

**INITIATIVE FOR CLIMATE ACTION TRANSPARENCY (ICAT)
PILOTING OF ICAT'S AGRICULTURE GUIDANCE
IN ETHIOPIA'S AGRICULTURE SECTOR**

**POLICY ASSESSED: COMMUNITY BASED PARTICIPATORY
WATERSHED DEVELOPMENT GUIDELINE**

**PROGRAM ASSESSED: SUSTAINABLE LAND
MANAGEMENT PROGRAM III (SLMP III)**

**ASSESSMENT REPORT
V.3**

October 2019

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Contents

1. Introduction	2
2. ETHIOPIA'S AGRICULTURE SECTOR	3
3. OBJECTIVE OF THE ASSESSMENT	7
4. APPROACH AND METHODOLOGY	8
4.1 Steps of the assessment	8
4.2 Approach	10
4.3 Methodology	10
5. POLICY AND PROGRAM DESCRIPTION	12
6. IDENTIFYING IMPACTS: THE CAUSAL CHAIN	14
7. GHG ESTIMATION	20
7.1 About the GHG Estimation	20
7.2 Estimating the baseline scenario and emissions	24
7.3 Estimating GHG impacts ex-ante	26
8. PERFORMANCE MONITORING PLAN	28
9. REFERENCE	30
Annex I: Attendance sheet from stakeholder participation	31
Annex II: Summary of related projects	33

1. Introduction

This document is a pilot assessment of the ***Agriculture Guidance for assessing the greenhouse gas impacts of agriculture policies: May 2018, prepared for the Initiative for Climate Action Transparency (ICAT)***. The assessment was conducted in Ethiopia with a specific focus on the Climate Resilient Green Economy (CRGE) Strategy and the agriculture sector. In addition, one national policy titled ‘Community Based Participatory Watershed Development Guideline’ and one national program titled ‘Sustainable Land Management Program III (SLMP III)’ were selected and assessed.

The report has the two parts. The first part gives introductory information regarding the assessment, which includes sector background, assessment objectives, the approach followed and methodology adopted. Part two focuses on the assessment result. The result presented includes policy/program description, impact identification, GHG estimation and performance monitoring plan.

Echnoserve Consulting PLC conducted the pilot study in close collaboration with the Ministry of Agriculture with technical support from Verra and GHG Management Institute. Daniel Fikreyesus led the assessment and Messay Sintayehu, Solomon Gizaw, Bayu Nebsu and Abdulrezak Hussen of Echnoserve served as researchers. The CRGE Directorate at the Ministry of Agriculture had been the main counterpart from the government agency. Berhnau Assefa and Tamiru Assefa from the Ministry of Agriculture also provided input.

The assessment was conducted between September and October of 2019. This is the third version of the document prepared after feedback from Verra and GHG Management Institute as well as consultation with the Ministry of Agriculture.

2. ETHIOPIA'S AGRICULTURE SECTOR

Agriculture is the backbone of the Ethiopian economy. Crop production makes up 60 percent of the sector's outputs, whereas livestock accounts for 27 percent and other areas contribute 13 percent of the total agricultural value added. Small-scale farmers who practice rain-fed mixed farming; traditional technology, low inputs and low output production systems dominate the system. Ethiopia has varied agro-climatic zones and they traditionally classify them as dega (cool), woina dega (temperate) and qolla (low land; warm climate). This diversity makes it a favorable region for growing a variety of crops.

Ethiopia ranks top of the list of African countries with large livestock population. Even though the livestock wealth is very large, its contribution to the agricultural GDP is minimal. The role played by livestock in the economy of Ethiopia, as in many developing countries, is varied but substantial. Livestock contribute to the production of food (meat, milk, eggs and blood), industrial raw materials (wool, hair, hides and skins), input for crop production through draught power and manure. Livestock also contributes to export earnings (live animals, skin and hides). They also generate cash income, which can be used to purchase food grain, seeds, fertilizer and farm implements.

