 2025	Sheblay Kebele	• Understand local climate risks and impacts • Assess current coping mechanisms • Identify water-related challenges • Explore gendered livelihood constraints and opportunities • Discuss potential identified environmental and social impact of the project • Consult on how the project intends to use communal land and associated bylaws (this includes discussion on land rights).	Focus group (women), participatory appraisal	• Women and vulnerable groups reported drought, livestock deaths, seed shortages, and poor market access as key challenges. • They emphasized the need for irrigation, solar-powered water systems, agro-processing support, and targeted livelihood opportunities. • These were integrated into Components 2.1-2.4 and Component 4, particularly women-centered training, agroforestry inputs, and rural enterprise support linked to local cooperatives.	Women's groups, agriculture DAs, Kebele leadership	35 (11M / 24F)
14 May 2025	Sheblay Woreda Office	• Assess institutional capacities and planning gaps • Validate stakeholder engagement and gender inclusion mechanisms • Discuss potential identified environmental and social impact of the project	Key informant interviews, woreda workshop	• Local officials emphasized the absence of structured climate integration in woreda planning, insufficient capacity among sector experts, and poor representation of women in kebele-level development committees. • They recommended formal recognition of Local Climate Committees, capacity-building through ToT, and inclusion of adaptation indicators in local planning tools. • These are embedded in Component 1.1 to 1.4, especially mainstreaming and institutional training.	Woreda agriculture, women's affairs, livestock and natural resource offices	20 (13M / 7F)
Oromia Region (Tullo Woreda)						
15 May 2025	Harro Kebele	• Understand local climate risks and impacts • Assess current coping mechanisms	Focus group discussion, key informant	• Farmers and community members reported erratic rainfall, livestock disease, reduced crop yields, and limited access to safe water.	Farmers, women's associations,	42 (22M / 20F)

		• Identify water-related challenges • Explore gendered livelihood constraints and opportunities • Discuss potential identified environmental and social impact of the project • Consult on how the project intends to use communal land and associated bylaws (this includes discussion on land rights).	interviews, participatory methods	• Women identified the burden of water collection and lack of livelihood opportunities. Participants suggested introducing solar-powered irrigation, drought-resilient seed varieties, and support for small-scale poultry and beekeeping enterprises. • These informed Components 2.1-2.4, 3.1, and 4.1-4.3 with gender-responsive approaches and climate-smart agriculture.	youth, elders, agricultural extension staff	
16 May 2025	Tullo Woreda Office	• Assess institutional capacities and planning gaps • Validate stakeholder engagement and gender inclusion mechanisms • Discuss potential identified environmental and social impact of the project	Workshop, KII with sector offices	• Woreda sector officials highlighted fragmented climate adaptation efforts, a lack of formal planning tools, and underrepresentation of women in decision-making. • They proposed creating Local Climate Committees, conducting train-the-trainer programs, and embedding adaptation into kebele and woreda plans. • These were directly incorporated into Component 1.1-1.4, particularly focusing on participatory planning, integrated M&E, and gender-mainstreamed capacity-building.		36 (20M / 16F)

Safeguard concerns identified by the community

The following were some of the concerns that were raised regarding the safeguards concerns of the community. Women highlighted that, while it was positive that the project had gender focus, they felt there might be resistance from the community who might perceive that women have relatively little role in agriculture and livestock rearing. The need to create awareness and build capacity were highlighted as important interventions to this end. This aspect is integrated as an impact in this ESIA based on this feedback.

Moreover, at the governance level women thought their participation will only be meaningful if their concerns if their household commitments and workload was taken into account. In particular women felt that, while the water management committee by law required half of the members should be women, generally these members tend to be less active due to domestic responsibilities. Participants also urged for specific training and capacity-building initiatives to enable women to play a leading role in their communities.With regards to the use of communal land, communities confirmed that communal land is generally administered by communities through a bylaw, which stipulates how such common assets are used. Such development projects align with the intended usage of such communal lands. Moreover, clarification was made with regards to the Livelihood Restoration and Compensation Framework, and Expropriation of Land Holdings for Public Purposes and Payment of Compensation (Proclamation No.455/2005). Considering the intended project activities which were presented, communities were cognizant that there will be no expropriation of land from individuals and communities.

Gender Equity Considerations

The project incorporates a range of gender equity measures to ensure that women meaningfully participate in and benefit from all activities. For instance, different campaigns and consultations are designed to include at least 50% women, with consultations held at times and locations convenient for them, facilitated by individuals trained in gender-sensitive engagement. Gender-disaggregated data will be collected to establish baselines and monitor progress, ensuring accountability and targeted support. Women are prioritized in capacity-building efforts and are encouraged to take leadership roles in community structures and decision-making processes. The design of early warning systems and dissemination of weather information is gender-responsive, ensuring that women have equal access to and understanding of these services. Tailored training further supports women in using climate information to make informed decisions. Livelihood initiatives focus on supporting women-led enterprises and enhancing women's access to climate-resilient income-generating activities, technologies and resources. Finally, gender-specific indicators and targets are embedded within monitoring and evaluation frameworks to track participation and benefits, reinforcing a strong commitment to gender equity throughout the project.

Additional participatory processes will be embedded during implementation to ensure inclusive, gender-responsive infrastructure planning and service delivery. These will include:

- **DRE System Design Considerations -** DRE systems (e.g., solar-powered irrigation or energy access points) will be designed with inputs from women and girls during implementation. Specific considerations will include:
    - Strategic placement near households, schools, health facilities, and markets to reduce travel time and risk.
    - User-friendly technologies that accommodate all ages and physical abilities, including those with disabilities.

- **Inclusive Water Infrastructure Planning -** consultations with women and girls will be conducted during implementation regarding:
    - The placement and design of water points (e.g., tap stands).
    - Timing of water availability to align with women's time use patterns.
    - Safety concerns related to accessing water, especially in remote locations.

Outcomes of these consultations will be added to Gender Action Plan (GAP), ensuring that feedback from women and girls is not only sought but operationalized in design and monitoring frameworks.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

Ethiopia justifiably seeks funding for its climate change adaptation efforts, emphasizing the imperative of addressing the full cost of adaptation. This proposal, solely with the Adaptation Fund (AF) financing, will be able to effectively deliver on its objectives, ensuring that communities most at risk can strengthen their resilience to climate change. The following key justifications underscore the necessity of financial support for Ethiopia in its pursuit of climate resilience:

Table 13 Project outputs to tackle climate risk

Major Climate Risk	Relevant Project Outcome	Relevant Project Output	Activities
Vulnerability and exposure to drought and floods[82], [83], [84], [85], [86], [87]	**Outcome 1:** Improved capacity of kebele communities and local authorities in climate risk reduction and adaptation planning	**Output 1.1:** Increased awareness and capacity of communities and local experts	Conducting climate vulnerability assessments (100% of kebeles) and disseminating weather information (100% of target population) reduce exposure to droughts and floods. Training 620 experts and capacitating community leaders equips stakeholders to address extreme weather events.
		Output 1.2: Strengthened capacity of local authorities and stakeholders	Training programs enhance local authorities' ability to implement risk reduction strategies.
		Output 1.3: Enhanced monitoring, supervision, and safeguard management	Quarterly monitoring and weather information dissemination enable early warnings for droughts and floods, mitigating crises.
Water scarcity and drought[88], [89]	**Outcome 2:** Enhanced agricultural and livestock resilience through improved water systems and livelihood support	**Output 2.1:** Improved access to clean water sources	Upgrading water systems (50,000 households) and irrigating 800 hectares reduce reliance on rain-fed agriculture. Developing 10 springs and 15 rehabilitated wells, plus 200 km of drip/sprinkler irrigation, address water scarcity.
		Output 2.2: Enhanced agricultural water use	Improved irrigation techniques optimize water use, increasing resilience to drought.
		Output 2.3: Strengthened skills of women in water management	Training women in water management ensures sustainable use, benefiting 50,000 households.
	Outcome 3: Enhanced agricultural and livestock resilience, increased productivity, and food security among women-headed households	**Output 3.1:** Increased resilience through diverse crop varieties	Training 5,000 farmers on diversified cropping and distributing 150 quintals of drought-tolerant forage seeds enhance resilience.
		Output 3.2: Sustainable and resilient livestock sector	Training 3,000 farmers on livestock husbandry strengthens resilience to drought.
Fragile ecosystem[90], [91]	**Outcome 3:** Enhanced agricultural and livestock resilience, increased productivity, and food security	**Output 3.3:** Sustainable land use, protected ecosystems, and enhanced agricultural productivity	Supporting conservation agriculture and multi-purpose nurseries protects ecosystems and biodiversity.
Limited community resilience[92], [93], [94]	**Outcome 1:** Improved capacity in climate risk reduction	**Output 1.1:** Increased awareness and capacity	Public events (50 events, 5,000 participants) and training 620 experts build capacity.
		Output 1.2: Strengthened capacity of local authorities	Training local authorities supports resilient governance.
	Outcome 4: Increased economic stability and climate resilience	**Output 4.1:** Diversified activities for income generation	Diversifying income for 4,000 households and supporting 8,000 women in livelihood activities enhance economic resilience.
		Output 4.2: Enhanced economic viability	Strengthened economic activities support resilience.

The Ethiopian government prioritizes climate-conscious policies, with this initiative serving as a key component of the Climate Resilient Green Economy (CRGE) strategy. The project adopts a climate-smart, landscape-oriented approach, integrating water accessibility, resource management, and livelihood diversification to help vulnerable communities adapt to increasing droughts. It focuses on climate adaptation while addressing sustainable development challenges amid changing climatic conditions.

Ethiopia has launched large-scale programs to combat climate-induced drought, including the Agricultural Growth

[82] https://www.cambridge.org/core/journals/journal-of-agricultural-science/article/perception-of-and-adaptation-to-climate-change-by-farmers-in-the-nile-basin-of-ethiopia/98FC44BF50B3E78DC8205A464097CDB8
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[91] https://www.tandfonline.com/doi/full/10.1080/14735903.2023.2253648
[92] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10457510/
[93] https://www.tandfonline.com/doi/full/10.1080/14693062.2022.2028597
[94] https://pmc.ncbi.nlm.nih.gov/articles/PMC10881839/

Program, Sustainable Land Management Program, Livestock Growth Program, Productive Safety Nets Program, One WASH Program, and Ethiopian Forestry Action Program. These initiatives enhance climate resilience, strengthen adaptation efforts, and promote diversified livelihoods.
The proposed project aligns with these existing programs and complements Ethiopia's broader climate resilience strategy. Its four components integrate seamlessly with national adaptation priorities and the Adaptation Fund's objectives, reinforcing Ethiopia's commitment to sustainable development, climate adaptation, and transformative impacts on vulnerable communities.

Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the local level: Building Awareness, Understanding, and Ownership
This component focuses on raising awareness, strengthening capacity, engaging communities, and integrating climate adaptation into local development plans. The requested funds are justified based on specific outputs that enable communities to adapt effectively to climate risks. The full cost of adaptation covers awareness campaigns, capacity-building, policy integration, and project management to ensure long-term sustainability.

- **Climate Risk Awareness (1.1):** Funding supports outreach campaigns, educational materials, and local media engagement to increase awareness of climate risks. Costs include content creation, workshops, and resource mobilization.
- **Capacity-Building Workshops (1.2):** Funds facilitate training sessions for local authorities, covering module development, trainer fees, materials, and workshop logistics.
- **Community Engagement & Vulnerability Assessments (1.3):** Resources support data collection, community mobilization, and inclusive workshops using culturally sensitive approaches.
- **Integrating Climate Adaptation (1.4):** Funding aids the incorporation of climate adaptation into local policies through expert consultations and stakeholder engagement.
- **Project Management & Evaluation (1.5):** Supports monitoring systems, personnel salaries, and technology infrastructure to track progress.
- **Environmental & Social Safeguards (1.6):** Ensures compliance with safeguard policies, risk monitoring, and impact assessments to mitigate environmental and social risks.

Component 2: Water Security, Climate Resilience, and Women's Empowerment
This component focuses on improving water access, upgrading infrastructure, deploying renewable energy, promoting sustainable agriculture, and empowering women. The requested funds support climate resilience efforts, particularly in water security and gender empowerment. The full cost covers water infrastructure, renewable energy, sustainable agriculture, and gender-focused capacity building.
- **Water Source Development & Protection (2.1):** Funding supports infrastructure development, watershed protection, and community training to improve clean water access. Costs include geological assessments, construction, and maintenance.
- **Water Infrastructure Upgrade & Expansion (2.2):** Resources will enhance water distribution and storage systems, incorporating sustainable technologies. Costs cover materials, labor, and system upgrades.
- **Decentralized Renewable Energy (2.3):** Funds support solar-powered water systems, covering equipment, installation, and maintenance training.
- **Small-Scale Irrigation & Water Efficiency (2.4):** Funding ensures efficient irrigation systems, farmer training, and monitoring, covering planning to maintenance.
- **Women-Centric Capacity Building (2.5):** Supports training in water management and agriculture, covering materials, trainers, and mentorship.
- **Gender-Responsive Awareness Campaigns (2.6):** Resources fund gender-focused education and outreach, including campaign development and community engagement.

Component 3: Climate Smart Agriculture and Livestock Rearing
This component focuses on improving agricultural and livestock practices, enhancing natural resource management, and facilitating climate-informed decision-making. The requested funds will support research, training, infrastructure, and ongoing assistance to increase resilience, sustainability, and productivity in the agriculture and livestock sectors.
- **Climate-Resilient Crop Selection & Diversification (3.1):** Funding supports research on drought-resistant crops, seed distribution, and farmer training. Costs cover seed development, dissemination, and ongoing technical support.
- **Climate-Resilient Livestock Management (3.2):** Resources will enhance livestock adaptability through improved breeding, veterinary care, and sustainable management. Costs include vaccination programs and farmer training.
- **Natural Resource Management (3.3):** Funds support sustainable land use, conservation practices, and ecosystem protection. Costs cover land rehabilitation, community engagement, and monitoring.

- **Weather Information Dissemination (3.4):** Funding ensures farmers receive timely weather updates for better decision-making. Costs include setting up weather monitoring infrastructure, communication strategies, and training.

These activities collectively strengthen agricultural resilience, ensuring sustainable food production and climate adaptation for farming communities.

Component 4: Climate Smart Livelihood diversification

This component focuses on gender-responsive livelihood diversification, technical training, implementation support, and market linkages to enhance economic resilience and reduce vulnerability to external shocks. The requested funds will support research, capacity building, and sustainable income generation.

- **Identification of Gender-Responsive Diversification Options (4.1):** Funding supports research, consultations, and community engagement to identify viable, inclusive livelihood opportunities. Costs cover research activities, strategy development, and community participation.
- **Technical Training & Knowledge Sharing (4.2):** Resources will equip women and community members with skills for managing diversified livelihoods. Costs include training design, materials development, and capacity-building support.
- **Implementation of Diversified Activities (4.3):** Funds will establish and support alternative livelihoods through financial assistance, resources, and ongoing monitoring. Costs cover implementation, resource allocation, and sustainability measures.
- **Promotion of Market Linkages (4.4):** Funding enhances access to markets, ensuring economic viability. Costs include market research, development of linkages, and sustained market access.

These activities collectively strengthen economic opportunities, fostering sustainable livelihoods for vulnerable communities.

Table 14 Summary of project results, indicators and targets

Project Outcome/Output	Indicator	Target
Outcome 1: Improved capacity of all target kebele communities and local authorities in climate risk reduction and adaptation planning	# of kebeles with climate vulnerability assessments completed	100% of kebeles
	% of target population benefiting from weather information dissemination	100% of target population
Output 1.1: Increased awareness and capacity of communities and local experts	# of public events organized (climate fairs, exhibitions)	50 events
	# of male and female community members attending awareness events	5,000 participants
Output 1.2: Strengthened capacity of local authorities and stakeholders in climate risk reduction and adaptation planning	# of local experts trained on climate risk reduction and adaptation planning	620 experts
	# of community leaders, women's groups, and marginalized populations capacitated	Targets to be defined clearly during implementation
Output 1.3: Enhanced monitoring, supervision, and safeguard management capabilities at national, regional, and woreda levels	# of woreda experts trained on Environmental and Social Safeguards management	Training completed at all target woredas
	# of joint monitoring and supervision missions conducted	Regular quarterly missions
Outcome 2: Enhanced agricultural and livestock resilience through improved water systems and livelihood support	# of households benefiting from upgraded potable water and irrigation systems	50,000 households
	# of households benefiting from alternative livelihood options	1,000 households
Output 2.1: Improved access to clean water sources	# of springs with distribution systems	10 springs
	# of rehabilitated hand-dug wells	15 wells
Output 2.2: Enhanced agricultural water use and reduced climate-related risks	Ha of land irrigated	800 hectares
	Km of drip and sprinkler irrigation systems constructed	200 kilometers
Output 2.3: Strengthened skills and participation of women in water management and agriculture	% of female participants applying training to support livelihood	At least 50% of female participants
	# of women trained in water management, agriculture, and leadership roles	Targets to be specified clearly during implementation
Outcome 3: Enhanced agricultural and livestock resilience, increased productivity,	# of women-headed households benefiting from income and nutrition improvement measures	2,000 women-headed households
	% increase in crop yields and livestock productivity	20% increase in

and food security among women-headed households	among beneficiaries	productivity
Output 3.1: Increased resilience through diverse crop varieties	# of farmers trained on diversified cropping systems	5,000 farmers
	# of community seed banks established	20 seed banks
Output 3.2: Sustainable and resilient livestock sector	# of farmers trained on livestock husbandry practices	3,000 farmers
	Quintal of drought-tolerant forage seeds distributed	150 quintals
Output 3.3: Sustainable land use, protected ecosystems, and enhanced agricultural productivity	Ha of land under conservation agriculture practices	Targets to be defined clearly during implementation
	# of multi-purpose nurseries supported	Targets to be specified clearly during implementation
Output 3.4: Improved decision-making based on weather information	% of households with access to weather information dissemination in local language (SMS texting option)	100% households in target kebeles
Outcome 4: Increased economic stability and climate resilience through diversified income sources and gender-responsive initiatives	# of households with diversified income sources	4,000 households
	# of women benefiting from financial inclusion and business support services	5,000 women
	% increase in households with access to financial services	25% increase in households
Output 4.1: Successful establishment of diversified activities for income generation	# of women benefiting from livelihood diversification measures	8,000 women
	# of women benefiting from market linkages	2,000 women
Output 4.2: Enhanced economic viability of diversified activities	# of markets identified and linkages brokered for smallholder families	200 markets

Table 15 Summary Matrix of Measurable and Time-bound Economic, Social, and Environmental Targets

Dimension	Measurable Indicator	Target	Timeline
Economic	Increase in agricultural productivity	20% increase in yields	By end of Year 5
	Number of households with diversified livelihoods	4,000 households	By end of Year 5
Social	Number of people lifted out of poverty	2,000 women-headed households	By end of Year 5
	Number of women benefiting from financial services	5,000 women	By end of Year 5
Environmental	Hectares of land rehabilitated	800 hectares under irrigation	By end of Year 5
	Number of community seed banks established	20 seed banks	By end of Year 3

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

Ensuring the sustainability of project outcomes beyond the implementation period has been a central design principle of this proposal. The project employs an integrated, system-wide approach that embeds climate adaptation measures within existing institutional frameworks, financial systems, social structures, environmental governance, and economic development pathways. Rather than creating parallel systems, the project strengthens and formalizes locally owned mechanisms, builds capacity across multiple levels of government and community actors, and ensures that tools, responsibilities, and financial flows are institutionalized. Table 18 below summarizes the specific strategies for long-term maintenance across the five sustainability dimensions, drawing exclusively on actions articulated within this funding proposal.

Table 16 Summary of project sustainable outcomes

Sustainability Aspect	Strategies for Long-Term Maintenance
Economic Sustainability	Economic sustainability will be promoted by supporting viable climate-smart enterprises and ensuring continued access to finance, training, and markets. Women and youth-led businesses will operate using business plans developed with project support and linked to local trade offices and TVET institutions for mentoring and technical support. Savings and credit groups established through the project will operate as community-governed revolving funds. Selected enterprises, such as beekeeping, agro-processing, and NTFP value addition, align with regional economic potential and will be integrated into local economic development strategies. Market linkages will be formalized through cooperative agreements and MoUs with private buyers and aggregators. Extension staff will continue to support enterprise development using

	materials and tools institutionalized in government systems.
Social Sustainability	Social sustainability is grounded in inclusive governance, community ownership, and codified equity mechanisms. Local committees and Women's Groups will have formally defined roles in planning, feedback, and monitoring processes, integrated into woreda development procedures. Participatory Rural Appraisals (PRAs), community scorecards, and grievance mechanisms, introduced by the project, will become standard tools for local service delivery. Affirmative targeting of female-headed households, youth, and other vulnerable groups is embedded in the project design and will continue through local government-led selection committees. Gender equality indicators developed under the project will be adopted into kebele-level M&E templates and scorecards, promoting lasting social accountability and responsive service delivery.
Environmental Sustainability	Environmental sustainability will be ensured by embedding nature-based solutions (e.g., watershed rehabilitation, agroforestry, water harvesting) into kebele and woreda NRM plans. These activities will be led by trained cooperatives and Local committees under MoUs that define maintenance responsibilities and benefit-sharing rules. Regional and local bylaws, already part of the project activities, will be used to enforce the protection of communal environmental assets. Forest and watershed health monitoring systems introduced by the project, including tools for tracking vegetative cover and water flow, will be handed over to woreda NRM offices and used to inform land use decisions. Environmental clubs established in schools will promote awareness and stewardship across generations.
Institutional Sustainability	Institutional sustainability will be achieved by embedding project outcomes into formal structures, legal mandates, and operational routines at kebele, woreda, and regional levels. Local committees will be formally established and recognized through local government directives and community by-laws, ensuring legal authority and continuity. These committees will be integrated with existing governance organs and supported through woreda budget allocations. A train-the-trainers (ToT) program will be institutionalized within sector offices by incorporating climate adaptation modules into existing training systems. Annual refresher sessions will be delivered via regional training institutions and CRGE Support Units. Adaptation planning tools such as vulnerability assessment templates, and training manuals will be revised and used in local development planning, ensuring sustained climate mainstreaming through decentralized systems.
Financial Sustainability	Financial sustainability will be secured through integration of core activities into woreda and regional budgets, deployment of cost-recovery mechanisms, and establishment of revolving funds. WASH cooperatives and water user associations will implement tiered user-fee models to cover operations and maintenance of solar-powered water systems and irrigation assets. Budget commitments from local governments will finance key extension, training, and infrastructure upkeep post-project. Women-led savings groups and revolving funds established under the project will provide capital for enterprise growth, governed by local by-laws. Financial literacy and entrepreneurship training, linked to woreda microfinance offices, will help maintain these schemes. Additionally, the project builds linkages to the CRGE Facility and other public-private climate finance mechanisms to ensure continuity of funding.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

Gender risk assessment and mitigation

Gender risks were assessed through document reviews and consultation processes. focusing on the differentiated needs, roles, and vulnerabilities of women, men, and marginalized groups. This process identified key risks such as the exclusion of women-especially female-headed households-from community decision-making, limited access to resources and services, increased time poverty due to unpaid care work, and potential gender-based violence (GBV). To mitigate these risks, the project integrates targeted strategies including the establishment of gender quotas for women's participation in committees and trainings, capacity-building sessions tailored to women's needs (e.g., scheduling at accessible times and locations), and community sensitization on gender equality and GBV prevention. The project will also ensure that infrastructure and service delivery (e.g., water access points, agricultural inputs, and financial services) reflect women's practical needs and safety concerns. Gender-responsive grievance redress mechanisms will be established to allow confidential reporting of risks and harms. Overall, the risk mitigation approach ensures that women and vulnerable groups are not only protected from unintended harm but also meaningfully included as agents of change in the project's implementation and benefits.

Environmental and Social risk Assessment and mitigation

The summary table below provides information on the

- Environmental and social principles triggered,
- Whether further assessment is required for compliance
- Potential impacts and risks, further assessment and management/mitigation required for compliance

The risk level of these potential impacts is also described. Principle 1 - compliance with the law; Principle 4 - human rights; and Principle 6 - core labour rights are addressed as these principles always apply as per the Adaptation Fund's policy.

Table 17 Environmental and social principles against identified potential impacts and risks

Environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		**Risk Level:** No to Low risk **Further Assessment:** No further assessment required beyond the ESIA. **Justification:** All AF ESP requirements have equivalent and comparable laws in Ethiopia. And as a government institution, Ministry of Finance will comply to all laws during the implementation of the project.
Access and Equity	X	**Risk Level:** No to Low Risk **Justification:** All projects and budget allocations of the Ministry of Finance are strictly developed with access and equity considerations, and in line with Article 43(4) states that, "The basic aim of development activities shall be to enhance the capacity of all citizens for development and to meet their basic needs.". Moreover, the project will set conditions for benefit sharing and gender and social inclusion considerations for participating communities to ensure that no exclusion happens.
Marginalized and Vulnerable Groups	X	**Risk Level:** No to Low Risk **Justification:** The project will conduct meaningful stakeholder consultation will be conducted. The project will develop eligibility criteria of activities that will be included in this project, clearly highlighting the exclusion of activities that have implication on marginalized and vulnerable groups. Although such implications are less likely, for any aspects that will have negative implications to native communities, the project will obtain free, prior and informed consent (FPIC), before such actions are taken in line with MOF's Resettlement, Livelihood Restoration and Compensation Framework that was developed in line with the requirements of international climate change funds. Moreover, MOF's Native Communities Engagement Framework that was developed in line with the requirements of international climate change funds will be used.
Human Rights		**Risk Level:** Low Risk **Further Assessment:** No further assessment required beyond the ESIA. **Impact:** In the long-term potential conflict related to benefit sharing might arise, as a result of the benefits of these water and soil conservation structure will bring about to the participating communities. **Further Assessment:** No further assessment required beyond the ESIA. **Mitigation:** The development of an inclusive community led and owned by-law, which clearly stipulates benefit sharing to supporting communities. Moreover, benefit sharing will be set as a condition, and communities participating in the project, should agree to the condition pertaining to benefit sharing.
Gender Equity and Women's Empowerment		**Risk Level:** Low Risk **Impact:** Resistance to the gender focus of the project in identifying participants/beneficiaries, which will hinder project implementation. **Further Assessment:** No further assessment required beyond the ESIA.

Environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		Mitigation: This requires tracking and regular follow up by the project team. Moreover, capacity building and awareness, including creating the understanding of these communities on why the project has gender focused.
Core Labour Rights		**Risk Level:** Low Risk **Impact:** Occupation health and safety issues, including impact on safety of workers **Further Assessment:** No further assessment required beyond the ESIA. **Mitigation**: Provision of personal protective equipment as per the dictates of the Labor Proclamation (377/2003), ensure that all electrical and mechanical fixtures fulfil safety standards and that they are not exposed and accessible, and ensure that all users of facilities are aware of all dangers and post warning signs at appropriate places.
Indigenous Peoples	X	**Risk Level:** No to Low Risk **Justification:** Generally, in Ethiopia all communities are native, and in the selected localities native communities have had strong engagement and voice. This was confirmed during the field visit at each locality and was confirmed from first-hand source and consulted communities.
Involuntary Resettlement	X	**Risk Level:** No to Low Risk **Justification:** No potential expropriation of the land of individual farmers and communities. There will only be usage of communal land for conservation and planting activities for the community and water infrastructure development (when appropriate). Consultation conducted confirmed that based of intended project activities which were presented, communities were cognizant that there will be no expropriation of land from individuals and communities. But this will only be on communal land and will not be on individual farms. In the remote case where there will be implication to an individuals holding compensation will be made with due consideration of to the Livelihood Restoration and Compensation Framework, and Expropriation of Land Holdings for Public Purposes and Payment of Compensation (Proclamation No.455/2005).
Protection of Natural Habitats		**Risk Level:** Low Risk **Impact 1:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment 1:** Review and (if necessary) update the screening method used by Woreda agriculture offices. **Mitigation 1:** This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia. **Impact 2:** Excessive use of groundwater leading to draw down of water table and possible and subsidence. However, this is less likely to occur as the proposed water infrastructure are only shallow wells, hand dug wells, and springs. **Further assessment required 2:** The project will conduct pump tests and groundwater quality studies

Environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		to regularly monitor and determine suitability of groundwater and the safe yield. **Mitigation:** Implement these water projects strictly in line with the recommended safe yield and groundwater quality assessment recommendations.
Conservation of Biological Diversity		**Risk Level:** Low Risk **Impact:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment:** Review and (if necessary) update the screening method used by Woreda agriculture offices. **Mitigation:** This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia.
Climate Change	X	-
Pollution Prevention and Resource Efficiency		**Risk Level:** Low Risk **Impact 1:** Solid waste and oil spills from decommissioning of diesel pumps and vehicles during the infrastructure development and construction. **Further Assessment 1:** No further assessment required beyond the ESIA. **Mitigation 1:** Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids, which requires the area to be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater). **Impact 2:** Noise and dust during infrastructure development and construction phase of the project. **Further Assessment 2:** No further assessment required beyond the ESIA. **Mitigation 2:** To the extent possible, apply dust suppression techniques and noise screens
Public Health		**Risk Level:** Low Risk **Impact 1:** Solid waste and oil spills from decommissioning of diesel pumps and vehicles during the infrastructure development and construction. **Further Assessment 1:** No further assessment required beyond the ESIA. **Mitigation 1:** Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids, which requires the area to be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater). **Impact 2:** Health and safety issues to communities. **Further Assessment 2:** No further assessment required beyond the ESIA. **Mitigation**: Ensure that all electrical and mechanical fixtures in construction sites fulfil safety standards

Environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		and that they are not exposed and accessible and ensure that nearby communities are aware of all dangers and post warning signs at appropriate places.
Physical and Cultural Heritage	X	**Risk Level:** No to Low Risk **Justification:** The project will not be implemented in areas of physical and cultural heritage.
Lands and Soil Conservation		**Risk Level:** Low Risk **Impact:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment:** Review and (if necessary) update the screening method used by Woreda agriculture offices. **Mitigation:** This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project/programme implementation.

Ethiopia has developed strong sectoral institutions responsible for policy formulation and implementation, drawing from extensive experience in managing national and global commitments such as the MDGs and SDGs. The successful execution of this project requires collaboration across federal, regional, and woreda levels.

Ministry of Finance (MoF): The Ministry of Finance oversees financial management and project implementation in Ethiopia. As the Direct Access Entity, MoF holds overall responsibility for coordination, monitoring, financial and procurement management, and reporting. It manages funds from the Adaptation Fund and operates the **Climate Resilient Green Economy (CRGE) Facility**, which mobilizes climate finance for projects supporting Ethiopia's vision of a climate-resilient and carbon-neutral economy. The CRGE Facility will coordinate project implementation, ensuring MoF delivers on its mandate.

Federal-Level Executing Entities: The Ministry of Agriculture (MoA) and the Ministry of Water and Energy (MoWE) will execute project components aligned with their mandates. MoA will lead Component 3, focusing on climate-smart agriculture, while MoWE will oversee Component 2, related to water security. Both ministries, alongside the CRGE Facility, will co-lead the execution of Components 1 and 4.

A **National Project Steering Committee**, comprising MoF, executing entities, the Designated National Authority (DNA), and other stakeholders, will oversee implementation. These ministries have successfully executed similar projects, including the previous Adaptation Fund-financed initiative.

Ministry of Water and Energy: MoWE has extensive experience managing large-scale national programs, including:

- **Ethiopia Urban Water Supply and Sanitation Project** (USD 445 million, World Bank) – improving urban water and sanitation services.[95]
- **Ethiopia Electrification Program (ELEAP)** (USD 375 million, World Bank) – expanding rural electricity access.[96]
- **Second Urban Water Supply and Sanitation Project** (USD 300 million) – enhancing water sustainability in major cities.[97]

MoWE also leads the **National Electrification Program (NEP)**, a USD 6 billion initiative promoting decentralized renewable energy in off-grid areas, supporting productive uses such as irrigation. The NEP, alongside Ethiopia's **Nationally Determined Contributions (NDCs)**, provides policy directives that underpin the project rationale.

Ministry of Agriculture (MoA): MoA plays a central role in Ethiopia's agricultural policies, focusing on food security, rural livelihoods, and climate-resilient farming. The ministry leads:

- **Sustainable Land Management Program (SLMP)** (USD 100 million, World Bank) – restoring degraded landscapes and promoting climate-smart agriculture.[98]
- **Climate Action through Landscape Management (CALM) Project** (USD 500 million, World Bank) – enhancing climate resilience through reforestation and sustainable land management.[99]
- **Ethiopia Green Legacy Initiative** (2019–2024) – targeting 20 billion trees to combat deforestation and land degradation.[100]

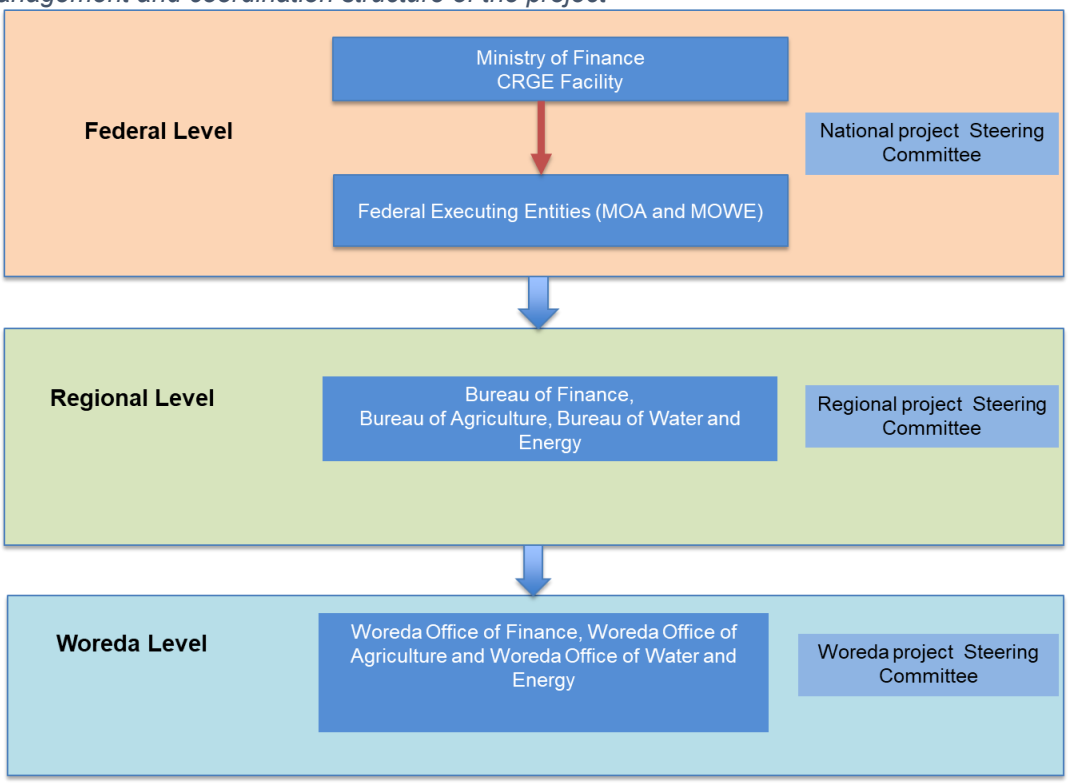
MoA also leads the Growth and Transformation Plan (GTP II), integrating environmental sustainability into agricultural development, and the Productive Safety Net Program (PSNP), which combines food security interventions with land rehabilitation. These initiatives have restored ecosystems, improved rural livelihoods, and increased agricultural productivity.

95 World Bank (2022). Ethiopia Urban Water Supply and Sanitation Project.
96 World Bank (2021). Ethiopia Electrification Program (ELEAP).
97 World Bank (2020). Second Urban Water Supply and Sanitation Project.
98 World Bank (2019). Sustainable Land Management Program.
99 World Bank (2021). Climate Action through Landscape Management (CALM) Project.
100 Government of Ethiopia (2019). Ethiopia Green Legacy Initiative.

At the regional level, the Bureau of Finance Economic Development (BOFED) will coordinate implementation of the project. It will chair the regional project steering committee. The Bureau of Agriculture and the Bureau of Water and Energy will lead the implementation of activities under the components, which they lead in accordance with the legal mandates bestowed on them. In this regard, the Bureau of Agriculture is responsible to coordinate and ensure the implementation of the crop, livestock-related climate smart watershed, alternative income source and natural resources management related activities of the project. The Bureau of Water and Energy on the other hand is responsible for the execution of clean potable water-related activities. BOFED will receive project fund directly from the Ministry of Finance in accordance with the project annual work and budget plan and disburse to the Woreda Office of Finance for the implementation of project activities in the target kebeles. BOFED also disburses fund to the Regional Bureau of Agriculture and Bureau of Water and Energy and Bureau (which are the regional equivalents of the federal level executing entities) for activities each Bureau directly implement at regional level. The existing team in the regional sector bureau who are employed by the GoE will be assisting the Project Officers who will be employed under this project.

At the Woreda level, the Woreda Office of Finance is responsible for the financial management of the project including local procurement of goods, services, and works. A Woreda Steering Committee, which is chaired by the Woreda Administrator oversees the project implementation and renders overall guidance to the implementing sectors. This committee will be the fundamental body in ensuring the Woreda plans that shall be developed under this project are implemented at all Kebeles. Wherever possible, depending on the actual constitution of the Woreda level experts, the project will ensure at least 50% women membership to the woreda steering committee. The Woreda Office of Agriculture, Water and Energy are responsible for the day-to-day implementation of the project activities. The technical experts, hired at the woreda level, in close collaboration with the existing woreda staff are responsible for the day-to-day implementation of the project and processes, engage stakeholders, and mobilize communities at target Kebele level, in accordance with the approved work plan. They are also responsible to prepare periodic reports. In addition, finance officers will be hired within each targeted Woreda to ensure that funds are effectively disbursed, utilized, monitored, and reported back to the CRGE Facility. The project technical officers at the woreda and MOF level will be responsible to contribute monitoring and evaluation (M&E) overlook gender responsiveness is ensured throughout the project implementation. The project management and coordination structure from federal to woreda level is presented below.

Figure 12 Management and coordination structure of the project



Roles and Responsibilities of the project stakeholders

The CRGE Facility: The CRGE Facility team in the Ministry of Finance, in collaboration with the Regional Bureaus of Finance and Woreda Office of Finance is responsible for the financial and procurement management of the project,

consistent with government policies. In collaboration with the federal EEs, it will facilitate annual work planning, periodic review meetings, joint monitoring missions, assess and assure the quality of the proposed program plans and reports submitted by EEs. Furthermore, it will exercise the necessary diligence, efficiency, and transparency in line with acceptable best principles and practices and ensure that grants are used according to approved work plans and budgets.

The CRGE Facility shall have the following roles and responsibilities:

- Ensure the grant is managed in accordance with the financial and procurement management policies of the Government of Ethiopia and the terms and conditions of partnership and implementation agreements.
- Facilitate fund disbursements, account auditing, periodic review, monitoring and supervision, preparation and submission of reports.
- Organize quarterly project review meetings to discuss project implementation, financial and procurement management, reporting, monitoring and supervision and related issues.
- Ensure that the Regional EEs and Finance Officers from BOFD of the target regions are invited to project technical meetings on biannual basis.
- Ensure deployment of adequate finance officers, project management team and logistics at federal, regional and woreda levels.

The Federal EEs: These constitute MOA and MOWE have clearly defined mandates, roles and responsibilities as defined on proclamation. This project is designed to allow the Federal EEs to deliver their mandates individually as well as collectively in collaboration with each other. They are responsible for the project implementation and will be accountable for the delivery of results. The Federal EEs shall ensure the project is implemented through strong management and coordination structures at federal, regional and woreda levels, ensuring adequate collaboration with each other and communication of project progress and results to all relevant audiences. They will closely collaborate with the CRGE Facility and other stakeholders at federal, regional and woreda levels. The Federal EEs are responsible for the following:

- Coordinate the preparation of annual work plans and consolidate periodic progress reports to be submitted to the CRGE Facility.
- Based on the annual work and budget plan, they initiate fund disbursement requests on bi-annual basis to be submitted to MoF and ensure the timely transfer of funds.
- Organize joint monitoring missions and periodic program level review meetings.
- Prepare and disseminate communication materials.

Regional Bureau of Agriculture and Bureau of Water and Energy: These entities will have the following roles and responsibilities:

- Ensure the timely delivery of project results and targets at regional level and monitor the project in close collaboration with BOFED and relevant public institutions.
- Ensure that the application of monitoring tools is understood, properly used and that data on project activities is regularly collected, compiled, analyzed, and submitted to federal level for compilation.
- Review and consolidate annual work plans, budgets and procurement plans submitted by woredas.
- Review and approve implementation progress reports (including M&E, safeguards, etc.) from woredas.
- Provide technical and capacity building support to the woreda project team.
- Request fund disbursements on quarterly basis.
- Coordinate annual planning, prepare periodic reports and send to the Federal EEs.
- Facilitate periodic regional project steering committee meetings.
- Facilitate periodic monitoring visits.
- Ensure proper beneficiary selection criteria are put in place to ensure women and disadvantaged groups equally benefit from the project and are adequately represented in local level management positions, committees, etc.

Regional project Steering Committees: The regional project Steering Committees are chaired by the BOFED and comprises members from the Bureau of Agriculture, Land Administration, Bureau of Water and Energy and other stakeholders. The Steering Committee will meet biannually and review program implementation progress and provide overall guidance and supervision. This committee will have the following roles and responsibilities:

- Overall supervision for project implementation.
- Annual regional work plan and procurement plan review.
- Annual implementation performance report review.
- Oversee corrective actions implementation.
- Approval and endorsement of guidelines and manuals.
- Approval of best practices.

Woreda Project Coordination Unit: The woreda project Coordination Units are responsible for the following:

- On the ground planning and execution of activities under the project;
- The day-to-day implementation of project activities at landscapes level, including community mobilization, etc.
- facilitate annual planning, periodic reports and submits to the Regional EEs;
- Provide regular training and other capacity building activities;
- Undertake participatory monitoring and evaluation of project activities;
- In collaboration with the WOFED, facilitate procurement of goods and services at the woreda level; and
- Ensure the project budget and logistics are used for the intended purposes.

Woreda Project steering Committee: The Woreda project Steering Committees, chaired by the Woreda Administrator, will be responsible for the overall guidance and coordination of project activities. The committees shall ensure project activities are implemented in accordance with work plans and the approved budget. It will meet quarterly to review project implementation and take corrective measures if/when challenges are reported by the woreda project team. Furthermore, it will support the woreda project team in the identification of implementation sites.

Fund disbursement and Reporting Arrangement

The project's financial reporting system involves federal, regional, and woreda-level executing entities (EEs) submitting periodic, activity-based financial reports to ensure transparency and accountability.

- **Federal Level:** Federal executing entities (EEs) will submit quarterly financial reports to the **CRGE Facility** for activities they directly manage and implement.
- **Regional Level:** Regional executing entities, including the **Bureau of Agriculture, Bureau of Water and Energy, and Bureau of Irrigation and Lowlands Development**, will submit quarterly financial reports to the **Bureau of Finance and Economic Development (BOFED)** for activities under their management.
- **Woreda Level:** Woreda Offices of Finance and Economic Development (WOFEDs) will submit quarterly financial reports to BOFED, which will consolidate both **regional and woreda financial reports** and forward them to the **CRGE Facility**. BOFED will also share copies with regional EEs and provide updates in regional Steering Committee meetings.

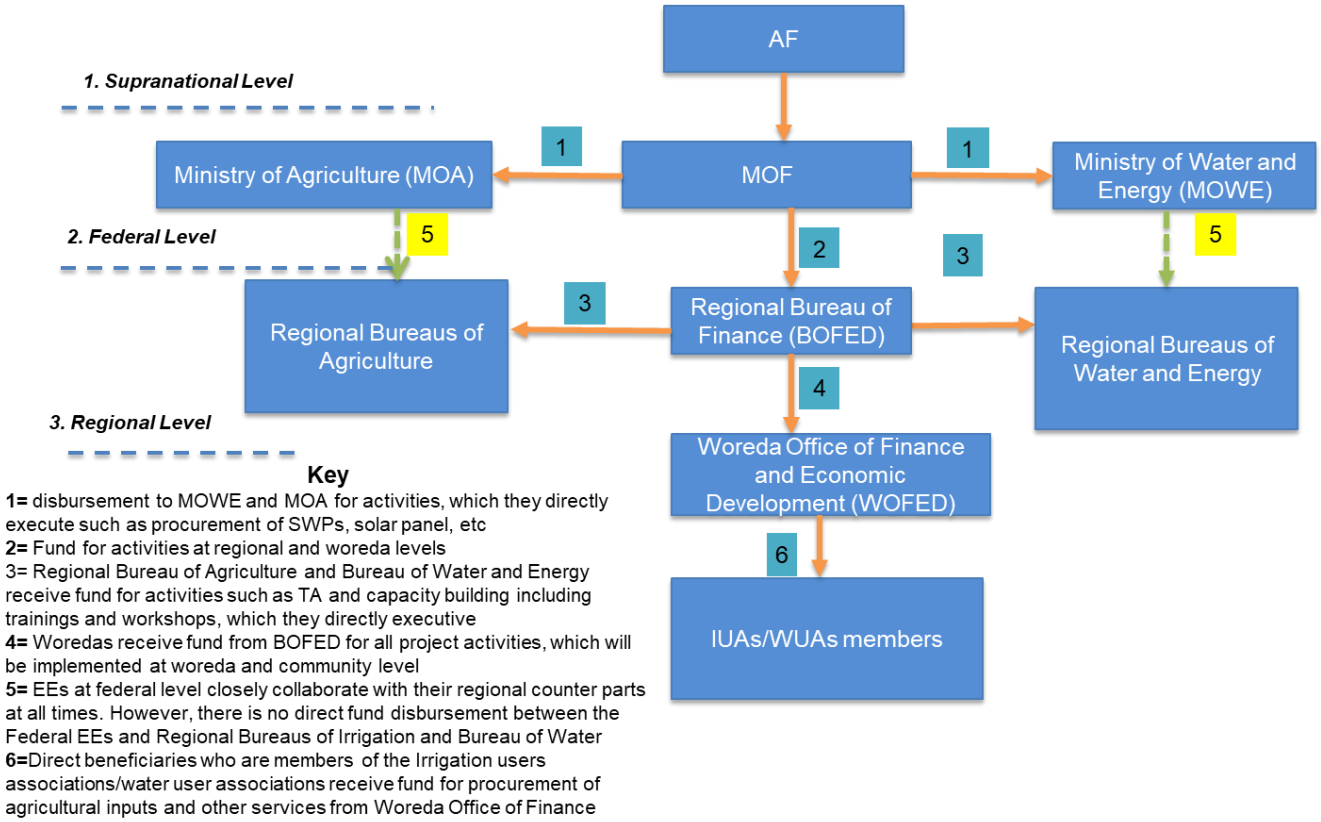
The **CRGE Facility** consolidates financial reports received from BOFEDs and federal EEs and submits an annual report to the **Adaptation Fund (AF)**. The Facility will also facilitate an **annual external audit** and submit the audit report to the AF.

To strengthen financial management, BOFEDs will ensure timely submission of reports by WOFEDs, while the CRGE Facility will conduct periodic **financial spot-checks**, organize **training and review meetings** for finance officers and technical staff, and develop tailored **financial and procurement guidelines** for woreda finance teams. All financial management and procurement activities will comply with **Ethiopian government policies and procedures**.

The financial reporting process follows the same structure in reverse order for reporting back from the AF.

To ensure full compliance with the Gender Policy of the Adaptation Fund and promote inclusive, equitable outcomes, the project will incorporate concrete gender-responsive elements across all levels of implementation. A key commitment is to strive for a 50:50 gender representation in the Project Steering Committee and all decision-making and coordination structures, recognizing the vital role of women in climate resilience and community development. Gender equity will also be prioritized in the recruitment of project staff, with affirmative actions to encourage the participation of qualified women, particularly in technical and leadership roles. At the community level, gender balance will be a guiding principle in the identification of project beneficiaries, selection of participants for trainings, membership in Water User Associations, and leadership positions in community-based governance bodies. These measures are not only aligned with national gender strategies and the project's overarching goal of women's economic empowerment, but also reflect lessons from baseline assessments and stakeholder consultations conducted in the target woredas. Implementation partners will be required to monitor and report on gender-disaggregated data, and adaptive management approaches will be employed to address any gender gaps that may emerge throughout the project cycle. Through these comprehensive arrangements, the project seeks to ensure that women and men benefit equally, contribute meaningfully, and play leadership roles in building climate resilience in their communities.

Figure 13 Fund disbursement and Reporting Arrangement



Program Implementation and Knowledge Sharing

- **Capturing Lessons**: Stakeholders, guided by the CRGE Facility's monitoring, evaluation, and learning guideline, will document lessons at kebele, woreda, and regional levels. For example, CSIRDP's success with community-led reforestation informs participatory monitoring tools to capture local knowledge.
- **Regional Coordination**: The Project Management Unit (PMU) will collaborate with the regional CRGE steering committee and woreda sector heads, channelling lessons like CSIRDP's government engagement strategy to enhance ownership and scalability at the kebele level.
- **Archiving and Accessibility**: Lessons will be archived in the CRGE registry, with CSIRDP-inspired tools like policy briefs and lesson reports disseminated via workshops, exchange visits, and media engagement to ensure accessibility and application.
- **Refinement and Presentation**: High-impact lessons, such as CSIRDP's irrigation and women's empowerment successes, will be refined for presentation to policymakers, informing national CRGE strategy and adaptation policies.
- **Learning Events**: CSIRDP's emphasis on community engagement inspires this proposal's learning events, which will share outcomes like solar pump adoption and women's empowerment, fostering stakeholder participation and knowledge transfer.
- **Incorporation into Development Plans**: Lessons, such as CSIRDP's long-term monitoring needs, will shape annual and mid-term plans, ensuring continuous improvement and alignment with Ethiopia's development strategy

B. Describe the measures for financial and project/programme risk management.

No	Risks	Risk Level	Mitigation
1	Delays in the disbursement of funds, procurement and Institutional inefficiencies (lengthy approval processes etc.) could potentially result in delayed project implementation.	Low	The CRGE Financial Manual has been developed and training will be given to permanent and temporary staff at all levels. The financial flow and administration will follow the government regular channel. Additional finance from the government and administrative officers will be recruited to ensure effective mobilization of funds, contracting, monitoring, and financial reporting.
2	Traditionally, projects were developed by a single Ministry and implemented by the same from Federal to Region and Woreda. This project follows a landscape based integrated approach and requires engagement of different stakeholders at macro, meso and micro levels.	Medium	The CRGE Facility has acquired lessons from the implementation of Adaptation Fund, Green Climate Fund and Fast Track Investments and will coordinate the implementation of this project through the assignment of a dedicated staff. This team will regularly communicate with the project coordination units of the executing Ministries and Bureaus.
3	Low technical knowhow of farmers and communities to use modern technologies. The project will introduce green technologies such as extracting of water and small scale irrigation using solar energy. These and other technologies require adopting the new technologies and associated practices.	Low	Technical support to the intended project beneficiaries will be provided through the project and existing government extension system. This will include, knowledge transfer on the technologies and improved practices through workshops, exchange visits, demonstration of on farm practices (e.g. using Farmers Training Centers), and training of trainers. It will also focus on capacity building on irrigation practices, farming technologies, livestock feed preparation, cut and carry, existing watershed management guidelines, and soil and water conservation practices. Proper training will also be given to government stakeholders and implementing institutions on trouble shooting, operation and maintenance of the solar PVs and the installed surface pumps.
4	The project has a number of components, which are strongly inter-related, and will be introduced in an integrated approach. The implementation of these components is expected to diversify and strengthen livelihoods and sources of income for vulnerable people in targeted areas. Full realization of the expected results of the project could be affected by improper selection of relevant areas and response to address communities' vulnerability.	Low	The project will address this risk through a number of actions. The first is compiling and examining vulnerability factors of target Kebeles. This will help to undertake relevant natural resource management approaches in a coherent and adaptive manner. The second is the rigorous approach to selection of participating communities, which ensures that the viability of the approaches has at the outset been validated in the local contexts. This pre-feasibility assessment has been conducted and integrated with the project design.
5	Communities have low awareness to climate change and are less enthusiastic to respond to the dangers brought by climate change. Unless beneficiaries have full awareness about the impact of climate change it is difficult to gain their commitment in the proposed action aimed at building resilience and adaptation.	Medium	The project will start by identifying the severity of communities' vulnerability through engagements. The project will introduce participative mechanisms to understand the impact of climate change and integrate into local planning. It will build awareness through a series of targeted activities and employs Kebele level staff to promote activities.
6	Low awareness and acceptance of the need to engage in climate change adaptation among officials of the Federal, Regional and Woreda level limits the support for action on climate change within key sectors.	Low	The implementation of CRGE strategy is overseen and supported by top government officials. Experience from the implementation of the Adaptation and Green Climate fund has shown that the project has brought together key stakeholders together and built awareness of officials at all levels through consultation and effective advocacy that was made.
7	Lack of project management capacity at Woreda and Kebele level. Most Government projects are managed at Federal and Regional level. While this project will be implemented at Wereda and Keble level there could be human and management capacity shortage.	Low	Lessons drawn from the Adaptation Fund and Green Climate Fund Projects has enabled the CRGE Facility to establish and strengthen its project management capacity. Strong project management staff will be assigned and rigorous support from Federal and Regional sector bureaus and the CRGE Facility will be extended towards this project.

8	Insufficient commitments from Woreda to support the implementation of project components.The project component implementations require significant level of human resources.	Medium	The project will use existing institutional arrangements. Thus the additional project implementation cost will be low. It will be supported by ongoing agricultural extension, DRM, livestock, natural resource and other government structures and resources as well as farmers and farmer's organizations. This will mitigate the challenge for the implementation of the project.
9	Failure to crate ownership of the project at local level results in communities' resistance.	Medium	Important institutional arrangements in organizing and sensitizing communities are already present at Kebele level. There is existing experience of participating in communal practices, such as watershed management, participatory forest management, etc. The project will use such opportunities to create ownership of the project. The project will use Development Agents in the implementation process.
10	Lack of co-ordination with other climate change projects limits the capacity of implementing agency to learn from and build on the experiences of related projects.	Low	The project has reviewed lessons from other projects and has discussed the projects with relevant Ministries and Woredas. The CRGE Facility in collaboration with MoA, MoWE andare engaged in coordinating climate change projects. The Technical Committee under the CRGE Ministerial Committee also plays important role in monitoring and coordinating climate change projects at all levels. The committee will also ensure technical level collaboration with regional entities happen periodically and cross-sectoral collaboration on matters of common interests is delivered.
11	Staff turnover in the project implementing unit may hamper progress	Low	Fair remuneration, training and technical support will be provided to the project staff.
12	Limited ability of smallholder farmers to pay for project inputs and technologies.	Medium	The project will promote access to credit to purchase and disseminate modern farming inputs and green technologies. The project will support beneficiaries to establish cooperatives to afford economies of scale and bargaining power in buying inputs and aggregating the product in sufficient quality to sell on to traders.
13	Unsustainability of project outputs.Some of the project activities may need operation and maintenance costs such as operation and maintenance of irrigation schemes and, supply and use of improved technologies. Unless a financing mechanism is established or government supports from budget the project output sustainability will be questionable.	Medium	The project will link the project outputs with the existing agricultural extension system. This will help continue to provide participatory and demand-driven services in line with the extension strategy beyond the lifespan of the project. The government is committed to further support and strengthen the extension service, which will provide increased opportunities for rolling out project results.
14	Lack of incentives for local communities to participate and cooperate in interventions that do not yield immediate financial value or reduce incomes in the short term, but aim at longer-term resilience. Furthermore if target communities perceive that the project support lacks fairness and transparency they will be reluctant to participate in the project implementation. This may reduce stakeholder engagement and participation.	Low	Targeted awareness campaigns will highlight the benefits of the project, showcasing successful Climate-Smart Agriculture (CSA) practices. As neighbouring farmers witness positive outcomes, both implementing institutions and communities will actively promote the project. Local stakeholders play a crucial role in implementation and monitoring. At the kebele level, Development Agents (DAs) will provide advisory support, distribute materials, and offer technical training to farmers, ensuring effective implementation.

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Environmental and Social Safeguards Framework: A comprehensive Environmental and Social Impact Assessment (ESIA) has been conducted for this project and is included as Annex. The assessment evaluates potential environmental and social impacts, outlining mitigation measures to ensure sustainable implementation. The project aligns with Ethiopia's Environmental Policy (1997) and related legal frameworks, including the Environmental Impact Assessment Proclamation No. 299/2002 and the National Biodiversity Strategy and Action Plan (2005).

Regulatory Oversight and Compliance: The Environment Protection Authority (EPA), the Climate Resilient Green Economy (CRGE) Facility, and the National Planning Commission (NPC) oversee the ESIA process. The project will adhere to the Environmental and Social Management Framework (ESMF), approved in 2015, ensuring compliance with national policies and international best practices from institutions such as the World Bank, the Global Environmental Facility, and the African Development Bank.

The **Environmental and Social Safeguards Framework (ESSF)**, established under the CRGE, integrates environmental protection and social inclusion into Ethiopia's climate resilience investments. The framework:

- Provides internationally recognized environmental and social safeguards.
- Prevents or mitigates adverse environmental and social impacts.
- Defines stakeholder roles and responsibilities for compliance throughout project lifecycles.
- Ensures effective mechanisms for monitoring and safeguard compliance.

Core Safeguard **Principles** the ESSF emphasizes:

- **Early application of safeguards** to ensure proactive risk management.
- **Stakeholder participation** in all stages of project development.
- **Transparent information dissemination** to enhance public trust and involvement.
- **Impact prevention and mitigation** by integrating environmental and social considerations throughout project planning.
- **Accountability and transparency** in managing CRGE investments.

Application to the Project: The ESSF applies to all CRGE-funded projects, including this initiative. A screening process will determine whether Environmental Impact Assessments) and social assessments are required. Additionally, the project will follow the CRGE Operations Manual, which includes appraisal procedures and environmental and social safeguards compliance. These measures ensure sustainable implementation while fostering social inclusion and climate resilience.

The project has been assessed against the AF Environmental and Social Policy with a summary of the checklist for the project presented in section K.

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.

Monitoring and evaluating climate adaptation projects is challenging due to unpredictable variables such as climate patterns, population changes, and economic shifts. Behavioral and cognitive factors, which influence adaptation, are also difficult to measure. Additionally, adaptation outcomes often take years to materialize. The project's M&E system is designed to address these complexities while aligning with the Adaptation Fund (AF) guidelines and Ethiopia's CRGE Monitoring and Evaluation System Manual.

The M&E system consists of six key components: strategy and objectives, performance indicators, monitoring and reporting, evaluation, roles and responsibilities, and system maintenance. This framework helps plan activities, assess project effectiveness, identify improvements, communicate progress, and contribute to national and global climate resilience efforts.

Implementation and Reporting

The Project Management Unit (PMU) within the CRGE Facility will oversee M&E, supported by local project staff at regional and woreda levels. A Monitoring and Evaluation Officer, along with local experts and a Gender Coordinator, will track progress and ensure compliance with international best practices.

- **Quarterly Progress Updates**: Federal executing entities (EEs) will submit detailed reports to the CRGE Facility, covering physical and financial advancements. The CRGE Facility will consolidate these into comprehensive reports for stakeholders, incorporating updates on activities (including Gender Action Plan components), risk evaluations, lessons learned (inspired by CSIRDP tools), expenditure details, and work plans to ensure adaptive project management.
- **Annual Performance Reviews (PARs)**: Guided by the CSIRDP's emphasis on capturing challenges and successes, EEs will prepare annual Performance Assessment Reports (PARs) that summarize progress (including Gender Action Plan achievements), obstacles, and key lessons. These reports will inform annual monitoring missions and contribute to sectoral reporting, ensuring alignment with project goals and stakeholder expectations.
- **Institutional Learning Forums**: Federal EEs will organize mid-term and final learning events to assess observed changes and evaluate progress, drawing on CSIRDP's community engagement approach (e.g., Lesson #8 on solar pump adoption). These forums will facilitate experience-sharing and lesson dissemination among EEs, including regional entities, fostering collaborative learning and knowledge transfer.
- **Annual Monitoring Visits**: Joint field missions will involve project stakeholders, such as regional authorities, communities, and development partners. These visits will apply CSIRDP's third-party supervision lesson (Lesson #3) for infrastructure projects, ensuring efficient implementation and resource use through independent oversight.

In addition to the monitoring and reporting mechanisms already outlined, the project will comply with all mandatory reporting requirements of the Adaptation Fund. Accordingly, annual Project Performance Reports (PPRs) will be prepared and submitted beginning one year after the inception workshop, using the Fund's approved template. These reports will capture progress on implementation, challenges encountered, lessons learned, and gender-disaggregated results. The final PPR, to be submitted within six months of project closure, will also serve as the official project completion report. To complement this, the project will prepare a Project Completion Summary, which will provide a concise and accessible overview of the project's overall achievements, lessons learned, and knowledge generated, tailored for wider dissemination among stakeholders and the general public. Furthermore, in line with the Fund's requirements, a final audited financial statement of the Implementing Entity Grant Account will be produced by an independent auditor and submitted within six months of the end of the financial year in which the project is completed. Together, these reporting instruments will ensure full compliance with the Adaptation Fund's guidelines while also strengthening transparency, accountability, and knowledge sharing.

Knowledge Sharing and Evaluation

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The CRGE Facility in collaboration with the executing entities will identify and participate through its structures, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. Further, they will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future programmes. A two-way flow of information will be maintained between this project and others of a similar focus. At project completion, the Ministry of Finance will conduct a Terminal Evaluation to assess achievements, sustainability, and long-term impact. A Project Terminal Report will provide a detailed review of successes, challenges, and recommendations providing valuable lessons to inform future climate finance initiatives in Ethiopia.

A dedicated knowledge management and learning subcomponent is embedded under Component 4 (Institutional Strengthening and Knowledge Systems) to ensure that adaptation experiences are systematically captured, analyzed, and shared with relevant stakeholders. This subcomponent is guided by a two-pronged strategy. First, it focuses on capturing local knowledge and facilitating community-level learning using participatory monitoring and evaluation tools, which allow beneficiaries and project teams to document implementation experiences, assess the effectiveness of interventions, and generate actionable insights that inform course corrections and scaling decisions. These tools will also support inclusive participation, particularly of women, youth, and other vulnerable groups.

Second, the subcomponent prioritizes wider dissemination and policy engagement. Knowledge generated from implementation will be synthesized into user-friendly formats such as policy briefs, learning reports, and technical notes. These will be disseminated through a range of platforms. The aim is to bridge the gap between community-level practice and policy-level decision-making while ensuring that good practices are documented and made accessible for replication across similar contexts.

The target audiences of this knowledge management strategy are defined across three levels. At the primary level, the project targets local communities, user groups, and local government structures such as kebele councils and woreda offices. At the secondary level, the project engages regional and national institutions. At the tertiary level, civil society organizations, academic institutions, and development partners are targeted to support innovation and collaborative research.

To ensure adaptive learning, the project embeds participatory feedback loops into implementation. Lessons captured through these mechanisms will be fed into project governance structures and decision-making forums, enabling evidence-based adjustments during execution. Knowledge products will be stored in both digital and print formats,

shared through Ethiopia's Climate Knowledge Hub and the CRGE Facility's knowledge repository, and accessible to a wide range of actors.

Gender-related aspects of the project will be systematically monitored through a combination of gender-disaggregated indicators, dedicated responsibilities, and adaptive tools to ensure that gender equity goals are effectively tracked and integrated throughout implementation. Key indicators on the GAP, include the proportion of women (with a specific focus on female-headed households) participating in consultations, trainings, leadership roles, income-generating activities, and accessing services such as weather information and markets. These indicators will be disaggregated by sex, and FHH/MHH proportions to capture intersectional vulnerabilities.

Responsibility for monitoring will be shared among the project focal persons, Monitoring and Evaluation (M&E) team, and implementing partners including women and social affairs offices, all of whom will receive gender-responsive training to carry out their roles effectively. Progress will be tracked using tools such as gender-disaggregated reports, community feedback mechanisms (including sex-segregated focus group discussions), and regular field monitoring reports. Participatory monitoring with women's groups will be used to validate progress and identify emerging barriers.

To ensure adaptability, the project includes annual review workshops, which will review progress including on gender outcomes and recommend course corrections if targets are not met. Gender-responsive learning will also be embedded in reviews, enabling the project team to adjust strategies, reallocate resources, or tailor activities based on the realities faced by women and marginalized groups. Overall, gender monitoring will not only document outcomes but also drive continuous improvement, ensuring that gender considerations remain central to the project's climate resilience and development goals.

Institutional Strengthening and Knowledge Systems: The project's M&E framework is designed to promote adaptive learning and institutional strengthening by embedding participatory feedback loops. Quarterly learning meetings, annual reflection workshops, and community feedback mechanisms will bring together implementers, extension staff and beneficiaries to jointly review progress and capture lessons in real time. Component 4.1.1 (Technical Training and Knowledge Sharing) will generate key knowledge products-such as training curricula, policy briefs, and demonstration reports-that are systematically documented. These outputs will be disseminated through Ethiopia's Climate Knowledge Hub and the CRGE Facility repository and further shared through existing extension systems and institutional training programs, ensuring that policymakers and practitioners at all levels can readily access and apply the findings. By linking adaptive M&E, inclusive stakeholder feedback, and strategic knowledge sharing, the project strengthens existing institutions and knowledge systems in line with Component 4.1.1, without introducing any activities beyond those already planned.

Table 18 Monitoring and evaluation activities and budget.

S.No	Activity	Responsible person	Budget (US$)	Timeframe
1	Baseline assessment of project performance indicators	External consultant / M&E Officers (MoF, MoWE, MoA)	25,000	Within 2 months of project start
2	Project management, monitoring and supervision	Project Management Unit (MoF, MoWE, MoA)	180,395	Throughout project
3	Environment & Social Safeguard (E&S) Management	ESS specialists (Regional/Woreda)	64,212	Throughout project
4	Monitoring & Evaluation per diem: assessment of performance/outcomes (3 Federal Experts every 3 months)	M&E Officers (MoF, MoWE, MoA)	19,200	Every 3 months
5	ESS: Monitoring, implementation and reporting (1 per Region)	ESS specialists (Regional)	34,000	Throughout project
6	Supervision of preparation of annual project reports and project evaluation reports	Implementing Entity / CRGE Focal Person (MoF)	4,800	Annual
7	Project launch and closure workshops	CRGE Focal Person	9,000	Month 1 & 36
8	Annual audits	External auditor	9,000	Months 12, 24, 36
9	Final evaluation	External consultant	85,000	Month 36
	Total		**430,607**	

Table 19 Monitoring and Evaluation Plan Matrix

Expected Results	Indicators	Definition of Indicators	Baseline	Target	Frequency	Responsible
Project Objective: Improved resilience of communities and ecosystems to climate challenges through the promotion of equitable and sustainable adaptation strategies, strengthening local climate governance, and fostering sustainable livelihoods.	▪ Increase in community resilience indices. ▪ # of direct project beneficiaries (disaggregated by gender) with increased resilience to climate change impacts, through improved access to climate-smart livelihoods, water, and ecosystem services ▪ Hectares of natural assets (forests, watersheds, agricultural land) restored, conserved, or sustainably managed to withstand climate variability and change.	▪ A measure of the capacity (gender disaggregated) of communities to adapt to climate impacts, based on indicators such as income stability, food security, water access, and infrastructure robustness. ▪ A measure of the total number of individuals (men and women) who directly benefit from project-supported interventions that enhance adaptive capacity, including improved access to climate-smart agriculture, diversified livelihoods, reliable water supply, and strengthened ecosystem services. ▪ A measure of the total land area rehabilitated, conserved, or sustainably managed through project interventions such as reforestation, watershed management, soil and water conservation, and ecosystem-based adaptation practices, thereby strengthening ecosystem services and resilience.	▪ TBD	▪ Improved resilience of targeted communities by 20%. ▪ 120,000 direct beneficiaries (of which at least 50% women) ▪ 12,000 ha (restored or under sustainable management)	▪ Annual	Ministry of Finance (MOF), Ministry of Agriculture (MOA), Woreda Offices
Outcome 1: All target Kebele communities and local authorities have improved capacity and ownership in climate risk reduction and adaptation planning, resulting in well-coordinated and effective climate adaptation strategies integrated in 100% of local development plans	▪ # of kebeles with climate vulnerability assessments completed. ▪ % of target population benefiting from weather information dissemination.	▪ The number of kebeles (local communities) where comprehensive climate risk assessments have been conducted. ▪ The percentage of people receiving and using weather-related information for agriculture and disaster management.	▪ 15 kebeles 75%	▪ 100% of kebeles in the target areas. 100%	▪ Bi-annual	MOF, National Meteorology Agency, Woreda Administration
Outcome 2: Additional 16,500 households are benefiting from enhanced agricultural and livestock resilience to climate change in project target areas, as measured by improved access to potable water and	▪ # of households benefiting from upgraded potable water and irrigation systems. ▪ # of households benefiting from alternative livelihood options.	▪ The number of households with access to improved water sources and irrigation systems for agriculture. ▪ The number of households that have adopted new income-	▪ 37,500 households 500 households	▪ 50,000 (5,000 FHH) households 1,000 households (100 FHH)	▪ Quarterly	Ministry of Water and Energy, MOF, Woreda Offices

enhanced irrigation systems.		generating activities to reduce climate vulnerability.				
Outcome 3: At least 2,000 women headed households achieve a 20% increase in agricultural productivity and enhanced food security through the implementation of climate-smart agricultural practices and sustainable livestock management systems.	▪ # of women-headed households benefiting from income and nutrition improvement measures. ▪ % increase in crop yields and livestock productivity.	▪ The number of women-headed households receiving support to increase income, improve nutrition, and enhance food security. ▪ The percentage increase in agricultural yields and livestock productivity due to climate-smart agricultural practices and improved livestock management.	▪ 2,000 women-headed households	▪ 2,000 women-headed households 20% increase in productivity	▪ Quarterly	Ministry of Women and Social Affairs, Ministry of Agriculture, Woreda Offices, Local NGOs
Outcome 4: A minimum of 4,000 households demonstrate increased economic stability and climate resilience, evidenced by diversified income sources, reduced dependence on climate sensitive activities and increased participation of gender-responsive income generation activities.	▪ # of households diversifying livelihoods through climate-resilient income-generating activities. ▪ # of women benefiting from financial inclusion and business support services.	▪ The number of households adopting diversified livelihood options to reduce climate vulnerability. ▪ The number of women who have gained access to financial services and business support for climate-resilient enterprises.	▪ TBD	▪ 4,000 households (400 FHH) ▪ 5,000 women	▪ Quarterly	Ministry of Finance, Ministry of Women and Social Affairs, Woreda Offices, Local Microfinance Institutions
Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the Local Level.	▪ **Output 1.1** Increased awareness and capacity of communities and local experts on climate risk vulnerabilities assessment and climate-smart planning.	▪ # of public events (climate fairs, exhibitions) organized. ▪ # of male and female community members attending awareness events.	▪ The number of public outreach events organized to raise awareness of climate risks and adaptation strategies. ▪ The number of community members attending these awareness-raising events.	▪ 30 events ▪ 3,005 participants (50% women)	▪ 50 events ▪ 5,000 participants	Annually
Component 2: Water Security, Climate Resilience, and Women's Empowerment.	▪ **Output 2.1** Improved access to clean water sources.	▪ # of springs with distribution systems. ▪ # of rehabilitated hand-dug wells.	▪ The number of water springs developed with distribution systems for community access. The number of existing hand-dug wells that have been rehabilitated and upgraded.	▪ 4 springs 7 wells	▪ 10 springs ▪ 15 wells	Quarterly

Output 2.2 Enhanced agricultural water use and reduced climate-related risks.	▪ Ha of land irrigated. ▪ Km of drip and sprinkler irrigation systems constructed.	▪ The total hectares of land that are under irrigation systems to improve agricultural productivity. ▪ The length of drip and sprinkler irrigation systems installed to improve water use efficiency.	▪ 560 ha ▪ 150 km	▪ 800 ha ▪ 200 km	▪ Quarterly	Ministry of Agriculture, Ministry of Water and Energy
Component 3: Climate-Smart Agriculture.	▪ **Output 3.1** Increased resilience through diverse crop varieties.	▪ # of farmers trained on diversified cropping systems. ▪ # of community seed banks established.	▪ The number of farmers trained in diverse crop production systems and conservation agriculture. ▪ The number of seed banks established to preserve and exchange climate-resilient crop varieties.	▪ 3,750 farmers (50% women) ▪ 15 seed banks	▪ 5,000 farmers ▪ 20 seed banks	Bi-annually
Output 3.2 Sustainable and resilient livestock sector.	▪ # of farmers trained on livestock husbandry practices. ▪ Quintal of drought-tolerant forage seeds distributed.	▪ The number of farmers trained in livestock husbandry to increase resilience and productivity in the face of climate change. ▪ The quantity of drought-tolerant forage seeds distributed to farmers for livestock feed.	▪ 2,250 farmers 89 quintals	▪ 3,000 farmers (50% women) ▪ 150 quintals	▪ Quarterly	Ministry of Agriculture, Regional Livestock Bureaus
Component 4: Climate-Smart Livelihood Diversification and Women's Empowerment.	▪ **Output 4.1** Successful establishment of diversified activities for income generation.	▪ # of women benefiting from livelihood diversification measures. ▪ # of women benefiting from market linkages.	▪ The number of women supported to diversify their income sources through new activities. ▪ The number of women who have been linked to markets for selling their products.	▪ 6,342 women ▪ 1,500 women	▪ 8,000 women ▪ 2,000 women	Quarterly
Output 4.2 Enhanced economic viability of diversified activities.	▪ # of markets identified and linkages brokered for smallholder families.	▪ The number of markets identified and market linkages brokered for smallholder farmers and families to sell their agricultural products.	▪ 140 markets	▪ 200 markets	▪ Annually	Ministry of Agriculture, Local Cooperatives

E. Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

Expected Results	Indicators	Baseline	Target	Means of Verification	Assumptions/ Risks
Project Objective: Improved resilience of communities and ecosystems to climate challenges through promotion of sustainable adaptation strategies, strengthening local climate governance and gender equality, fostering sustainable livelihoods	▪ # of direct project beneficiaries (disaggregated by gender) with increased resilience to climate change impacts, through improved access to climate-smart livelihoods, water, and ecosystem services	0	120,000 direct beneficiaries (of which at least 50% women)	Project monitoring reports, household surveys, gender-disaggregated beneficiary tracking system, terminal evaluation.	▪ Communities remain engaged throughout project implementation; ▪ Gender and social inclusion commitments are upheld; ▪ Stable political and financial environment allows timely delivery.
	▪ Hectares of natural assets (forests, watersheds, agricultural land) restored, conserved, or sustainably managed to withstand climate variability and change.		12,000 ha (restored or under sustainable management)	Field monitoring reports, GIS mapping, environmental assessments, terminal evaluation	▪ Communities and local authorities remain committed to sustainable land and ecosystem management; ▪ No major disasters reverse gains; ▪ Adequate technical support and resources are available.
Outcomes:					
Outcome 1: All target Kebele communities and local authorities have improved capacity and ownership in climate risk reduction and adaptation planning, resulting in well-coordinated and effective climate adaptation strategies integrated in 100% of local development plans.	▪ # kebeles with climate vulnerability assessment		15	Project annual review, periodic monitoring missions, terminal evaluation all of which will provide gender disaggregated data	▪ Political will exists at all levels to mainstream climate change considerations into planning. ▪ Government enforces integrated approaches to project implementation. ▪ There is a systemic platform that readily avails climate information at all levels ▪ Government stakeholders cooperate and agree on designing and implementing risk reduction measures. ▪ No major disasters impede progress of
	▪ # of woredas with climate smart local development plan		6		
	▪ Percentage of target population benefiting from weather information dissemination		75,000 (of which 50% women)		
Outcome 2 Additional 16,500 households are benefiting from enhanced agricultural and livestock resilience to climate change in project target areas, as measured by improved access to potable water and enhanced irrigation systems.	▪ # of people benefiting from upgraded potable water supply and irrigation systems	37,500	79,200 (of which at least 30% are FHH)		
	▪ # of people benefiting from		2,400 (of which at least 30% are		

Expected Results	Indicators	Baseline	Target	Means of Verification	Assumptions/ Risks
	alternative livelihood options;		FHH)		project and damage infrastructure. ▪ Timely disbursement of project funds
Outcome 3: At least 2,000 women headed households achieve a 20% increase in agricultural productivity and enhanced food security through the implementation of climate-smart agricultural practices and sustainable livestock management systems.	▪ # of women heads benefiting from income and nutrition improvement measures		21,600		
Outcome 4: A minimum of 4,000 households demonstrate increased economic stability and climate resilience, evidenced by diversified income sources, reduced dependence on climate sensitive activities and increased participation of gender-responsive income generation activities.	▪ Percentage reduction in households reliant solely on climate-sensitive livelihoods ▪ # of women engaged in gender-responsive income generation activities ▪ Percentage increase in households with access to financial services		▪ 4,000 households with diversified income sources ▪ 5,000 women benefiting from financial inclusion and business support services ▪ 25% increase in households, including FHHs with access to financial services	▪ Quarterly and annual monitoring reports. ▪ Surveys and interviews with beneficiary households. ▪ Financial institution records for financial service access. ▪ Gender-disaggregated data reports to track women's participation.	▪ Households have sustained access to inputs, knowledge, and markets for diversified activities. ▪ Proposed activities will be resilient to climate risks and supported by the local context. ▪ Cultural factors allow or encourage women's involvement, with any necessary support in place. ▪ Financial services, suitable for rural and low-income settings, are available in or near the target areas.
Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the local level					
Output 1.1 Increased awareness and capacity of communities and local experts on climate risk vulnerabilities assessment and climate smart planning	▪ # of public events, (climate fairs, exhibitions) organized		30	Gender disaggregated event reports, annual performance reports	▪ Relevant stakeholders and communities are willing and interested to engage in climate fairs, exhibitions; ▪ Woreda and regional officials support the events
	▪ # of male and female community members attending climate change related awareness raising events		3,005 (of which 50% are women)	Gender disaggregated training reports, annual performance reports,	▪ There is willingness and interest from the target communities to participate on trainings and awareness raising events ▪ There is adequate technical support, guidance, supervision and follow up
	▪ # of community leaders, women's groups, and marginalized populations capacitated;		2,250 (including all relevant women experts)	Gender disaggregated periodic reports, surveys,	

Expected Results	Indicators	Baseline	Target	Means of Verification	Assumptions/ Risks
Output 1.2 Strengthened capacity of local authorities and stakeholders to effectively engage in climate risk reduction and adaptation planning	▪ # of local experts trained on climate risk reduction and adaptation planning		75 (including all relevant women experts)	periodic review meetings, training reports, annual reports, gender disaggregated	▪ There is willingness and interest from the target communities to participate on trainings and awareness raising events ▪ There is adequate technical support, guidance, supervision and follow up
	▪ # woreda and regional experts trained on climate change risk analysis and implementation of local adaptation strategies		250 (including all relevant women experts)	Periodic review meetings, training reports, annual reports gender disaggregated	
Output 1.3 Enhanced monitoring, supervision and safeguard management capabilities, at national, regional and woreda levels	▪ # of woreda experts trained on Environmental and Social Safeguards management		100 (including all relevant women experts)	Training reports, survey gender disaggregated	▪ Experts at all levels are willing to attend the trainings, ▪ There is adequate technical expertise; ▪ The regional and federal implementing entities closely collaborate
	▪ # of joint monitoring and supervision missions		6	Gender disaggregated fonitoring mission reports	▪ The relevant stakeholders are willing to engage in the monitoring missions; ▪ There is adequate budget allocated for monitoring and supervision
Component 2: Water Security, Climate Resilience, and Women's Empowerment					
Output 2.1 *Improved access to clean water sources*	▪ # of springs with distribution system		4	Gender disaggregated field observation reports, annual reports	▪ Communities positively perceive benefits and are willing to actively participate and make the necessary in kind contribution
	▪ # of rehabilitated hand-dug wells		7	Gender disaggregated field monitoring mission reports,	
Output 2.2 Enhanced agricultural water use and reduced climate-related risks	▪ Ha of land irrigated		560	Gender disaggregated field monitoring reports,	▪ Communities positively perceive benefits and actively engage in adaptation interventions. ▪ Information available and appropriate to local conditions
	▪ Km of drip and sprinkler irrigation systems constructed;		150	Gender disaggregated field monitoring reports	
Output 2.3 Strengthened skills and participation of women in water management and agriculture	▪ # of women benefiting from irrigation system		3,177	Gender disaggregated training reports,	▪ Women are willingness and interested to participate on trainings and awareness raising events
	▪ # of women trained in water management,		2,250	Gender disaggregated training reports	

Expected Results	Indicators	Baseline	Target	Means of Verification	Assumptions/ Risks
	agriculture, and leadership roles				
Component 3: Climate Smart Agriculture					
Output 3.1: Increased resilience through diverse crop varieties	▪ # of farmers trained on diversified cropping systems and conservation agriculture;		3,750	Gender disaggregated training reports, surveys	▪ There is willingness among target communities to attend trainings;
	▪ # of community seed banks for preserving and exchanging climate-resilient seed varieties		15	Gender disaggregated monitoring mission reports	▪ The local government is willing to provide the necessary support ▪
	▪ Quintal of drought tolerant and early maturing crop varieties		1,874	Gender disaggregated monitoring mission reports, annual reports, survey	▪ Communities are willing to adopt drought tolerant species ▪ There is adequate market supply of drought tolerant crop varieties
	▪ Ha of land put under conservation agriculture		508	Gender disaggregated field monitoring mission reports, surveys	▪ Communities are willing to engage in conservation agriculture; ▪ There is adequate expertise
Output 3.2 A sustainable and resilient livestock sector through improved health, increased productivity, and adaptability of the herds	▪ # of farmers trained on improved livestock husbandry practice and efficient forage utilization		2,250	Gender disaggregated training reports	▪ Communities are willing to engage; ▪ The local government is willing to coordinate and facilitate
	▪ Quintal of drought tolerant forage seeds		89	Gender disaggregated field mission reports, surveys	▪ Communities are willing to adopt drought tolerant species ▪ There is adequate market supply of drought tolerant crop varieties
	▪ # of experts trained on forage development and utilization		2,085	Gender disaggregated training reports, monitoring mission reports	
	▪ # of community groups benefiting from improved livestock husbandry practices		20	Gender disaggregated monitoring reports, annual review meeting minutes, survey	
Output 3.3 Sustainable land use, protected ecosystems and enhance agricultural productivity	▪ # of multi-purpose nurseries supported		15	Gender disaggregated field monitoring reports, annual reports,	▪ Rural communities actively engage in adaptation interventions. ▪ Woredas and Kebeles support and help implement ecosystem based approaches;
	▪ Ha of land rehabilitated/ restored		410	Gender disaggregated field monitoring reports, annual reports	

Expected Results	Indicators	Baseline	Target	Means of Verification	Assumptions/ Risks
	▪ Ha of land conserved with biological and physical conservation measures		1,123	Gender disaggregated field monitoring reports, annual reports	▪
	▪ Ha of farmland treated with integrated soil fertility management		651	Field monitoring reports, annual reports	
	▪ Ha of land under area closure management		9,498	Field monitoring reports, annual reports	
	▪ Ha of land under invasive species control		477	Field monitoring reports, annual reports	
Output 3.4 Improved decision-making based on weather information	▪ # of households trained on weather information interpretation and utilization;		3,750 (of which 50% are women)	Training reports, annual review meeting minutes	▪ Communities are willing and interested to attend trainings ▪ There is expertise to at woreda and kebele to interpretate weather information; ▪ Communities are willing to utilize weather information
	▪ # of farm households utilizing weather information from their mobile devices;		37,500 (of which 20% are women)	Gender disaggregated training reports, annual review meeting minutes	
Component 4: Climate Smart Livelihood Diversification and Women empowerment					
Output 4.1 Successful establishment and management of diversified activities, leading to increased income generation and reduced reliance on a single source of income	▪ # of gender responsive campaigns		92 (of which 30% are women)	Event reports, annual reports	▪ Women are willing to participate ▪ Communication materials are culturally relevant and targeted on the basis of gender, age, location and area norms.
	▪ # of women trained and capacitated		1532	Gender disaggregated training reports, annual review meeting minutes	
	▪ # of women benefiting from livelihoods diversification measures		6342	Monitoring reports, survey, annual reports	
	▪ # of women benefiting from nutrition sensitive agricultural practices		180	Gender disaggregated monitoring reports, survey, annual reports	
	▪ # of women benefiting from market linkages		1,500	Gender disaggregated monitoring reports, survey, annual review meeting minutes	
	▪ # of gender responsive campaigns		92	Event reports, annual reports	

Expected Results	Indicators	Baseline	Target	Means of Verification	Assumptions/ Risks
Output 4.2 Enhanced economic viability of diversified activities, leading to improved income and better market access for community members	▪ # of markets identified and linkages brokered for the smallholder families		140	Gender disaggregated monitoring reports, survey, annual reports	▪ Vibrant markets are found within the vicinity of the community