Agricultural activities have a major impact on the climate. It is estimated that the agriculture sector contributes approximately 19 to 29% of total global anthropogenic emissions (on a CO₂ equivalent basis). The same scenario applies in Ethiopia, where the sector contributes one of the largest GHG emissions. In order to respond to the growing threat of climate change and contribute to GHG reduction, the Government of Ethiopia had prepared the Climate Resilient Green Economy (CRGE) strategy in 2012 and has been implementing several programs and projects.

Government Response: Climate Resilient Green Economy Strategy

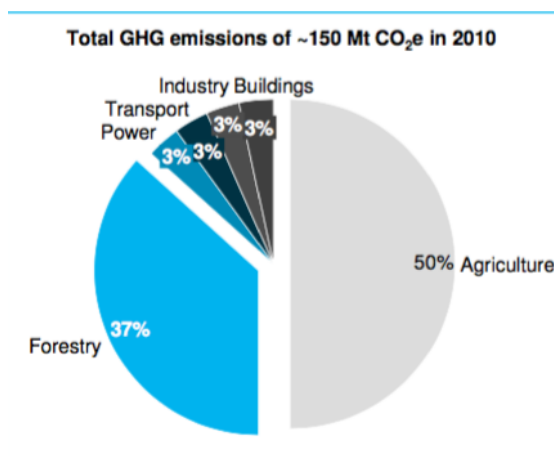
Ethiopia is recognized as a global leader on climate action with one of the first country to product a green economy strategy with the preparation of CRGE in 2011. Ethiopia has prioritized the role of natural capital to help drive and protect growth and prosperity, and help manage climate risks for greater resilience. However, Ethiopia's strategic response had started much earlier with the preparation of National Adaptation Programmes of Action (NAPA). The Ethiopian Environmental Protection Authority (now the Ministry of Environment Forestry and climate change) issued the Climate Change National Adaptation Programmes of Action (NAPA) in 2007. The NAPA identified priority actions that integrate climate change adaptation actions with national development policies. The NAPA process in Ethiopia identified arid and dry sub-humid areas of the country as being most vulnerable to drought; in addition, agriculture was identified as the most vulnerable sector where small-scale rain-fed subsistence farmers and pastoralists are identified as the most at risk.

From 2007-2011 the country has progressed significantly in articulating its climate change policy objectives with the aim of keeping development objectives on track. Starting with the identification of 10 priority adaptation projects under its National Adaptation Plan for Action (NAPA) in 2007 - to the preparation of the of the Ethiopian Programmed of Adaptation to Climate Change (EPA-CC) in 2010, which deals with 25 issues and spells out the need to mainstream climate change into all spheres of development planning and implementation, and the submission of 75 Nationally Appropriate Mitigation Actions (NAMA) in 2010 to the UNFCCC. Since then, the Government of Ethiopia has initiated the Climate Resilient Green Economy (CRGE) strategy to protect the country from the adverse effects of climate change and to build a green economy that will help realize its ambition of reaching middle income status before 2025. Following the conventional development path would, among other adverse effects, result in a sharp increase in GHG emissions and unsustainable use of natural resources. Hence addressing the issue climate change would be vital if Ethiopia is to break out of the poverty trap and achieve its national ambition to become a middle-income country by 2025.

The CRGE initiative follows a sectoral approach and has so far identified and prioritized more than 60 initiatives, which could help the country achieve its development goals while limiting 2030 GHG emissions to around today's 150 Mt CO₂e. Of the 150 Mt CO₂e in 2010, more than 85% of GHG emissions come from the agricultural and forestry sectors. In agriculture, GHG emissions are attributable to livestock and crops. Livestock emissions are estimated to amount to 65 Mt CO₂e in 2010 – more than 40% of total emissions today. The cultivation of crops contributes to the concentration of greenhouse gases mainly by requiring the use of fertilizer (~10 Mt CO₂e) as well as by emitting N₂O from crop residues reintroduced into the ground (~3 Mt CO₂e).