Table 20 Gender Action Plan

Outcomes and Outputs	Activities	Indicators & Targets	Responsible Body
Project Impact: Improved resilience of communities and ecosystems to climate challenges through promotion of sustainable adaptation strategies, strengthening local climate governance and gender equality, fostering sustainable livelihoods.			
Component 1:Strengthening Climate Risk Reduction and Adaptation Planning at the local level			
Outcome 1: Empowered communities and stakeholders, proactive climate adaptation actions, climate-responsive decision-making, ownership of climate resilience.			
Gender disaggregated data for current status of women's and FHH's level of participation under each component at different regions/woreda are not available	Establish baseline	Baseline established for each activity in the GAP, for each region, by second quarter of first year of implementation	project implementing team + CRGE Facility
Output 1.1 Increased awareness and capacity of communities and local experts on climate risk vulnerabilities assessment and climate smart planning	Conduct inclusive climate risk awareness campaigns	At least 50% of participants from communities are women (both from MHH and FHH)	project implementing team
		Community consultations are held at times and places that are conducive to women participation	project implementing team
		Representatives from the region, woreda and Kebele gender offices are actively engaged	project implementing team
		All event reports show gender disaggregated and FHH/MHH proportion data of participants	project implementing team
	Conduct inclusive community engagement and participatory Vulnerability Assessment	At least 50% of participants from communities are women (both from MHH and FHH)	project implementing team
		Conduct women-only and men only discussions	project implementing team
		Community consultations are held at times and places that are conducive to women participation	project implementing team
		Representatives from the region, woreda and Kebele gender offices are actively engaged	project implementing team
		All assessment reports show gender disaggregated and FHH/MHH proportion of outcomes	project implementing team
Output 1.2 Strengthened capacity of local authorities and stakeholders to effectively engage in climate risk reduction and adaptation planning	Capacity-building workshops for local authorities and stakeholders	All relevant women experts at region, woreda and kebele level are included in the capacity building events	project implementing team
		All relevant team members at different levels will attend at least one training on gender-inclusive climate actions.	
		Representatives from the region, woreda and Kebele gender offices are actively engaged	project implementing team
		All capacity building reports will have gender disaggregated data of participants	project implementing team
	Mainstreaming gender-responsive climate adaptation into development plan	Each development plan clearly indicates gender-responsive adaptation strategies	project implementing team
		Plans are endorsed by communities through public consultation	project implementing team
		Plans are endorsed by women beneficiaries at women only consultations (see 2.3.1)	project implementing team

Output 1.3 Enhanced monitoring, supervision and safeguard management capabilities, at national, regional and woreda levels	Project Management, M&E	Project activity and M&E reports review GAP progress and include sex disaggregated and FHH/MHH proportion of data	project implementing team + CRGE Facility
		At least 50% of participants during community update meetings are women	project implementing team
		Women and social affair office representatives from the woreda or kebele are part of the M&E process	project implementing team
		Annual review workshops will have a dedicated time to review GAP progress	project implementing team
Component 2: Water Security, Climate Resilience, and Women Empowerment			
Outcome 2: Improved agricultural productivity, reduced vulnerability to climate risks, enhanced gender equality, increased water security			
Output 2.1 Improved access to clean water sources	New inclusive potable Water Source Development and Protection	Participatory consultation and mapping during design phase of water infrastructure and DRE systems involve 50% participation of women	project implementing team
		At least 30% of beneficiaries are FHH	project implementing team
		Survey shows at least 50% by mid-term and 100% by end of project, of the Female beneficiaries in the project areas report better access to potable water	project implementing team
		Women and girls in the project areas report reduced burden in fetching water	project implementing team
	Inclusive existing water Infrastructure Upgrade	At least 50% of community trainees on sustainable water management and DRE systems are women	project implementing team
	Training for local technicians and operators	At least 35% of trainees are women by mid-term with the aim to reach 50% by end of project	project implementing team
	Formation/strengthening of water users' association (WUA)	At least 50% of members are women (both from MHH and FHH)	project implementing team
		At least 33% of executive committees are women	project implementing team
		users' association bylaws reflect 50% female membership	project implementing team
		water users' association bylaw puts provisions to ensure women's membership and leadership positions are compatible with women's other responsibilities	project implementing team
		Number and proportion of female representatives retained annually at a minimum of 50%	project implementing team
		All elected female members and officials are given targeted training	project implementing team
Output 2.2 Enhanced agricultural water use and reduced climate-related risks	Install small scale irrigation system and storage tanks; upgrade water storage infrastructure	All beneficiary households receive the necessary training to properly use the irrigation systems	project implementing team
		At least 50% of FHH in the project area are beneficiary and report capability of operating the irrigation systems	project implementing team
		At least 70% of the FHH beneficiaries report improvement of services from DAs	project implementing team
Output 2.3 Strengthened skills and participation of women in water management and agriculture	Women-Centric Capacity Building	Capacity need assessment (technical, leadership, financial etc.) carried out on women beneficiaries	project implementing team
		All women from beneficiary households in the kebeles are included in the identified training	project implementing team
		At least 50% of the female participants report application of the training to support their livelihood	project implementing team
		Women only consultations held to discuss various aspects of the project including formation of women-led community groups, different training, participation in WUA etc.	project implementing team

	Gender-Responsive Awareness Campaigns/consultations	All beneficiary households including all FHHs in the kebeles are included in training/campaigns/consultations	project implementing team
		Male and female from MHHs attend consultations together or take turns	project implementing team
		At least 50% of women from MHHs report improved situations in decision making on household spendings, asset management, access to information and work opportunities etc.	project implementing team
Component 3: Climate Smart Agriculture			
Outcome 3: Enhanced agricultural and livestock resilience, increased productivity, reduced greenhouse gas emissions, strengthened rural livelihoods.			
Output 3.1: Increased resilience through diverse crop varieties	Climate resilient crop selection and diversification	At least 50% of the beneficiaries and trainees are women from both FHH and MHH	project implementing team
		All FHH households report accessibility of community-based seedbank	project implementing team
Output 3.2 A sustainable and resilient livestock sector through improved health, increased productivity, and adaptability of the herds	Provision of improved drought-tolerant forage seeds	At least 50% of FHHs in each kebele receive improved seeds	project implementing team
	Forage development and utilization (Capacity building)	At least 50% of the beneficiaries and trainees are women from both FHH and MHH	project implementing team
	Improved livestock husbandry practice introduction	At least 50% of the beneficiaries and trainees are women from both FHH and MHH	project implementing team
Output 3.3 Sustainable land use, protected ecosystems and enhance agricultural productivity	Establishment of Nurseries	At least 50% of the employees in the nurseries are women from FHHs and MHH in the kebeles	project implementing team
		At least 50% of participants on nursery management, soil conservation and NRM trainings are women	project implementing team
Output 3.4 Improved decision-making based on weather information	Weather information dissemination in local language (with SMS texting option)	At least 50% of beneficiaries trained on how to use information disseminated through their mobile devices are women of which atleast 20% are from FHH	project implementing team
		Mechanisms put in place for those without mobile devises to access timely weather updates	project implementing team
		At least 50% FHHs and women in MHHs in the kebeles report better access to information	project implementing team
Component 4: Climate Smart Livelihood Diversification			
Outcome 4: Reduced reliance on subsistence farming, steady revenue streams, enhanced economic resilience, improved crop pollination, and biodiversity.			
Output 4.1 Successful establishment and management of diversified activities, leading to increased income generation and reduced reliance on a single source of income	Identify Gender responsive and socially inclusive livelihood Diversification option and implementation	Conduct assessment of appropriate and inclusive livelihood diversification options	project implementing team
		At least 40% of beneficiaries are women in MHH; At least 30% of beneficiaries are women from FHHs; At least 30% beneficiaries are youth; people with disabilities will be given priority in all categories	project implementing team
		At least 70% of the beneficiaries from each category report improved income as a result of the additional livelihood activity	project implementing team
	Technical Training and knowledge sharing platforms created	All relevant women experts at woreda and kebele level are included in the capacity building / knowledge sharing events;	project implementing team
		At least 80% of participants are women including those from FHHs	project implementing team
		Lessons from the project's gender responsive actions documented and shared	project implementing team

Output 4.2 Enhanced economic viability of diversified activities, leading to improved income and better market access for community members	Promotion of Market Linkages	At least 80% of the beneficiaries of diversified livelihood and market linkages are women	project implementing team
		At least 70% of the beneficiaries, report improved income as a result of market linkages created	project implementing team
Sexual Exploitation, Abuse and Harassment (SEAH)			
Mechanism in place to address SEAH incidents	Ensure project is prepared for potential SEAH incidents at each region	Dedicated SEAH sessions during project team meetings, community and women consultations	project implementing team
		Safeguarding committee and SEAH focal points established, using existing structures where available	project implementing team
		Checklist produced to identify/screen high risk project activities	project implementing team + CRGE Facility

F. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

The project's results framework is strongly aligned with the Adaptation Fund's Strategic Results Framework, ensuring coherence between project-level interventions and the Fund's strategic priorities. As detailed in the alignment tables, each of the four project outcomes contributes directly to multiple Fund-level outcomes, reflecting the project's integrated and transformative approach to building climate resilience. Outcome 1 aligns with AF Outcomes 2, 3, and 7 by strengthening institutional capacity, increasing local awareness, and embedding climate priorities into development planning. Outcomes 2 and 3 advance AF Outcomes 4, 5, and 6 by enhancing adaptive infrastructure, protecting natural resources, and empowering women-headed households through climate-smart agriculture. Outcome 4 supports AF Outcomes 6 and 3 by expanding income diversification and enabling vulnerable households to adopt resilient, gender-responsive livelihood strategies. Collectively, the project reinforces the Fund's strategic focus on empowering the most vulnerable, reducing exposure to climate risks, and fostering sustainable adaptation models.

In addition to outcome-level alignment, the project's outputs are well-matched with the Fund's output indicators, enabling robust tracking of adaptation results. Outputs such as risk and vulnerability assessments, early warning coverage, staff training, infrastructure development, livelihood asset creation, and gender-sensitive awareness activities are directly linked to AF Outputs 1.1, 1.2, 2, 3, 4, 5, and 6. These outputs are measured through clearly defined indicators-including the number of institutions and individuals strengthened, percentage of population covered by risk reduction systems, number of physical and ecosystem assets improved, and types of income sources generated under climate scenarios. This indicator-level alignment enhances the project's ability to monitor performance, demonstrate impact, and contribute to the Adaptation Fund's aggregated results and reporting system.

Table 21 Project's results framework alignment with the Adaptation Fund's Strategic Results Framework

Project Objectives	Project objective indicators	Fund outcome	Fund outcome Indicator	Grant Amount (USD)
Improved resilience of communities and ecosystems to climate challenges through promotion of sustainable adaptation strategies, strengthening local climate governance and gender equality, fostering sustainable livelihoods	▪ # of direct project beneficiaries (disaggregated by gender) with increased resilience to climate change impacts, through improved access to climate-smart livelihoods, water, and ecosystem services ▪ Hectares of natural assets (forests, watersheds, agricultural land) restored, conserved, or sustainably managed to withstand climate variability and change.	▪ **Outcome 5:** Increased ecosystem resilience in response to climate change and variability-induced stress. ▪ **Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.	▪ **5.1** Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress ▪ **6.1** Percentage of households and communities having more secure access to livelihood assets ▪ **6.2** Percentage of targeted population with sustained climate-resilient alternative livelihoods	**9,006,598**
Outcome 1: All target Kebele communities and local authorities have improved capacity and ownership in climate risk reduction and adaptation planning, resulting in well-coordinated and effective climate adaptation strategies integrated in 100% of local development plans.	▪ # kebeles with climate vulnerability assessment ▪ # of woredas with climate smart local development plan ▪ Percentage of target population benefiting from weather information dissemination	▪ **Outcome 2:** Strengthened institutional capacity ▪ **Outcome 3:** Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	▪ 2.1 Capacity of staff to respond to climate-related events increased	338,447
			▪ 3.1 Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	394,625
			▪	
Outcome 2 Additional 16,500 households are benefiting from enhanced agricultural and livestock resilience to	▪ # of households benefiting from upgraded potable water supply and irrigation systems	▪ **Outcome 4:** Increased adaptive capacity in sector	▪ 4.1 Responsiveness of development sector services to evolving climate needs	4,701,104

climate change in project target areas, as measured by improved access to potable water and enhanced irrigation systems.	▪ # of households benefiting from alternative livelihood options;	services and infrastructure ▪ **Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	▪ 6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods	280,890
			▪	
Outcome 3: At least 2,000 women headed households achieve a 20% increase in agricultural productivity and enhanced food security through the implementation of climate-smart agricultural practices and sustainable livestock management systems.	▪ # of women headed households benefiting from income and nutrition improvement measures	▪ **Outcome 3:** Strengthened awareness and ownership ▪ **Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	▪ 3.1 Percentage of targeted population aware of climate impacts and responses	44,893
			▪ 6.1 Percentage of households and communities having more secure access to livelihood assets	1,701,951
Outcome 4: A minimum of 4,000 households demonstrate increased economic stability and climate resilience, evidenced by diversified income sources, reduced dependence on climate sensitive activities and increased participation of gender-responsive income generation activities.	▪ Percentage reduction in households reliant solely on climate-sensitive livelihoods ▪ Number of women engaged in gender-responsive income generation activities ▪ Percentage increase in households with access to financial services	▪ **Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas ▪ **Outcome 7:** Improved policies and regulations	▪ 6.1 Percentage of households and communities having more secure access to livelihood assets	1,294,177
			▪ 7.1 Climate change priorities integrated into national development strategy	250,511
Project Outcomes	**Outcome Indicators**	**Fund Outputs**	**Fund output indicators**	**Grant Amount**
Outcome 1: All target Kebele communities and local authorities have improved capacity and ownership in climate risk reduction and adaptation planning, resulting in well-coordinated and effective climate adaptation strategies integrated in 100% of local development plans.	▪ # kebeles with climate vulnerability assessment ▪ # of woredas with climate smart local development plan ▪ Percentage of target population benefiting from weather information dissemination	▪ **Output 2:** Strengthened capacity of national and sub-national centres and networks to respond rapidly ▪ **Output 3:** Targeted population groups participating in adaptation awareness activities	▪ **2.1.1** No. of staff trained to respond to climate-related events (by gender)	338,447
			▪ **3.1** No. of news outlets in local media covering adaptation and risk reduction	394,625
Outcome 2 Additional 16,500 households are benefiting from enhanced agricultural and livestock resilience to climate change in project target areas, as measured by improved access to potable water and enhanced irrigation systems.	▪ # of households benefiting from upgraded potable water supply and irrigation systems ▪ # of households benefiting from alternative livelihood options;	▪ **Output 4:** Vulnerable development sector services and infrastructure assets strengthened ▪ **Output 6:** Targeted livelihood strategies strengthened	▪ **4.1.1** No. and type of development sector services modified to respond to new conditions resulting from climate variability and change (by sector and scale)	4,701,104
			▪ **6.2.1** Type of income sources for households generated under climate change scenario	280,890
Outcome 3: At least 2,000 women headed households achieve a 20% increase in agricultural productivity and	▪ # of women headed households benefiting from income and nutrition improvement measures	▪ **Output 3:** Targeted population groups participating in	▪ **3.1.1** No. of news outlets in local media covering adaptation and risk reduction	44,893

enhanced food security through the implementation of climate-smart agricultural practices and sustainable livestock management systems.		adaptation awareness activities ▪ **Output 6**: Targeted individual and community livelihood strategies strengthened	▪ **6.1.1** No. and type of adaptation assets (tangible and intangible) created or strengthened	1,701,951
Outcome 4: A minimum of 4,000 households demonstrate increased economic stability and climate resilience, evidenced by diversified income sources, reduced dependence on climate sensitive activities and increased participation of gender-responsive income generation activities.	▪ Percentage reduction in households reliant solely on climate-sensitive livelihoods ▪ Number of women engaged in gender-responsive income generation activities ▪ Percentage increase in households with access to financial services	▪ **Output 6**: Targeted individual and community livelihood strategies strengthened ▪ **Output 7:** Improved integration of climate-resilience strategies into country plans	▪ **6.1.1** No. and type of adaptation assets (tangible and intangible) created or strengthened	1,294,177
			▪ **7.1** No. of policies introduced or adjusted to address climate change risks	250,511

[1] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

A: Programme Activities Cost				5 Regions	
Component	**Activity Description**	**Unit**	**Unit Cost (US $)**	**Target**	**Budget (US $)**
Component 1					**733,073**
Strengthening Climate Risk Reduction and Adaptation Planning at the local level	1.1.1. Climate Risk Awareness Campaign	No.	59	3,005	178,515
	1.1.2. Community Engagement and Participatory Vulnerability Assessments:	No	6,054	15	90,807
	1.2.1. Capacity-building Workshops	No.	215	620	133,216
	1.2.2. Mainstreaming Climate Adaptation into development plans	No	1,146	75	85,928
	1.3.1 Project Management, monitoring and supervision	No	36,079	5	180,395
	1.3.2 Environment Social Safeguard Management	L/sum	16,053	4	64,212
Component 2					**4,981,994**
Water Security, Climate Resilience, and Women's Empowerment	**1. Potable water**				**3,212,624**
	2.1.1 Water Source Development and Protection	No	24,753	11	272,279
	2.1.2 Efficient Water Infrastructure Upgrade and expand water supply systems for efficient distribution including sustainability options	HH	1,100	1,080	1,188,506
	2.1.3 Decentralized Renewable Energy (DRE) Systems	HH	210	7,609	1,598,857
	2.1.4. Spare parts good for 2 years (5%)	LS		-	152,982
	2. Small-scale irrigation				**1,488,480**
	2.2.1 Small-Scale Irrigation and Water Use Efficiency	Ha	2,658	560	1,488,480
	3. Strengthened skills and participation of women in water management and agriculture				**280,890**
	2.3.1 Women-Centric Capacity Building	No	2,131	60	127,860
	2.3.2 Gender-Responsive Awareness Campaigns	No	5,101	30	153,030
Component 3					**1,746,843**
Climate Smart Agriculture	**3.1.1 Climate-Resilient Crop Selection and Diversification**				**345,315**

	3.1.1.a. Promotion of drought tolerant and early maturing crop varieties	Qt	105	1,874	197,288
	3.1.1.b. Implementation of conservation agriculture	Ha	291	508	148,027
	3.2.1 Climate-Resilient Livestock Production and Management:				**335,964**
	3.2.1.a. Provision of improved drought-tolerant forage seeds	Qt	1,702	89	151,462
	3.2.1.b. Forage development and utilization (Capacity building)	No	24	2,085	50,159
	3.2.1.c. Improved livestock husbandry practice (Housing improvement, hygiene practice, breeding technology)	No	6,717	20	134,343
	3.3.1 Natural Resource Management:			**12,166**	**1,020,672**
	3.3.1.a. Watershed institutionalization and strengthening	No	5,032	7	35,224
	3.3.1.b. Multipurpose Nursery/seedling production for forage/trees/crops/horticulture: (Nursery establishment and upgrading)	L/sum		-	194,452
	3.3.1.c. Rehabilitation (Afforestation and reforestation)	Ha	241	410	98,868
	3.3.1.d. Bio and Physical soil and water conservation (Water retention structures (Terracing/Trench/Check dams), bund stabilizations)	Ha	332	1,123	372,367
	3.3.1.e. Integrated soil fertility management	Ha	104	651	67,418
	3.3.1.f. Area closure management	Ha	24	9,498	225,361
	3.3.1.g. Invasive species control	Ha	57	477	26,981
	3.4.1 Weather Information Dissemination	**L/sum**	**2,993**	**15**	**44,893**
Component 4					**1,544,688**
Climate Smart Livelihood Diversification and Women empowerment	4.1.1 Identification of Gender Responsive Diversification Options	No	981	92	90,225
	4.1.2 Technical Training and knowledge sharing	L/sum	164	1,532	250,511
	4.1.3 Implementation of Diversification Activities	No	434	2,385	1,035,090
	4.2.1 Promotion of Market Linkages	L/sum		-	168,862
Component Totals				**-**	**9,006,598**
Project Execution	**Description of item/activity**	**Unit**	**Unit Cost (US $)**	**Target**	**Budget (US $)**
1.1	**CRGE Technical persons:** MoWE, MILLs and MoA (3 Experts)	Months	625	108	67,500
1.2	**Project coordinators:** 6 at the Region's	Months	585	216	126,360
1.3	**Project facilitators:** 6 at the Woreda level	Months	300	216	64,800

1.4	**Monitoring and Evaluation: Perdiem:** Assessment of the performance and outcomes of the resilient livelihoods and CSA against annual climate variability (3 Federal Experts every 3 months)	Periodic	40	480	19,200
1.5	**Development Agents:** 15 members of the community at each Kebele	Months	150	540	81,000
1.6	**ESS:** Monitoring, implementation and reporting (1 per Region)	Months	250	136	34,000
1.7	**Per diem** (60 days per person/year): Project coordinators and facilitators (12) and ESS (6); totaling 12	Days	40	2160	86,400
2.0	**Desk and chair** (ETB 25,000 per person): All except at the Federal and Kebele Level	Set	500	24	12,000
3.0	**Computer and printers** (ETB 35,000 per person): All except at the Federal and Kebele Level	Set	625	24	15,000
4.0	**Communication** (ETB 3,000 per person/year): All (39 Experts)	No	50	117	5,850
5.0	**Utility** (ETB 15,000 per person/year): Woreda and Kebele (21)	No	260	63	16,380
6.0	**Launching meetings/workshop** at woreda level every 3 months	Periodic	250	72	18,000
7.0	Desk and chair (ETB 25,000 per person): Woreda Level (6)	Set	500	6	3,000
9.0	Annual Audits	Annual	3,000	3	9,000
	B: Project Execution (6%)				**558,490**
	(A+B): Programme Cost				**9,565,088**
Implementing Entity Fee	**Description of item/activity**	**Unit**	**Unit Cost (US $)**	**Target**	**Budget (US $)**
1.1	**CRGE Technical person:** MoF (1 Expert)	Monthly	625	36	22,500
1.2	**Finance managers:** 6 at the Region's	Monthly	585	216	126,360
1.3	**Finance officer:** 6 at the Woreda level	Monthly	300	216	64,800
1.4	**Supervision of preparation of annual project reports and project evaluation reports**	Set	1,600	3	4,800
1.5	**Per diem** (60 days per person/year): Finance Managers and finance officers (12)	Days	40	2,160	86,400
2.0	**Computers and printers** (ETB 35,000 per person): Woreda Level (6)	Set	625	6	3,750
3.0	**Communication** (ETB 3,000 per person/year): All (13 Experts)	No	50	39	1,950
4.0	**Utility** (ETB 15,000 per person/year): Woreda (6)	No	260	18	4,680
5.0	**Project launch and closure workshops**	No	4,500	2	9,000
6.0	Baseline Assessment	No	25,000	1	25,000

7.0	Final evaluation	No	85,000	1	85,000
	C: Implementing Entity Fee (5%)				**434,240**

Table 22 Descriptive budgetary note

Activity Description	Total Cost (USD)	Description
Component 1: Climate Risk Reduction & Adaptation		
▪ Climate Risk Awareness Campaign	178,515	Supports 3,005 community sessions across Amhara, Oromia, Sidama, and other regions to raise awareness on climate risks like drought and floods. Covers facilitation, educational materials, and radio outreach to improve community readiness.
▪ Community Vulnerability Assessments	90,807	Finances participatory mapping of local climate vulnerabilities such as water stress and land degradation. Critical input for designing responsive and inclusive adaptation strategies at the kebele level.
▪ Capacity-Building Workshops	133,216	Funds hands-on workshops for local government and community leaders on adaptation planning and climate-smart agriculture. Enhances technical capacity to translate policy into local action.
▪ Mainstreaming Climate Adaptation	85,928	Facilitates the integration of climate resilience measures into 75 local development plans. Ensures alignment with Ethiopia's CRGE strategy and NDCs, fostering systemic and sustained local adaptation.
▪ Project Management, Monitoring, and Supervision	211,395	Enables structured oversight of field operations, including planning, supervision, compliance monitoring, and adaptive management. A cornerstone for effective and accountable delivery.
▪ Environmental & Social Safeguard Management	64,213	Ensures environmental and social compliance including gender safeguards, land rights, stakeholder engagement, and monitoring mechanisms, in line with Adaptation Fund policies.
Component 2: Water Security & Women Empowerment		
▪ Water Source Development and Protection	272,279	Develops and protects springs and shallow wells in rural areas, contributing to safe drinking water access and reducing time burden—especially for women and girls.
▪ Efficient Water Infrastructure Upgrade	1,188,506	Expands and rehabilitates rural water distribution networks using solar and gravity-fed systems. Emphasizes sustainability through maintenance training and community ownership structures.
▪ Decentralized Renewable Energy Systems	1,598,857	Provides solar-powered systems for pumping and distribution of potable water. Integrates clean energy solutions into rural WASH services, reducing reliance on diesel and enhancing resilience.
▪ Spare Parts for Water Systems	152,982	Procures spare parts to cover operation and maintenance needs over a two-year period, ensuring continuous service and avoiding costly breakdowns.
▪ Small-Scale Irrigation & Water Use Efficiency	1,488,480	Introduces efficient irrigation techniques (e.g., drip and sprinkler systems) to smallholder farmers. Aims to increase water productivity and reduce climate-induced crop failures.
▪ Women-Centric Capacity Building	127,860	Delivers targeted training for women on water resource management, leadership, and climate-adaptive farming. Strengthens gender-responsive climate action.
▪ Gender-Responsive Awareness Campaigns	153,030	Implements outreach initiatives using radio, community events, and IEC materials to shift perceptions and promote women's participation in adaptation planning.
Component 3: Climate Smart Agriculture		
▪ Drought-Tolerant Crop Varieties	197,288	Procures and distributes resilient seed varieties (e.g., teff, sorghum) that are early maturing and drought-tolerant. Ensures stable crop production in vulnerable agro-ecological zones.
▪ Conservation Agriculture	148,027	Promotes low-till and cover cropping practices to improve soil structure, moisture retention, and productivity while reducing GHG emissions.
▪ Improved Forage Seeds	151,462	Distributes high-yielding and drought-resistant forage seeds to support livestock health and productivity, crucial for climate-resilient animal husbandry.

Activity Description	Total Cost (USD)	Description
▪ Forage Development Capacity Building	50,159	Trains farmers and local extension agents in forage production, storage, and utilization to strengthen year-round fodder availability.
▪ Improved Livestock Husbandry	134,343	Supports upgrades in animal housing, hygiene, and breeding practices to improve animal health, reduce mortality, and enhance productivity under changing climatic conditions.
▪ Watershed Institutionalization	35,224	Strengthens local watershed committees through tools, training, and coordination platforms to enhance integrated water resource management.
▪ Nursery Establishment	194,452	Establishes and rehabilitates community nurseries producing seedlings for trees, crops, forage, and horticulture. Supports reforestation and alternative income.
▪ Afforestation and Reforestation	98,868	Restores degraded areas through indigenous tree planting, promoting carbon sequestration and erosion control.
▪ Soil and Water Conservation	372,367	Constructs terraces, trenches, and bunds to reduce soil erosion and enhance moisture retention in farmland and hillsides.
▪ Integrated Soil Fertility Management	67,418	Promotes organic fertilizer application, composting, and crop rotation to improve soil productivity and sustainability.
▪ Area Closure Management	225,361	Supports regeneration of degraded landscapes through exclusion of grazing and human activity, enabling natural restoration of biodiversity and ecosystem services.
▪ Invasive Species Control	26,981	Funds removal and control of invasive species that threaten native biodiversity, water access, and land productivity.
▪ Weather Information Dissemination	44,893	Deploys weather and climate alerts through SMS, radio, and public displays to support timely agricultural decisions and risk management by farmers.
Component 4: Livelihood Diversification		
▪ Identification of Diversification Options	90,225	Facilitates local assessments to identify viable, climate-resilient income options for women, including poultry, beekeeping, and processing enterprises.
▪ Technical Training and Knowledge Sharing	250,511	Delivers hands-on training in business planning, agro-processing, and renewable energy utilization for women and youth entrepreneurs.
▪ Implementation of Diversified Livelihoods	1,035,090	Provides start-up capital, inputs, and technical support to operationalize micro-enterprises for income diversification and resilience.
▪ Promotion of Market Linkages	168,862	Connects rural enterprises to markets through aggregation centers, transport support, and cooperative development to improve product value and access.
Project Execution Costs (7%)		
▪ CRGE Technical Experts	67,500	Supports deployment of federal-level experts (MoWE, MoA, MILLs) to provide technical backstopping, coordination, and policy coherence.
▪ Project Coordinators (Regions)	126,360	Funds regional coordination of implementation, monitoring, and reporting to ensure timely delivery of results.
▪ Project Facilitators (Woredas)	64,800	Supports woreda-based facilitators who link project activities with local stakeholders and beneficiaries.
▪ M&E Performance Assessments	19,200	Funds periodic federal-level evaluations to track results against climate indicators and ensure adaptive learning.
▪ Development Agents	81,000	Supports frontline service delivery by extension agents who provide day-to-day guidance to farmers and community members.
▪ ESS Monitoring	54,000	Supports ESS officers to oversee safeguards implementation, field monitoring, and reporting.
▪ Per Diem for Coordination Teams	86,400	Provides field travel allowance to project staff at regional and woreda levels to monitor and support interventions.
▪ Desk & Chair	12,000	Equips offices of regional and woreda staff with basic office furniture.
▪ Computers and Printers	15,000	Supports procurement of IT equipment to improve efficiency and data management.
▪ Communication	5,850	Covers communication costs (e.g., airtime, internet) for project staff at decentralized levels.

Activity Description	Total Cost (USD)	Description
(Regional/Woreda)		
▪ Utilities (Woreda/Kebele)	16,380	Ensures uninterrupted service (water, electricity) in offices to maintain productivity.
▪ Woreda-Level Launch Workshops	18,000	Funds awareness and planning meetings every quarter to mobilize local stakeholders and improve coordination.
Implementing Entity Fee (3%)		
▪ MoF CRGE Technical Expert	22,500	Funds coordination role by CRGE Facility to ensure alignment with national frameworks and AF guidelines.
▪ Finance Managers (Regions)	126,360	Supports regional financial planning, control, and reporting staff.
▪ Finance Officers (Woredas)	64,800	Finances woreda-based finance personnel responsible for documentation, disbursement, and recordkeeping.
▪ Supervision of Reports & Evaluations	4,800	Supports annual report and evaluation supervision to ensure quality and consistency across sites.
▪ Finance Staff Per Diem	86,400	Field allowances for woreda and regional finance staff supporting activity implementation.
▪ Desk & Chair (Woreda Finance)	3,000	Provides office infrastructure for woreda finance staff.
▪ Final Evaluation	50,000	Finances independent terminal evaluation to assess impact, sustainability, and lessons learned.
▪ Annual Audits	9,000	Ensures fiduciary compliance and financial transparency through third-party audits.
▪ Computers & Printers (Woreda Finance)	3,750	Supports digital recordkeeping and financial data management.
▪ Communication (MoF)	1,950	Supports mobile/data costs for finance staff at federal and regional levels.
▪ Utilities (Woreda Finance)	4,680	Ensures office operational functionality for woreda finance units.
▪ Project Launch & Closure Workshops	9,000	Funds opening and closing events to share objectives and results with stakeholders.
▪ Annual Review Workshops	9,000	Facilitates learning, accountability, and cross-site coordination through annual review sessions.

H. Include a disbursement schedule with time-bound milestones.

	Upon Agreement signature	One Year after Project Start	Year 2	Total
Scheduled Date				
Project Funds	3,205,386	4,791,380	1,568,322	9,565,088
Implementing Entity Fee	124,200	147,270	162,770	434,240
Total	**3,329,586**	**4,938,650**	**1,731,092**	9,999,328

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government[2]

Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

Record of endorsement on behalf of the government[2]

Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

(Enter Name, Position, Ministry)	Date*: (Month, day, year)*

B. Implementing Entity certification

Implementing Entity certification

Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

6. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (……list here…..) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

Name & Signature Implementing Entity Coordinator Zerihun Getu Mekuria 	
Date: *(Month, Day, Year)* *04/06/2025*	Tel. and email: zedget@yahoo.com
Project Contact Person:	
Tel. And Email:	

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FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
MINISTRY OF PLANNING AND DEVELOPMENT

Addis Ababa, 31 October 2024

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for "Transforming Communities: A Nexus of Climate-Smart Agriculture, Livelihood Diversification, and Women's Economic Empowerment"

In my capacity as designated authority for the Adaptation Fund in the Federal Democratic Republic of Ethiopia, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Ethiopia.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Ministry of Finance and executed by the Ministry of Water and Energy and Ministry of Agriculture.

Sincerely,

Mohammed Andoshe Faynet
Desk Leader, Environment and Climate Change Planning, implementation & Coordination,
Focal point for Adaptation Fund projects in Ethiopia.
Ministry of Planning and Development
Addis Ababa, Ethiopia
Cell:+251913 28 09 61
P.O. box: 4472(office)

ADAPTATION FUND

Adaptation Fund

Transforming Communities: A Nexus of Climate-Smart Agriculture, Livelihood Diversification, and Women's Economic Empowerment

Environmental and Social Impact Assessment and Management Plan

ANNEX

July 2025

Table of Contents

Abbreviations

AF	Adaptation Fund
CDA	Community Development Agent
CRGE	Climate Resilient Green Economy Strategy
CSA	Climate Smart Agriculture
DRM	Disaster Risk Management
EIA	Environment Impact Assessment
EIO	Ethiopian Institute of Ombudsman
EMP`	Environment Management Plan
EPA	Environment Protection Authority
ESIA	Environment and Social Impact Assessment
ESMF	Environment and Social Management Framework
ESMP	Environment and Social Management Plan
ESS	Environment and Social Safeguards
FHH	Female Headed Household
GHG	Greenhouse Gases
GOE	Government of Ethiopia
Kebele	Sub-district/smallest unit of local government with average population of 5000.
M&E	Monitoring and Evaluation
MILL	Ministry of Irrigation and Lowlands
MHH	Men Headed Household
MOA	Ministry of Agriculture
MOF	Ministry of Finance
MOWE	Ministry of Water and Energy
PCU	Project Coordination Unit
PGHO	Public Grievance Hearing Office
PPP	Private Public Partnership
PV	Photovoltaic
SWC	Soil and Water Conservation
ToR	Terms of Reference
Woreda	District with average population of about 100,000.

1. Introduction

1.1. Project background and objectives

The impact of climate change on Ethiopia's agriculture, water resources, and food security is considerable, especially in rural areas heavily reliant on rain-fed farming as their primary means of sustenance. The irregularity of rainfall patterns, rising temperatures, and more frequent extreme weather events, such as droughts and floods, pose considerable challenges to crop yields and productivity thus negatively affecting the progress made thus far. Reduced agricultural output and food insecurity result from these climate-induced impacts, negatively impacting rural communities[1]. Moreover, Ethiopia's water resources face vulnerability due to changes in precipitation patterns, leading to water scarcity and diminished availability for agriculture and domestic use. Prolonged droughts exacerbate the strain on water supplies, both surface water and groundwater sources[2]. Consequently, food security is compromised, leaving communities vulnerable to hunger and malnutrition[3]. The challenges extend to pastoralist communities that rely heavily on livestock for their livelihoods. Changes in temperature and rainfall patterns affect grazing land availability and water access, posing risks to livestock health and productivity[4]. Addressing these impacts necessitates adaptive measures and resilient strategies to ensure sustainable development and safeguard the well-being of Ethiopia's population.

By way of addressing these challenges, the overall objective of this project, is to create a holistic and integrated approach to enhance climate resilience and sustainable development in the targeted communities. To this end, the project has four components focusing on:

1. **Strengthening Climate Risk Reduction and Adaptation Planning at the Local Level:** This component seeks to empower local communities with the knowledge and tools necessary to assess and respond to climate-related risks effectively. This involves developing and implementing robust climate adaptation plans tailored to the specific needs and vulnerabilities of each community. By strengthening local planning processes, this component aims to improve the preparedness of these communities to face the challenges posed by a changing climate.

2. **Improving water security, climate resilience, and women's empowerment:** Water security is a fundamental aspect of climate resilience. This component emphasizes the importance of ensuring access to clean and reliable water sources, especially for women, for potable and productive use through Decentralized Renewable Energy (DRE) systems. By enhancing water infrastructure, promoting efficient water use, and involving women in decision-making processes, this component empowers them and ensures that communities can withstand the impact of climate change on water resources.

3. **Strengthening climate smart agriculture and livestock management practices:** Sustainable agriculture and livestock practices are critical for food security and economic stability in the face of climate change. This component promotes the adoption of climate-smart agricultural techniques, such as drought-resistant crop varieties and sustainable land

[1] United Nations Development Programme (UNDP) - "Climate Resilient Green Economy Strategy" (2011)
[2] Intergovernmental Panel on Climate Change (IPCC) - "Climate Change 2014: Impacts, Adaptation, and Vulnerability" (2014)
[3] Food and Agriculture Organization (FAO) - "Climate Change and Food Security in Ethiopia" (2016)
[4] United Nations Environment Programme (UNEP) - "Climate Change and Pastoralism: Impacts and Mitigation" (2010)

management practices. Additionally, it focuses on enhancing livestock rearing practices to increase resilience in the face of changing weather patterns. This component aims to boost agricultural productivity and income for communities while reducing their vulnerability to climate-related shocks.

4. **Promoting climate smart livelihood diversification:** Economic diversification is vital for climate-resilient communities. This component of the project encourages communities to explore alternative livelihood options that are less susceptible to climate-related risks. This may include income-generating activities like apiculture, poultry, horticulture, shots, and establishment of women led SME's. By diversifying livelihoods, the project helps reduce the reliance on climate-sensitive activities, improving economic stability.

The goal of this project is to build self-reliant, climate-resilient communities where the local population, including women, are actively engaged in climate adaptation efforts. By addressing these four components, the project aims to create a sustainable and adaptive environment that not only mitigates climate risks but also enhances the overall well-being and livelihoods of the communities involved.

1.2. Intervention Areas

Ethiopia is constitutionally structured as a federation consisting of nine regional states based on ethnicity, along with two chartered cities. These Ethiopian regions are further subdivided into 68 or more zones, which, in turn, are composed of districts referred to as Woredas. Each Woreda is comprised of wards (kebele) or neighborhood associations, representing the smallest units of local governance in Ethiopia. The focus of this initiative is at the kebele level, specifically targeting six particularly vulnerable woredas across six regions. Within each of these woredas, the project will be implemented in two to four of the most vulnerable kebeles.

Table 1: Localities where the project will be implemented

#	Region	Woreda	Kebeles targeted
1	Oromia	Tullo	Burka Jelala, Oda Kebena, Efa Bas, Hunde Lafto
2	Amhara	Mida Weremo	Tegora, Dengore, A/Bayne
3	Tigray	Sewha Saese	Saesie, Koma Subuha
4	Afar	Awash Fentale	Kebena, Dudub
5	Somali	Shabelay	Wooble, Biyo-Cade
6	Central Ethiopia	Fofa	Semo Awasho, Upper Kesheli

These woredas were selected based on their susceptibility to climate-related risks, such as increased rainfall variability and heightened instances of drought, flood and fire. Their vulnerability to climate change, characterized by limited income diversification, crop and livestock breed variations including lack of small ruminants that can better cope to the effects of climate shocks, but also their lack to adapt to climate change, considering factors like water availability and proximity to markets, also

influenced the selection. The kebeles targeted in this initiative were chosen in consultation with stakeholders from the respective regions and woredas, considering diverse agro-ecological conditions, market accessibility, and the degree of vulnerability to drought.

1.3. Scope of the ESIA

The ESIA supports an examination of the risks and potential impacts associated with projects or activities under the planned AF proposed project. The ESIA and ESMP will set out the principles, guidelines, and procedures to assess environmental and social risks/impacts, and proposes measures to reduce, mitigate, and/or offset potential adverse environmental and social impacts and enhance positive impacts and opportunities of the above-mentioned project.

In line with the requirements of the AF, the main provisions of scope of work include:

a) Develop an Environment and Social Safeguards (ESS) screening report for the 6 Woreda's below:
   i. Amhara Region - Mida Weremo Woreda
   ii. Oromia Region – Tullo Woreda
   iii. Tigray Region - Sewha Saese Woreda
   iv. Central Ethiopia Region– Fofa Woreda
   v. Afar Region– Awash Fentale Woreda
   vi. Somali Region- Shabelay Woreda

b) Develop a comprehensive Environmental and Social Impact Assessment and Management Plan (ESIA) in the 6 Woredas above as per the Adaptation Fund requirements and standards that will be submitted along with the proposal prepared for funding from the Adaptation Fund.

c) The ESIA report shall be guided by the "Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy".

1.4. Environmental and social risk categorization

This Environmental and Social Impact Assessment and Management Plan has screened the project activities against the Adaptation Fund's Environmental and Social Policy and procedures and categorizes the project as **low impact Category B project**.

This categorization is in due recognition that the project will be conducted in food-insecure and drought-affected areas and not in sensitive ecosystems (i.e. in wetlands, forests or others). Moreover, it will have minimal adverse social impacts and impact on cultural heritage. Furthermore, the anticipated impacts will be limited and restricted to the project site and will not affect a broader area beyond the immediate project implementation sites. There is also no displacement and resettlement of the community during the development or implementation of the project. Finally, all impacts identified will be addressed through implementation of mitigation measures and there will be minimal residual impact after the implementation of the proposed mitigation measures.

2. Governing policies, laws, codes and standards

2.1. Relevant national laws and policies

The legislative and policy basis for the provision of environmental protection, climate change, water resource management, and health, hygiene and occupational safety in Ethiopia is controlled through the following, which are discussed further below:

- **The Constitution**
- **Environment and climate change related policies, strategies and proclamations,** which highlight the environmental management requirements in the country, including:
    - The Environment Policy.
    - Proclamation 299/2002, Environmental Impact Assessment (EIA).
    - Proclamation 300/2002, Environmental Pollution Control.
    - Proclamation 513/2007, Solid Waste Management.
    - Proclamation 159/2008, Prevention of Industrial Pollution – Council of Ministers Regulation.
    - EIA Guideline, July 2000.
    - EIA Procedural Guideline, November 2003.
    - Guideline for Environmental Management Plan (draft), May 2004.
    - The Climate Resilient Green Growth (CRGE) Strategy.
- **Water resource management related policies, strategies, and proclamations**, which highlight the water resource management, and the associated requirements related to integrated water resource management, including:
    - Water Resource Management Policy, 1999
    - Water Resource Management Strategy, 2001
    - Proclamation No. 197/2000, Ethiopian Water Resources Management Proclamation
    - Proclamation No. 115/2005, Ethiopian Water Resources Management – Council of Ministers Regulation
    - Irrigation Water Users' Associations Proclamation (No. 841/2014).
    - Drinking Water Specification (CES- 58) and other Ethiopian Standards pertaining to different aspects of irrigation and water use for irrigation, as well as construction safety for public infrastructure, which are stipulated in the catalogue of the Institute of Ethiopian Standards (2023).

- **Health and sanitation related policies, strategies and proclamations,** which highlight requirements that have relevance to hygiene and WASH:
    - Proclamation 661/2009, Food, Medicine and Health Care Administration and Control
    - Proclamation 200/2000, Public Health Proclamation
    - National Hygiene and “On-Site” Sanitation Protocol
    - One WASH National Programme

The project will fully comply with Ethiopia’s national law and codes of practice.

The Constitution

The constitution adopted by Ethiopia in 1995 provides the guiding principles for environmental protection and management in Ethiopia. The concept of sustainable development and environmental rights are enshrined in Article 43, 44, 90 and 92 of the Constitution of GOE.

Environment and climate change related policy, strategies, and proclamations

Environment Policy of Ethiopia

The Environmental Policy of Ethiopia (EPE) was approved on April 2, 1997 by the Council of Ministers and consists of ten sectoral and ten cross-sectoral policies. The EPE has embraced the concept of sustainable development. The Environment Protection Authority (EPA), has also issued several guidelines including the:

- (i) EIA Guideline Document of the EPA (2000),
- (ii) Procedural EIA Guideline of EPA (2003), and
- (iii) 2004 EPA's EIA Guidelines for sectors, including the road and railway; fisheries; forestry; hydropower production, transportation, and distribution; irrigation; livestock and rangelands; mineral and petroleum operation; water supply; and Industrial Zone/Estate Development.

Proclamation 299/2002, Environmental Impact Assessment

The EIA Proclamation makes EIA a mandatory requirement for the implementation of major development projects, programs and plans. The Proclamation is a tool for harmonizing and integrating environmental, economic, cultural, and social considerations into decision-making processes in a manner that promotes sustainable development. The why and how to prepare, methodologies, and to whom the report is submitted are described in this law.

Directive No.1/2008 A Directive Issued to Determine Projects Subject to the Environmental Impact Assessment Proclamation No.299/2002 lists the projects that require EIAs. None of the activities proposed under the proposed project are listed, therefore EIAs are not expected to be required. Should this change or the need for an EIA be identified, then a full assessment would be undertaken as part of the implementation.

Proclamation 300/2002, Environmental Pollution Control

Complementary to the EIA legislation, which requires developmental activities to consider environmental impacts before their establishment, the Pollution Control Proclamation requires ongoing activities to implement measures that would reduce their degree of pollution to a set limit or quality standard. Thus, one of the dictates of the legislation is to ensure through inspection the compliance of ongoing activities with the standards and regulations of the country: i.e. environmental audit.

Proclamation 513/2007, Solid Waste Management

Proclamation 513/2007 aims to promote community participation to prevent adverse effects and enhance benefits resulting from solid waste. It provides for preparation of solid waste management action plans by urban local governments.

Proclamation 159/2008, Prevention of Industrial Pollution - Council of Ministers Regulation

As a follow up to Proclamation 300/2002, a regulation to prevent industrial pollution was developed by the Federal Environmental Protection Authority to ensure the compatibility of industrial development with environmental conservation. This regulation (Proclamation no. 159/2008) also includes comprehensive industrial pollution standards for a range of industrial and mining activities.

EIA Guideline, July 2000

The EIA Guideline Document provides essential information covering:

- Environmental Assessment and Management in Ethiopia.
- Environmental Impact Assessment Process.
- Standards and Guidelines.
- Issues for sectoral environmental impact assessment in Ethiopia covering agriculture, industry, transport, mining, dams and reservoirs, tanneries, textiles, hydropower generation, irrigation projects and resettlement projects.

EIA Procedural Guideline, November 2003

The guideline outlines the screening, review, and approval process for development projects in Ethiopia and defines the criteria for undertaking an EIA. Relevant to the project are the activities listed in Annex II, Schedules 1 and 2, which require either full or preliminary EIS. However, Directive No.1/2008 (refer above) modifies this list and consequently none of the proposed activities requires an EIA.

Guideline for Environmental Management Plan (draft), May 2004

The Guideline outlines the necessary measures for preparation of an Environmental Management Plan (EMP) for proposed developments in Ethiopia and the institutional arrangements for implementation of EMPs. This ESMP complies with the requirements of the Guideline.

CRGE Strategy, 2011

The CRGE strategy focuses on four pillars that will support Ethiopia's developing green economy:

- Adoption of agricultural and land use efficiency measures.
- Increased GHG sequestration in forestry, i.e., protecting, and re-establishing forests for their economic and ecosystem services including as carbon stocks.
- Deployment of renewable and clean power generation.
- Use of appropriate advanced technologies in industry, transport, and buildings.

In general, four initiatives for fast-track implementation have been selected under the CRGE: (i) exploiting Ethiopia's hydropower potential; (ii) large-scale promotion of advanced rural cooking technologies; (iii) efficiency improvements to the livestock value chain; and (iv) reducing Emissions from Deforestation and forest Degradation (REDD).

Water Resource Management related policies, strategies, and proclamations

Ethiopian Water Sector Policy, 1999

The water sector policy aims enhance the development of the country's water resources to make optimum contribution to an accelerated socio-economic growth. The water resources management policy is based on the constitution of the FDRE Government Macro Economic and Social policies and development strategies as well as objectives accepted by the Federal Democratic Republic of Ethiopia and the principles of water resources development objectives that would enhance the socio-economic development of the peoples of Ethiopia.

Ethiopian Water Sector Strategy, 2001

The principal objective of the water resources strategy is to translate the national water resources management policy into action. In doing so, the strategy seeks to make meaningful contributions towards achieving broader national development objectives of poverty alleviation and sustainable human resources development. Pursuance of these objectives makes the water strategy compatible with the national economic development strategy.

Ethiopian Water Resources Management Regulation (No. 115/2005)

Ethiopian Water Resources Management Regulation Part two, Article 3, Water Resources utilization provides a list of information required for an application to be submitted to the Supervising Body for a water use permit, pursuant to Article 13 of the Proclamation (Proclamation No. 197/2000) and Article 4 states the duties of the supervising body regarding the provision of license for water works.

Irrigation Water Users' Associations Proclamation (No. 841/2014)

This proclamation governs the establishment and operational responsibilities pertaining to community led users' associations for the management of irrigation water use.

Catalogue of the Institute of Ethiopian Standards (2023)

This included Drinking Water Specification (CES- 58) and other Ethiopian Standards pertaining to different aspects of irrigation and water use for irrigation, as well as construction safety for public infrastructure, which are stipulated in the catalogue of the Institute of Ethiopian Standards (2023).

Health and sanitation related policies, strategies and proclamations

Proclamation 661/2009, Food, Medicine and Health Care Administration and Control

The proclamation provides provisions towards:

- Ensuring that handling and disposal of trans-regional solid and liquid wastes are not harmful to public health.
- Ensuring that the quality of trans-regional water supply for the public is up to the standard.
- Ensuring the availability of necessary hygienic requirements in controllable health related institutions under the federal government.

Proclamation 200/2000, Public Health Proclamation

This proclamation prohibits:

- the discharge of untreated liquid waste generated from septic tanks, seepage pits and industries into water bodies, or water convergences.
- the disposal of solid or liquid or any other waste in a way which contaminates the environment or affects public health.

2.2. Alignment of national policies and laws to the Adaptation Fund Environmental and Social Policy

A detailed assessment and comparison of the alignment of policies and laws in Ethiopia to the 15 principles that are contained in the Environmental and Social Policy of the Adaptation Fund was conducted. To this end, Ethiopia's national policies and laws clearly align with the Environmental and Social policy of the Fund. Further information on this alignment can be provided, should there be the requirement to do so.

2.3. The Accredited Entity's Environmental and Social Safeguards Framework

In order to facilitate climate action on the ground, GoE (and particularly the CRGE Coordinating Entities led by the Ministry of Finance) developed the *'Environmental and Social Safeguards Framework (ESSF) for the CRGE Initiative'*. This ESSF guides the formulations and implementations of the CRGE initiatives and provides an enabling mechanism to GoE to meet environmental and social safeguard requirements associated with investments that it finances through the CRGE Facility and international climate change funds. It further defines roles, responsibilities, institutional framework,

and provides procedures to avoid, minimize and mitigate any direct, indirect and potential environmental and social risks and impacts which may arise from the among others implementation of CRGE investments. It also addresses mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances in case this is needed during project implementation.

2.4. Project specific applicable AF Environmental and Social Principles

The Ethiopian EIA procedural guideline recommends a screening assessment and consultation to be conducted. As part of this Environmental and Social Impact Assessment development process initial screening was conducted using the template of the Ministry of Finance (appendix 1). Based on this screening the project is categorized as **low impact Category B project**. This categorization is in due recognition that the project will be conducted in food-insecure and drought-affected areas and not in sensitive ecosystems (i.e. in wetlands, forests or others). Moreover, it will have minimal adverse social impacts and impact on cultural heritage. Furthermore, the anticipated impacts will be limited and restricted to the project site and will not affect a broader area beyond the immediate project implementation sites. There is also no displacement and resettlement of the community during the development or implementation of the project. Finally, all impacts identified will be addressed through implementation of mitigation measures and there will be minimal residual impact after the implementation of the proposed mitigation measures.

The table below summarizes the ESIA screening phase observations, which look at the AF safeguards principle triggered, and the comments and remarks related to this.

Table 2: AF Environmental and Social Principles triggered and the associated impacts and mitigation

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	-	**Risk Level:** No to Low risk **Further Assessment:** No further assessment required beyond the ESIA. **Justification:** All AF ESP requirements have equivalent and comparable laws in Ethiopia. And as a government institution, Ministry of Finance will comply to all laws during the implementation of the project.
Access and Equity	X	**Risk Level:** No to Low Risk **Justification:** All projects and budget allocations of the Ministry of Finance are strictly developed with access and equity considerations, and in line with Article 43(4) states that, "The basic aim of development activities shall be to enhance the capacity of all citizens for development and to meet their basic needs.". Moreover, the project will set conditions for benefit sharing and gender and social inclusion considerations for participating communities to ensure that no exclusion happens.
Marginalized and Vulnerable Groups	X	**Risk Level:** No to Low Risk **Justification:** The project will conduct meaningful stakeholder consultation will be conducted. The project will develop eligibility criteria of activities that will be included in this

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		project, clearly highlighting the exclusion of activities that have implication on marginalized and vulnerable groups. Although such implications are less likely, for any aspects that will have negative implications to native communities, the project will obtain free, prior and informed consent (FPIC), before such actions are taken in line with MOF's Resettlement, Livelihood Restoration and Compensation Framework that was developed in line with the requirements of international climate change funds. Moreover, MOF's Native Communities Engagement Framework that was developed in line with the requirements of international climate change funds will be used.
Human Rights	-	**Risk Level:** Low Risk **Further Assessment:** No further assessment required beyond the ESIA. **Impact:** In the long-term potential conflict related to benefit sharing might arise, as a result of the benefits of these water and soil conservation structure will bring about to the participating communities. **Further Assessment:** No further assessment required beyond the ESIA. **Mitigation:** The development of an inclusive community led and owned by-law, which clearly stipulates benefit sharing to supporting communities. Moreover, benefit sharing will be set as a condition, and communities participating in the project, should agree to the condition pertaining to benefit sharing.
Gender Equity and Women's Empowerment	-	**Risk Level:** Low Risk **Impact:** Resistance to the gender focus of the project in identifying participants/beneficiaries, which will hinder project implementation. **Further Assessment:** No further assessment required beyond the ESIA. **Mitigation:** This requires tracking and regular follow up by the project team. Moreover, capacity building and awareness, including creating the understanding of these communities on why the project has gender focused.
Core Labour Rights	-	**Risk Level:** Low Risk **Impact:** Occupation health and safety issues, including impact on safety of workers **Further Assessment:** No further assessment required beyond the ESIA. **Mitigation**: Provision of personal protective equipment as per the dictates of the Labor Proclamation (377/2003), ensure that all electrical and mechanical fixtures fulfil safety standards and that they are not exposed and accessible, and ensure that all

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		users of facilities are aware of all dangers and post warning signs at appropriate places.
Indigenous Peoples	No	**Risk Level:** No to Low Risk **Justification:** Generally, in Ethiopia all communities are native, and in the selected localities native communities have had strong engagement and voice. This was confirmed during the field visit at each locality and was confirmed from first-hand source and consulted communities.
Involuntary Resettlement	No	**Risk Level:** No to Low Risk **Justification:** No potential expropriation of the land of individual farmers and communities. There will only be usage of communal land for conservation and planting activities for the community and water infrastructure development (when appropriate). Consultation conducted confirmed that based of intended project activities which were presented, communities were cognizant that there will be no expropriation of land from individuals and communities. But this will only be on communal land and will not be on individual farms. In the remote case where there will be implication to an individuals holding compensation will be made with due consideration of to the Livelihood Restoration and Compensation Framework, and Expropriation of Land Holdings for Public Purposes and Payment of Compensation (Proclamation No.455/2005).
Protection of Natural Habitats	-	**Risk Level:** Low Risk **Impact 1:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment 1:** Review and (if necessary) update the screening method used by Woreda agriculture offices. **Mitigation 1:** This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia. **Impact 2:** Excessive use of groundwater leading to draw down of water table and possible and subsidence. However, this is less likely to occur as the proposed water infrastructure are only shallow wells, hand dug wells, and springs. **Further assessment required 2:** The project will conduct pump tests and groundwater quality studies to regularly monitor and determine suitability of groundwater and the safe yield. **Mitigation:** Implement these water projects strictly in line with the recommended safe yield and groundwater quality assessment recommendations.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Conservation of Biological Diversity	-	**Risk Level:** Low Risk **Impact:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment:** Review and (if necessary) update the screening method used by Woreda agriculture offices. **Mitigation:** This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia.
Climate Change	No	-
Pollution Prevention and Resource Efficiency	-	**Risk Level:** Low Risk **Impact 1:** Solid waste and oil spills from decommissioning of diesel pumps and vehicles during the infrastructure development and construction. **Further Assessment 1:** No further assessment required beyond the ESIA. **Mitigation 1:** Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids, which requires the area to be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater). **Impact 2:** Noise and dust during infrastructure development and construction phase of the project. **Further Assessment 2:** No further assessment required beyond the ESIA. **Mitigation 2:** To the extent possible, apply dust suppression techniques and noise screens
Public Health	-	**Risk Level:** Low Risk **Impact 1:** Solid waste and oil spills from decommissioning of diesel pumps and vehicles during the infrastructure development and construction. **Further Assessment 1:** No further assessment required beyond the ESIA. **Mitigation 1:** Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids, which requires the area to be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater). **Impact 2:** Health and safety issues to communities. **Further Assessment 2:** No further assessment required beyond the ESIA.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		Mitigation: Ensure that all electrical and mechanical fixtures in construction sites fulfil safety standards and that they are not exposed and accessible and ensure that nearby communities are aware of all dangers and post warning signs at appropriate places.
Physical and Cultural Heritage	No	**Risk Level:** No to Low Risk **Justification:** The project will not be implemented in areas of physical and cultural heritage.
Lands and Soil Conservation	-	**Risk Level:** Low Risk **Impact:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment:** Review and (if necessary) update the screening method used by Woreda agriculture offices. **Mitigation:** This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia.

3. Project Description, Project Components and Theory of Change

3.1. Project Description and components

The proposed project, structured around its four components, exhibits significant synergies with existing adaptation-focused programs enumerated earlier. The alignment of this initiative with the priorities of the Adaptation Fund (AF) is evident, positioning it as a substantial contributor to the realization of transformational impacts. The strategic coherence between the proposed project and Ethiopia's established climate resilience initiatives underscores the country's commitment to holistic climate adaptation, sustainable development, and transformative outcomes.

Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the local level: Building Awareness, Understanding, and Ownership

This component encompasses multifaceted activities aimed at building awareness, enhancing capacity, fostering community engagement, and integrating climate adaptation into local development plans. The justification for the requested funds is delineated based on the specific outputs and the overarching goal of enabling local communities to adapt effectively to climate risks. The full cost of adaptation reasoning considers the diverse needs of awareness campaigns, capacity-building efforts, community engagement, policy integration, and robust project management, ensuring the effectiveness and sustainability of adaptation measures at the local level.

Component 2: Water Security, Climate Resilience, and Women's Empowerment

This component entails a range of interconnected activities aimed at improving water access, enhancing infrastructure, deploying renewable energy solutions, promoting sustainable agriculture, and empowering women. The justification for the requested funds is based on the specific outputs and the overarching goal of building climate resilience, particularly in the context of water security and women's empowerment. The full cost of adaptation reasoning considers the diverse needs of water infrastructure development, renewable energy deployment, sustainable agriculture, and gender-focused capacity building, ensuring a holistic and effective approach to climate resilience in the project area.

Component 3: Climate Smart Agriculture and Livestock Rearing

This component encompasses various activities aimed at enhancing agricultural and livestock practices, promoting natural resource management, and facilitating informed decision-making based on weather information. The requested funds are crucial to implementing these activities effectively, ensuring increased resilience, sustainability, and improved productivity in the agriculture and livestock sectors. The full cost reasoning includes investments in research, training, infrastructure, and ongoing support, reflecting the holistic nature of the proposed activities and their contribution to building resilience in the agriculture and livestock sectors.

Component 4: Climate Smart Livelihood diversification

This component encompasses various activities aimed at promoting gender-responsive diversification options, providing technical training and knowledge sharing, implementing diversified livelihood activities, and promoting market linkages. The requested funds are crucial for realizing these outcomes and ensuring increased economic viability, income generation, and reduced vulnerability to external shocks. The full cost reasoning includes investments in research, training, implementation, and market linkages, reflecting the holistic nature of the proposed activities and their contribution to building resilient livelihoods in the target communities and has been detailed below:

3.2. Project Theory of Change

Project overall Impact

Through the collaborative implementation of the components, the project seeks to achieve a transformative impact in the targeted communities. By raising awareness, enhancing water security, promoting climate-smart agriculture, and diversifying livelihoods, the project aims to create resilient

communities capable of adapting to and mitigating the challenges posed by climate change. The interconnectedness of these components is expected to lead to improved well-being, increased economic stability, and enhanced climate resilience among the target communities. By fostering ownership, collaboration, and sustainable practices, the project's impact is expected to extend beyond its duration, creating a foundation for a more climate-resilient and prosperous future for the targeted rural communities.

Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the Local Level: Building Awareness, Understanding, and Ownership

- Outcome: Empowered communities and stakeholders, proactive climate adaptation actions, climate-responsive decision-making, ownership of climate resilience.
- Outputs: Increased awareness of climate risks, improved knowledge and capacity, enhanced community engagement, gender-responsive strategies.
- Activities: Conduct awareness campaigns, facilitate knowledge sharing and capacity-building sessions, engage communities and stakeholders, develop gender-responsive strategies.
- Inputs: Awareness campaigns, knowledge sharing, capacity building and gender analysis tools.

Component 2: Water Security, Climate Resilience, and Women's Empowerment

- Outcome: Improved agricultural productivity, reduced vulnerability to climate risks, enhanced gender equality, increased water security.
- Outputs: Increased access to safe water, adoption of climate-resilient practices, enhanced women's participation, climate-responsive decision-making.
- Activities: Improve water access, promote climate-resilient agricultural practices, empower women, integrate climate resilience into decision-making.
- Inputs: Collaboration among stakeholders, water management expertise.

Component 3: Climate Smart Agriculture and Livestock Rearing

- Outcome: Enhanced agricultural and livestock resilience, increased productivity, reduced greenhouse gas emissions, strengthened rural livelihoods.
- Outputs: Diversified crops, weather information, enhanced farmer knowledge, improved soil and water management practices, increased awareness of agroforestry, improved health, increased productivity, and adaptability of the livestock, sustainable land use, protected ecosystems, and enhanced productivity.
- Activities: Provision of climate-resilient crops and seeds, forage development and utilization, livestock husbandry practice, share weather data, educate farmers on climate-responsive practices, implement sustainable soil and water management, promote agroforestry.
- Inputs: Agricultural expertise, technology, collaboration with local experts.

Component 4: Livelihood Diversification

- Outcome: Reduced reliance on subsistence farming, steady revenue streams, enhanced economic resilience, improved crop pollination, and biodiversity.
- Outputs: Diversified income sources, increased market accessibility, improved beekeeping skills.
- Activities: Introduce cash crops, vegetables, fruits, and beekeeping, provide training and technical support.
- Inputs: Training resources, community engagement.

4. Baseline of the Project Weredas and Kebeles

4.1. Amhara Region Target Area: Mida Weremo Woreda

The target woreda in Amhara region, Mida Weremo, has a total population of 119,985 (F= 60,381; M= 59,604). Literacy in the woreda is low, 18% for men and 5% for women. Current school enrolment for boys is 75% and only 39% for female mainly because of early marriage, household responsibilities and gender-based violence. Three kebeles in the Woreda, namely Tegora, Dengore, and A/Bayne are selected for this project. The kebeles have a total area of 12,348 ha. The total population of these kebeles is 13,518 (F=6,631; M=6,887). There are 871 female headed households (FHHs) and 2,127 male headed households (MHHs) in the kebeles.

In the past five years, the kebeles have been affected by drought and 5,671 people are being provided with support. There is shortage of clean drinking water sources in the kebeles and only 30% of the total population in Tegora and Dengore kebeles and 38% in A/Bayne have access to clean water. The sources of water available include river, spring and hand dug wells. On average women and girls walk for 3 kms each day and spend 3 hours/day to collect water. Women and girls are exposed to gender-based violence while they travel to fetch water. They are also more exposed to water borne diseases. A total of 130.5 ha land is under small irrigation and 592 MHHs and 80 FHH benefit from these schemes currently.

The day-to day tasks of women and girls include household tasks such as cleaning, fetching water, collecting firewood, cooking, taking care of children and washing clothes, and farm-based tasks such as weeding, harvesting and livestock management. On the other hand, men and boys are responsible for farm-based tasks such as livestock herding, land clearing, ploughing, harvesting and post-harvest chores as well as community involvement. Some alternative livelihoods are already carried out in the kebeles with women mostly focusing on poultry production, vegetable and herbs gardens and petty trade while men focus on weaving, livestock fattening, plantation of woodlots, crafts as well as sand and stone mining. People with disability are also involved in petty trades, cattle keeping and metal works. The climate risk awareness of the communities in the kebeles is indicated as medium for men and low for women and youth. Some of the climate adaptation and mitigation works underway in the kebeles include physical and biological soil and water conservation measures, use of improved crop varieties, preparation of compost, planting along the contour and agroforestry, water management and small-scale irrigation.

4.2. Central Ethiopia Region Target Area: Fofa Woreda

The target woreda in Central Ethiopia region, Fofa, has a total population of 49,889 (F= 28,568; M= 21,321). Two kebeles, Semo Awasho and Upper Kesheli are selected for this project. The kebeles have a total area of 2,476.48 ha. The total population of these kebeles is 6,251 (F=3,544; M=2,707). There are 224 FHHs and 950 MHHs in the kebeles.

In the past five years, the kebeles have been affected by flood, landslide, and fire and 133 people are being provided with support. There is shortage of clean drinking water sources and only 33% and 67% of the total population in Semo Awasho and Upper Kesheli have access to clean water, respectively. The sources of water available include piped, deep wells and springs. Giardia, typhus and amoeba are major health challenges faced as a result of water insecurity. On average women and girls walk for 2.2 and 1.3 kms each day and spend 2.3, and 1.3 hours/day to collect water in Semo Awasho and Upper Kesheli, respectively. A total of 27.9 ha land is under small irrigation and 401 MHHs and 101 FHH benefit from these schemes.

Women and girls are mostly engaged in water and firewood collection, over all household chores as well as farm management including harvesting while men and boys are involved in farming and

livestock husbandry. Boys also help in wood collection. Women and girls have heavy load as they are responsible for the household. As a result, girls have very limited time to be actively engaged in their education. On the other hand, boys are tied with field work and many face the challenge of unemployment. Some alternative livelihood activities in the kebeles include vegetable and herbs gardens and crafts for men and girls and weaving and petty trades for men and boys. People with disability are engaged in crafts, poultry management and children management. The estimated level of education in the kebeles are: 40% for women, 60% for men, 75% for girls and 85% for boys.

The climate risk awareness is indicated as high for men, medium for women and low for the youth. Some climate adaptation and mitigation activities in the kebeles include biological and physical soil and water conservation practices and plantation of indigenous trees.

4.3. Oromia Region Target Area: Tullo Woreda

The target woreda in Oromia region, Tullo, has a total population of 200,656 (F= 97,920; M= 102,736). Four kebeles, Burka Jelala, Oda Kebena, Efa Bas, and Hunde Lafto are selected for this project. The kebeles have a total area of 5,132 ha. The total population of these kebeles is 24,013 (F=11,747; M=12,266). There are 878 FHHs and 4,126 MHHs in the kebeles. In the past five years, the kebeles have been affected by drought and flood and 5,477 people are being provided with support. There is shortage of clean drinking water sources and only 16%, 44%,39%, and 41.5% of the total population in Burka Jelala, Oda Kebena, Efa Bas, and Hunde Lafto have access to clean water, respectively. The sources of water available include river, spring and wells in Burka Jelala and spring in the rest of the kebeles. It is indicated that diarrhea, giardia, and worm related diseases are common in the Kebeles as a result of water insecurity. On average women and girls walk for 2.5, 2, 1.8 and 2.7 kms each day and spend 2.3, 2, 2, and 3 hours/day to collect water in Burka Jelala, Oda Kebena, Efa Bas, and Hunde Lafto, respectively. A total of 267 ha land is under small irrigation and 600 MHHs and 76 FHH benefit from these schemes.

In the household women and girls are responsible mainly for cooking, water collection, childcare, goat/sheep herding, cattle herding, poultry production, firewood collection, other household chores, petty trade, and collection of animal dung, vegetable production, livestock feeding, weeding, goat rearing. Men and boys on the other hand are responsible for farming, land clearing, petty trade, work as daily labor, oxen fattening, livestock production. The major challenges faced by the communities include lack of fuel wood due to deforestation, access to potable water, lack of livestock feed, distance to fetch water, and access to market, soil erosion, shortage of cultivable land, lack of irrigation water, lack of improved seeds, erratic rain fall due to climate change and deforestation, over grazing, lack of improved fodders, and lack of improved breeds of livestock. The climate risk level of awareness in the selected kebeles are indicated as medium for men and youth while it low for women.

4.4. Somali Region Target Area: Shabelay Woreda

The target woreda in Somali region, Shabelay, has a total population of 343,850 (F= 168,718; M= 175,132). Two kebeles, Wooble and Biyo-Cade are selected for this project. The kebeles have a total area of 4,821 ha. The total population of these kebeles is 30,139 (F=13,550; M=16,589). There are 1,931 FHHs and 2,484 MHHs in the kebeles. In the past five years, the kebeles have been affected by drought and 3,292 people are being provided with support. There is shortage of clean drinking water sources and only 19% and 10% of the total population in Wooble and Biyo-Cade have access to clean water, respectively. The sources of water available include deep wells, seasonal rivers, springs, and rainwater harvesting. On average women walk for 3 and 2 kms each day and spend 2, and 1.3 hours/day to collect water in Wooble and Biyo-Cade, respectively. A total of 2,467 ha land is under small irrigation and 3,563 MHHs and 1,216 FHH benefit from these schemes.

In the kebeles women are mostly responsible for household chores including water and firewood collection and the girls held me cleaning houses, cooking, and firewood collection. Women and girls also work in the farm mostly weeding. Men are responsible for farming and livestock management while boys are encouraged to focus on education. Women and girls are the least educated in the kebeles.

4.5. Tigray Region Target Area: Sewha Saese Woreda

The target woreda in Tigray region, Sewha Saese, has a total population of 66,004 (F= 34,305; M= 31,699). Two kebeles, Saesie and Koma Subuha are selected for this project. The kebeles have a total area of 10,143.62 ha. The total population of these kebeles is 15,726 (F=8,141; M=7,585). FHH in the kebeles are slightly higher than MHH - 1,698 and 1,627, respectively. In the past five years, the kebeles have been affected by drought and 13,624 people are being provided with support. There is shortage of clean drinking water sources and only 38% and 25% of the total population in Saesie and Koma Subuha have access to clean water, respectively. The sources of water available include hand dug wells, DW, SHW and spring development. On average women walk for 5 kms each day and spend 3 hours/day to collect water. A total of 133.5 ha is under small irrigation and 1,090 MHH and 493 FHH benefit from these schemes.

4.6. Afar Region Target Area: Awash Fentale woreda

In the Awash Fentale Woreda, two kebeles, Kebena and Dudub are selected for this project. The kebeles have a total area of 74,200 ha. The total population of these kebeles is 12,609 (F=7,644; M=4,965). In the past five years, the kebeles have been affected by flood and 593 people are being provided with support. Similarly, several droughts in the past 10 years have resulted in lack access to grazing land and water access. Overall, there is a major shortage of clean drinking water sources and only 65% of the total population in each kebele have access to clean water.

The sources of water available include river and deep wells. Rivers in this woreda include the Awash and its tributary the Germama. A large portion of this woreda is occupied by the Awash National Park. On average women walk for 5 and 6 kms each day and spend 3 and 4 hours/day to collect water in Kebena and Dudub, respectively. A total of 1,222 ha land is under small irrigation and 1,712 MHHs and 1,521 FHH benefit from these schemes.

5. Project Implementation Arrangements

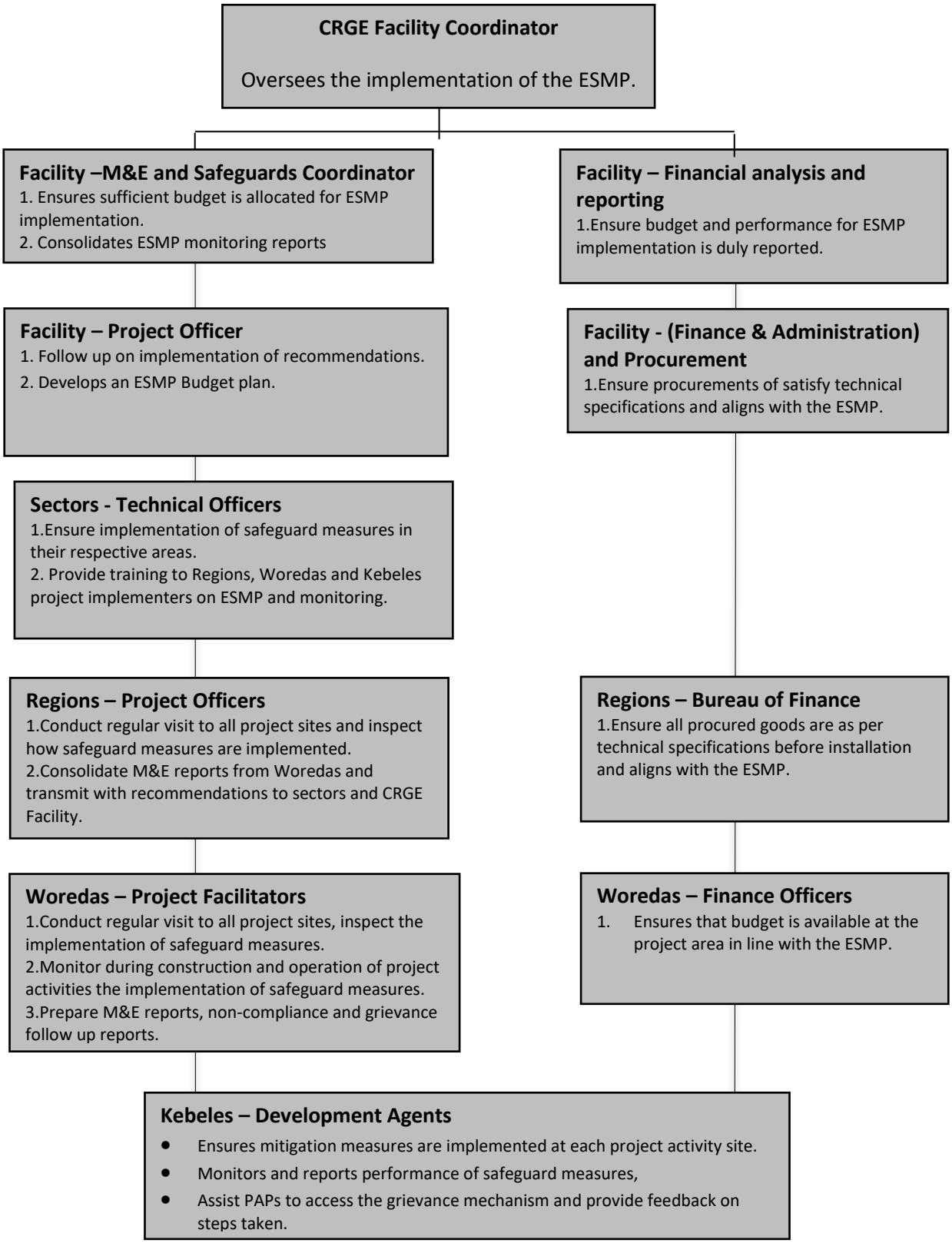
The implementation of the Environmental and Social Impact Assessment and Management Plan will utilize the envisaged project implementation arrangements the structure of which is indicated below. The Environment Protection Authority (EPA) has the mandate to ensure ESIA is conducted for project that require them. Under the CRGE, implementing entities are Federal Government (FIE's, i.e. line ministries) and Regional Governments (RIEs, i.e. sector bureaus) while executing entities do the bulk of implementation. For this proposal, the implementing entity will be the Ministry of Finance (MOF).

There are four Ministries of the GoE that will be executing entities, namely the Ministry of Agriculture (MOA), the Ministry of Irrigation and Lowlands (MILL), the Ministry of Water Energy (MOWE) and the Environmental Protection Authority (EPA). These federal government institutions have committed to work together under the overall coordination and leadership from the CRGE Facility of the Ministry of Finance (MOF). MOA, MILL, MOWE, and EPA will provide project management support for the project. In addition to carrying out the responsibilities, through its co-financing commitments, these federal government institutions will also support operations and management, and provide staff capacity and time, and provide infrastructure and facilities for project implementation. Each federal government institution has local offices at Woreda level and thus these local offices will undertake the actual implementation.

While the project is based on multisector and integrated approaches, the federal government institutions will work on a centrally coordinated basis with clear and specific responsibilities delegated to individual institution. Generally, all agriculture and natural resource related outputs will be delivered by MOA, water and energy related outputs by MOWE, forest and crosscutting climate change outputs by EPA, and irrigation by MILL. All work will be jointly planned and implemented under the coordination of the Woreda Administration Office.

The diagram below illustrates the implementation arrangement and responsibilities with regards to the Environmental and Social Impact Assessment and Management Plan development and implementation.

Figure 1: Implementation arrangement and responsibilities with regards to the Environmental and Social Management Plan implementation



6. Overall Social and Environmental Benefits

6.1. Social Benefits

The project has an explicit **learning component** that intends to build the capacity of the local communities and will provide opportunities for scaling up of innovative approaches and interventions in off project sites. This aspect will generate substantial social benefits in terms of enhancing local planning capacity, community involvement in decision making and will benefit wider communities later when innovative approaches are scaled up.

The overarching strategy of the project is to manage the risks from recurring droughts, floods, landslides, and erosion – both from current risks and under future climate change - through an integrated water, agriculture, and natural resource management nexus approach. enhance climate smart integrated water management, providing a reliable source of clean water for potable supply (reducing current health impacts) and reducing the climate risks from rain-fed subsistence agriculture, managing the watershed through physical and biological interventions such as bunds, trenches, terraces and afforestation and reforestation practices.

This project, through the above interventions, will provide employment opportunities to local populations. It is anticipated that the project will provide direct employment during the construction phase and at operational stage of components. Water supply systems under this program will ensure that the public in the targeted areas have access to clean water supply, a pre-requisite for health and sanitation. In promoting irrigation practice, the project will offer opportunities for high value crop productions that will increase the income of rural farmers resulting in enhancing their quality of life.

This is complemented with a low carbon, climate resilient livelihoods diversification interventions. The project is to be implemented in climate sensitive and vulnerable areas of Ethiopia. The value chain approach that ensures investment in production is complemented with efforts to ensure access to markets, will greatly benefit local communities in securing sustained income.

6.2. Environmental Benefits

The planned conservation structures by the project include stone or earth terraces, bunds, check dams and contour terraces, dams, grassed water ways, planting pits. These structures increase the time of concentration of runoff, thereby allowing more of it to infiltrate into the soil; divide a long slope into several short ones and thereby reducing amount and velocity of surface runoff; reduce the velocity of the surface runoff; protect against damage due to excessive runoff. Ultimately springs and water wells will yield more water and soil erosion will be avoided. In general, the structures will bring about environmental and social benefits to the communities of the kebeles. Conservation structures are basically environment enhancement interventions.

To accrue the environmental and social benefits of the physical structures, the structures should be designed and constructed following technical guidelines and specifications provided in the 2005 Ministry of Agriculture and Rural Development's "Community Based Participatory Watershed Development Guidelines Part 1 and 2."

Better productivity on less tilled land due to improved seeds will also contribute to soil conservation. Conservation structures are basically environment enhancing projects and agro-forestry provides sheds to plants, conserve water and protects from soil erosion.

6.3. Potential measures for the enhancement of the Project's Environmental and Social Benefits

To enhance the benefits of groundwater wells, both hand pump and submersible pumps-based systems, proper training to operators and users should be provided. Adequate spare parts for all installations (hand pump, submersible pump, solar power systems, should be available on site along with appropriate workshops.

Ponds store rainwater or diverted water from perennial or intermittent rivers and are usually used for livestock watering. Some communities use pond water for drinking and domestic use. Pond waters are turbid and are often polluted.

Additional structures need to be incorporated to make ponds socially acceptable and fulfill environmental requirements. These include installation of hand pumps in wells dug near the ponds and construction livestock troughs away from the ponds. Considerations should also be taken in the design of the ponds for loss of water through evaporation and infiltration based on meteorological and soil characteristics around pond constructions.

Caution should be exercised to avoid polluted water from entering ponds usually from washed fertilizer and pesticides from adjacent farmlands. The Environmental Protection Authority in its draft EIA guidelines recommends that the location of irrigation fields should be carefully selected, with a view as to not encroach on sensitive or biologically rich ecosystems, sites of cultural/historical significance, settlements of religious or scientific value, areas with flat topography or with high water tables that are at risk from salinization. It also advises that adequate health care facilities must be provided, on-going user involvement in the development of the project must be encouraged, capacity of irrigation canals to transport sediment loads must be determined, measures must be taken to prevent low irrigation efficiency caused by poor water distribution or a poor rain system management. Flood control measures should also be implemented in addition to the above measure to enhance the social and environmental benefits of irrigation projects.

With regards to plantation forests, the FAO 2026 document entitled, '*Responsible management of planted forests: voluntary guidelines. Planted Forests and Trees WorkingPaper 37/E. Rome (also available at www.fao.org/forestry/site/10368/en)* is recommended.

7. Potential Adverse Impacts and Mitigation Measures

The ESIA has looked at the different phases (design, construction, implementation and closure phases) of the proposed project to identify potential environmental and social impacts and risks and to propose comprehensive and appropriate mitigation measures to address these impacts.

Table 3: Adverse Environmental and Social Impacts and Mitigation Measures

Project component and activities		Potential environmental/social implications or risks	Proposed Mitigation Measures (including additional clarification)
Component 1: Strengthening Climate Risk Reduction and Adaptation Planning at the local level			
1.1	**Awareness and capacity building for communities and local experts** (no environmental and social impact)		
1.2.	**Strengthened capacity of local authorities and stakeholders** (no environmental and social impact)		
1.3.	**Capacity development on monitoring, supervision and safeguards management**		
1.3.1	Project Management, monitoring and supervision	no environmental and social impact	-
1.3.2	Environment Social Safeguards Management	This will have positive environmental and social implications as it will strengthen capacity for environmental and social safeguards management	-
Component 2: Water Security, Climate Resilience, and Women Empowerment			
2.1	**Potable water**		
2.1.1	- Potable Water Source Development and Protection (shallow wells,, hand dug wells, springs development and protection)	- Surface and/or groundwater quality isues resulting from drilling and operational activities.	- Groundwater quality studies should be carried out to determine suitability of groundwater and the safe yield.
	- Replacing failed diesel or manual water pump with solar	Oil spill and other hazardous materials released	- Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids. The area should be protected by an impermeable base

Project component and activities		Potential environmental/social implications or risks	Proposed Mitigation Measures (including additional clarification)
			to avoid contamination of soil and water (surface and groundwater) - Refueling to be undertaken in areas away from water systems during construction.
2.1.2	Water infrastructure upgrade and expand water supply systems for efficient distribution including sustainability options (IWA, O&M, Spare parts)	- Excessive use of groundwater leading to draw down of water table and possible land subsidence (although this is less likely due to the development of shallow wells, hand dug wells, and springs.	- It is less likely that there will be excessive use of groundwater as the development is shallow wells, hand dug wells, and springs which are much less extractive in terms of groundwater usage. - However, a full engineering assessment of the proposed anchoring method should be conducted and should be concerns water level monitors should be installed prior to implementation.
2.1.3	Decentralized Renewable Energy (DRE) Systems	- Dumping of construction waste, and solid waste and oil spills from decommissioning of diesel pumps.	- Provision of designated areas for storage of waste fuels, oils, chemicals, or other hazardous liquids. The area should be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater)
		- Noise and dust during construction phase of the project	- To the extent possible use dust suppression techniques and noise screens
		- Occupation health and safety issues, including impact on safety of workers and communities due to exposure to equipment installed.	- Provide workers with personal protective equipment as per the dictates of the Labor Proclamation (377/2003) - Ensure all electrical and mechanical fixtures fulfill safety standards and that they are not exposed and accessible.

Project component and activities		Potential environmental/social implications or risks	Proposed Mitigation Measures (including additional clarification)
			- Ensure all users of facilities are aware of the dangers and post warning signs at appropriate places.
2.2	**Small-scale irrigation development and improved water efficiency**		
2.2.1	Replacing diesel or manual water pump, shallow wells (less than 75m depth), hand-dug wells, spring, water harvesting structure: Pond Construction)	- Solid waste and oil spills from decommissioning of diesel pumps.	- Provision of designated areas for storage of waste fuels and oil during the diesel pump replacement process. The area should be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater)
Component 3: Climate Smart Agriculture			
3.1	**Climate-Resilient Crop and Diversification**		
3.1.1	Promotion of drought tolerant and early maturing crop varieties	- Potential risk of import of seeds of alien invasive species along with required seeds and seedlings', which will have impacts on the natural habitat and biodiversity.	- Strict control and screening of imported seeds before dissemination, with guidance and involvement of the Ministry of Agriculture.
3.1.2	Implementation of conservation agriculture	- Potential impact resulting from the expropriation of communal land for conservation and planting activities.	- The project will not expropriate land from individuals. However, the use of communal land for the project should be guided by the Expropriation of Land Holdings for Public Purposes and Payment of Compensation Proclamation No.455/2005. - Furthermore, this should be in line with the MOF's Resettlement, Livelihood Restoration and Compensation Framework that was developed in line with the requirements of international climate change funds.