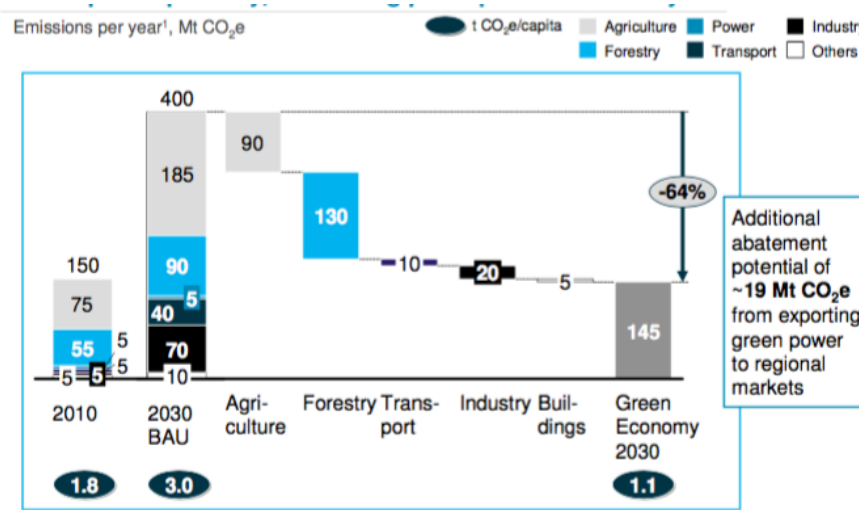
Based on the CRGE, Ethiopia's GHG emission in 2010, which is considered the base year, was 150 Mt CO₂e and agriculture contributes about 50% of the GHG emissions.

Figure 1: 2010 Ethiopia's GHG emissions



Looking at business as usual scenario, Ethiopia’s GHG emissions is expected to increase to 400 Mt CO₂e by 2030; however, the CRGE has laid out a strategy to reduce that by 250 Mt CO₂e. From the 250 Mt CO₂e about 90 Mt CO₂e or 36% is expected to come from the agriculture sector.

Figure 2: Baseline, BAU and projected GHG reductions



Agriculture sector CRGE strategy is divided into two broad categories of livestock and soil. The focus of the CRGE strategy in the crop and soil sectors is to increase the productivity of farmland rather than expanding the amount of land in use. Specifically, the CRGE strategy affirms a commitment to the following goals:¹

- Intensify agriculture through usage of improved inputs and better residue management resulting in a decreased requirement for additional agricultural land that would primarily be taken from forests,
- Create new agricultural land in degraded areas through small-, medium-, and large-scale irrigation to reduce the pressure on forests if expansion of the cultivated area becomes necessary,
- Introduce lower-emission agricultural techniques, ranging from the use of carbon- and nitrogen-efficient crop cultivars to the promotion of organic fertilizers. These measures would reduce emissions from already cultivated areas.

The livestock initiative was designed with multiple levers:

- Enhancing and intensification of diversifying animal mix;
- Value chain efficiency improvements (pastoralists);
- Value chain efficiency improvements (farmers);

¹ Federal Democratic Republic of Ethiopia, *ibid.*

- Mechanization (small scale);
- Mechanization (large scale); and
- Rangeland and pastureland management.

3. OBJECTIVE OF THE ASSESSMENT

The general objective of this assessment is to pilot test the Agriculture Guidance for assessing the greenhouse gas impacts of agriculture policies: May 2018, prepared by Initiative for Climate Action Transparency (ICAT).

The Government of Ethiopia developed the CRGE Strategy in 2012 but has not developed sector-specific policies to move the mitigation actions forward. Rather, it has taken project and program level approaches to implement the mitigation actions. In addition, the programs and projects designed are not specifically designed to tackle GHG reductions but productivity, food security and livelihood improvement. However, as mitigation and adaptation actions in agriculture sector are closely blended, these interventions are also expected to provide GHG mitigation in agriculture sector.

The objective of this pilot is to assess current and future potential GHG mitigations from selected projects and programs. By doing so, the pilot is expected to provide support into:

- 1) Improving program and project design and implementation, assess financing and inform policy selection as well as
- 2) Feed into the ICAT on the current guideline to further enhance it.