Project component and activities		Potential environmental/social implications or risks	Proposed Mitigation Measures (including additional clarification)
			- The required permits and standards for land use, drinking water specification (CES- 58) and other Ethiopian Standards pertaining to different aspects of irrigation and water use for irrigation, as well as construction safety for public infrastructure, which are stipulated in the catalogue of the Institute of Ethiopian Standards (2023) should be adhered to during installation to ensure safety.
3.2	**Climate Resilient Livestock Production and Management (Following are Specific proposed sub-activities)**		
3.2.1	Provision of improved drought-tolerant forage seeds	- Potential risk of import of seeds of alien invasive species along with required seeds and seedlings', which will have impacts on the natural habitat and biodiversity.	- Strict control and screening of imported seeds before dissemination.
3.2.2	Forage development and utilization	- Long-term anticipated conflict related to benefit sharing, which will arise between pastoral communities which have improved grazing land due to the project interventions.	- There should be a community led and owned by-law, which clearly stipulates benefit sharing. Moreover, benefit sharing should be set as a condition, and communities should agree to this as a condition for participating in the project.
3.2.3	Improved livestock husbandry practice (Housing improvement, hygiene practice, breeding technology)	- Long-term anticipated conflict related to benefit sharing, which will arise between pastoral communities which have improved grazing land due to the project interventions.	- There should be a community led and owned by-law, which clearly stipulates benefit sharing. Moreover, benefit sharing should be set as a condition, and communities should agree to this as a condition for participating in the project.
3.4	**Natural Resource Management (Following are Specific proposed sub-activities)**		

Project component and activities		Potential environmental/social implications or risks	Proposed Mitigation Measures (including additional clarification)
3.4.1	Bio and Physical soil and water conservation - Water retention structures (Terracing/Trench/Check dams)	- Potential for use of degraded communal land for this, resulting in loss of access to free grazing land.	- To the extent possible, the site for conservation structures should be on communal land and there should be extensive consultation and buy-in from the community for the intended use of the communal land.
		- Potential conflict during boundary demarcations.	- Demarcation of boundaries of private properties is sensitive and should be done in the presence of kebele officials and with agreement of owners sharing boundaries.
3.4.2	Integrated soil fertility management	- Long-term anticipated conflict related to benefit sharing, which will arise from the benefits of these water and soil conservation and retention structures.	- There should be a well-structured consultation process and a practice undertaking conservation measures including use of communal lands. There should be a community lead and owned by-law, which clearly stipulates benefit sharing and is endorsed by the community.
Component 4: Climate Smart Livelihood Diversification			
4.1	Identify Gender responsive and socially inclusive livelihood Diversification option and implementation mainly Apiculture, Poultry, Sheep-goats (Shoats), Horticulture	- Resistance to the gender focus of the project in identifying participants/ beneficiaries.	- Conduct prior consultation with communities to explain why the project has a gender focus and set this as a condition for participating in the project.
		- Potential risk of import of seeds of alien invasive species along with seeds and seedlings	- During seed dissemination stage ensure the quality of seeds and ensure that no alien invasive seed species are disseminated.

Project component and activities		Potential environmental/social implications or risks	Proposed Mitigation Measures (including additional clarification)
		- Generation of solid waste (hazardous and non-hazardous) and impacts of site level infrastructure construction.	- Solid waste (hazardous and non-hazardous) should be managed as per the requirements of Ethiopia's Solid Waste Management Proclamation (517/2007). - Used oil traps and other effluent/discharge management interventions should be put in place. - Dust suppression technique should be in place. - Provide workers operating in these areas personal protective equipment, including mufflers, as per the requirements stipulated in the Labour Proclamation (No. 377/2003).

8. Environment and Social Management Plan

The ESMP consists of a set of mitigation, monitoring, and institutional measures, including policies, procedures, and practice – as well as the actions needed to implement these measures – to achieve the desired social and environmental sustainability outcomes.

An ESMP will consist of separate sections on:

1. Social and environmental impact mitigation,
2. Social and environmental sustainability monitoring,
3. Capacity development,
4. Stakeholder engagement,
5. Implementation action plan.

The hierarchy of social and environmental impact mitigation includes, in descending order: a) Avoid, prevent or eliminate environmental and social risks and adverse impacts; b) identify measures and actions to minimize and mitigate impacts; c) identify measures to offset them by enhancing the proposed project and d) identify compensatory measures to balance the residual adverse impacts.

The ESMP is presented in a tabular form in which the following key environment and social management issues are outlined with respect to AF safeguards principles that are triggered by the various interventions of the project and is organized as:

Project phase: The phase of the project when the impact is expected.

AF principle potentially triggered: This AF principle that is triggered. In case more than one AF principle is triggered all involved are mentioned.

Source of impact and potential impacts: the source of impact and description of the impacts are indicated

Mitigation and Management measures: The mitigation and management measures for these impacts are included in this column.

Applicable laws and standards: This highlights the requirements to be adhered to, during the implementation of mitigation measures.

Responsible party: The party responsible for undertaking the mitigation measures is indicated in this column.

Indicators: key indicators that need to be measured to show compliance or non-compliance and progress are indicated in this column.

Monitoring and Reporting: What is to be monitored by whom, and the frequency of monitoring are indicated in this column. The purpose of monitoring and reporting is to ensure that project impacts are addressed by the parties responsible on a timely basis and complaints of project affected persons (PAPs) are seriously considered in addressing their concerns.

Table 4: Environmental and Social Management Plan (ESMP)

Project Phase	AF Principle potentially triggered	Source and Potential impacts	Mitigation and Management	Applicable laws and standards	Responsible party	Indicators	Monitoring and Reporting
Construction	Protection of Natural Habitats	**Source:** Site clearance for project activities and access roads **Impact:** Habitat loss and disturbance of fauna	Limit vegetation clearing and minimize habitat disturbance through adequate protection and management of retained vegetation. Avoid any damage to the trees near and around project activities.	-Proclamation No. 482/2006 Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation -Forest Development, Conservation and Utilization Proclamation No. 1065/2018 and the Biodiversity Conservation and Research Establishment Proclamation No. 381/2004	Site Supervisor as per design and construction specifications.	- Number of trees and area of vegetation cleared) - Number of trees and area of vegetation planted (as a compensation for vegetation cleared).	Report to EPA on any loss of endemic flora and non-compliance with the ESMP, twice a year during the construction period. Report to EPA at the end of the project on vegetated area and saved trees.
Construction	Core Labour Rights	**Source:** Noise, vibration and dust from construction work, equipment for water facilities and vehicles **Impact:** Occupation health and safety	-Ensure that construction work is only undertaken in defined/limited working hours to reduce extent of impact. -Ensure that noise, and dust suppression systems are maintained.	-Labour Proclamation (No. 377/2003) -Proclamation 159/2008, Prevention of Industrial Pollution - Council of Ministers Regulation (for noise standards) - Catalogue of the Institute of Ethiopian Standards (2023) for construction safety for public infrastructure.	Contractor	Noise level measurement	Daily (visual) observations Maintaining records
Construction	Pollution Prevention and Resource Efficiency	**Source:** Leaks/ spillages from equipment, vehicles & storage compounds.	Ensure proper storage for oils and fuels and in case of spill put in place cleaning equipment and	- Ethiopia's Pollution Control Proclamation and standards (Proclamation no. 300/2002)	Contractor	Frequency of spills and damage extent	Daily observation and maintain records.

Project Phase	AF Principle potentially triggered	Source and Potential impacts	Mitigation and Management	Applicable laws and standards	Responsible party	Indicators	Monitoring and Reporting
		Impact: Soil contamination and impacts on vegetation.	clear instructions on cleaning spills.	-Proclamation 159/2008, Prevention of Industrial Pollution - Council of Ministers Regulation			
Construction	Pollution Prevention and Resource Efficiency	Excessive use of groundwater leading to draw down of water table and possible land subsidence	Pump tests and groundwater quality studies should be carried out to determine suitability of groundwater and the safe yield.	- Ethiopia's Pollution Control Proclamation and standards (Proclamation no. 300/2002) -Proclamation 159/2008, Prevention of Industrial Pollution - Council of Ministers Regulation (in which ambient environmental quality standards are stipulated).	Site supervisor and MILL and MOA.	Water table	Maintain records on earth movements/ subsidence.
Construction	Lands and Soil Conservation	**Source:** earthwork activities **Impact:** Loss of soil material and surface and ground water affected by sedimentation	-Minimize earthwork using machinery. -Relocate soil stockpiles from the vicinity of well sites and water bodies.	Forest Development, Conservation and Utilization Proclamation No. 1065/2018 and the Biodiversity Conservation and Research Establishment Proclamation No. 381/2004	MILL, MOA, Woreda project officers	Soil depth eroded in centimeters	Conduct site inspections on a weekly basis and measure soil depth eroded at representative sites- by Woreda M&E officer
Construction	-Core Labour Rights -Public Health	**Source**: vehicles and drilling machines **Impact:** excessive noise disturbing residential and other	Minimize all noise and vibration from trucks and drilling machines [the extent of use of such noise	-the Labour Proclamation (No. 377/2003) -Proclamation 159/2008, Prevention of Industrial Pollution - Council of	MOWE and contractors	It is not practical to use decibel as threshold due to the impracticality of	Record number of complaints

Project Phase	AF Principle potentially triggered	Source and Potential impacts	Mitigation and Management	Applicable laws and standards	Responsible party	Indicators	Monitoring and Reporting
		community centers (Occupation health and safety and public health)	sources is limited due to the nature of the project]	Ministers Regulation (for noise standards) - Catalogue of the Institute of Ethiopian Standards (2023) *for construction safety for public infrastructure*. - Proclamation 200/2000, Public Health Proclamation		using instruments to measure noise levels. Thus, frequency of complaints from community members may be taken as indicator	
Construction	-Core Labour Rights -Public Health	**Source:** Dust from site clearance and construction works **Impact:** Dust emissions resulting in potential nuisance, human health and aesthetic impacts	Implement dust suppression measures for all stockpiles.	-the Labour Proclamation (No. 377/2003) -Proclamation 159/2008, Prevention of Industrial Pollution - Council of Ministers Regulation - Proclamation 200/2000, Public Health Proclamation	Contractors	Number of complaints from community members	Kebele Development Agents make regular observations and record such incidents and complaints of residents
Construction	-Core Labour Rights -Public Health	**Source:** Emissions from construction equipment and vehicles **Impact**: Reduced air quality with consequent nuisance and Greenhouse Gas emissions	-Ensure all equipment is turned off when not in use. -The nature of the project and the frequency and duration of use of such emitting equipment is not significant.	-the Labour Proclamation (No. 377/2003) -Proclamation 159/2008, Prevention of Industrial Pollution - Council of Ministers Regulation - Proclamation 200/2000, Public Health Proclamation	Contractors	- Complaints from community members - Visual observation	Kebele DAs make regular observation and record such incidents and complaints of residents

Project Phase	AF Principle potentially triggered	Source and Potential impacts	Mitigation and Management	Applicable laws and standards	Responsible party	Indicators	Monitoring and Reporting
Construction	Pollution Prevention and Resource Efficiency	**Source:** packaging material disposal, construction material, animal waste, **Impact:** health impact and aesthetic disturbance	-Waste generation is minimized through avoidance, reduction, reuse, and recycle. -Remove litter from project sites due to activities of site personnel;	-Solid Waste Management Proclamation (517/2007) - Proclamation 200/2000, Public Health Proclamation	Site supervisors and Contractor	- Complaints from community members - Visual observation	Maintain records of number of complaints by community members.
Construction	-Pollution Prevention and Resource Efficiency -Public Health	**Source:** waste generated by project workers. **Impacts**: communicable disease that may affect communities	Provide proper sanitary facilities to workers.	-the Labour Proclamation (No. 377/2003) -Solid Waste Management Proclamation (517/2007) - Proclamation 200/2000, Public Health Proclamation	Site supervisors and Contractor	- Complaints from community members - Visual observation	Maintain records of number of complaints by community members.
Construction	Access and Equity	**Source:** Changes in land use **Impact:** Social conflict due to shortage of land	Carry out community consultation on the purpose and benefits of making changes to land use and get community buy-in on change of land use. Ensure community consultation and participation throughout the project. Ensure long-term social and economic benefits are	- The Ethiopian Constitution (Article 92 and 95), - Roles and responsibilities of Ministry of Finance on equitable resource allocation (Proclamation 1263-2021)	Regional sector Bureaus and Woreda sector offices	- Complaints - Conflict	Maintain records on frequency of conflicts

Project Phase	AF Principle potentially triggered	Source and Potential impacts	Mitigation and Management	Applicable laws and standards	Responsible party	Indicators	Monitoring and Reporting
			achieved for the community				
Construction	-Core Labour Rights -Public Health	**Source**: deep well drilling **Impact**: exposure to accidents due to vehicles and equipment movements	Avoid adverse impacts to local community during construction and operations and where not possible, minimize, restore. Ensure due attention is given to protect community health and safety.	-the Labour Proclamation (No. 377/2003) - Proclamation 200/2000, Public Health Proclamation	Regional sector Bureaus and Woreda sector offices	- Number of accidents	Maintain frequency of accidents.
Construction	Pollution Prevention and Resource Efficiency	**Source:** construction activities and equipment operation. **Impact:** pollution of surface and ground water	Implement surface and groundwater monitoring systems. Take precautionary measures in protecting water sources;	- Ethiopia's Pollution Control Proclamation and standards (Proclamation no. 300/2002) -Proclamation 159/2008, Prevention of Industrial Pollution - Council of Ministers Regulation (in which ambient environmental quality standards are stipulated).	Contractor	Water quality parameters	Maintain records of water quality measurements and report to EPA.
Construction and implementation	Involuntary Resettlement	**Source**: project land requirement for interventions **Impact**: Communal land appropriation and loss of livelihoods	Ensure community land use is optimized and to extent possible reduce land appropriation from community. Compensate for loss of land and livelihoods.	- Rural land administration and use proclamation (No. 456/2005)	Regional sector Bureaus and Woreda sector offices	- Land appropriated -stakeholder consultation and grievance records.	Maintain records of cases of land appropriations and grievances and results of grievances.

Project Phase	AF Principle potentially triggered	Source and Potential impacts	Mitigation and Management	Applicable laws and standards	Responsible party	Indicators	Monitoring and Reporting
			Ensure cultural heritage is not adversely impacted. Ensure complaint and grievance redress mechanisms is in place				
implementation	Conservation of Biological Diversity	**Source**: Introduced flora and fauna species **Impact:** proliferation of alien species	Prevent introduction of weeds/pests/diseases by sourcing appropriate weed/pest/disease free seed and stock Re-vegetate disturbed areas using native and locally endemic species that have high habitat value.	- Proclamation No. 381/2004, Institute of Biodiversity Conservation and Research Establishment Proclamation - Proclamation No. 482/2006 Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation	MILL, MOA, and Development Agents	Seed stock	Screening of imported seeds and reporting to MOA and MILL
Implementation	Pollution Prevention and Resource Efficiency	**Source:** irrigation malpractice **Impact:** Water logging and salinization due to irrigation malpractice	Provide training to farmers on proper irrigation practices. Monitor water quality Adhere to standards as stipulated in	-Irrigation Water Users' Associations Proclamation (No. 841/2014) - Catalogue of the Institute of Ethiopian Standards (2023) as this includes Ethiopian Standards pertaining to different aspects of irrigation and water use for irrigation, as well as construction safety for public infrastructure.	MILL, MOA, and woreda project officers	Water quality parameters	Maintain records. Report both compliance and non-compliance with the set quality standards

9. ESMP Implementation Cost

The detailed costing for the ESMP implementation is presented below

Table 5: ESMP Implementation cost[5]

Project Phase	AF Principle potentially triggered	Potential impacts	Mitigation and Management	Assumption (for costing)	Cost Estimate	Total
Construction	Protection of Natural Habitats	Habitat loss and disturbance of fauna	Limit vegetation clearing and minimize habitat disturbance through adequate protection and management of retained vegetation. Avoid any damage to the trees near and around project activities.	- The project will only use degraded communal land for development. -Moreover, the infrastructure to be developed is small and localized. - Generally communities contribute in kind for such interventions	- 10000 USD for seedling development and rehabilitation work.	10000 USD
Construction	Core Labour Rights	Occupation health and safety	-Ensure that construction work is only undertaken in defined/limited working	- These are generally part of the operational cost of the project	-	**-**

[5] This cost is only for ESMP implementation. There is an additional budget of USD 29000 for ESS capacity building allocated under component 1.3. This additional resource is critical for creating capacity in this critical area that requires technical capacity building.

Project Phase	AF Principle potentially triggered	Potential impacts	Mitigation and Management	Assumption (for costing)	Cost Estimate	Total
			hours to reduce extent of impact. -Ensure that noise, and dust suppression systems are maintained.			
Construction	Pollution Prevention and Resource Efficiency	Soil contamination and impacts on vegetation.	Ensure proper storage for oils and fuels and in case of spill put in place cleaning equipment and clear instructions on cleaning spills.	This is part of the operation cost of the project and will be part of the project contractors' work.	-	-
Construction	Pollution Prevention and Resource Efficiency	Excessive use of groundwater leading to draw down of water table and possible land subsidence	Pump tests and groundwater quality studies should be carried out to determine suitability of groundwater and the safe yield.	This is part of the operation cost of the project and will be part of the project contractors' work.	-	-
Construction	Lands and Soil Conservation	Loss of soil material and surface and ground water affected by sedimentation	-Minimize earthwork using machinery. -Relocate soil stockpiles from the vicinity of well sites and water bodies.	This is part of the operation cost of the project.	-	-
Construction	-Core Labour Rights -Public Health	Excessive noise disturbing residential and other community centers (Occupation health	Minimize all noise and vibration from trucks and drilling machines [the extent of use of such noise sources is limited due to the nature of the project]	This is part of the operation cost of the project.	-	-

Project Phase	AF Principle potentially triggered	Potential impacts	Mitigation and Management	Assumption (for costing)	Cost Estimate	Total
		and safety and public health)				
Construction	-Core Labour Rights -Public Health	Dust emissions resulting in potential nuisance, human health and aesthetic impacts	Implement dust suppression measures for all stockpiles.	This is part of the operation cost of the project.	-	-
Construction	-Core Labour Rights -Public Health	Reduced air quality with consequent nuisance and Greenhouse Gas emissions	-Ensure all equipment is turned off when not in use. -The nature of the project and the frequency and duration of use of such emitting equipment is not significant.	This is part of the operation cost of the project.	-	-
Construction	Pollution Prevention and Resource Efficiency	Health impact and aesthetic disturbance	-Waste generation is minimized through avoidance, reduction, reuse, and recycle. -Remove litter from project sites due to activities of site personnel;	This is part of the operation cost of the project.	-	-
Construction	-Pollution Prevention and Resource Efficiency -Public Health	Communicable disease that may affect communities	Provide proper sanitary facilities to workers.	This is part of the operation cost of the project.	-	-
Construction	Access and Equity	Social conflict due to shortage of land	Carry out community consultation on the purpose and benefits of making changes to land use and get community	This is part of the operation cost of the project.	-	-

Project Phase	AF Principle potentially triggered	Potential impacts	Mitigation and Management	Assumption (for costing)	Cost Estimate	Total
			buy-in on change of land use. Ensure community consultation and participation throughout the project. Ensure long-term social and economic benefits are achieved for the community			
Construction	-Core Labour Rights -Public Health	Exposure to accidents due to vehicles and equipment movements	Avoid adverse impacts to local community during construction and operations and where not possible, minimize, restore. Ensure due attention is given to protect community health and safety.	This is part of the operation cost of the project.	-	-
Construction	Pollution Prevention and Resource Efficiency	Pollution of surface and ground water	Implement surface and groundwater monitoring systems. Take precautionary measures in protecting water sources;	This is part of the operation cost of the project.	-	-
Construction and implementation	Involuntary Resettlement	Communal land appropriation and loss of livelihoods	Ensure community land use is optimized and to extent possible reduce	This is less likely to happen due to the nature of the project	-	-

Project Phase	AF Principle potentially triggered	Potential impacts	Mitigation and Management	Assumption (for costing)	Cost Estimate	Total
			land appropriation from community. Compensate for loss of land and livelihoods. Ensure cultural heritage is not adversely impacted. Ensure complaint and grievance redress mechanisms is in place	and its limited requirement for land.		
implementation	Conservation of Biological Diversity	Proliferation of alien species	Prevent introduction of weeds/pests/diseases by sourcing appropriate weed/pest/disease free seed and stock Re-vegetate disturbed areas using native and locally endemic species that have high habitat value.	Require experts from MOA and other consultants to screen seeds and ensure alien species are not there	15000 USD	15000 USD
TOTAL						**25000 USD**

10. Responsibilities for ESMP implementation

The roles and responsibilities in the implementation of the ESMP are provided below:

Table 6: Roles and responsibilities in the implementation of the ESMP

Project Phase	Tasks	Responsible
Feasibility study and ESMP preparation	Review and approve the ESMP	EPA
Detailed Project Design and implementation Plan preparation including tender documents preparation	Review and approve if design and tender documents have integrated the ESMP requirements	EPA in collaboration with federal government institutions and consultants.
Review and Approval of ESMP	• Review sub-project proposal for safeguard impacts and social risks. • Assess the adequacy and feasibility of the safeguard measures. • Assess the capacity of environment units of line ministries, regional states and Woreda offices to implement safeguard measures. • Publicly disclose safeguard related information.	CRGE Facility Coordination Unit
Review and approve required changes to ESIA and ESMP during implementation	• Conduct and review project specific and location specific ESIAs	Federal government institutions and consultants.
Project Implementation, construction	• Ensure the implementation of all safeguard measures during implementation	Federal government institutions and contractors
Operation stage	• Ensure all operation guidelines are made available to kebeles where projects are located	Federal government institutions and regional and Woreda counterparts.
Monitoring and Evaluation	• Ensure project completion reports include implementation of safeguard measures. • Put in place a standing procedure for submission of monitoring reports on safeguard measures functioning and grievance reporting	Federal government institutions and Woreda M&E Experts (Kebele Development Agents should be trained to handle the M&E and reporting tasks)

11. Grievance mechanism, eligibility criteria, and due diligence

11.1.Grievance Mechanism

The AF Environment and Social Policy states that *the implementing entities shall identify a grievance mechanism that provides people affected by projects/programmes supported by the Fund with an accessible, transparent, fair, and effective process for receiving and addressing their complaints about environmental or social harms caused by any such project/programme. The mechanism can be pre-existing, national, local, or institution, or project-specific...*[6]

The Ethiopian Institution of the Ombudsman (EIO) is a federal entity accountable to the Federal Parliament and responsible for ensuring that the constitutional rights of citizens are not violated by executive organs. It receives and investigates complaints in respect of maladministration; conducts supervision to ensure the executive carries out its functions according to the law; and seeks remedies in case of maladministration.

The Regional Public Grievance Hearing Offices (PGHOs) are regional entities accountable to their respective regional Presidents. They are responsible for receiving appeals, complaints and grievances related to public services and good governance; investigating these; and making recommendations and decisions to redress them. Most regions have established their PGHOs and have branches at zonal, woreda and kebele levels which are accountable to their respective chief administrator. At the kebele level, the Kebele Manager serves as the focal point.

A complainant has the option to lodge his/her complaint to the nearby EIO branch or the respective PGHO in person, through his/her representative, orally, in writing, by fax, telephone or in any other manner. Complaints are examined; investigated and remedial actions are taken to settle them. If not satisfied with the decision of the lower level of the GRM system, the complainant has the right to escalate his/her case to the next higher level of administration. In addition, some regions have mobile grievance handling teams at woreda level to address grievances by clustering kebeles; some have good governance command posts to handle cases that have not been settled by the Kebele Manager and woreda PGHOs. PBS 3 is supporting GRM system strengthening including the opening of new EIO branches**.**

Affected local communities should be informed about the ESIA provisions, including its grievance mechanism. Contact information of the Kebele, Woreda and Regional State **M&E and safeguard officer** should be made publicly available. As a first stage, grievances should be made to the Kebele designated **M&E and safeguard officer**, who should respond to grievances in writing within 15 calendar days of receipt. Claims should be properly filed at the office of the Woreda and Kebele Administrations, and a copy of the grievance should be provided to the Project Management Unit at MOFEC. If the claimant is not satisfied with the response, the grievance may be submitted to Project Implementation Unit at MOF.

This project will not result in involuntary resettlement and there will not be the expropriation of land. However, some components may require land for locating water wells, irrigation plots, metrological stations, storage facilities that may encroach on private properties. The Ethiopian government laws and AF principles contain appropriate provisions with regards to compensation. Proclamation 456/2005 includes provisions that are in line with AF Principles 2,8 and 9, and states, *"Holder of rural land who is evicted for purpose of public use shall be given compensation proportional to the development he, has made on the land and the property acquired, or shall be given substitute land thereon.'*

[6] Adaptation Fund, Board 2016.Environnement and Social Policy (Revised in March 2016)

Proclamation No. 455/2005, article 3(1), states *"A Woreda or an Urban Administration shall, upon payment in advance of compensation in accordance with this proclamation, have the power to expropriate rural or urban land holdings for public purpose where it believes that it should be used for a better development project to be carried out by public entities, private investors, cooperative societies or other organs or where such expropriation has been decided by the appropriate higher Regional or Federal government organ for the same purpose ".*

The purpose of the complaint procedure is to ensure all complaints from local communities are dealt with appropriately, with corrective actions being implemented and the complainant being informed of the outcome. Both verbal and written complaints will be entered on the Complaints Log and the Complaints Action Form.

The complaints log provides a record to show that actions are tracked and carried out. It records:

- Date the complaint was reported,
- Person responsible for the complaint,
- Information on proposed corrective action sent to complainant,
- The date the complaint was closed out, and
- Date response sent to complainant.

Possible Grievance Redress procedures at the different levels of administration based on the study done for the National REDD+ Secretariat[7].

Table 7: Grievance redress procedure and roles and responsibilities

Level	Responsible Institution	Procedure
Federal Level	MOF + Project steering committee	EPA need to give response within one month
	Federal Ombudsman's Office	The Federal Ombudsman's can also give advice for unresolved issues before the case is submitted to the court
	Federal Court	Applicants may also pursue their cases through the court system, if they are not satisfied with the Grievance Redress System.
Regional Level	Regional Environment Office and PCU	If Applicants are not satisfied or referred to the regional environment office and the regional office should give response within 15 days,
	Regional Ombudsman's Office	Applicants may also get advice from the Regional Ombudsman's office
	Regional Court	Applicants may appeal to the court if it is not resolved at environment office
Woreda Level	Woreda Environment office	Applicants may raise their grievance to the Woreda environment office and response should be given within 10 days. If the applicant are not satisfied by the response they can take the issue to the Regional PCU or Woreda formal court

[7] MINISTRY OF ENVIRONMENT AND FOREST (MEF) OROMIA FOREST AND WILDLIFE ENTERPRISE (OFWE) 2015. OROMIA FORESTED LANDSCAPE PROGRAM (OFLP),RESETTLEMENT POLICY FRAMEWORK (RPF)

Level	Responsible Institution	Procedure
	Woreda Ombudsman's Office	Applicants can also submit their apple to the Ombudsman's for advice
	Woreda Court	Applicants can submit their appeal to the formal court and continue with the formal process
Kebele* Level	Kebele Shengo	Local communities and other interested stakeholders (Applicants) may raise a grievance/complaint to the Kebele manager for grievance caused by the project and need to get a response within 10 days.

The following table provides very general guidance in consideration of compensation as related to the project at hand and the determination of compensation entitlements will have to worked out for specific sub-projects falling under the jurisdiction of government implementing agencies and types of property lost because of project implementation.

11.2.Eligibility criteria for project activities

It is essential to ensure the activities undertaken in the context of Ethiopia's "*Climate Smart Integrated Rural Development*" project are in line with the legal requirements of the country and the AF's policies. In the previous sections the general alignment of the Ethiopian laws with the AF environment and social policy has been demonstrated. In general, the following are ineligible activities under the proposed project, in line with national and internationally accepted principles:

a) Not significantly convert or degrade "natural habitat".
b) Not implement activities in "critical habitat".
c) Not implement activities in legally protected or internationally recognized areas unless:
d) Not develop a project on land that is traditionally owned or used by rural communities unless the risks are thoroughly assessed, rural communities are informed of their rights, rural communities continue to have access to resources, if possible, appropriate compensation is offered, and rural communities are offered a fair and equitable sharing of project benefits.
e) Not remove, alter, or damage critical cultural heritage (such as internationally recognized or legally protected heritage sites), except in exceptional circumstances and in collaboration with affected communities.
f) Not discriminate but instead hire, compensate, manage, and lay off employees based on the principle of equal opportunity and fair treatment.
g) Not restrict workers from joining or forming workers' organizations or bargaining collectively, nor retaliate against workers who organize.
h) Not employ children (under 18) in any manner that is economically exploitative or harmful to the child's health, education, or social development.
i) Not employ forced labor or trafficked persons

11.3.Due Diligence and Environmental Audit

The project will develop an environment and social due diligence questionnaire to identify any potential associated facilities that require such assessment.

The due diligence will include question on whether there are:

- Environmental implications, such as impact on water availability and impact on biodiversity, due to the development and sitting of these associated facilities, and
- Impacts on individuals and households, including loss of land, due to the development of associated facilities, such as distribution lines and water pump installations.
- Occupations health and safety issues on those involved the development water and other facilities.

Moreover, considering that the project involves upgrading existing facilities, an initial environmental audit will be carried out incorporating the following information, namely:

- **Executive Summary:** A concise discussion of all environmental and occupational health and safety areas of concern. Possible additional summary information may include recommended mitigation measures and their priority, the cost of mitigation, and a schedule for compliance.
- **Scope of the Audit:** A description of what the audit focused upon (where the audit was conducted), what was audited (processes, organization, operations, etc.), when the period of performance began and ended
- **Regulatory Setting:** Tabular summary of applicable environmental and occupational health and safety laws, regulations, guidelines, and policies as they may directly pertain to the scope of the audit.
- **Audit and Site Investigation Procedure:** Brief overview of the approach used to conduct the audit. A discussion of the records review, site reconnaissance, and interview activities; description of the site sampling plan and chemical testing plan, field investigations, environmental sampling and chemical analyses and methods, if applicable.
- **Findings and Areas of Concern:** Detailed discussion of all environmental and occupational health and safety areas of concern, which are prioritized into categories of those requiring immediate action; mid-term action; and long-term action.
- **Corrective Action Plan, Costs and Schedule (CAP):** For each area of concern, the appropriate corrective actions to mitigate them and why they are necessary. These includes estimates of the cost of implementing the corrective actions and a schedule for their implementation.
- **Annexes:** including references, copies of interview forms, any details regarding the audit protocol not already included, and data obtained during the audit.

12. Stakeholder Consultation

12.1.Context

The implementing entity is responsible for disclosing the final environmental and social assessment to project-affected people and other stakeholders. Project/programme performance reports including the status on implementation of environmental and social measures shall be publicly disclosed. Any significant proposed changes in the project/programme during implementation shall be made available for effective and timely public consultation with directly affected communities.

This allows the public and other stakeholders to comment on the possible environmental and social impacts of the project. The IFC Guidelines on best practice in public consultation and disclosure outline issues to consider whilst undertaking public consultation and disclosure, as follows:

- Written and oral communications in local languages and readily understandable formats,
- Accessibility by relevant stakeholders to both written information and to the consultation process,
- Use of oral or visual methods to explain information to non-literate people,
- Respect for local traditions or discussion, reflection and decision-making,
- Care in assuring that groups being consulted are representative, with adequate representation of women, vulnerable groups, and ethnic or religious minorities, and separate meetings for various groups, where necessary, and
- Clear mechanisms to respond to people's concerns, suggestions and grievances.

In the context of this proposal, consultation events were organized as part of the project preparation process. This was conducted to ensure that the voices and concerns of relevant stakeholders and local communities, particularly vulnerable groups, were integrated into the design and implementation of the climate-smart agriculture initiative. Several stakeholders were engaged throughout the project's planning stages including representatives from government bodies drawn from federal, regional and woreda levels, vulnerable groups such as women and pastoral communities. The consultations provided a platform for open dialogue, where participants could express their concerns, share their experiences with the impacts of climate change, and contribute ideas for building resilience. Special attention was given to marginalized groups, ensuring that their unique perspectives, especially regarding water access, agricultural productivity, health risks, and gender-based challenges, were captured and addressed in line with the project's goals. Through these discussions, the project sought to align its interventions with the real needs and priorities of those most affected by climate change. Furthermore, the consultative process was structured to align with the ESIA requirements ensuring compliance with the Adaptation Fund's Environmental and Social Policy and Gender Policy.

12.2.Expert Group Consultation

The expert group consultation took place on **2 and 3 October 2023** in Adama, Ethiopia, with around over 50 participants drawn from federal Ministry of Agriculture, Ministry of Water and Energy, experts from the CRGE Facility at the Ministry of Finance and relevant experts from **Oromia, Tigray, Afar, Somali, and Central Ethiopia** regions and from the project target woredas attended the workshop.

During the two days event, participants reflected positively on the outcomes of the previous Adaptation Fund-financed project, expressing their appreciation for the significant improvements in water access, strengthened climate resilience, and enhanced livelihoods within the target

communities. Many participants highlighted how the project had successfully empowered local communities, particularly women and vulnerable groups, through capacity-building initiatives and improved access to resources. These achievements were seen as critical foundations on which the current project could build. Participants emphasized the importance of integrating these positive experiences and lessons learned into the design and implementation of the new project to further enhance its effectiveness and long-term impact. In addition to these reflections, participants emphasized the need to ensure the **sustainability of the project's outcomes**, particularly in relation to climate-smart agriculture and water security initiatives. They stressed that providing local communities with the necessary skills and resources would be crucial to ensuring that the benefits of the project endure long after its completion. **Capacity-building measures** and local ownership were identified as key factors in achieving this sustainability.

Participants also highlighted the importance of **water security and quality** in the target regions and woredas. They emphasized the need for advanced water management technologies, such as solar-powered irrigation systems to address water scarcity and improve water quality in these drought-prone areas, enhancing the resilience of local communities.

Participants from regional governments also emphasized the need for **better coordination between federal and regional authorities**. They highlighted the importance of clear communication channels and coordination mechanisms to ensure smooth project implementation and avoid delays. Clear delineation of roles between federal ministries, regional bureaus, and local authorities was seen as essential to achieving project objectives.

Finally, participants stressed the **importance of capacity building and knowledge sharing** as essential to the project's success. They emphasized the need for ongoing training programs at the woreda and kebele levels to ensure that local communities are equipped with the skills necessary to implement and sustain the project's interventions effectively.

12.3.Community Consultations

In terms of community consultation, two rounds of consultations took place in July 2024 and May 2025. These field visits and public consultation events were carried out at each participating woreda level. These consultations were led by two experts from the Ministry of Finance, who are involved in safeguards implementation. Particularly in May 2025, extensive stakeholder consultations were conducted between 13 and 16 May, across four climate-vulnerable woredas in Afar, Oromia, Somali, and Southwest Ethiopia Regions. These consultations aimed to identify climate risks, understand local adaptation needs, and ensure that the voices of marginalized groups, especially women, are fully integrated into the project design.

A participatory and inclusive approach was applied using a mix of focus group discussions, key informant interviews, and woreda-level workshops. Participants included smallholder farmers, pastoralists, traditional leaders, local government experts, and representatives from women's and youth associations.

Key themes emerged across all woredas:

- Communities are experiencing increasingly severe climate shocks, particularly recurrent droughts, erratic rainfall, and soil degradation.
- Women and girls disproportionately bear the burden of water collection and suffer from limited access to livelihood opportunities and decision-making platforms.
- Local institutions lack the technical capacity, coordination mechanisms, and resources to integrate climate risk planning into existing governance processes.

- Participants identified critical needs such as solar-powered water systems, drought-resilient crop and livestock options, small-scale irrigation, gender-responsive livelihood diversification, and improved access to markets.

Community feedback directly shaped the project's components, including the establishment of Local Climate Committees (Component 1), rehabilitation of water systems and solar energy integration (Component 2), climate-smart agriculture and livestock practices (Component 3), and targeted livelihood support for women-headed households (Component 4). Stakeholder recommendations on governance and institutional capacity were also used to inform the design of participatory M&E and knowledge systems.

In total, over 270 participants were engaged across the four woredas, with a strong emphasis on gender balance and inclusion of vulnerable groups. The consultations demonstrated a high level of community ownership and provided critical insights to ensure the project is locally relevant, socially inclusive, and institutionally embedded for long-term sustainability. The Table below provides a summary of the consultation that was conducted at the level of each woreda.

Table 8: summary on community consultation conducted

Date	Location	Consolidated Consultation Objectives	Methods Used	Key Outcomes / Feedback Integration	Stakeholders Consulted	Participants (M/F)
Afar Region (Awash Fentale Woreda)						
13 May 2025	Sabure Kebele	• Understand local climate risks and impacts • Assess current coping mechanisms • Identify water-related challenges • Explore gendered livelihood constraints and opportunities • Discuss potential identified environmental and social impact of the project • Consult on how the project intends to use communal land and associated bylaws (this includes discussion on land rights).	Focus group discussion, Key informant interviews (KII), Plenary discussions	• Participants highlighted worsening drought, degraded pasture, shrinking water points, and reduced livestock productivity. • Women raised concerns on water collection burden, fuelwood reliance, and lack of livelihood diversification. • Community emphasized the need for solar-powered water systems, rangeland rehabilitation, and seed/feed access. • These inputs were incorporated under Components 2.1-2.3, 3.2, and 4.2 - 4.3, ensuring gender-targeted livelihood support and participatory planning.	Pastoralist women, clan leaders, Kebele leaders, elders, woreda experts	39 (19M / 20F)
14 May 2025	Awash Town	• Assess institutional capacities and planning gaps • Validate stakeholder engagement and gender inclusion mechanisms • Discuss potential identified environmental and social impact of the project	Workshop, KIIs	• Woreda officials highlighted poor coordination among sectors, absence of climate-risk data in planning, and lack of gender-responsive budgeting. • They requested training, planning tools, and support to formalize Local Climate Committees. • These findings directly informed Component 1.2, 1.4, and 1.5, including institutional capacity building, mainstreaming adaptation into woreda plans, and formalizing participatory M&E and gender mechanisms.	Woreda offices of Agriculture, Water, Women's Affairs, Disaster Risk Management	28 (14M / 14F)
Southwest Ethiopia Region (Fofa Woreda)						

14 May 2025	Bita Kebele	• Understand local climate risks and impacts • Assess current coping mechanisms • Identify water-related challenges • Explore gendered livelihood constraints and opportunities • Discuss potential identified environmental and social impact of the project • Consult on how the project intends to use communal land and associated bylaws (this includes discussion on land rights).	Focus group discussions, KIIs, plenary discussions	• Community members cited erratic rainfall, crop failure, reduced soil fertility, and high reliance on natural forests. • Women expressed that water collection is time-consuming and livelihood opportunities are limited. Preferred solutions included small-scale irrigation, improved seeds, agroforestry, and women-led value chains. • These insights informed Components 2.4, 3.1, and 4.1-4.3, including gender-responsive livelihood and agroecological adaptation measures.	Farmers, women's groups, traditional elders, agriculture DAs	46 (25M / 21F)
15 May 2025	Fofa Town	• Assess institutional capacities and planning gaps • Validate stakeholder engagement and gender inclusion mechanisms • Discuss potential identified environmental and social impact of the project	Workshop, key informant interviews	• Sector offices identified weak inter-sectoral collaboration, lack of formal guidance for climate integration in local plans, and gender underrepresentation in planning processes. • Recommendations included creating Local Climate Committees, integrating adaptation into kebele and woreda plans, and providing ToT for agriculture and water staff. • These guided the design of Components 1.1 to 1.4, especially participatory planning, mainstreaming, and gender equity.	Woreda office of Agriculture, Water, Women's Affairs, Natural Resource Offices	24 (16M / 8F)
Somali Region (Sheblay Woreda)						
13 May 2025	Sheblay Kebele	• Understand local climate risks and impacts • Assess current coping mechanisms • Identify water-related challenges • Explore gendered livelihood constraints and opportunities	Focus group (women), participatory appraisal	• Women and vulnerable groups reported drought, livestock deaths, seed shortages, and poor market access as key challenges. • They emphasized the need for irrigation, solar-powered water systems, agro-	Women's groups, agriculture DAs, Kebele leadership	35 (11M / 24F)

		• Discuss potential identified environmental and social impact of the project • Consult on how the project intends to use communal land and associated bylaws (this includes discussion on land rights).		processing support, and targeted livelihood opportunities. • These were integrated into Components 2.1-2.4 and Component 4, particularly women-centered training, agroforestry inputs, and rural enterprise support linked to local cooperatives.		
14 May 2025	Sheblay Woreda Office	• Assess institutional capacities and planning gaps • Validate stakeholder engagement and gender inclusion mechanisms • Discuss potential identified environmental and social impact of the project	Key informant interviews, woreda workshop	• Local officials emphasized the absence of structured climate integration in woreda planning, insufficient capacity among sector experts, and poor representation of women in kebele-level development committees. • They recommended formal recognition of Local Climate Committees, capacity-building through ToT, and inclusion of adaptation indicators in local planning tools. • These are embedded in Component 1.1 to 1.4, especially mainstreaming and institutional training.	Woreda agriculture, women's affairs, livestock and natural resource offices	20 (13M / 7F)
Oromia Region (Tullo Woreda)						
15 May 2025	Harro Kebele	• Understand local climate risks and impacts • Assess current coping mechanisms • Identify water-related challenges • Explore gendered livelihood constraints and opportunities • Discuss potential identified environmental and social impact of the project • Consult on how the project intends to use communal land and	Focus group discussion, key informant interviews, participatory methods	• Farmers and community members reported erratic rainfall, livestock disease, reduced crop yields, and limited access to safe water. • Women identified the burden of water collection and lack of livelihood opportunities. Participants suggested introducing solar-powered irrigation, drought-resilient seed varieties, and support for small-scale poultry and beekeeping enterprises.	Farmers, women's associations, youth, elders, agricultural extension staff	42 (22M / 20F)

		associated bylaws (this includes discussion on land rights).		• These informed Components 2.1-2.4, 3.1, and 4.1-4.3 with gender-responsive approaches and climate-smart agriculture.		
16 May 2025	Tullo Woreda Office	• Assess institutional capacities and planning gaps • Validate stakeholder engagement and gender inclusion mechanisms • Discuss potential identified environmental and social impact of the project	Workshop, KII with sector offices	• Woreda sector officials highlighted fragmented climate adaptation efforts, a lack of formal planning tools, and underrepresentation of women in decision-making. • They proposed creating Local Climate Committees, conducting train-the-trainer programs, and embedding adaptation into kebele and woreda plans. • These were directly incorporated into Component 1.1-1.4, particularly focusing on participatory planning, integrated M&E, and gender-mainstreamed capacity-building.		36 (20M / 16F)

Safeguard concerns identified by the community

The following were some of the concerns that were raised regarding the safeguards concerns of the community. Women highlighted that, while it was positive that the project had gender focus, they felt there might be resistance from the community who might perceive that women have relatively little role in agriculture and livestock rearing. The need to create awareness and build capacity were highlighted as important interventions to this end. This aspect is integrated as an impact in this ESIA based on this feedback.

Moreover, at the governance level women thought their participation will only be meaningful if their concerns if their household commitments and workload was taken into account. In particular women felt that, while the water management committee by law required half of the members should be women, generally these members tend to be less active due to domestic responsibilities. Participants also urged for specific training and capacity-building initiatives to enable women to play a leading role in their communities.

With regards to the use of communal land, communities confirmed that communal land is generally administered by communities through a bylaw, which stipulates how such common assets are used. Such development projects align with the intended usage of such communal lands. Moreover, clarification was made with regards to the Livelihood Restoration and Compensation Framework, and Expropriation of Land Holdings for Public Purposes and Payment of Compensation (Proclamation No.455/2005). Considering the intended project activities which were presented, communities were cognizant that there will be no expropriation of land from individuals and communities.

Gender Equity Considerations

The project incorporates a range of gender equity measures to ensure that women meaningfully participate in and benefit from all activities. For instance, different campaigns and consultations are designed to include at least 50% women, with consultations held at times and locations convenient for them, facilitated by individuals trained in gender-sensitive engagement. Gender-disaggregated data will be collected to establish baselines and monitor progress, ensuring accountability and targeted support. Women are prioritized in capacity-building efforts and are encouraged to take leadership roles in community structures and decision-making processes. The design of early warning systems and dissemination of weather information is gender-responsive, ensuring that women have equal access to and understanding of these services. Tailored training further supports women in using climate information to make informed decisions. Livelihood initiatives focus on supporting women-led enterprises and enhancing women's access to climate-resilient income-generating activities, technologies and resources. Finally, gender-specific indicators and targets are embedded within monitoring and evaluation frameworks to track participation and benefits, reinforcing a strong commitment to gender equity throughout the project.

Additional participatory processes will be embedded during implementation to ensure inclusive, gender-responsive infrastructure planning and service delivery. These will include:

- **DRE System Design Considerations -** DRE systems (e.g., solar-powered irrigation or energy access points) will be designed with inputs from women and girls during implementation. Specific considerations will include:
    - Strategic placement near households, schools, health facilities, and markets to reduce travel time and risk.
    - User-friendly technologies that accommodate all ages and physical abilities, including those with disabilities.

- **Inclusive Water Infrastructure Planning -** consultations with women and girls will be conducted during implementation regarding:
    - The placement and design of water points (e.g., tap stands).
    - Timing of water availability to align with women's time use patterns.
    - Safety concerns related to accessing water, especially in remote locations.

Outcomes of these consultations will be added to Gender Action Plan (GAP), ensuring that feedback from women and girls is not only sought but operationalized in design and monitoring frameworks.

13. Training and Capacity Building Requirements

The successful implementation of the ESMP requires capacitated federal, regional states and Woreda organizations that are planning and implementing the project and the mitigation measures recommended by the ESMP and project specific ESIAs.

The capacity building activities include short term trainings, awareness workshops, office equipment and vehicles. The details should be based on capacity gaps analysis at federal, regional and Woreda levels. There are possibilities that implementing line ministries and regional and Woreda level offices may also contribute to their capacity building needs by providing the necessary office space and facilities for the implementation of the ESMP.

The following table summarizes the training aspect of the capacity building component.

Table 9: Capacity building training

	Issue	Participants	Duration and frequency
1.	National and international safeguard policies	Regional Bureaus, Woredas Offices 16 participants	1 round for 2 days
2.	ESIA planning and implementation	Regional Bureaus, Woredas Offices 16participants	1 round for 3 days
3.	Monitoring and evaluation	Regional Bureaus, Woredas offices and kebel Development agents 24 participants	1 round for 2 days
4.	Structural and non-structural mitigation measures	Regional states, Woredas PCU staff and environment units staff 22 participants	2 rounds 2 days each
5.	Conflict resolution and grievance mechanism and procedures	Regional Bureaus, Woredas Offices, Kebele Development agents 24 staff	2 rounds 2 days each

14. Resettlement, Livelihood Restoration and Compensation Framework

14.1.Context

Ethiopia's Proclamation to provide for the expropriation of land holdings for the public purposes and payment of compensation (Proclamation No. 455/2005), and the Rural Land Administration and Use Proclamation (Proclamation 456/2005) cover provisions contained in the AF principle on involuntary resettlement.

Proclamation 456/2005 includes provisions that are in line with AF involuntary resettlement: *"Holder of rural land who is evicted for purpose of public use shall be given compensation proportional to the development he has made on the land and the property acquired, or shall be given substitute land thereon;* and *rural lands that have gullies shall be rehabilitated by private and neighbouring holders and, as appropriate, by the local community, using biological and physical works."*

The Expropriation of Land Holdings for Public Purposes and Payment of Compensation Proclamation No.455/2005" states that: *"A woreda or an urban administration shall, upon payment in advance of compensation in accordance with this Proclamation, have the power to expropriate rural or urban landholdings for public purpose where it believes that it should be used for a better development project to be carried out by public entities, private investors, cooperative societies or other organs, or where' such expropriation has been decided by the appropriate higher regional or federal government organ for the same purpose."* The law specifies procedures of expropriation, compensation payment, displacement of land holders and grievance and appeal.

No resettlement is proposed as part of this project. However, as per the requirement of international climate funds a Resettlement, Livelihood Restoration and Compensation Framework has developed by MOF.

14.2.Resettlement, Livelihood Restoration and Compensation Framework

In line with the stipulated proclamations, the compensation framework will be guided by the following principles:

1. Provide transparent, fair and timely compensation for displacement, including replacement for lost land in accordance with national regulations and applicable standards.
2. Restore the livelihoods and welfare of project affected persons and local communities such that their well-being is at the least, equal to their pre-resettlement conditions, or that they are better off.

The different types of affected persons (such as landowners, tenants, forest occupants without formal tenure, owners of permanent and non-permanent infrastructures, people potentially losing livelihood and access to resources, etc.) will be identified and their compensation entitlements will be stipulated in line with the national proclamations.

Individual and household compensation will be made in different forms (in cash, in kind and/or through assistance) in the knowledge and presence of both man and wife and adult children or other relevant stakeholders, where applicable. It should be noted that when land holdings necessary for the livelihood of affected persons are taken away or reduced in size by the project, the preferred form of compensation is to offer an equivalent parcel of land elsewhere, i.e., land for land.

Other key elements of this framework are the process for notifying affected people, census and documentation of assets, agreements on compensation and integration in contracts, and the mechanism for delivering compensations to affected people. Livelihoods restoration is also an important element of this framework, as it prevents and mitigates the potential adverse impacts on vulnerable project affected persons.

Key principles guiding livelihood restoration planning are:

1. The understanding that supporting the restoration of income and the reestablishment of community support networks requires a combination of approaches.
2. Active participation of project affected persons in planning and decision making is required to ensure proposed support reflects local realities and priorities.
3. Affected people should be provided with choices so that they can self-determine how their household will best benefit from the livelihood restoration options.
4. Transition allowances are necessary but require clear eligibility and end points.
5. Capacity building should be incorporated into livelihood restoration activities to develop skills, including in agricultural practices. Capacity building acknowledges the different needs of women, men, youth, and vulnerable groups with respect to skills development.

To recognize the potential and magnitude of adverse impacts and develop livelihood restoration options, the following approach may be considered:

1. Livelihood restoration for vulnerable affected peoples should refer to the ecological conditions, livelihoods and socio-cultural characteristics of the affected persons/people.
2. Livelihood restoration should be able to support project affected people to gain a similar or even better livelihood, independently. It is important that the land acquisition and resettlement process will not cause dependency on the project, which eventually would make more problems in the future.
3. The livelihood restoration should be focused on the characteristics of the vulnerability and potential sources of livelihood assets that each household owns.
4. Involvement of representatives of communities, the project-affected people and host populations in the consultation process to build familiarity and to resolve disputes that may arise during and after the resettlement process.

14.3.Land Acquisition and Resettlement Action Plan

As mentioned in previous sections, no resettlement is proposed as part of this project. However, should this be required a comprehensive land acquisition and resettlement action plan should be developed. This land acquisition and resettlement action plan should be based on the IFC Performance Standards guidance note and should include:

- **Description of the project:** General description of the project and identification of the project area.
- **Potential impacts:** Identification of the project component or activities that give rise to resettlement, the area of impact of such component or activities, the alternatives considered to avoid or minimize resettlement; and the mechanisms established to minimize resettlement, to the extent possible, during project implementation.

- **Objectives and studies undertaken:** The main objectives of the resettlement program and a summary of studies undertaken in support of resettlement planning / implementation, e.g. census surveys, socio-economic studies, meetings, site selection studies, etc.
- **Regulatory framework:** Relevant laws of the host country, other policies and procedures, performance standards.
- **Institutional framework:** Political structure, NGOs.
- **Stakeholder engagement:** Summary of public consultation and disclosure associated with resettlement planning, including engagement with affected households, local and/or national authorities, relevant CBOs and NGOs and other identified stakeholders, including host communities. This should include, at a minimum, a list of key stakeholders identified, the process followed (meetings, focus groups, etc.), issues raised, responses provided, significant grievances (if any) and plan for ongoing engagement throughout the resettlement implementation process.
- **Socioeconomic characteristics:** The findings of socioeconomic studies to be conducted in the early stages of project preparation and with the involvement of potentially displaced people, including results of household and census survey, information on vulnerable groups, information on livelihoods and standards of living, land tenure and transfer systems, use of natural resources, patterns of social interaction, social services and public infrastructure.
- **Eligibility:** Definition of displaced persons and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cut-off dates.
- **Valuation of and compensation for losses:** The methodology used in valuing losses to determine their replacement cost; and a description of the proposed types and levels of compensation under local law and such supplementary measures as are necessary to achieve replacement cost for lost assets.
- **Magnitude of displacement:** Summary of the numbers of persons, households, structures, public buildings, businesses, croplands, churches, etc. to be affected.
- **Entitlement framework:** Showing all categories of affected persons and what options they were/are being offered, preferably summarized in tabular form.
- **Livelihood restoration measures:** The various measures to be used to improve or restore livelihoods of displaced people.
- **Resettlement sites:** Including site selection, site preparation, and relocation, alternative relocation sites considered and explanation of those selected, impacts on host communities.
- **Housing, infrastructure, and social services:** Plans to provide (or to finance resettlers' provision of) housing, infrastructure (e.g., water supply, feeder roads), and social services (e.g., schools, health services); plans to ensure comparable services to host populations; any necessary site development, engineering and architectural designs for these facilities.
- **Grievance procedures:** Affordable and accessible procedures for third-party settlement of disputes arising from resettlement; such grievance mechanisms should consider the availability of judicial recourse and community and traditional dispute settlement mechanisms.
- **Organizational responsibilities:** The organizational framework for implementing resettlement, including identification of agencies responsible for delivery of resettlement measures and provision of services; arrangements to ensure appropriate coordination between agencies and jurisdictions involved in implementation; and any measures (including technical assistance) needed to strengthen the implementing agencies' capacity to design and carry out resettlement activities; provisions for the transfer to local authorities or resettlers themselves of responsibility for managing facilities and services provided under the project

and for transferring other such responsibilities from the resettlement implementing agencies, when appropriate.

- **Implementation schedule:** This covers all resettlement activities from preparation through implementation, including target dates for the achievement of expected benefits to re-settlers and hosts, and implementing the various forms of assistance. The schedule should indicate how the resettlement activities are linked to the implementation of the overall project.
- **Costs and budget:** Tables showing itemized cost estimates for all resettlement activities, including allowances for inflation, population growth, and other contingencies; timetables for expenditures; sources of funds; and arrangements for timely flow of funds, and funding for resettlement, if any, in areas outside the jurisdiction of the implementing agencies.
- **Monitoring, evaluation and reporting:** Arrangements for monitoring of resettlement activities by the implementing agency, supplemented by independent monitors to ensure complete and objective information; performance monitoring indicators to measure inputs, outputs, and outcomes for resettlement activities; involvement of the displaced persons in the monitoring process; evaluation of the impact of resettlement for a reasonable period after all resettlement and related development activities have been completed; using the results of resettlement monitoring to guide subsequent implementation.

14.4.Compensation and Entitlement Matrix

Below is the proposed compensation matrix for different loss categories.

Table 10: Compensation and Entitlement Matrix

Loss Category	Entitlement Unit	Description of Entitlement
Loss of Trees and Crop	Landowner	▪ At least three months advance notice to be provided to farmers to harvest crop. In absence of advance notice, cash compensation based on annual value of the produce (crop compensation). ▪ Cash compensation based on annual value of the produce, in case of fruit trees and coppicing trees (for trees compensation
Loss of agriculture land	Landowner	▪ Cash compensation at replacement cost ▪ Any transfer costs, registration fees or charges ▪ Compensation for crops and trees if any ▪ Subsistence allowance equivalent to one year of minimum agriculture wages
Loss of property	households	▪ Compensation at replacement cost

15. Native Communities Engagement Framework

15.1.Context

In Ethiopia, there is no specific national legislation on indigenous people, as the entire Ethiopian population is indigenous. However, by way of improving its implementation practice the Ministry of Finance has developed a guiding principle entitled Native Communities Engagement Framework, which is developed to ensure the project will adhere to Free, Prior, and Informed Consent (FPIC) principles.

15.2.Definitions and approach

In this framework, the term '*native communities'* is used as this is a more acceptable terminology than indigenous groups (refer to first paragraph of this section). In a generic sense, native communities, in Ethiopian context refers to social and cultural groups possessing the following characteristics in varying degrees:

- Self-identification as members of a distinct social and cultural group.
- Collective attachment to geographically distinct habitats, territories, or areas of seasonal use or occupation as well as to the natural resources in these areas.

This framework represents the formal approach to issues affecting native communities in Ethiopia. As there are no formally recognized indigenous communities, the focus here is on native communities and NGOs, CSOs, and advocacy groups that are engaged with these communities. The aim of this native communities' engagement framework is to assess the impacts of climate change on the livelihoods of these communities, and to explore strategies for making the project investments align with their needs.

15.3.Main considerations

In the context of native communities, it should be noted that they are:

- **Vulnerable to climate change -** Native communities in this project are particularly vulnerable to the adverse impacts of climate change. Changes in weather patterns, extreme events, and environmental degradation directly affect their agricultural practices and pastoral livelihoods, leading to food insecurity, displacement, and heightened socio-economic challenges.
- **Limited access to resources –** Native communities in these areas are constrained from accessing basic services such as finance, education, and healthcare.

15.4.Engagement Framework

As part of the diligence phase to the project, an assessment on the level of risk presented to native communities will be considered. This will include any potential adverse impacts, and, if any, how this will be mitigated. Overall, the framework aims to ensure that native communities have equal access to the goods or services provided by the project.

Furthermore, considering the project's approach to stakeholder engagement, meaningful consultation will be conducted. On aspects that have negative implications to native communities, such as displacement, the project will obtain free, prior and informed consent (FPIC), before such actions are taken.

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Appendix 1: Project Screening (adapted to Adaptation Fund requirement – MOF)

Part 1. Identifying and Managing Social and Environmental Risks

QUESTION 1: What are the Potential Social and Environmental Risks?	QUESTION 2: What is the level of significance of the potential social and environmental risks?			QUESTION 3: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks?
Risk Description	**Impact and Probability (1-5)**	**Significance (Low, Moderate, High)**	**Comments**	**Description of assessment and management measures as reflected in the Project design.**
Decrease in surface and/or groundwater water quality resulting from drilling and operational activities.	I = 3 P = 1	**Low**		- Groundwater quality studies should be carried out to determine suitability of groundwater and the safe yield. systems during construction. - Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids **-** The area should be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater)
Dumping of construction waste, and solid waste and oil spills from decommissioning of diesel pumps.	I = 2 P = 2	**Low**		- Provision of designated areas for storage of waste fuels and oil during the diesel pump decommissioning and replacement process. The area should be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater) - During Construction, refueling to be undertaken in areas away from water systems during construction. - Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids which should again be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater)
Excessive use of groundwater leading to draw down of water table	I = 4 P = 1	**Low**		- It is less likely that there will be excessive use of groundwater as the development is shallow wells, hand dug wells, and springs which are much less extractive in terms of

QUESTION 1: What are the Potential Social and Environmental Risks?	QUESTION 2: What is the level of significance of the potential social and environmental risks?			QUESTION 3: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks?
Risk Description	**Impact and Probability (1-5)**	**Significance (Low, Moderate, High)**	**Comments**	**Description of assessment and management measures as reflected in the Project design.**
and possible land subsidence (although this is less likely due to the development of shallow wells, hand dug wells, and springs.				groundwater usage. - However, a full engineering assessment of the proposed anchoring method should be conducted and should be concerns water level monitors should be installed prior to implementation.
Noise and dust during construction phase of the project	I = 1 P = 4	**Low**		- To the extent possible use dust suppression techniques and noise screens
Occupation health and safety issues, including impact on safety of workers and communities.	I = 2 P = 2	**Low**		- Provide workers with personal protective equipment as per the dictates of the Labor Proclamation (377/2003) - Ensure all electrical and mechanical fixtures fulfill safety standards and that they are not exposed and accessible. - Ensure all users of facilities are aware of the dangers and post warning signs at appropriate places.
Potential risk of import of seeds of alien invasive species along with required seeds and seedlings', which will have impacts on the natural habitat and	I = 4 P = 1	**Low**		- Strict control and screening of imported seeds before dissemination, with guidance and involvement of the Ministry of Agriculture.

QUESTION 1: What are the Potential Social and Environmental Risks?	QUESTION 2: What is the level of significance of the potential social and environmental risks?			QUESTION 3: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks?
Risk Description	**Impact and Probability (1-5)**	**Significance (Low, Moderate, High)**	**Comments**	**Description of assessment and management measures as reflected in the Project design.**
biodiversity.				
Potential impact resulting from the expropriation of communal land for conservation and planting activities.	I = 4 P = 1	**Low**		- The project will not expropriate land from individuals. However, the use of communal land for the project should be guided by the Expropriation of Land Holdings for Public Purposes and Payment of Compensation Proclamation No.455/2005. - Furthermore, MOF's Resettlement, Livelihood Restoration and Compensation Framework that was developed in line with the requirements of international climate change funds will be used. - The required permits and standards for land use, drinking water specification (CES- 58) and other Ethiopian Standards pertaining to different aspects of irrigation and water use for irrigation, as well as construction safety for public infrastructure, which are stipulated in the catalogue of the Institute of Ethiopian Standards (2023) should be adhered to during installation.
Long-term anticipated conflict related to benefit sharing, which will arise between pastoral communities which have improved grazing land due to the project interventions.	I = 4 P = 1	**Low**		- There should be a community led and owned by-law, which clearly stipulates benefit sharing. Moreover, benefit sharing should be set as a condition and communities should agree to this as a condition for participating in the project.

QUESTION 1: What are the Potential Social and Environmental Risks?	QUESTION 2: What is the level of significance of the potential social and environmental risks?			QUESTION 3: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks?
Risk Description	**Impact and Probability (1-5)**	**Significance (Low, Moderate, High)**	**Comments**	**Description of assessment and management measures as reflected in the Project design.**
Generation of solid waste (hazardous and non-hazardous) and impacts of site level infrastructure construction.	I = 2 P = 2	**Low**		- Solid waste (hazardous and non-hazardous) should be managed as per the requirements of Ethiopia's Solid Waste Management Proclamation (517/2007). - Used oil traps and other effluent/discharge management interventions should be put in place. - Dust suppression technique should be in place. - Provide workers operating in these areas personal protective equipment, including mufflers, as per the requirements stipulated in the Labour Proclamation (No. 377/2003).
Resistance to the gender focus of the project in identifying participants/ beneficiaries	I = 3 P =1	**Low**		- Conduct prior consultation with communities to explain why the project has a gender focus and set this as a condition for participating in the project.

Part 2: Project Risk Categorization

QUESTION 4: What is the overall Project risk categorization?	
Categorization	**Comments**
Low Impact, Category B project	This categorization is in due recognition that the project will be conducted in food-insecure and drought-affected areas and not in sensitive ecosystems (i.e. in wetlands, forests or others). Moreover, it will have minimal adverse social impacts and impact on cultural heritage. Furthermore, the anticipated impacts will be limited and restricted to the project site and will not

	affect a broader area beyond the immediate project implementation sites. There is also no displacement and resettlement of the community during the development or implementation of the project. Finally, all impacts identified will be addressed through implementation of mitigation measures and there will be minimal residual impact after the implementation of the proposed mitigation measures.

Part 3: AF principles triggered

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	-	**Risk Level:** No to Low risk **Further Assessment:** No further assessment required beyond the ESIA. **Justification:** All AF ESP requirements have equivalent and comparable laws in Ethiopia. And as a government institution, Ministry of Finance will comply to all laws during the implementation of the project.
Access and Equity	X	**Risk Level:** No to Low Risk **Justification:** All projects and budget allocations of the Ministry of Finance are strictly developed with access and equity considerations, and in line with Article 43(4) states that, "The basic aim of development activities shall be to enhance the capacity of all citizens for development and to meet their basic needs.". Moreover, the project will set conditions for benefit sharing and gender and social inclusion considerations for participating communities to ensure that no exclusion happens.
Marginalized and Vulnerable Groups	X	**Risk Level:** No to Low Risk **Justification:** The project will conduct meaningful stakeholder consultation will be conducted. The project will develop eligibility criteria of activities that will be included in this project, clearly highlighting the exclusion of activities that have implication on marginalized and vulnerable groups. Although such implications are less likely, for any aspects that will have negative implications to native communities, the project will obtain free, prior and informed consent (FPIC), before such actions are taken in line with MOF's Resettlement,

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		Livelihood Restoration and Compensation Framework that was developed in line with the requirements of international climate change funds. Moreover, MOF's Native Communities Engagement Framework that was developed in line with the requirements of international climate change funds will be used.
Human Rights	-	**Risk Level:** Low Risk **Further Assessment:** No further assessment required beyond the ESIA. **Impact:** In the long-term potential conflict related to benefit sharing might arise, as a result of the benefits of these water and soil conservation structure will bring about to the participating communities. **Further Assessment:** No further assessment required beyond the ESIA. **Mitigation:** The development of an inclusive community led and owned by-law, which clearly stipulates benefit sharing to supporting communities. Moreover, benefit sharing will be set as a condition, and communities participating in the project, should agree to the condition pertaining to benefit sharing.
Gender Equity and Women's Empowerment	-	**Risk Level:** Low Risk **Impact:** Resistance to the gender focus of the project in identifying participants/beneficiaries, which will hinder project implementation. **Further Assessment:** No further assessment required beyond the ESIA. **Mitigation:** This requires tracking and regular follow up by the project team. Moreover, capacity building and awareness, including creating the understanding of these communities on why the project has gender focused.
Core Labour Rights	-	**Risk Level:** Low Risk **Impact:** Occupation health and safety issues, including impact on safety of workers **Further Assessment:** No further assessment required beyond the ESIA. **Mitigation**: Provision of personal protective equipment as per the dictates of the Labor Proclamation (377/2003), ensure that all electrical and mechanical fixtures fulfil safety

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		standards and that they are not exposed and accessible, and ensure that all users of facilities are aware of all dangers and post warning signs at appropriate places.
Indigenous Peoples	No	**Risk Level:** No to Low Risk **Justification:** Generally, in Ethiopia all communities are native, and in the selected localities native communities have had strong engagement and voice. This was confirmed during the field visit at each locality and was confirmed from first-hand source and consulted communities.
Involuntary Resettlement	No	**Risk Level:** No to Low Risk **Justification:** No potential expropriation of the land of individual farmers and communities. There will only be usage of communal land for conservation and planting activities for the community and water infrastructure development (when appropriate). Consultation conducted confirmed that based of intended project activities which were presented, communities were cognizant that there will be no expropriation of land from individuals and communities. But this will only be on communal land and will not be on individual farms. In the remote case where there will be implication to an individuals holding compensation will be made with due consideration of to the Livelihood Restoration and Compensation Framework, and Expropriation of Land Holdings for Public Purposes and Payment of Compensation (Proclamation No.455/2005).
Protection of Natural Habitats	-	**Risk Level:** Low Risk **Impact 1:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment 1:** Review and (if necessary) update the screening method used by Woreda agriculture offices. **Mitigation 1:** This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		Impact 2: Excessive use of groundwater leading to draw down of water table and possible and subsidence. However, this is less likely to occur as the proposed water infrastructure are only shallow wells, hand dug wells, and springs. **Further assessment required 2:** The project will conduct pump tests and groundwater quality studies to regularly monitor and determine suitability of groundwater and the safe yield. **Mitigation:** Implement these water projects strictly in line with the recommended safe yield and groundwater quality assessment recommendations.
Conservation of Biological Diversity	-	**Risk Level:** Low Risk **Impact:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment:** Review and (if necessary) update the screening method used by Woreda agriculture offices. **Mitigation:** This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia.
Climate Change	No	-
Pollution Prevention and Resource Efficiency	-	**Risk Level:** Low Risk **Impact 1:** Solid waste and oil spills from decommissioning of diesel pumps and vehicles during the infrastructure development and construction. **Further Assessment 1:** No further assessment required beyond the ESIA. **Mitigation 1:** Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids, which requires the area to be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater).

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		Impact 2: Noise and dust during infrastructure development and construction phase of the project. **Further Assessment 2:** No further assessment required beyond the ESIA. **Mitigation 2:** To the extent possible, apply dust suppression techniques and noise screens
Public Health	-	**Risk Level:** Low Risk **Impact 1:** Solid waste and oil spills from decommissioning of diesel pumps and vehicles during the infrastructure development and construction. **Further Assessment 1:** No further assessment required beyond the ESIA. **Mitigation 1:** Provision of designated areas for storage of fuels, oils, chemicals, or other hazardous liquids, which requires the area to be protected by an impermeable base to avoid contamination of soil and water (surface and groundwater). **Impact 2:** Health and safety issues to communities. **Further Assessment 2:** No further assessment required beyond the ESIA. **Mitigation**: Ensure that all electrical and mechanical fixtures in construction sites fulfil safety standards and that they are not exposed and accessible and ensure that nearby communities are aware of all dangers and post warning signs at appropriate places.
Physical and Cultural Heritage	No	**Risk Level:** No to Low Risk **Justification:** The project will not be implemented in areas of physical and cultural heritage.
Lands and Soil Conservation	-	**Risk Level:** Low Risk **Impact:** Potential risk of seeds of alien invasive species coming along with required seeds and seedlings, which will have impacts on the natural habitat and biodiversity. **Further Assessment:** Review and (if necessary) update the screening method used by Woreda agriculture offices.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		Mitigation: This requires strict control and screening of imported seeds before dissemination and this is the standard practice of agriculture offices at the Woreda, given the extensive experience of importing high-yielding seeds in Ethiopia.

Adaptation Fund

ANNEXES

Gender Assessment and Action Plan

Table of Contents

Part I: Gender Assessment

I. Background and National Context

Ethiopia is located in the horn of Africa and is home to over 107 million people (ESS, 2023). Over 83% of the population are smallholder farmers, of whom 26% are female-headed households (MoF, 2019). The number of farmers cultivating in less than 0.9 ha and in very fragmented landscapes account for about 60% of farmers (Zerssa,G., et al, 2021). Smallholder agriculture contributes over 85% of total employment, over 90% of foreign exchange earnings, and approximately 50% of gross domestic product (GDP) (Welteji, D, 2018). Smallholder farmers account for 95% of the total area under agriculture and these farmers provide more than 90% of total agricultural output (Welteji, D, 2018).

However, these farming systems are facing critical challenges including land degradation, low soil quality and limited resources which is negatively affecting sustainable crop production and food security (Zerssa,G., et al, 2021). Natural resources are key in the country's economic growth and development, as well as the livelihoods of the rural population. As a result, growth in the agriculture sector can play a critical role in reducing the poverty rate – a 1% increase in agricultural output leads to a decrease in poverty of nearly 1% (World Bank, 2016a).

Eighty percent of the Ethiopian population currently live in rural areas. Recent rapid economic growth, however, signals the advent of a demographic transition, as urban services and industry are expanding rapidly (World Bank, 2019a). In the past decade, Ethiopia's average annual economic growth rate was slightly over 10%, exceeding the regional average of 5%. In this period, services grew by 12%, industry by 21% and agriculture by 7% (World Bank, 2019a).

Public investment, which increased from 5% of GDP in the early 1990s (Rodrik D, 2016) to 15.3% in 2022 (Terry M et al., 2022), plays a significant part in Ethiopia's growth. More recently, foreign direct investment (FDI) has influenced Ethiopia's growth and the country has attracted about US$ 8.5 billion in FDI (CIA, 2021). The sustained economic growth Ethiopia maintained over the past decade reduced the poverty rate from 30% to 24% between 2011 and 2016 (World Bank, 2019a).

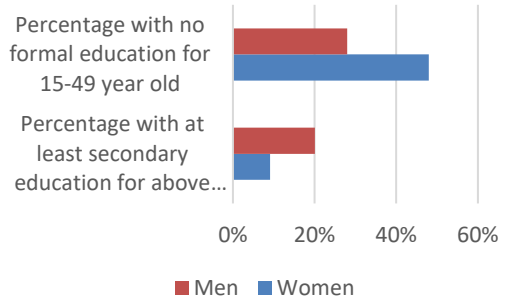
However, in 2022 inflation rose to 34% and the real GDP growth fell to 5.3% while it still remained above East Africa's average, which was 4.4% (ADB, 2023). The growth as well as inflation were negatively affected by drought, internal conflict as well as increased commodity prices as a result of the Russian and Ukraine war. Remittances also declined by 10% in 2020, and Foreign Direct Investment inflows were 20% lower (FDRE, 2021).

Ethiopia is among the poorest countries in the world. The Human Development Index (HDI), which measures average achievements in long and healthy lives, knowledge and a decent standard of living, places Ethiopia in the low human development category: at rank 175 (out of 191 countries), with a value of 0.498 (UNDP, 2022). The 2023 global multidimensional poverty index shows that 68.7% of the population in multidimensional poverty, with 23.5% living below the national poverty line (UNDP and OPHI, 2023).

Ethiopia is highly vulnerable to impacts of climate change despite its very low global greenhouse gas emissions contribution (0.04% of global emissions) (Crippa, M. et al., 2019). Evidence of climate change impacts has become clear in Ethiopia in the last 50 years. An average of around 1°C in temperature increase has been recorded since the 1960s. Occurrences of extreme weather events such as drought and floods have increased in the last ten years while annually, 25-50% mean rainfall variations are observed.

These circumstances are expected to further increase the risk of conflict over scarce resources and food insecurity, affect human health, put infrastructure at risk and exacerbate environmental degradation. Therefore, to manage vulnerability to climate risks and hazards, sustainable adaptation and resilience measures are crucial (FDRE, 2021).

Fig. 1: Percentage of men and women with no formal education and with at least secondary education



Source: CSA, 2017a; UNDP 2022

Women constitute half of the Ethiopian population (49.87%) (ESS, 2023) and 22.1% of the total heads of households (World Bank, 2019b). The livelihoods of the majority of rural women are directly dependent on agriculture and environmental resources; hence they are engaged in productive activities (including crop farming and livestock herding) as well as the management of natural resources and household assets (AU, 2012). A study shows the uptake of climate smart agriculture by women smallholders is limited due to access to credit, extension services, restricted cooperative and water user associations membership, lack of access to skill, training, information as well as restricted mobility (Tsige, M. et al, 2020).

Ethiopia has a value of 0.921 in the Gender Development Index, which is the ratio of female to male HDI values; it is in Group Four, which includes countries with medium to low equality in HDI achievements between women and men. The Gender Inequality Index, which reflects inequality in achievement between women and men in reproductive health, empowerment, and the labor market, ranks Ethiopia at 129 out of 191 countries, with a value of 0.520 (UNDP, 2022).

This gender assessment is carried out to inform the proposed Adaptation Fund project on the gender roles and power relations observed in the Ethiopian context. It is expected to support the design of the project by taking into consideration the different needs, priorities and knowledge of women and men.

Ethiopia Gender Profile

Population

Ethiopia has a population of 105 million and a population growth rate of 2.85%. It is the second-largest country in Africa (World Bank, 2019a). 50% of the total population are women, while 44% are under the age of 15 and 4% are above the age of 65 (EPHI, 2021). Average household size is 5.2 persons in rural areas and 3.6 in urban areas (CSA, 2020).

Education

Literacy is key in preparing a skilled workforce. Participation in a broader range of work opportunities, including more profitable and high-value-added sectors, are determined by the technical and vocational skills of an individual (Hallward-Driemeier, M., 2013). Education is also strongly linked with socioeconomic variables such as lifestyle, income, and fertility.

The gender development index of the 2021/22 Human Development Report indicates that the mean year of schooling in Ethiopia is 2.2 years for females and 4.2 for males, while the gender inequality index shows that only 9.1% of females and 20.1% of males above the age of 25 have at least some secondary educations (UNDP, 2022).

Based on a survey conducted in 2016 men are better educated than women in Ethiopia. Of the population aged 15-49, about half of women (48%) and 28% of men aged 15-49 had no formal education. Urban women complete a median of 7.7 years of education, while the median among rural women is 0. The

corresponding figures among men are 9.3 and 2.9 years, respectively. Additionally, 48% of women are literate, as compared to 69% of men (CSA, 2017a; EPHI, 2021).

In 2019, 35% of females attended some primary schooling, 6% completed primary education, 11% had some secondary schooling and 7% completed secondary school or had more than a secondary education. Improvement is seen the parentage of women being educated as the percentage of women with no education fell from 75% in 2000 to 48% in 2016 and 40% in 2019 (EPHI, 2021).

The median age for a mother's first birth in Ethiopia is 18.7 years (EPHI, 2021). Women who give birth in their teenage years are more likely to drop out of school, it is also shown that they will continue to struggle with decisions related to fertility, motherhood, and the labor market throughout their adult life (CSA, 2017a).

The gender gap in adult education is also wide with 70% of illiterate men enrolled in adult education programs, while only around 40% of illiterate women are enrolled in such programs. This is because women are likely to experience more time and social constraints with age relative to men. To facilitate women's involvement in continuing education programs, it may be effective to offer financial incentives to offset time costs associated with attendance and travel (UN Women, 2014).

Health

In Ethiopia, health problems are largely attributable to preventable infectious ailments and nutritional deficiencies. Infectious and communicable diseases account for about 60-80% of diseases in the country. The health status of women is poor, largely due to the higher rate of illiteracy and poverty among women, which has impeded their access to health services, information, and decision-making in health matters (JICA, 2006).

The median age at first birth among women aged 25-49 is 18.7 years, in Ethiopia (EPHI, 2021). The 2022 gender inequality index shows that, there are 69.2 births per 1,000 women aged 15-19. The age at which childbearing commences is an important determinant of the health and well-being of a mother and child.

Family planning is essential for women to minimize unplanned or unwanted pregnancies as well as unsafe abortions. Additionally, it enables women to space the births of their children, which benefits the health of the mother and child. The 2019 mini demographic and health survey showed that 96% of married women aged 15-49 know at least one method of contraception. The contraceptive prevalence rate in 2019 was 41% and has steadily increased from 14% in 2005 (EPHI, 2021).

Health care services during pregnancy and after delivery are yet another important factor for the survival and well-being of both the infant and the mother. Skilled care during pregnancy, childbirth and the postpartum period is essential in reducing maternal and neonatal morbidity and mortality. A 2019 survey shows that the percentage of women aged 15-49 who received antenatal care from a skilled provider were 74, which has increased from 62% in 2016. Further, 48% of births occurred in a health facility, which has increased from 26% in 2016 and just 5% in 2005. The gender inequality index of 2021/22 shows that the mortality ratio for Ethiopia is 401 maternal deaths/100,000 live births, which needs considerable improvement to meet the SDG target of 70/100,000 by 2030. Although institutional delivery has been promoted in Ethiopia, home delivery is still common, primarily due to distance, scarce transport, and lack of appropriate facilities (EPHI, 2021).

Twenty percent of women and 38% of men aged 15-49 have comprehensive knowledge of HIV. The national HIV prevalence rate is 1.2% and 0.6% for females and males, respectively (CSA, 2017a). Regarding female genital mutilation (FGM), 65% of women aged 15-49 (a decrease from 74% in 2005 and 80% in 2000) are circumcised. Among women who have heard of female circumcision, 24% believe that the practice is required by their religion and 18% believe that the practice should be continued (CSA, 2017a). Though a lot of progress has been observed since a national strategy and action plan were developed in 2013 to address harmful traditional practices, it is evident that more work is needed in raising awareness and taking actions to eliminate the practice of FGM (MoWCYA, 2013; CSA, 2017a).

The 2019 EPHI survey shows that most of the positive outcomes on women's health indicators are higher for women in urban areas and for those that have at least a secondary education. This is an indication that a focus on education can improve the health of both women and men in Ethiopia.

Participation in the formal and informal economy

Gender serves as a strong predictor of workforce participation in Ethiopia, according to the Ethiopia Socioeconomic Survey (ESS) of 2015-16 - women are 17% less likely than men to participate in the labor force. This difference widens to 29% when considering other factors such as education, age, and household wealth. A gender gap of 4.4 hours exists among individuals active in the workforce; on average, while men work 31 hours per week, women work only 27 (World Bank, 2019a).

Access to Resources

Asset Ownership

Assets such as land and business equipment serve as essential inputs as well as, as a potential collateral for credit. Of all women in Ethiopia, half own a house in part or in full, while 40% own land. Of the women who own land, only half report having their name on a title deed (CSA, 2017a). However, relative to men and male-headed households, women and female-headed households fare worse in land and asset ownership. Compared to female-headed households, male-headed households have larger plot sizes, a larger proportion of cultivable land and a larger fraction of registered land. Women in male-headed households are very rarely primary land managers, though the reverse is not the case for men in female-headed households (World Bank, 2019a).

Land as productive resource

Seventy four percent of female farmers are widowed, divorced, or separated, according to the Ethiopia Socioeconomic Survey (ESS) of 2015-16. Further, on average, they have smaller household size, are five years older and are more likely to be illiterate – 88% for females vs. 59% for males (World Bank, 2019a).

Rural households, on average, own 1 hectare of land; while, on average, male-headed households own 1.12 ha, female-headed households own 0.6 ha (CSA, 2020). Further, even though women make up more than 40% of the agricultural labor force and head approximately 25% of all farming households, they have less access not only to land but also to other factors of production than men (World Bank, 2019a). In terms of gross value of output, female farmers produce 23% less per hectare than male farmers. In addition, women see lower returns to their time spent on agricultural activities, extension services received, and use of fertilizer and oxen compared to their male counterparts (O'Sullivan M. et al., 2014). The fact that female farmers grow a narrower range of crops further widens the gender gap in productivity (World Bank, 2019a).

These lower returns point to broader social norms, market failures and institutional constraints that prevent women's resources from translating into the same levels of agricultural productivity as they would for men (World Bank, 2019a). Addressing these challenges is a necessary step to fulfill ambitious targets, such as those set in the national Ten-Year Development Plan – including securing the rights of the 60% of women who are not given land rights (FDRE, 2020).

Services and Inputs

Extension services

Agriculture extension services are how smallholder farmers access information about new technologies and other farm-related information. Female farmers are less likely than male farmers to attend extension programs. Twenty three percent of female farmers attended extension programs compared to 38% of male farmers, in 2015-16. This means women are less aware of, and exposed to, new techniques, farming knowledge and management practices. Though policies have recognized the need to close the gender gap, identifying and addressing constraints still remains a challenge (World Bank, 2019a).

Formal credit

Financial services and credit can provide small-scale farmers with the opportunity to improve farm productivity and transition from subsistence farming to large-scale and commercial farming (Mukasa A. N., 2017). Credit can, in the short term, help farmers increase their purchasing power to acquire necessary production inputs and finance their operating expenses, while in the long run it can help farmers to make profitable investments (World Bank, 2019a). Female farmers are 9 percentage points less likely to live in a household with access to credit than male farmers (Mukasa A. N., 2017). Reasons include the fact that women are less likely to own and control physical assets that serve as collateral and they have lower levels of human and social capital which, in turn, can reduce their eligibility for formal credit. When credit is constrained, farmers are likely to use sub-optimal levels of productive inputs, thereby limiting their productive capacity (Mukasa A. N., 2017).

Production inputs

To mitigate crop losses, modern agricultural inputs, such as fertilizers, pesticides, herbicides, and fungicides are used. Female farmers use 2 percentage point lower levels of these agricultural inputs than their male counterparts, which limits productivity and may imply greater vulnerabilities to shock-induced variations in production. Reasons vary from these products being typically sold in large quantities, requiring a sizable upfront cost that cash-constrained women may struggle to afford, to mobility where limited transport options are available that affect access to both inputs and markets (World Bank, 2009a).

Access to Irrigation

Although studies show most projects target both women and men farmers, women still benefit much less from irrigation programs due to lower access to information, including training (Likimyelesh, N. et al., 2017, FDRE, 2007). Men mostly control the use of irrigation technologies and have more control over income from these technologies (Likimyelesh, N. et al., 2017).

Level of income and wages

In 2009, the average wage in Ethiopia was only one-third of the Sub-Saharan African average and less than one-half of the global average for low-income economies. In 2012, the monthly average real income was ETB 421.70 (USD 23.40), less than USD 1.25 per day (Tadele, F and Shiferaw, K., 2015). Low levels of productivity and investment likely contributed to stunted wage growth (World Bank, 2009b).

Both formal and informal sector analysis indicates that female employees earn 44% less per hour than their male counterparts. This disparity drops to 36% when individual-, household-, and job-level characteristics are taken into consideration (World Bank, 2019a).

The gender wage gap is partly explained by gender differences in education, experience, and training (Arbache J. S. et al., 2010). Secondary and post-secondary education help individuals to develop more advanced skills to garner higher wages. Data show that employees who hold a bachelor's or postgraduate degree, have, on average, a 50% higher hourly wage relative to individuals who only completed secondary education, and a 20% higher wage than those who only completed their primary education (World Bank, 2019a).

Furthermore, women's limited labor market skills pigeonhole them into jobs concentrated in low-profitability sectors, with more women working in informal wage employment than men (Arbache J. S. et al., 2010). 37% of women report seasonal employment and 13% report occasional employment (CSA, 2017a). These trends of irregular employment contribute to women's limited on-the-job training, fewer professional development opportunities, and a perpetuation of disparities in skill sets, job opportunities and wages (World Bank, 2019a).

Norms and Practices

Shared beliefs or informal rules about which behaviors are appropriate, typical, or desirable in a particular social group are referred as social norms (Padlock E.L. and Ball L., 2010). Although norms do not dictate behavior, they influence the likelihood of particular behaviors by establishing expectations of rewards and approval or, conversely, sanctions and disapproval. Gender norms arise from, and give basis to, the belief

that men and women are, and should be, different in behavior, aspirations, status, and economic activity (Cech E.A., 2013). Norms influence everything from educational investments early on in life, to factors later in life such as the timing and dynamics of marriage, childbearing, household dynamics, asset ownership and internalized beliefs (Paluck E.L. and Ball L., 2010).

Marriage and Childbearing

Marriage in Ethiopia occurs early in life, with the median age at first marriage for women standing as the lowest in Eastern Africa at 17.4 years (Clark S. et al., 2017). Both social norms and economic pressures may result in early marriages. When norms emphasize women's role as mothers rather than providers, girls may be motivated to move into adulthood through marriage and motherhood rather than through education and employment. In cases where norms emphasize virginity, marriage in adolescence is encouraged. Economic pressures also motivate marriages, leading parents to arrange their daughters' marriages to escape poverty at home. Women who marry early are more likely to drop out of school earlier and less likely to spend time acquiring valuable skills for economic success. Therefore, delaying marriage may result in better educational and economic outcomes for women in Ethiopia (World Bank, 2019a).

Career and Family

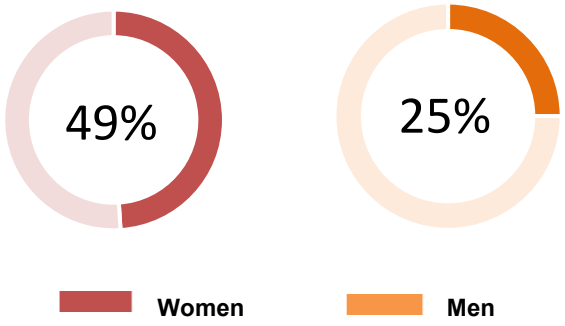
Women may be forced to avoid job opportunities that will minimize the time they can give to caring for family members and the household. Such choices will impact lifetime earnings and contribute to the gender gaps in wages and profits (World Bank, 2019a).

Further, women experience an increasing trade-off between career and family as they enter roles with higher pay and responsibility, in part discouraging women from aspiring to particular occupations or positions. In Ethiopia, a study of large companies, including Ethiopian Airlines, Ethio-Telecom and NIB International Bank, found that female business leaders experience intense "work overload" attributed to their "inability to say no, the nature of their company and their work, and the imbalance of their responsibility and their required working hours" (World Bank, 2019a).

Intra-household Dynamics

In Ethiopia, most of the domestic work is delegated to women, including child rearing, cleaning, food preparation, wood and water collection, and food production. Ethiopian women aged 18-19 spend 4.1 hours per day on domestic tasks, compared to 1.5 hours for boys of the same age (A. Pankhurst et al., 2016). Women are much more likely than men to spend time collecting water and fuel wood; about 49% of female household members engage in these activities daily, compared with only 25% of male members (CSA, 2020). In addition, many studies document the large amounts of time women devote to agricultural and livestock production. In Oromia, Amhara and SNNP Regions, for instance, women divide their time between agricultural and domestic tasks and spend about 14 hours a day on both productive and domestic activities, compared to an average of 10 hours spent by men (Agajie, G. and Derese, T., 2011). According

Fig. 3: Percentage of household members collecting water and fuelwood daily



Source: CSA, 2020

to UN Women, women contribute as much as 70% of on-farm labor in post-harvest activities for cereals and take on 60% of marketing activities .

These responsibilities hinder women's opportunities to study, develop professional experience and skills, run a business, or engage in paid work: 16% of girls drop out of school to look after siblings and 12% of girls drop out of school due to family issues (Frost M. and Rolleston C., 2013).

Internalized Beliefs

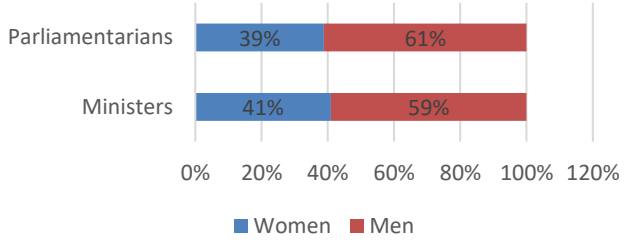
Women's and men's subjective self-assessment capabilities contribute to gender gaps. Ethiopian gender gaps in self-assessed ability are clearly seen for tasks typically performed by only one gender or tasks for which either men or women have a perceived natural advantage. On the other hand, when gender is said to be irrelevant to the task, men and women show no difference in self-perceived competence (World Bank, 2019a).

Violence against women affects a woman's physical and mental health, as well as her ability to engage in daily activities. Fear of violence can also reduce women's willingness to pursue economic activities, especially activities uncommon for women. In Ethiopia, one in ten women report having experienced sexual violence while one-third of ever-married women have experienced spousal violence (CSA, 2017a). 63% of women and 28% of men agree that a husband is justified in beating his wife for activities such as burning food, going out without permission, neglecting children, or refusing to have sex (CSA, 2017a).

Women in Politics

According to 2023 women in politics data, Ethiopia ranks 29 (out of 190) for women in ministerial positions with a score of 40.9% (9 out of 22), while the country ranks 25th for women in parliament. Of the 616 seats in the federal Parliamentary Assembly (House of Peoples' Representatives and House of Federation), 38.8% are held by women. This is higher than the sub-Saharan African average and the world average of 26.5% for women in parliament. Ethiopia is also among the 17 countries (11.3%) globally that have a woman head of state (UN Women, 2023).

Fig. 2: Percentage of women and men parliamentarians and Ministers



Source: UN Women, 2023

II. Gender and Climate Change

Africa has been identified as highly vulnerable to climate change due to low adaptive capacity and high reliance on climate-sensitive sectors such as rain-fed agriculture (Gebrechorkos, S.H. et al. 2019; Girvetz, E. et al., 2019). The two most important variables of climate change, imposing a negative effect on the productivity of the agricultural sector and sustainable economic development in Africa, particularly in sub-Saharan African countries are rainfall variability and increasing temperatures (Serdeczny, O. et al., 2017; Abera, K. et al., 2018; Asfaw, A. et al., 2018; Gebrechorkos, S.H. et al., 2019).

Ethiopia is one of the sub-Saharan African countries that is highly vulnerable to the impacts of climate change and variability (Birara, H. et al., 2018), despite its very low global greenhouse gas emission (0.04%) contribution (Crippa, M. et al., 2019).

Evidence of climate change impacts has become apparent in Ethiopia in the past 50 years. Changes in the amount and spatial distribution of seasonal and annual rainfall and recurrent droughts are among the major

climate-related developments evident in Ethiopia (Zeleke et al., 2017; Weldearegay, S.K. and Tedla, D.G., 2018).

Ethiopia's agriculture systems are predominantly rainfall dependent. As a result, any variation in rainfall amount, distribution and trends will have a direct impact on agricultural production. This in turn significantly affect the lives of smallholder farmers who depend largely on agriculture as their main source of income (Desalew, M.M. and Bhat, H.G, 2021).

A study on agricultural productivity change caused by climate change, up to the year 2050, finds that, at national level, crop production will be adversely affected during the coming four decades, with increased severity over the time period. Therefore, food prices are expected to increase which in return will lower the Ethiopian GDP growth, reduce real household incomes, and adversely impact consumption. Overall, the study indicates that climate change will cause a loss of 31% of agricultural GDP by 2050. It further shows that poor, rural households will be more affected than urban and rural non-farming households. Since agriculture has linkages with other sectors, an impact on the agriculture sector will also adversely impact the agro-processing, industrial and service sectors. The value of exports and imports are expected to fall by 36% and 32% in 2050, respectively. Therefore, the need to mainstream adaptation measures to sustain the overall performance of the economy is critical. The key recommendations of the study are increasing the use of irrigation and infrastructure development, building human capital, especially the skills of farmers, and integrated policy options, including changes in modern technology and enhanced awareness to adapt to adverse climate change impacts (Solomon, R. et al., 2021).

Another study done in the northwestern highlands of Ethiopia, in the Rib Watershed, shows that both seasonal and annual rainfall patterns across the watershed vary extremely and exhibit high temporal and spatial variability (Desalew, M.M. and Bhat, H.G, 2021). Most parts of the watershed have experienced high variability or less reliability of rainfall over the last few decades, notably with higher variability of Belg – short rainy period (March-May) rainfall in the watershed than Kiremt – the main rainy season (June- September). The study projected that the Kiremt rainfall will probably increase by 20-25% by 2050 relative to the baseline period (1986–2017) while the Belg rainfall is projected to decline by 4.8-8%.

In the Rib Watershed, a greater warming trend for both current and future scenarios was observed. In the study area, the mean annual temperature increased by 1.07°C over the last four and a half decades, with an average rate of 0.24°C per decade (Desalew, M.M. and Bhat, H.G, 2021). Comparable results were found in Lake Tana sub-basin (Abera, K. et al., 2018) and Tekeze basin (Fikru, F. et al., 2018).

Increases in temperatures may adversely affect crop production, farm income and food security in many ways, especially when combined with high inter-annual and intra-seasonal variability of rainfall. The projected warming will reduce the grain yield of cereal crops, which are already experiencing significant reduction due to human-induced soil erosion (Desalew, M.M. and Bhat, H.G, 2021). An increase in temperature significantly affects mean yield, as well as yield variability, of maize, millet, and sorghum (Maharjan and Joshi, 2013). Heat stress increases evaporation and reduces water availability (Hatfield and Prueger, 2015) leading to low yield, particularly in low rainfall-receiving downstream areas.

Livestock production is another important income source of rural communities. It contributes about 39% of the agricultural gross domestic product (GDP) and 17% of Ethiopia's GDP (Shapiro, B. et al., 2017). However, livestock management is often inefficient, with low and unreliable returns that leave many livestock-producing households in poverty (Rettberg, S. et al., 2017).

About 60% of Ethiopia's lowlands are arid or semi-arid and Shapiro, B. et al. (2017) estimate that 60 million ha of rangelands are grazed in Ethiopia and that livestock consume 120% of the annual forage production in average weather years. The forage deficits are higher in drought years and have been aggravated by increasing livestock populations. As a result, livestock productivity per animal has declined.

Improved production practices, such as rotation grazing, restoration of degraded rangeland, and fodder cultivation, may reduce or mitigate the negative impacts of grazing livestock on rangelands (Ng'ang'a, S. et al., 2020) and can reduce the GHG emissions per unit of animal products by increasing yields per animal (Kashangaki, J. and Ericksen, P., 2018). Improved practices may also accelerate the production cycle and

reduce livestock morbidity and mortality rates (Vétérinaires sans Frontières, 2018). Still, if ruminant populations increase, total GHG emissions may increase even if the emissions per animal fall.

Men and women are affected differently by the impacts of climate change mentioned above. There is a general understanding that since climate change has gender-differentiated impact, policies, programs, and interventions need to address these impacts in both mitigation and adaptation responses to make interventions sufficient, just, sustainable and avoid further increases in the existing gender gap (MoF, 2019).

A study shows that although all rural Ethiopian households are vulnerable to climate change, the magnitude of the effect differs, and female-headed households are more vulnerable. In the study, on average, household income in male-headed households declined by 5.7% while income in female-headed households declined by 12.4% due to climate variability. Since the study exposed both types of households to the same level of climate shock, the effect was attributed to differences in endowments and adaptive capacity. It is expected, therefore, that because of climate variability, female-headed households will become absolutely and relatively poorer (Tesfamicahel, W., 2016).

Women and female-headed households are the least prepared, most vulnerable, and likely to be worst affected by climate change. Their limited control over and access to, resources and information, and their limited input in decision-making processes, increases the vulnerability of many women to climate change (Aklilu, A. et al., 2013; Alebachew, A., 2011; Tesfamichael, W., 2016).

Securing water, energy and for the household, along with maintaining overall household well-being, is the role of women in rural Ethiopia. Therefore, extreme climate events such as floods, droughts, and rising temperatures place greater pressures on women. In addition, during emergencies men are mostly forced to migrate while women are left behind with children, assuming additional responsibilities without necessarily having the right skills and knowledge (MoANR, 2017). A study by Alebachew, A. (2011) shows that some men who leave their villages and families behind sometimes do not continue to help their family as they establish new lives at their destinations. Migration can, therefore, increase the level of malnutrition due to increased scarcity of food, leading to deteriorating health status of the communities left behind.

Adaptation preferences are usually different in male and female headed households. In male-headed household preferences are given to on-farm adaptation measures, such as cropping time adjustment, crop diversification, planting cash crops and soil conservation, while female-headed households tend to focus on off-farm and non-farm diversification adaptation measures (Azeb, A. and Van Laerhoven, F., 2016). Male-headed household heads have fewer domestic responsibilities and can, therefore, rely on income from temporary labor migration during bad harvest times – which is usually not an option for female-headed household heads, as they are responsible for caring for the children, the elderly and the sick, as well as the cattle (Azeb, A. and Van Laerhoven, F., 2016, Aklilu, A. et al., 2013).

Increasing frequency and intensity of floods, increased water stress and deteriorating water quality are additional critical impacts of climate change. Women and men often have different needs and priorities in terms of water use. Women usually use water for domestic purposes while men usually use it for agriculture-related functions. (Alebachew, A., 2011).

In drought-prone areas the time required for water collection increases and women and children (mostly girls) must travel greater distances to find water (Azeb, A. and Van Laerhoven, F., 2016). They are, therefore, forced to spend more hours fetching water, which significantly increases their workload and potentially exposes them to harassment, especially in areas and times of conflict. A study by Alebachew, A. (2011) indicates, on average, women work 14-17 hours each day and, during chronic drought and famine years, the daily work schedule may extend to 16-18 hours and beyond.

According to a survey by CSA (2014), rural households in Ethiopia obtain water mostly from wells or from public/private taps outside their homes. Thirty percent of households obtain water from unprotected wells outside of the household; 22% from a protected well outside of the household; and 25% from natural sources (rivers, springs, etc.). About 22% obtain water from a shared / community tap, and less than 1% of households report having access to piped water on their own premises. Women and girls spend a significant amount of time collecting water. About 56% of rural households must travel less than 1 hour to get water,

while 37% must travel between 1 and 2.5 hours, and the remaining must travel even further to fetch water. Poor access to safe drinking water, coupled with illiteracy (73%) and water-borne disease prevalence, greatly influence the participation of girls and female in education, agricultural production, and other development activities (Getachew, D., 2016).

Therefore, easy access to water mostly benefits women and girls, as it reduces the burden of water collection that disproportionately falls on them and makes time available for education and economically productive activities. It also reduces the physical challenges they face (i.e., exposure to physical hardship, sexual and physical violence), when they travel long distances to fetch water (UN Women, 2014). Yet, achieving equity within and among rural communities remains challenging and can compromise the sustainability of groundwater use (Likimyelesh, N. et al., 2018).

Based on an assessment done by a project implemented in Oromia and SNNPR that provided women and men farmers with water lifting technologies, installing technologies near households enabled multiple uses in addition to irrigation (Likimyelesh, N. et al., 2017). The assessment showed that even though men and women use the technologies for different purposes, both found the technologies ease their work. While men use water from these technologies mainly for irrigation, women and children use the water for multiple purposes, including livestock watering and domestic use. For these reasons, a water-based project should give specific attention to gender-based needs and concerns to prevent reinforcing inequities in opportunities for water access and governance or social norms against women (World Bank, 2016b).

Access to information, affects the likelihood of technologies improving the livelihoods of farmers. Likimyelesh, N., et al. (2017) found that, in their study area, women are excluded from decision-making in groundwater development and management due to male dominance, cultural influence and women simply not being invited to meetings, as well as inability to participate due to their high domestic workload. Men, therefore, have greater access to information. Due to the same reasons, women are reluctant to participate in groundwater monitoring.

This indicates the need to invest more effort in reaching and informing women, including understanding the times and locations convenient for women. Projects need to extend invitations to women directly for information-sharing events and meetings and not rely on spouses or men in the community to inform women (Likimyelesh, N. et al., 2017). Even though it is now standard practice for development programs to be built upon ‘gender mainstreaming’ approaches, the result is often nothing more than a satisfied quota (e.g., a certain number of women in groups or on water management committees), rather than actual participation or influence in decision-making (Lefore, N. et al., 2017). Therefore, it is imperative that steps are taken to address the root causes of women’s lack of participation, such as high demands on their time due to domestic responsibilities, and social norms that discriminate against them (Likimyelesh, N. et al., 2018).

The development of the Climate Resilient Green Economy (CRGE) Strategy in 2011 has provided a strong basis for climate-resilient development planning across sectors and levels of government in Ethiopia (FDRE, 2011; MoF, 2021a). In 2012, the Ethiopian government established the CRGE Facility as a financial mechanism to support the implementation of priorities identified by the CRGE Strategy (MoF, 2021a). Although studies indicate that the CRGE Strategy, as well as the Climate Resilient Strategies for Agriculture and Forest, and Transport, fail to explicitly address the gender dimension of climate change (Azeb, A and Van Laerhoven, F., 2019; MoF, 2019), recent efforts by the CRGE Facility have tried to ensure gender is taken into account in the implementation of programs and projects managed through the Facility (MoF, 2021b). Further, the recently launched LT-LEDS, recognizes the need for gender equality and social inclusion in climate action (FDRE, 2023).

III. Gender and climate: institutional, legal and policy frameworks

Legal and policy frameworks
Strong policy commitments to bring about gender equality has been demonstrated by the Ethiopian Government. It has signed and domesticated several international and regional policies, development frameworks and conventions, including the Convention on the Elimination of all forms of Discrimination against Women (CEDAW), the Beijing Platform for Action, Agenda 2063, the 2030 Sustainable Development Goals (SDGs), the Maputo Protocol, the Maputo Plan of Action, and the Malabo Declaration.

The Ethiopian Constitution guarantees equality before the law: equal rights to land, property, employment, maternity leave and pay, and equal rights between the male and female counterparts in marriage. There are affirmative action provisions to address the historical legacy of discrimination.

Several instruments are used to mainstream gender issues in the country's social, economic and political affairs. These include the 1993 National Ethiopian Women's Policy, the 2006 National Action Plan for Gender Equality, and the National Women's Development and Change Strategy and Package.

Ethiopia's overarching development strategy, the Ten-Year Development Plan (2021-2030), includes women's rights, representation, and access to resources as one of the key areas of focus under social sector development (NPC, 2021). The 2023 long-term low emissions development strategy (LT-LEDS) has provisions for promoting the rights and benefits of women (FDRE, 2023). Gender-responsive budgeting (GRB) is expected to be implemented across all sectoral ministries, guided by the National Gender-Responsive Budgeting Guideline developed by the Ministry of Finance.

Further, the Women's Affairs Office was upgraded to a Ministry in 2005 and was restructured as the Ministry of Women and Social Affairs in 2021. Proclamation no 691/2010 expanded the Ministry's mandate to render comprehensive protection and promotion of women's rights and to coordinate the efforts of the Women's Affairs Directorates (WADs) established in the sectoral ministries (MoF, 2019).

Several legislative and policy frameworks have been established to provide directions on how climate change effects can be eradicated or at least reduced. The frameworks range from stand-alone climate change mitigation and adaptation processes to the mainstreaming of climate change into decision-making processes at a national level. Relevant policy instruments are presented below.

National Policy on Ethiopian Women, 1993
The policy outlines the major economic, social, and political concerns of Ethiopian women and indicates broad strategies and interventions (Transitional Government of Ethiopia, 1993). Since then, major programs have been designed to be gender-sensitive or to have gender components, and women's affairs have been given attention with the establishment of an office that eventually grew to the status of a ministry (Amdissa, T., 2018). A new national policy on gender equality and women empowerment is drafted and currently under review at the Ministry of Planning and Development.

The Revised Family Code, 2000
Even though the earlier Family Code granted permission to married women to control assets or pursue a profession, it failed to offer protection to unmarried or widowed women. The 2000 Revised Family Code better protects women by granting equal rights to spouses during the duration, conclusion, and dissolution of marriage, requiring equal asset division between the husband and wife upon divorce (FDRE, 2000).

To improve women's ability to earn, work and thrive outside of the home, the 2000 Revised Family Code changed the legal age of marriage to 18. A study in 2013 showed that, by 2005, five regions and two charter cities had implemented this change. The increased marriage age helped improve participation in the labor market, particularly for young women. In the five regions, labor force participation rose by 15-24% more than regions that had not yet implemented the change (Hallward-Driemeier, M. and Gajigo, O., 2013).

Water Resources Management Proclamation, 2000
The Ethiopian Water Resources Management Proclamation (WRMP) is the main policy governing the water resources sector. The theme of the proclamation focuses on the sustainability and equitability of water uses and cross-cutting issues. The proclamation indicates that to provide for the full participation of users and facilitate effective decision making, the management of water supply and sanitation services is to be at the lowest and most efficient level of institutional set-up (FDRE, 2000). The main challenge surrounding water resources is their uneven spatial and temporal occurrence and distribution among the major river basins. Four river basins namely, Abbay (Blue Nile), Tekeze, Baro-Akobo and Omo-Gibe in the north-western and south-western parts of Ethiopia, provide 80-90% of the water resources in the country (Israel K, and Merkineh M, 2020).

The Ethiopian Water Resources Management Policy and Water Sector Strategy, 2001
The Water Resources Management Policy (MoWR 2001a) has a section on gender related issues which aims to "promote the full involvement of women in planning, implementation, decision making and training, as well as empower them to play a leading role in self-reliance initiatives." On the other hand, the Strategy (MoWR 2001b) emphasizes gender mainstreaming with the aim to:

- Pay special attention to the role of women while establishing community-based structures for the management of localized water supply and sanitation (WSS) and small-scale irrigation systems. It includes allocation of a specific number of seats for women in these community-based structures, depending upon the nature and size of the scheme.
- Enhance the active involvement of women for the sustainable services of water schemes and success of water projects and programs. It incorporates the launching of campaigns to encourage women to contribute to improved management of water schemes.
- Take steps to empowering women in decision-making processes of water projects and relieve them from the huge burden of fetching and carrying water for the family.

Land Registration Act, (FDRE, 2003)
The Act grants equal inheritance and property rights to women. It enabled land registration of households, accompanied by issuing certificates. Land certificates were issued after public registration to ensure transparency. Furthermore, the land certification scheme required that land administration committees at the *kebele* level, the smallest administrative unit in Ethiopia, consists of at least one female member (Holden et al., 2011). Female-headed households are encouraged to participate in the certification process due to the presence of female members in the land administration committees. Overall, the land registration process increased tenure security for women (World Bank, 2019a). A study across 15 villages in Ethiopia indicated that, combined with the Family Code revisions, the 2003 Land Registration Act changed perceptions and social norms related to the division of assets upon divorce (World Bank, 2019a).

Climate Resilient Green Economy (CRGE) Strategy, 2011
The CRGE Strategy integrates into the country's development planning climate change adaptation and mitigation, and resilience-building measures. It has recognized the most vulnerable sectors to climate change to be the agriculture, health, water and energy, buildings, and transportation sectors (FDRE, 2011). The strategy identified more than 150 potential green growth opportunities, of which 60 were prioritized.

When it comes to gender equality issues including challenges to women in relation to the priority sectors, studies show that the Strategy is weak. The only program that mentions the potential positive impact on women is the Rural Energy and Efficient Stoves Initiative, where the potential to contribute to gender equality is indicated without any detail (MoF, 2019).

Despite the Strategy recognizing the effects of climate change on people's livelihoods and social well-being in its vision statement, it does not show the differential impact of climate change on men and women. It provides no explanation for how the gendered nature of climate change problems and their solutions can be addressed (Azeb, A and Van Laerhoven, F., 2019).

Following the creation of the CRGE Facility in 2012 and the development of sector climate-resilient strategies in 2015, the Facility has recognized the need to have gender integration across different priority

sectors and has taken some steps towards this in recent years by developing a gender mainstreaming strategy (MoF, 2021a).

Climate-Resilient Strategy for Agriculture and Forestry, (FDRE, 2015a)
The Climate-Resilient Strategy for Agriculture and Forestry aims to ensure climate-resilient economic growth in Ethiopia. Its focus is on three sub-sectors recognized as the most vulnerable to the impacts of climate change: crops, livestock, and forestry.

As shown in previous sections, women have significant role in the agriculture sector and there is, therefore, a need to identify ways for equitable participation and benefit from investments on climate change mitigation and adaptation. However, a review undertaken in 2017 shows that the Strategy hardly mentions the terms gender, women, or females, and where it does it hardly provided any explanation on what the gender- and climate-related challenges, impacts and subsequent actions should be. In the instances where the terms are used, it states women as being impacted by climate change but without articulating mechanisms to address their vulnerability (Azeb, A. and Van Laerhoven, F., 2019).

Further, the Strategy identifies 41 adaptation options, which are further categorized under nine themes. Only one of these themes, social protection for high-priority groups, includes women and children. The remaining themes (capacity building and institutional coordination, information and awareness, crop and water management on farms, livestock, value chains and market development, sustainable agriculture and land management, natural resources conservation and management, disaster risk reduction) include no references to gender or women's issue.

Climate-Resilient Strategy for Water and Energy, (FDRE, 2015b)
The Climate Resilient Strategy for Water and Energy analyses the economic and social impacts of current climate variability to ensure economic growth and poverty reduction. To build climate resilience, it takes preventive measures for the impacts of future climate change in the water and energy sectors.

The Strategy, however, only includes few references to the impact of climate change and gender. Even though there is an overall statement that identifies the positive contribution of improved access to water on women's lives, it provides no detailed information on what will be done and how the changes will come about. Further, the vulnerability assessment does not consider gendered power relations, institutions, or other socio-economic drivers. Of its 11 strategic priorities, only one (the development of the gender action plan) reflects 0n women's issues (MoF, 2019).

On a positive note, the Strategy does recognize a few gender issues, including the impacts of lack of access to modern energy services on women's workloads, their participation in productive activities such as education and employment, their health and lack of access to clean water and sanitation. Moreover, although it has yet to materialize, the Strategy has committed to developing a gender action plan (MoF, 2019).

Climate-Resilient Strategy for Transport, (FDRE, 2015c) The Climate-Resilient Strategy for Transport sets the framework to deliver an integrated, modern transport system with a focus on multi-modal transportation and good customer service. The Strategy is completely gender-blind with regard to its contents, according to a review by MoF (2019).

Gender Equality Strategy for the Agriculture Sector (MoANR, 2017)
The limitations of female farmers are identified by the Strategy, and it proposes to address these through capacity building of staff on gender-sensitive planning, programming, and service delivery. The need to support the revision and implementation of land-related policies and to strengthen institutional structures and systems in Ethiopia is emphasized to increase the profitability and productivity of women in the agriculture sector. Meaningful participation of women in decision-making and partnership with other relevant ministries to promote gender equality are also among its strategic objectives.

Women's Development and Change Package and Strategy (MoWCA, 2017a,b)
The Women's Development and Change Package recognizes the limited access to extension services that female farmers have and highlights services that should benefit women, including input use, labor-saving technologies, participation in horticulture, nutrition-dense crop production, irrigation soil management and agro-processing.

The Women's Development and Change Strategy, on the other hand, lists a set of interventions related to ownership, access, and use of land. Among these are: encouraging sharecropping where women lack the required labor to cultivate their land, ensuring women obtain fair sharecropping agreements, assigning plots to landless women, and making women aware of their land ownership rights.

Ethiopia's National Adaptation Plan (NAP-ETH), 2019
Ethiopia's NAP was developed in 2017-2018. Its goal is to reduce vulnerability to climate change by building adaptive capacity and resilience (FDRE, 2019). A detailed gender analysis was done in 2019. The analysis identified three main issues that need to be considered in the implementation of the NAP-ETH: (i) gender differences in adaptation needs, opportunities, and capacities; (ii) equitable participation and influence in adaptation decision-making processes; and (iii) equitable access to financial resources and other benefits resulting from adaptation investments. The document also elaborates on actions to be taken to address these issues, with the aim of providing a roadmap to integrate gender considerations into the implementation of the NAP-ETH (FDRE, 2019). The NAP implementation roadmap was developed in 2020 and 5 implementation strategies which focus on agriculture and water; natural resources management; health, livelihoods, and social protection; climate services and adaptation technologies; and infrastructure are identified. Each implementation strategy identifies adaptation options with key activities and gender considerations (FDRE, 2020).

Gender Mainstreaming Strategy 2020-2023, CRGE Facility
A Gender Mainstreaming Strategy is developed by the CRGE Facility to address gender gaps and opportunities relating to its climate finance mandate. The Strategy's goal is to enable vulnerable women and men, young girls, and boys to improve their livelihoods, to raise their incomes and strengthen their resilience to climate change. The Strategy aims to achieve this through the creation of equitable and fair opportunities for men and women to support a paradigm shift to low-emission and climate-resilient development. It has four strategic outcomes, with associated outputs and activities, as well as a gender implementation plan. The strategic outcomes identified are:

1. Strengthened policies, institutions, and processes within the CRGE Facility and Executing Entities on the promotion of gender equality.
2. Enhanced gender mainstreaming capacities and strategy delivery within the CRGE Facility and Executing Entities.
3. Increased design of gender-responsive projects and programs in the CRGE Facility.
4. Increased participation of women in climate action decision-making.

Updated Nationally Determined Contribution (NDC), 2021
Ethiopia's updated NDC is aligned with the national Ten-Year Development plan, and it includes updated greenhouse gas emission projections. The updated NDC commits to increased mitigation to reduce economy-wide emissions by at least 68.8% by 2030 against the business-as-usual projection. It also specifies 40 adaptation interventions (FDRE, 2021).

However, a gender analysis shows that there are neither gender-specific intervention areas nor gender-disaggregated results and indicators in the updated NDC to ensure gender mainstreaming in the mitigation interventions. Even in the updated adaptation actions, of the 66 performance indicators tracking the performance of adaptation interventions, only 4 are gender disaggregated. The analysis indicates that areas identified for GHG emission reductions, particularly in agriculture, forest, and natural resources, have immense potential for gender inclusion; however, very few gender-specific actions are included. Financing being a key driver of effective implementation of gender-responsive adaptation and mitigation interventions, the analysis calls for an earmarked budget to implement gender-responsive activities (Bedaso, T., 2021) .

The Ten-Year Development Plan (2020/21 – 2030/31)
Ethiopia's 10-year Development Plan sets the government development agenda from 2020/21-2030/2031. In its social development plan section, the document states that due attention will be given to women's rights, representation and equitable access and ownership to resources. To this end, some of the targets include addressing the 44% gender gap in wages, giving land ownership right for 59.7% of women among those who do not have ownership rights, and increasing the proportion of women who have access to loans from 33% to 55%. The Plan also has a section on ensuring a climate-resilient green economy through development and conservation of the environment, forest, wildlife, and biodiversity (Plan and Development Commission, 2021).

The long-term low emissions development strategy (LT-LEDS)
Ethiopia launched its LT-LEDS in 2023. This is a strategy that countries are encouraged to produce as part of the Paris Agreement. It provides a long-term roadmap on decarbonization and climate resilience. These trajectories are expected to be used as benchmark for revised and updated NDCs. The document provides various scenarios to achieve net-zero and climate resilient development by 2050 (FDRE, 2023).

Even though it lacks details, the LT-LEDS recognizes the need for gender equality and social inclusion in climate action. Economic opportunities through green job programs and a more inclusive labor market are included in the strategy.

Institutional Arrangements
The Ministry of Women's Affairs was established in 2005, with structures at regional, woreda and sector department levels. The Ministry is mandated to oversee and coordinate the work of sectoral ministries in their efforts to address gender issues (JICA, 2006). To date, it has facilitated the development of various policies, including the Women's Development and Change Package, that identify gender issues relevant to climate change response interventions. The Ministry had different names over the years, and, in 2021, it was restructured as the Ministry of Women and Social Affairs.

Reports on the integration of gender and climate change show that there has been challenges in collaboration of the different sectors. In 2012, it was found that mainly due to limited human and financial capacity the Women's Affairs Departments within sectors were not actively contributing towards integration of gender in the context of the CRGE Framework (AU, 2012). More recently, in 2017, a study showed that the departments' involvement in policy and program development was week stating that it does not go beyond formality (Azeb, A. and Van Laerhoven, F., 2019). Even within Ministries such as the Ministry of Agriculture, where a gender mainstreaming manual was developed, at the zone and woreda levels the assigned gender focal persons were found to have no or very limited knowledge of gender issues (Azeb, A. and Van Laerhoven, F., 2019).

A 2020 scoping study conducted on the Climate and Gender Directorates of the Ministry of Finance and the Environment, Forest and Climate Change Commission showed that there is consensus amongst experts that gender-responsive climate change policy and program are critical for addressing climate change issues. However, the understanding of which gender issues need to be incorporated into the day-to-day operations of these departments, and how, varies across and within the consulted offices and officials, indicating the need to create a common understanding. Moreover, despite the interest in integrating gender within the climate change sector, a lack of institutionalization has severely deterred gender-responsive planning and implementation of program, accountability and monitoring, intra- and inter-sectoral coordination, and gender-equal decision-making on climate change issues (Mulugeta, M. and Lealem, M., 2020).

In December 2020, the CRGE Facility and the then Ministry of Women, Children and Youth (MoWCY) launched the National Community of Practice (CoP) for Gender Equality and Social Inclusion in Climate Change. Following several restructurings in the sector ministries, the CoP is currently co-chaired by the Ministry of Planning and Development and the Ministry of Women and Social Affairs. Members include sector ministries, non-governmental organizations, and development partners. In 2023, the second meeting of the COP was held, in which members worked on and approved the revised terms of reference and the 2023/2024 workplan. The specific objectives of the COP are to inform strategic decision-making; plan

harmonized and aligned investment programming, capacity development and implementation; advocacy and resource mobilization; and monitoring, evaluation, reporting and knowledge management (MoF, 2021b).

IV. Key Gender and Climate Change Issues at Project Sites

The project aims to create a holistic and integrated approach to enhance climate resilience and sustainable development in the targeted sites. The proposed initiatives include enhancing local level adaptation responses by strengthening climate risk reduction and adaptation planning; water security and climate resilience with an emphasis on women empowerment; climate smart agriculture and livestock rearing; and climate smart livelihood diversification.

The project will be implemented in six woredas of six selected regions. The woredas were selected based on their susceptibility to climate-related risks, their vulnerability to climate change, and their low ability to adapt to climate change. The selected sites are:

- Afar region, Awash Fentale woreda, two kebeles
- Amhara region, Mida Weremo woreda, three kebeles
- Central Ethiopia region, Fofa woreda, two kebeles
- Oromia region, Tullo woreda, four kebeles
- Somali region, Shabelay woreda, two kebeles
- Tigray region, Sewha Saese woreda, two kebeles

Following desk review, stakeholder consultations were conducted to gather relevant information, update and enrich the project development and validate the proposed activities. Two inclusive consultation events (October 2–3 and November 3–4, 2023) were organized to ensure inclusive engagement with women, pastoralists, and other vulnerable groups at federal, regional, and woreda levels. Further, kebele level consultations at all target woredas were carried out from February 17 – March 28, 2025. The field level consultations included focus group discussion, key informant interview, document review and field observation. Discussion groups included experts from relevant sector offices, health and education professionals as well as community representatives. Discussion sessions were organized separately for men and women to give them a chance to voice their ideas and concerns freely.

1. Awash Fentale woreda, Afar region

The Afar region is located in the north-eastern part of Ethiopia. It has an estimated population of about 1.9 million people (UNICEF 2019d). The region is one of the regions in Ethiopia with poor reproductive health indicators with only 50.7% of women receiving antenatal care at least once (Desalegn, M. et al, 2020). The region has a high fertility rate of 5.5 in 2016 (UNICEF 2019d). However, about 84% of births occur at home without close supervision by a skilled provider (Desalegn, M. et al, 2020). The region has the highest rate of teenage childbearing and lowest proportion of women who would like to limit childbearing (Desalegn, M. et al, 2020). The median age of first marriage is 16.4 years of age. Pregnancy and childbirth complications are the leading cause of death in Afar women aged 15-19 years. The number of women aged 15-49 who have undergone some form of female genital mutilation is about 98% (Desalegn, M. et al, 2020). One in five women are in polygamous union with 11% men having two or more wives (Desalegn, M. et al, 2020).

In the region child marriage is not outlawed and seem to be increasing since 2000 (Presler-Marshall, E. et al, 2022). Marriages in the region are arranged, and girls are married to their maternal cousins with no choice at all (Presler-Marshall, E. et al, 2022). Only 12% of sexually active young women use contraception and the region has the highest rate (23.4%) of adolescent motherhood in the country (Presler-Marshall, E. et al, 2022).

Because the communities in the region are nomadic and settle sparsely, access to education is quite low Presler-Marshall, E. et al, 2022). While most communities do not have schools, many of those that do have the school lack basic resources such as learning materials, teachers and drinking water Presler-Marshall, E. et al, 2022). Nationally it is reported that 20% of children aged 7-14 are out of school but in Afar it is 66%. Due to cultural factors girls have less access to education with enrolment rates being 11% for boys and 9% for girls Presler-Marshall, E. et al., 2022).

Access to income for women is mainly dependent on livestock and livestock products while in agro-pastoralist areas, women also engage in trading. Studies show girls and women are highly disadvantaged in terms of access to productive inputs and their chance to save and borrow even when it comes to their own earnings. The days of girls and women are filled with chores such collecting water and caring for their family; thus, lack of time limits their economic empowerment (Presler-Marshall, E. et al, 2022).

The Afar people are mostly pastoralist or agro-pastoralist and highly depend on livestock. Agro-pastoralism is increasing because of increased irrigation systems in the region and crops like sorghum, maize, barely, teff and cotton as well as honey production are among resources the community generates income from.

A decline in poverty has been recorded for afar in recent years, with a 32% decline between 2000 and 2016. People living below the national poverty line in 2015/16 were 24% while the people living below the food poverty line was 28.3%. Both Monetary and food poverty are worse in rural areas when compared to urban areas (FDRE, 2017).

According to the Mini-EDHS key indicator report of 2019 Afar has achieved many improvements in maternal health indicators, however, most of the rates are still under the national average (EDHS, 2019). Child malnutrition is a critical challenge in Afar with 43% prevalence rate of stunting. It is shown that 41% of children with mothers who has no education and 14% of children with mothers with higher education are stunted indicating mother's education has a role in child stunting (UNICEF, 2019). Girls who give birth at a younger age do not complete secondary school education limiting their life choices throughout the course of their lives (Desalegn, M. et al, 2020).

In the Afar region, access to good quality and quantity of food is at stake for women and girls as priority is given to men and boys (Balehey, S. et al, 2018). Women and girls eat what is left by husbands and sons. This becomes a critical challenge during drought where resources are scarce (Balehey, S. et al, 2018).

In Afar, women have limited access to wealth due to the traditional asset inheritance which does not entitle them to any kind of wealth including what they have earned and produced (Balehey, S. et al, 2018). Inequality in wealth starts at birth where female children are either totally excluded or at most receive only half of their male siblings. This inequality is also seen during divorce where women traditionally are not entitled to share any asset, while recent use of the Sharia laws entitle them to take only a third of the household asset (Balehey, S. et al, 2018). All these inequalities affect the survival ability of women during drought and other climate related stresses. Thus, women and girls are regularly affected by nutrition and sanitation related health problems (Balehey, S. et al, 2018).

Women are also excluded in household decision making which at times puts the health and wellbeing of women at stake (Balehey, S. et al, 2018). Women are not involved in rangeland assessment before migration, this means priority is given to what men believe are critical such as availability of grass, absences of livestock diseases and predators etc., and other factors important to women such as proximity to water and health centres are not taken into consideration leading to a lot of suffering to the women (Balehey, S. et al, 2018).

Women's contribution to household during drought times increases as they collect famine foods to feed their family and travel longer distances to fetch water (Balehey, S. et al, 2018). Therefore, with the lower nutritional attention they get a decline in health is seen in women in addition to their exposure to sexual harassment and violence (Balehey, S. et al, 2018).

Therefore, gender-based differences in vulnerability and adaptive capacity needs to be recognized for the development and implementation of gender-sensitive adaptation measures (Balehey, S. et al, 2018).

The target woreda in Afar region, Awash Fentale, has a total population of 70,496 (F= 32,929; M= 37,567). Two kebeles, Kebena and Dudub are selected for this project. The kebeles have a total area of 74,200 ha. The total population of these kebeles is 12,609 (F=7,644; M=4,965). There are 1,521 female headed households (FHHs) and 1,713 male headed households (MHHs) in the kebeles. In the past five years, the kebeles have been affected by flood and 593 people are being provided with support. There is shortage of clean drinking water sources and only 65% of the total population in each kebele have access to clean water. The sources of water available include river and deep wells. On average women walk for 5 and 6 kms each day and spend 3 and 4 hours/day to collect water in Kebena and Dudub, respectively. A total of 1,222 ha land is under small irrigation and 1,712 MHHs and 1,521 FHH benefit from these schemes.

2. **Mida Weremo woreda, Amhara Region**

The Amhara region is situated in the northwestern and north central part of Ethiopia. It is one of the four largest regions, with a population of 21.1 million. 84% of the population live in rural areas and are engaged in agriculture (UNICEF, 2018). Crops that are grown in the region include teff, barely, wheat, oil seeds, sorghum, maize, oats, beans, and peas (UNICEF, 2019a). Large number of livestock, 8,314,200 (27.9% of the national total), are found in the region (USAID, 2000). The region has various water resources, including Lake Tana, and several rivers that provide great potential for irrigation development (UNICEF, 2019a).

Although there has been consistent decline in monetary poverty, largely due to agricultural growth and benefits from program such as the Productive Safety Net, there is still a lot to be done to meet the SDG targets for the region. Over one-quarter (26%) of the population live below the national poverty line (the SDG target being 13%) and almost one-third (31%) live below the food poverty line (SDG target 16%).

The median age of 16.2 years for first marriage among women aged 20-49 years is the lowest in the country. The rationale of child marriage in the region relates to the belief that marriage reduces the risk that daughters engage in pre-marital sex, exposing them to sexually transmitted diseases and pregnancy while unmarried, which would lead to family disgrace and social stigmatization (UNICEF, 2019a).

As in most other regions of Ethiopia, Amhara women and girls are traditionally labelled as nurturers and caregivers; thus, childcare responsibilities often fall exclusively on them. 83% of first marriages are decided by parents and 64% of women stop attending school after marriage, with the main reason being that they are too busy with family life (UNICEF, 2019a).

As in other regions, Amhara women are often denied their share of inheritance when their parents or husbands die. It is also common for women to be excluded from decisions on common property in marriage and to be denied their due share during a divorce (UNICEF, 2019a).

Gender-based violence is high in Amhara region, with women aged 15-49 reporting psychological (26%), physical (22%) and sexual (10%) violence. Further, 65% of women and 46% of men believe that a husband is justified in hitting or beating his wife in various circumstances (UNICEF, 2019a).

The climate in Amhara region is affected significantly by weather variations: farmers face droughts, frost, hailstorms, flooding, and landslides. Localized flooding of fields by rainfall run-off is a frequent problem. It was estimated that more than 100,000 people were at risk of flooding and more than 25,000 people were likely displaced in 2018 (UNICEF, 2019a).

According to the 2016 Ethiopia Demographic and Health Survey (EDHS), 64% of households use improved drinking water sources in the region, with only about 17% of water sources being piped. The Ethiopia Socioeconomic Survey (ESS) 2017 shows that 37% of households spend 30 minutes or more reaching the nearest water source, fetching water, and returning to their dwelling. As in other parts of the country, women and girls are mainly responsible for fetching water. The availability and sufficiency of drinking water is 82% and 75%, respectively.

A study on gender mainstreaming in selected sectors in the Amhara region shows that, despite the existence of legal and policy frameworks, in practice gender mainstreaming is not being implemented. It is also not taken into consideration in the region's plans, implementation, monitoring and evaluation and budgeting. Therefore, more work is needed to see changes on the ground (Bishaw, A., 2015).

The target woreda in Amhara region, Mida Weremo, has a total population of 119,985 (F= 60,381; M= 59,604). Literacy in the woreda is low, 18% for men and 5% for women. Current school enrolment for boys is 75% and only 39% for female mainly because of early marriage, household responsibilities and gender-based violence.

Three kebeles, Tegora, Dengore, and A/Bayne are selected for this project. The kebeles have a total area of 12,348 ha. The total population of these kebeles is 13,518 (F=6,631; M=6,887). There are 871 female headed households (FHHs) and 2,127 male headed households (MHHs) in the kebeles. In the past five years, the kebeles have been affected by drought and 5,671 people are being provided with support. There is shortage of clean drinking water sources in the kebeles and only 30% of the total population in Tegora and Dengore kebeles and 38% in A/Bayne have access to clean water. The sources of water available include river, spring and hand dug wells. On average women and girls walk for 3 kms each day and spend 3 hours/day to collect water. Women and girls are exposed to gender-based violence while they travel to fetch water. They are also more exposed to water borne diseases. A total of 130.5 ha land is under small irrigation and 592 MHHs and 80 FHH benefit from these schemes currently.

The day-to day tasks of women and girls include household tasks such as cleaning, fetching water, collecting firewood, cooking, taking care of children and washing clothes, and farm-based tasks such as weeding, harvesting and livestock management. On the other hand, men and boys are responsible for farm-based tasks such as livestock herding, land clearing, ploughing, harvesting and post-harvest chores as well as community involvement.

The challenges faced by women include exclusion from household, community and political decision-making. Women in the kebeles are less educated, poor with fewer assets and depend more on natural resources for their livelihood. While they shoulder most household responsibilities, women get less attention and have poor nutrition leading to health complications.

Girls have lower performance at school and usually have difficulty continuing their education due to time constraint because of their household responsibilities and other cultural challenges including early marriage. Boys on the other hand face labour abuse which competes with their time to learn and study.

Some alternative livelihoods are already carried out in the kebeles with women mostly focusing on poultry production, vegetable and herbs gardens and petty trade while men focus on weaving, livestock fattening, plantation of woodlots, crafts as well as sand and stone mining. People with disability are also involved in petty trades, cattle keeping and metal works.

The climate risk awareness of the communities in the kebeles is indicated as medium for men and low for women and youth. Some of the climate adaptation and mitigation works underway in the kebeles include physical and biological soil and water conservation measures, use of improved crop varieties, preparation of compost, planting along the contour and agroforestry, water management and small-scale irrigation.

3. **Fofa woreda, Central Ethiopia region**

The central Ethiopia regional state was formed in August 2023 after a referendum. It used to be the northern part of the Southern Nations, Nationalities and Peoples' (SNNP) Regional State. The new region comprises East Gurage Zone, Gurage Zone, Hadiya Zone, Halaba Zone, Kembata Zone, Silte Zone, Yem Zone, Kebena special woreda, Mareko Special woreda and Tembaro special woreda.

Fofa woreda is located within Yem zone and has a total population of 57,101 (F= 28,200; M= 28,901) and a total of 8,887 households (of which 1,635 are FHH). Two kebeles, Semo Awasho and Upper Kesheli are selected for this project. Semu Awasho has 13 villages while Upper Kesheli has 10. The kebeles cover a total area of 2,476.48 ha. The total population of these kebeles is 7,342 (F=3,621; M=3,721). Of the total

population 4,954 (67.5%) are youth under the age of 36. There are 224 FHHs and 949 MHHs in the kebeles. A total of 688 HHs (of which 141 are FHH) in Semu Awasho and 485 HHs (of which 83 are FHH) in Upper Kesheli will be beneficiaries of this project.

Woreda disaster risk assessment has identified flood and landslide as the main risk for the target kebeles. The report has identified small size farm owners, elders, landless youth, disabled individuals, women and children as the most vulnerable to climate risks. FHHs are especially vulnerable because even if they have land, most do not have the required labour and need to have a contract with other men to farm their land with a 50% share agreement. This means, FHHs usually will need to find additional off farm activities including a need to migrate at times, to have enough income.

Towards this, trainings on mitigation and adaptation strategies including watershed development planning and livelihood diversification are provided to the community members. The woreda has a development plan which includes appropriate biological and physical water and soil conservation measures, expansion of traditional irrigation, increased backyard vegetable production, and expansion of potable water schemes.

The two target kebeles are adjacent to one another and share similar livelihood and agricultural practices. Farming is still traditional and uses oxen and family labour. The communities have agriculture support group to work together during critical farming periods such as ploughing, sowing, weeding, harvesting, trashing and irrigation. The main crops produced include wheat, Teff, maize and barley. *Enset* (false banana) is the staple food and the main drought tolerant backyard crop which is used during food shortage periods. Some households also produce vegetables like collard green, tomato and potato and fruits including apple. Even though the government provides improved seeds of maize and wheat (used by 19% MHH and 8% FHH the previous year), the community have their own informal seed bank, and most use their own seed sources. Livestock such as goat, sheep, horses and donkeys are also kept by the community.

When it comes to irrigation of farmland, 248 MHHs and 137 FHHs in both kebeles use animal and human labour to carry water from river and spring to water their field covering about 35ha land. Traditional river diversions are used to irrigate land covering about 4ha in Semu Awasho by 28 MHHs and 5 FHHs. Even though there are no written bylaws, there are cultural values and norms by which the elders of the community resolve issues related to water resource use and conflicts. The office of agriculture and development agents provide extension service on plant water requirement, land preparation, weeding practices etc. So far about 276 MHH and 142 FHHs have received such trainings in recent years.

Family members have different roles - crop production, *Enset* plantation, overall livestock management and making major household decisions are the duty of men. The women of the MHH are responsible to fetch water, prepare food including *Enset*, manage backyard vegetables, take care of children and are consulted in decisions made in the family. Even though there are no restrictions that are imposed, women have limited opportunity for information and technology. Girls help in cleaning around the house and fetching water while boys participate in managing livestock. At times the household work forces girls to drop out of school or disrupt their school attendance.

There are five water schemes in Upper Kesheli serving 3 villages and ten schemes in Semu Awasho serving 6 villages. These schemes provide access to clean water to 119HH (22.18%) and 249 HH (26.7%), respectively. These include protected and developed springs and shallow wells. Walking distance varies and can reach up to 3.5km and about 4 hours. Therefore, limited access and distances travelled to fetch water are among the challenges faced by households, especially women and girls who are responsible for fetching water.

The water schemes are owned and managed by water user association established by the community and has clearly defined bylaws. Members of the water user association (which are about 31.4% of the total households and 31.3% of FHH in each Kebele) contribute money for operation and maintenance of the scheme. The association has an executive body and up to 40% of the leadership position is that of women out of which 20% are from FHH. Technical trainings on the operations of the schemes have been given to 15 men community members. In addition, various trainings on water use and management, sanitation and hygiene etc. are provided to community members.

Each kebele has a health post and there is one health centre serving both kebeles. Clinical reports show 80% of the HHs are affected by waterborne diseases. Commonly registered diseases include Giardia, intestinal parasites, pneumonia and tuberculosis. Prevalence of pneumonia and tuberculosis can also be an indicator of food shortage. Lack of access to improved sanitation is another contributing factor to health problems in the kebeles with only about 20 HH in each kebele having access to improved latrine.

Regarding education, 72% (of which 13.5% are FHH), and 79% of HHs (of which 12% are FHH) have attended at least primary education in Semu Awasho and Upper Kesheli, respectively. However, long distance and migration in search of job opportunities have resulted in school dropouts. Informal adult education is also provided at the kebeles' adult education centres and 8.65% HH (less than 1% of FHH) and 11% HH (2.32% of FHH) from Upper Kesheli and Semu kebeles have benefited from it, respectively.

Community consultations are carried out at different times including for watershed development campaigns. usually, women's participation is about 30% out of which 80% are FHH showing women of MHH do not attend these consultations usually.

According to social norms, women cannot work in plant nurseries which limits their participation in the workforce. Furthermore, women do not inherit farmlands if they have brothers who are entitled for inheritance.

Average age of marriage is 18 for women and 25 for men. Women have rights to choose their own partners. There are reported cases of gender-based violence but women are increasingly aware of their rights and the protection they have through different laws and systems. Violence is reported to community police as well as a violence protection taskforce of the kebele. The protection taskforce comprises representatives of religious leaders, women, youth and village work support group and chaired by the kebele administration.

The communities have different community-based organizations including '*Edir'* which is a traditional social support organization. The members contribute money monthly to support one another. It also is used as a safeguard system by which they contribute cash or grain that will be kept for emergency responses. There are men-only and women-only *Edir* groups. However, the Edir is being used beyond its purpose of establishment and serves as an information hub through which weather information, climate risk awareness and safeguarding strategies are shared. 80-90% of the HHs are said to have weather information that guides their farming activities and minimize risks of erratic rain or lack of it.

There is a saving and credit group in each kebele where mostly women are members. The groups in the two kebeles have come together to create a saving and credit association with 172 households as members. Out of the total members 122 are women; and out of the 18 committee members 15 are women. Members contribute 30 birr per months and can borrow with a 12% interest rate. This is a good source of finance for those who want to purchase inputs or engage in small businesses.

There is one cooperative in each kebele within the woreda which supports communities to access agricultural inputs and creates market linkages. The cooperatives from the different kebeles have formed a union which sells products of the cooperatives and also facilitate purchase of fertilizers and seeds. Both the cooperatives and the union are dominated by men with very limited participation from women.

4. **Tullo woreda, Oromia Region**

Oromia is the largest region in Ethiopia, occupying approximately 34% of the land area and accounting for 37% of the population. The total population is over 37 million. Under-18s account for 54% of the population (CSA, 2017b). The fertility rate in Oromia is higher than the national average, with a total fertility rate of 5.4 compared to the national rate of 4.6 (CSA, 2016). The average household is also large, at 5.2 people per household compared to the national average of 4.8 people per household (CSA, 2017c).

Oromia has a diverse range of agro-ecological zones. Sedentary rain-fed agriculture and livestock production dominates in the highland areas while the lowlands are characterized by pastoralist communities who depend on livestock production (UNICEF, 2019b). The region is divided into 20 administrative zones, with 84% of the population living in rural areas (CSA, 2019). Oromia has experienced high and sustainable

economic growth, due primarily to growth in the agricultural sector; however, there are limited off-farm job opportunities in the region, especially for youth (UNICEF, 2019b).

Strong agricultural growth, positive results from the Productive Safety Net Program (PSNP), and implementation of pro-poor economic and social development policies and strategies have all contributed to an increased per capita income in the region (World Bank, 2015). The region succeeded in achieving a 16% decline in monetary poverty between 2004/05 and 2015/16 (FDRE, 2017). A poverty analysis study in 2015/16 found that the poverty headcount ratio in Oromia was 23.9%, just above the national average of 23.5 percent (FDRE, 2017).

Oromia region has the most repeated beneficiaries of relief food in Ethiopia, especially between 2016 and 2018 due to extreme droughts (UNOCHA, 2019). In 2022, the region had 792,686 internally displaced persons due to conflicts and climatic shocks (IOM, 2022).

The proportion of pregnant women who gave birth in the five years and who received antenatal care from a skilled health provider during their pregnancy is 71%, the fourth lowest rate in Ethiopia. Only 44% of births are assisted by a skilled attendant (doctor or midwife) and 56% of women give birth without any assistance during delivery.

There is high prevalence of malnutrition, with serious implications for social and economic development. In Oromia, 28% of child deaths are associated with under-nutrition (CSA, 2016), with 36% of children under 5 stunted, 5% wasted and 16% underweight (EPHI, 2019). Stunting is associated with low socio-economic status and mothers' educational attainment: the children of mothers with no education are more than two times more likely to be stunted than those whose mothers have completed secondary or higher education (EPHI, 2019).

The gross enrolment ratio (GER) and the net enrolment ratio (NER) for pre-primary education in Oromia are low (29.4% and 16.4%, respectively) and far below the national average of 40.7% and 23.9%, respectively. Only 46% of students complete the first cycle of primary education (grade 4) and the dropout rate in primary schools is 20%, higher than the national average of 17.5%. Some of the reasons for high dropout rates and grade repetition include demand for child labor by rural households, child marriage, abduction of girls, long distances to schools, internal migration due to climate change, drought, and conflicts (MoE, 2018).

About 17% of water sources in Oromia are piped and 63% of households use improved drinking water sources, marginally fewer than the national average of 65% (CSA, 2016). 28% of households spend more than 30 minutes bringing water to their houses compared with the national average of 32% - reflecting progress in water infrastructure and the availability of water sources. As elsewhere in the country, women and girls are mostly responsible for fetching water (UNICEF, 2017b).

Lack of water supply and proper facilities, as well as hygiene products in schools, are major challenges for girls, leading to girls missing (and some even dropping out of) school due to menstruation. 90% of schools never have water available and 100% of schools never have soap available. There is a clear need for a gender-inclusive approach to improving water supply, sanitation and hygiene infrastructure in schools, to address school absenteeism, performance and completion (UNICEF, 2017b).

Dependency on land and weather for agricultural and livestock production is a key vulnerability for many households in Oromia (World bank, 2015). Climatic shocks contribute to increased internal conflicts because of trans-boundary competition over resources, such as grazing land, arable land, and water (UNICEF, 2014).

There was an increase in the average median age of marriage in Oromia between 2000 and 2011; however, progress has since stagnated and currently stands at 17.4 years. There has also been a decline in child marriage rates, from 58% in 1991 to 48% in 2016 – but still well above the national average of 40% (CSA, 2016).

In coming decades, rising temperatures, extraordinary rainfall events and more intense and prolonged droughts and floods are projected (World Bank, 2010). The high prevalence of poverty, high rates of malnutrition, high population growth and low climate adaptive capacities increase vulnerability to climate change (World Bank, 2010). Women and girls experience greater risks, burdens, and impacts of climate change, as emergencies exacerbate existing gender inequalities (CEDAW, 2018). During climate change-induced emergencies, formal and informal protection mechanisms break down and human rights abuses increase, resulting in increased gender-based violence that affects women and girls disproportionately (UNICEF, 2019b).

As in most other regions of Ethiopia, Oromia Regional State has a patriarchal society in which men hold primary power in private and public life. Women and girls have traditionally performed their roles in the domestic sphere, and these activities are often considered inferior. Women and girls are labelled nurturers and carers, with the result that childcare responsibilities often fall exclusively on them (UNICEF, 2019b).

In line with the national average, in Oromia 35% of women (aged 15-49) decide for themselves to marry, while parents make the decision for 61% (CSA, 2016).

The target woreda in Oromia region, Tullo, has a total population of 200,656 (F= 97,920; M= 102,736). Four kebeles, Burka Jelala, Oda Kebena, Efa Bas, and Hunde Lafto are selected for this project. The kebeles have a total area of 5,132 ha. The total population of these kebeles is 24,013 (F=11,747; M=12,266). There are 878 FHHs and 4,126 MHHs in the kebeles. In the past five years, the kebeles have been affected by drought and flood and 5,477 people are being provided with support. There is shortage of clean drinking water sources and only 16%, 44%,39%, and 41.5% of the total population in Burka Jelala, Oda Kebena, Efa Bas, and Hunde Lafto have access to clean water, respectively. The sources of water available include river, spring and wells in Burka Jelala and spring in the rest of the kebeles. It is indicated that diarrhea, giardia, and worm related diseases are common in the Kebeles because of water insecurity. On average women and girls walk for 2.5, 2, 1.8 and 2.7 kms each day and spend 2.3, 2, 2, and 3 hours/day to collect water in Burka Jelala, Oda Kebena, Efa Bas, and Hunde Lafto, respectively. A total of 267 ha land is under small irrigation and 600 MHHs and 76 FHH benefit from these schemes.

In the household women and girls are responsible mainly for cooking, water Collection, child care, goat/sheep herding, cattle herding, poultry production, fire wood collection, other household chores, petty trade, and collection of animal dung, vegetable production, livestock feeding, weeding, goat rearing. Men and boys on the other hand are responsible for farming, land clearing, petty trade, work as daily labour, oxen fattening, livestock production

The major challenges faced by the communities include lack of fuel wood due to deforestation, access to potable water, lack of livestock feed, distance to fetch water, and access to market, soil erosion, shortage of cultivable land, lack of irrigation water, lack of improved seeds, erratic rain fall due to climate change and deforestation, over grazing, lack of improved fodders, and lack of improved breeds of livestock.

The climate risk level of awareness in the selected kebeles are indicated as medium for men and youth while it low for women.

5. **Shabelay woreda, Somali region**

The Somali regional state is located in the east and southeast part of Ethiopia. It is about 350,000 square kilometre and is the second largest region in the country after Oromia in terms of land mass. The total population is about six million with 16% under-five years of age and 64% between 0-19 years of age. The fertility rate was 7.2 in 2016 and is the highest in the country. The majority of the population are pastoralists, followed by agro-pastoralists; very few are sedentary riverine farmers and urban-based households. Sources of income include livestock and livestock product sales, crop sales, petty trade, firewood and charcoal sales and remittances from family members abroad (UNICEF, 2019e).

The region is among the four regions in the country that are identified as Developing Regional States due to high poverty prevalence and social indicators lagging behind the national averages. People living below

the national poverty line are 22.4% in 2016 while those living below the food poverty line were 25.5%. It is the only region where rate of urban people in poverty (23%) is higher than that of rural people (22%) and urban food poverty (29%) is also higher than rural food poverty (23%) (UNICEF, 2019e).

Somali region has high rates of malnutrition of children under the age of five; the region is faced with chronic food insecurity. The region has shown improvements in health infrastructure including mobile health and nutrition teams; however most maternal indicators are still below the national averages. Mothers who received antenatal care during their pregnancy from a health professional was 30.2% and those who delivered in a health facility were 26% and only 10% received postnatal care within 48 hours in 2019 (UNICEF, 2019e). Not much progress is seen in reducing the neonatal mortality rate, in 2016 41 deaths were recorded per 1,000 births.

Water is a scarce resource in the region, it has the lowest percentage (42%) of households accessing improved drinking water in the country. Except for four riverine zones, the main source of water supply is ground water. Breakdown of borehole-based water supply systems is common further complicating the water challenges the communities face. Since less than 20% of households report men as primary water collectors, the shortage as well as distance to access water has a gender dimension (UNICEF, 2019e).

Even though child marriage has improved in the region, the percent of women ages 20-24 years who married before age 18 was 50% in 2016, indicating there is still a long way to go (UNICEF, 2019e). The female genital mutilation is the highest in the country among women aged 15-49 at 99% (UNICEF, 2019e).

The Somali region is arid and semi-arid in the lower-lying areas, receiving 300 millimetres or less of rain while it gets more rainfall (400 – 600 millimetres) in the higher altitude areas. The region has few rivers where agricultural crop production is possible. The communities face water deficits for both human and livestock consumption. The pastoralists system which has flexibility and mobility as well as changing of herd composition has allowed the community to cope harsh challenges. However, a combination of different factors including population growth, environmental degradation and climate change affect the resource availability including pasture and water (UNICEF, 2019e).

The 2016 EDHS shows that 68% of women aged 15-49 decided themselves on their first marriage while for the remaining 32% decision was made by their parents. This is a high rate of independence in making decision compared to the rest of the country. 53% indicated that they stop attending school after marriage mainly due to the high demand of family life followed by refusal of husbands to their continued education. Most girls are married before age 18 and almost none of them (1.4%) use modern contraceptive methods (UNICEF, 2019e).

Of those women currently married and aged 15-49, 29% are in a polygynous union. Women however are not entitled to inheritance when parents or partners die or in divorce. They are also excluded from decision making in the household. On the other hand, only 12% of households receive some involvement from their husbands in household chores (UNICEF, 2019e).

Somali women and girls experience greater risks, burdens and impact due to climate change as emergencies exacerbate existing gender inequalities (UNICEF, 2019e).

Access to income for women is mainly dependent on livestock and livestock products while in agro-pastoralist areas, women also engage in trading. Studies show girls and women are highly disadvantaged in terms of access to productive inputs and their chance to save and borrow even when it comes to their own earnings. The days of girls and women are filled with chores such collecting water and caring for their family; thus, lack of time limits their economic empowerment (Presler-Marshall, E. et al, 2022).

The Somali region, similar to Afar, has not yet outlawed child marriage (Presler-Marshall, E. et al, 2022). 55% of girls aged 20-24 had married before the age of 18 (Presler-Marshall, E. et al, 2022). Girls however indicate that they choose their partners. Only 20% of sexually active young women use contraception. The region has one of the highest (18.7%) of adolescent motherhood in the country (Presler-Marshall, E. et al, 2022).

Because the communities in the region are nomadic and settle sparsely, access to education is quite low Presler-Marshall, E. et al, 2022). While most communities do not have schools, many of those that do have the school lack basic resources such as learning materials, teachers and drinking water Presler-Marshall, E. et al, 2022). Nationally it is reported that 20% of children aged 7-14 are out of school but in Somali it is 54%. Due to cultural factors girls have less access to education with enrolment rates being 23% for boys and 16% for girls Presler-Marshall, E. et al, 2022).

The target woreda in Somali region, Shabelay, has a total population of 343,850 (F= 168,718; M= 175,132). Two kebeles, Wooble and Biyo-Cade are selected for this project. The kebeles have a total area of 4,821 ha. The total population of these kebeles is 30,139 (F=13,550; M=16,589). There are 1,931 FHHs and 2,484 MHHs in the kebeles. In the past five years, the kebeles have been affected by drought and 3,292 people are being provided with support. There is shortage of clean drinking water sources and only 19% and 10% of the total population in Wooble and Biyo-Cade have access to clean water, respectively. The sources of water available include deep wells, seasonal rivers, springs and rain water harvesting. On average women walk for 3 and 2 kms each day and spend 2, and 1.3 hours/day to collect water in Wooble and Biyo-Cade, respectively. A total of 2,467 ha land is under small irrigation and 3,563 MHHs and 1,216 FHH benefit from these schemes.

In the kebeles women are mostly responsible for household chores including water and firewood collection and the girls held me cleaning houses, cooking and firewood collection. Women and girls also work in the farm mostly weeding. Men are responsible for farming and livestock management while boys are encouraged to focus on education. Women and girls are the least educated in the kebeles.

6. **Sewha Saese woreda, Tigray region**

Tigray region is located in the dry lands of northern part of Ethiopia with an estimated population of 5.4 million people. In 2018, Tigray had a higher percentage (34%) of female headed household compared to the national rate (25%). Though three out of four live in rural area and depend on agriculture, urbanization has increasingly become a priority with an annual rate of 4.6% (UNICEF, 2019f).

Even though the region has demonstrated impressive agricultural growth and pro-poor spending on basic services and social protection, the region still had the highest monetary poverty in the country in 2016. 13.5% of people live under the national poverty line and 16.5% live below the food poverty line. Women are more likely to live in poverty than men with 43% and 24% of women living in monetary and food poverty as compared to 22% and 11% of men, respectively (UNICEF, 2019f).

The region has progressed in several child and maternal health and nutrition indicators. In antenatal care the region has performed much better than the national average. This is stated to be due to a high regional priority given to maternal mortality (UNICEF, 2019f).

72.1% of households in the region use improved drinking water sources, which is the largest share of all regions and above the national average of 66%. However, still one third of households are located more than 30 minutes away from water sources. Like in other parts of the country the responsibility of fetching water fell on women and girls (UNICEF, 2019f).

There is still high level of sexual harassment and violence in the region. 65% of women believe a husband is justified in beating his wife while 31% men share the same opinion. Improvement is seen in early marriage in the region which was 43% in 2016. Female genital mutilation has also been decreasing in the region which is 24.2% and the lowest in the country (UNICEF, 2019f).

The region is vulnerable to climate stress and is highly affected by environmental degradation. Drought, hailstorms, floods and landslides put people at high environmental risk. In the low lands and degraded highland areas of the region, minimum agricultural production and scarcity of drinkable water are high challenges. Extreme temperatures and intense rainfall and droughts are projected to be major environmental challenges in the region in the coming years (UNICEF, 2019f).

In the region women and girls have limited mobility, fewer economic opportunities and less decision-making power due to socio-cultural factors. There is inequality between men and women when it comes to ownership and decision making. While women participation in politics is increasing grassroots participation remains low (UNICEF, 2019f).

A study done in parts of Tigray showed that the top climate-change related impacts that affect their livelihoods are drought (97%), flooding (76%), pests and disease (62%), and other hazards (39%). The impacts of climate-change were found to be more sever on female-headed households mainly due to their lack of resource access and control, lack of income and technology use and high dependence on natural resources. Some of the coping strategies identified in the area included water harvesting practices, soil and water conservation, irrigation, diversifying income sources and agricultural inputs and adjustment of planting dates and crop varieties (Assefa, E. and Gebrehiwot G., 2023).

The target woreda in Tigray region, Sewha Saese, has a total population of 66,004 (F= 34,305; M= 31,699). Two kebeles, Saesie and Koma Subuha are selected for this project. The kebeles have a total area of 10,143.62 ha. The total population of these kebeles is 15,726 (F=8,141; M=7,585). FHH in the kebeles are slightly higher than MHH - 1,698 and 1,627, respectively. In the past five years, the kebeles have been affected by drought and 13,624 people are being provided with support. There is shortage of clean drinking water sources and only 38% and 25% of the total population in Saesie and Koma Subuha have access to clean water, respectively. The sources of water available include hand dug wells, DW, SHW and spring development. On average women walk for 5 kms each day and spend 3 hours/day to collect water. A total of 133.5 ha is under small irrigation and 1,090 MHH and 493 FHH benefit from these schemes.

V. Sexual Exploitation, Abuse and Harassment

The Government of Ethiopia through its Ministry of Women and Social Affairs (MoWSA) has drafted a Women Empowerment and Gender Equality policy which has provisions for Gender Based Violence. The policy is currently under parliament review and once approved all public institutions including Ministry of Finance (MoF) are required to apply it.

The Ministry of Finance (MoF) has an employee code of conduct which states:

- Committing, attempting or facilitating conditions for sexual harassment, abuse, and/or violence, against a colleague or customer shall be penalized;
- Employees and heads shall not abuse their authorities and apply such authorities to get personal interests.

Further, in order to ensure Sexual Exploitation, Abuse and Harassment (SEAH) does not undermine the well-being of the communities and other stakeholders who will be involved in this project, guidelines are recommended to be in place. Specifically, the following potential risks are identified along with recommended mitigation actions:

1. Lack of awareness of what SEAH constitutes and how it needs to be addressed
   Create awareness on prevention, handling and monitoring of SEAH in collaboration with MoWSA and its regional and woreda level offices. This will be done to all those involved at federal, region and woreda levels by having dedicated sessions during project implementation team meetings.

2. Risk of SEAH during project delivery including trainings, irrigation system placements etc.
   - Put in place a screening process to identify project activities that might have high risk of SEAH.
   - Ensure any contracts to be signed between the project and partners (including project personnel) contain SEAH clauses.

3. Risk of violence against women within household due to increased women empowerment
    - Have a dedicated SEAH sessions during community consultations including women-only consultations.
    - Ensure they are clear on who to contact (and how) in case of any incidence.

4. Lack of reporting system
    - Develop a Grievance Redress Mechanism for the project and ensure all stakeholders are aware of it.
    - Ensure the reporting mechanisms are simple and safe.
    - Ensure all stakeholders including contracted partners, project staff, government counterparts are required to report suspected or actual SEAH cases.
    - Establish a safeguarding team at the project management level at the beginning of the project.
    - Assign SEAH focal point both within the communities, project staff and women and social affair offices at the woreda level who will assist in reporting cases to the safeguarding team; this will support smooth communication and provide a sense of security to community members.
    - Make different channels are available for reporting including telephone, in-person, police, community elders etc.
    - The safeguarding team to advise on how to resolve reported cases and refer it to the police if necessary.
    - All SEAH reports will be kept confidential to protect those involved.

5. Lack of follow up and proper documentation
    - As part of its project monitoring, the AE will monitor the proper follow up of reported cases and how they are being kept.
    - Reported cases will be included in the project report.
    - Lessons learned through this process will be documented and be used to improve the project processes as well as future projects and programs of the AE.

VI. Recommendations

This gender assessment and gender action plan is prepared based on information from the available literature and stakeholder consultation. Based on the challenges identified and prioritized during the stakeholder consultation, the following actions are recommended to contribute towards the empowerment of women and female headed households.

1. Project Implementing Team – Gender expertise

The CRGE Facility gender specialist will support the project coordinators at the federal level and provide oversight and guidance to ensure the implementation of the gender action plan (GAP).

Sector ministries coordination team will include a gender expert. A representative from the women and social affairs directorate of the ministries will be assigned to support and follow up on the project delivery focusing on the gender action plan.

The project officers at the region and woreda level will work with sector bureau and offices including the women and social affairs departments to implement the project. The assigned gender experts will be responsible to follow up the day-to-day implementation of the project focusing on the GAP and will have a necessary budget to support the project.

2. Consultations

All project consultations should take into consideration the importance of inclusive participation (with at least 50% of women participation of which roughly equal representation by women of FHH and MHH). Consultations should present and discuss the project activities, gender action plan, SEAH, roles and responsibilities of various stakeholders and the progresses made, and challenges faced. It should also be used as a platform to sensitize men and boys in gender issues and ways to support women and girls in

their households. Any lesson learned through this process will inform the project implementation throughout the life of the project.

Led by woreda and region project officers, and the region and woreda gender office representatives, at least one women-only consultations per year will be organized at the project sites. This will enable women not only to voice their needs, ideas and challenges freely but also helps them to fully understand what their roles, responsibilities and rights are as members of the different cooperatives, including what they can do and whom to contact in case of SEAH incidents.

3. Access to irrigation and potable water

Access to clean drinking water and irrigation to increase productivity and decrease burden on women and girls, enhance school attendance as well as reduce health risks were among the priorities of the communities.

To ensure inclusive management and benefit, water user groups should make sure that 50% of the members and 33% of the executive committee are women from both FHH and MHH. This is to ensure, that women are part of the decision-making process and that irrigation activities include women priorities.

4. Training

The project should carry out needs assessment and provide a number of trainings to make sure implementing personnel as well as beneficiaries have the capacity to fully deliver and benefit from the project. The following proposed trainings were confirmed as priorities during consultation:

- Technical and leadership trainings should be organized for elected officers (irrigation and water user groups) based on capacity needs
- Financial Literacy training should be organized for cooperative officers with additional training for women officers and members.
- Trainings targeting women specific needs, based on capacity needs, should be delivered for women officers and members.
- Region Women and Social Affairs bureau in collaboration with the CRGE facility to provide guidance for project delivery personnel (including region and woreda officers and key federal, region, woreda and kebele government offices) on how to deliver the GAP and align with the AF gender policy
- Increased participation of women in all vocational training programs for local technicians of the project

5. Lessons / knowledge sharing

Gender results, challenges and gaps identified through the project implementation should be documented and shared to inform subsequent initiatives.

6. Grievance

There should be a safeguard desk/committee established for the project with both men and women as part of the team responsible for receiving grievances. The grievances should be recorded and reported. If possible existing structures should be evaluated and used rather than creating a parallel system.

7. Monitoring and evaluation

Project activity and M&E reports include sex disaggregated data and gender results are evaluated and reported.

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Part II: Gender Action Plan

No.	Outcomes and Outputs	Activities	Indicators & Targets	Timelines			Responsible Body	Cost	Budget line
				Yr1	Yr2	Yr3			
	Project Impact: Improved resilience of communities and ecosystems to climate challenges through promotion of sustainable adaptation strategies, strengthening local climate governance and gender equality, fostering sustainable livelihoods.								
1	**Component 1:Strengthening Climate Risk Reduction and Adaptation Planning at the local level**								
	Outcome 1: Empowered communities and stakeholders, proactive climate adaptation actions, climate-responsive decision-making, ownership of climate resilience.								
1.1	Gender disaggregated data for current status of women's and FHH's level of participation under each component at different regions/woreda are not available	Establish baseline	Baseline established for each activity in the GAP, for each region, by second quarter of first year of implementation				project implementing team + CRGE Facility	8,000.00	Budgeted under project budget 1.3.1
1.2	Output 1.1 Increased awareness and capacity of communities and local experts on climate risk vulnerabilities assessment and climate smart planning	Conduct inclusive climate risk awareness campaigns	At least 50% of participants from communities are women (both from MHH and FHH)				project implementing team	26,777.10	Budgeted under project budget 1.1.1
			Community consultations are held at times and places that are conducive to women participation				project implementing team		
			Representatives from the region, woreda and Kebele gender offices are actively engaged				project implementing team		
			All event reports show gender disaggregated and FHH/MHH proportion data of participants				project implementing team		
		Conduct inclusive community engagement and participatory Vulnerability Assessment	At least 50% of participants from communities are women (both from MHH and FHH)				project implementing team	13,621.05	Budgeted under project budget 1.1.2
			Conduct women-only and men only discussions				project implementing team		
			Community consultations are held at times and places that are conducive to women participation				project implementing team		

			Representatives from the region, woreda and Kebele gender offices are actively engaged				project implementing team		
			All assessment reports show gender disaggregated and FHH/MHH proportion of outcomes				project implementing team		
1.3	Output 1.2 Strengthened capacity of local authorities and stakeholders to effectively engage in climate risk reduction and adaptation planning	Capacity-building workshops for local authorities and stakeholders	All relevant women experts at region, woreda and kebele level are included in the capacity building events				project implementing team	19,982.40	Budgeted under project budget 1.2.1
			All relevant team members at different levels will attend at least one training on gender-inclusive climate actions.						
			Representatives from the region, woreda and Kebele gender offices are actively engaged				project implementing team		
			All capacity building reports will have gender disaggregated data of participants				project implementing team		
		Mainstreaming gender-responsive climate adaptation into development plan	Each development plan clearly indicates gender-responsive adaptation strategies				project implementing team	12,889.20	Budgeted under project budget 1.2.2
			Plans are endorsed by communities through public consultation				project implementing team		
			Plans are endorsed by women beneficiaries at women only consultations (see 2.3.1)				project implementing team		
1.4	Output 1.3 Enhanced monitoring, supervision and safeguard management capabilities, at national, regional and woreda levels	Project Management, M&E	Project activity and M&E reports review GAP progress and include sex disaggregated and FHH/MHH proportion of data				project implementing team + CRGE Facility	23,709.25	Budgeted under project budget 1.3.1
			At least 50% of participants during community update meetings are women				project implementing team		
			Women and social affair office representatives from the woreda or kebele are part of the M&E process				project implementing team		
			Annual review workshops will have a dedicated time to review GAP progress				project implementing team		
2	**Component 2: Water Security, Climate Resilience, and Women Empowerment**								
	Outcome 2: Improved agricultural productivity, reduced vulnerability to climate risks, enhanced gender equality, increased water security								

2.1	Output 2.1 Improved access to clean water sources	New inclusive potable Water Source Development and Protection	Participatory consultation and mapping during design phase of water infrastructure and DRE systems involve 50% participation of women				project implementing team	27,227.90	Budgeted under project budget 2.1.1
			At least 30% of beneficiaries are FHH				project implementing team		
			Survey shows at least 50% by mid-term and 100% by end of project, of the Female beneficiaries in the project areas report better access to potable water				project implementing team		
			Women and girls in the project areas report reduced burden in fetching water				project implementing team		
		Inclusive existing water Infrastructure Upgrade	At least 50% of community trainees on sustainable water management and DRE systems are women				project implementing team	118,850.60	Budgeted under project budget 2.1.2
		Training for local technicians and operators	At least 35% of trainees are women by mid-term with the aim to reach 50% by end of project				project implementing team		
		Formation/strengthening of water users' association (WUA)	At least 50% of members are women (both from MHH and FHH)				project implementing team		
			At least 33% of executive committees are women				project implementing team		
			users' association bylaws reflect 50% female membership				project implementing team		
			water users' association bylaw puts provisions to ensure women's membership and leadership positions are compatible with women's other responsibilities				project implementing team		
			Number and proportion of female representatives retained annually at a minimum of 50%				project implementing team		
			All elected female members and officials are given targeted training				project implementing team		
2.2	Output 2.2 Enhanced agricultural water use and reduced climate-related risks	Install small scale irrigation system and storage tanks; upgrade	All beneficiary households receive the necessary training to properly use the irrigation systems				project implementing team	148,848.00	Budgeted under project budget 2.2.1

		water storage infrastructure	At least 50% of FHH in the project area are beneficiary and report capability of operating the irrigation systems				project implementing team		
			At least 70% of the FHH beneficiaries report improvement of services from DAs				project implementing team		
2.3	Output 2.3 Strengthened skills and participation of women in water management and agriculture	Women-Centric Capacity Building	Capacity need assessment (technical, leadership, financial etc.) carried out on women beneficiaries				project implementing team	127,860.00	Budgeted under project budget 2.3.1
			All women from beneficiary households in the kebeles are included in the identified training				project implementing team		
			At least 50% of the female participants report application of the training to support their livelihood				project implementing team		
			Women only consultations held to discuss various aspects of the project including formation of women-led community groups, different training, participation in WUA etc.				project implementing team		
		Gender-Responsive Awareness Campaigns/consultations	All beneficiary households including all FHHs in the kebeles are included in training/campaigns/consultations				project implementing team	153,030.00	Budgeted under project budget 2.3.2
			Male and female from MHHs attend consultations together or take turns				project implementing team		
			At least 50% of women from MHHs report improved situations in decision making on household spendings, asset management, access to information and work opportunities etc.				project implementing team		
3	**Component 3: Climate Smart Agriculture**								
	Outcome 3: Enhanced agricultural and livestock resilience, increased productivity, reduced greenhouse gas emissions, strengthened rural livelihoods.								
3.1	Output 3.1: Increased resilience through diverse crop varieties	Climate resilient crop selection and diversification	At least 50% of the beneficiaries and trainees are women from both FHH and MHH				project implementing team	69,063.00	Budgeted under project budget 3.1.1
			All FHH households report accessibility of community-based seedbank				project implementing team		
3.2	Output 3.2 A sustainable and resilient livestock sector through improved health,	Provision of improved drought-tolerant forage seeds	At least 50% of FHHs in each kebele receive improved seeds				project implementing team	30,292.40	Budgeted under project budget 3.2.1a

	increased productivity, and adaptability of the herds	Forage development and utilization (Capacity building)	At least 50% of the beneficiaries and trainees are women from both FHH and MHH				project implementing team	10,031.80	Budgeted under project budget 3.2.1b
		Improved livestock husbandry practice introduction	At least 50% of the beneficiaries and trainees are women from both FHH and MHH				project implementing team	26,868.60	Budgeted under project budget 3.2.1c
3.3	Output 3.3 Sustainable land use, protected ecosystems and enhance agricultural productivity	Establishment of Nurseries	At least 50% of the employees in the nurseries are women from FHHs and MHH in the kebeles				project implementing team	153,100.80	Budgeted under project budget 3.3.1
			At least 50% of participants on nursery management, soil conservation and NRM trainings are women				project implementing team		
3.4	Output 3.4 Improved decision-making based on weather information	Weather information dissemination in local language (with SMS texting option)	At least 50% of beneficiaries trained on how to use information disseminated through their mobile devices are women of which atleast 20% are from FHH				project implementing team	4,489.30	Budgeted under project budget 3.4.1
			Mechanisms put in place for those without mobile devises to access timely weather updates				project implementing team		
			At least 50% FHHs and women in MHHs in the kebeles report better access to information				project implementing team		
4	**Component 4: Climate Smart Livelihood Diversification**								
	Outcome 4: Reduced reliance on subsistence farming, steady revenue streams, enhanced economic resilience, improved crop pollination, and biodiversity.								
4.1	Output 4.1 Successful establishment and management of diversified activities, leading to increased income generation and reduced reliance on a single source of income	Identify Gender responsive and socially inclusive livelihood Diversification option and implementation	Conduct assessment of appropriate and inclusive livelihood diversification options				project implementing team	787,720.50	Budgeted under project budget 4.1.1 and 4.1.3
			At least 40% of beneficiaries are women in MHH; At least 30% of beneficiaries are women from FHHs; At least 30% beneficiaries are youth; people with disabilities will be given priority in all categories				project implementing team		
			At least 70% of the beneficiaries from each category report improved income as a result of the additional livelihood activity				project implementing team		
		Technical Training and knowledge sharing platforms created	All relevant women experts at woreda and kebele level are included in the capacity building / knowledge sharing events;				project implementing team	175,357.70	Budgeted under project budget 4.1.2

			At least 80% of participants are women including those from FHHs				project implementing team		
			Lessons from the project's gender responsive actions documented and shared				project implementing team		
4.2	Output 4.2 Enhanced economic viability of diversified activities, leading to improved income and better market access for community members	Promotion of Market Linkages	At least 80% of the beneficiaries of diversified livelihood and market linkages are women				project implementing team	118,203.40	Budgeted under project budget 4.1.3
			At least 70% of the beneficiaries, report improved income as a result of market linkages created				project implementing team		
5	**Sexual Exploitation, Abuse and Harassment (SEAH)**								
5.1	Mechanism in place to address SEAH incidents	Ensure project is prepared for potential SEAH incidents at each region	Dedicated SEAH sessions during project team meetings, community and women consultations				project implementing team	3,210.65	Budgeted under project budget 1.3.2
			Safeguarding committee and SEAH focal points established, using existing structures where available				project implementing team		
			Checklist produced to identify/screen high risk project activities				project implementing team + CRGE Facility		
		Total						**2,051,133.65**	