The specific objectives include:

- To describe the policy and program assessed
- To describe the impact and effect of the policy and program
- To estimate GHG impact of the policy and program assessed

Our approach on the piloting of the Agriculture Guidance will be to look at ex-ante ***(before) policy implementation.***

4. APPROACH AND METHODOLOGY

4.1 Steps of the assessment

The steps followed in the assessment include:

1. Engagement with Ministry of Agriculture
After a brief concept note was prepared, a discussion was held with the MoA on the utility and feasibility of the study. MoA provided input on the concept note and endorsed the study with support letter. The CRGE Directorate at the Ministry of Agriculture facilitated the engagement.
2. Identification of agriculture sector mitigation actions
The concept note also included a list of agriculture sector mitigation actions and the second step was narrowing down the mitigation actions that the pilot assessment would assess. This was done considering the resources, time, and availability of information.

The actions identified for the assessment are:

- Enhancing and intensification of diversifying animal mix;
- Value chain efficiency improvements (pastoralists);
- Value chain efficiency improvements (farmers);
- Mechanization (small scale);
- Mechanization (large scale); and
- Rangeland and pastureland management.

However, the work has evolved since the first report based on discussion with MoA and had focused only on one action.

3. Identification of policies/programs/and projects
Following the identification of the mitigation actions, agriculture sector policies, programs and projects were identified along the actions that the pilot will assess. Ethiopia has taken a programmatic approach to address GHG reduction and thus the focus was identifying national level program and projects.

Initially eight projects/programs were identified. The eight projects initially looked at were:

- SLMP II (Sustainable Land Management Project)
- AGP II (Agricultural Growth Program)
- PASDIP (Participatory Small scale Irrigation Development Programme)
- PSNP IV (Production Safety Net Programme)
- LFSDP (Livestock & Fisheries Sector Development Project)
- RPLRP (Regional Pastoral Livelihood Resilience Project)

- DRSLP (Drought Resilience and Sustainable Livelihoods Programme in the Horn of Africa)
- DRDIP (Development Response for Displacement Impacts Project)

However, after review of the programs some were taken out due to lack of information and documents as well as duplication of activities within the programs/projects.

A final two projects were chosen for a complete pilot assessment:

- SLMPII (Sustainable Land Management Project)
- AGP II (Agricultural Growth Program)

Though the focus had been SLMPII, the assessment also changed into policy approach and the team looked at the Watershed Development Guideline which has been functioning as the standard used the Ministry of Agriculture for watershed development under different programs and projects.

4. Preparation of causal chain
After national level projects and programs were identified, causal chains were prepared for the different programs. A discussion was held on the initial draft of the causal chains with the Ministry of Agriculture and expert input was also given from GHG Management Institute. The Causal Chain prepared for SLMP had been further enhanced through stakeholder engagement.
5. Preparation of program/project checklist
Program/project checklist was then prepared for list of projects that are being assessed. While the first draft of the report had checklist for several projects, this report has only checklist for SLMPII.
6. Preparation of report
The preparation of the report started by reviewing the guidance and reporting outline provided in the Agricultural Sector ICAT guideline, chapter 11. After minor customization of the recommended outline, version 1 of the report was prepared and shared to Verra and GHG Management Institute. Based on comments provided, version 2 of the report was prepared and shared with MoA and used during the stakeholder engagement. Based on comments from MoA as well as Verra and GHG Management Institute, version 3 of the report was prepared.
7. Stakeholder engagement with Ministry of Agriculture
After the initial policy report was prepared and submitted to Verra and based on feedback and input a revised version was submitted to the Ministry of Agriculture and stakeholder engagement was conducted. Experts from the different projects/programs assessed and CRGE unit participated in the

stakeholder engagement. The first stakeholder engagement was conducted on October 14, 2019 at the Ministry of Agriculture. There were fourteen participants from different directorate from the Ministry of Agriculture and three from Echnoserve. A presentation of the pilot work and the result was made by Echnoserve followed by a discussion. The key point raised by participants is that the MoA is interested in taking policy or action approach to GHG reduction monitoring and that the pilot result best serve MoA if it takes policy approach. Considering the limited number of policies in the agriculture sector that focus on GHG mitigation, it was recommended that broad policies that have component that would address GHG mitigation be looked at.

Following the stakeholder meeting, Echnoserve team looked at the GHG mitigation actions in the CRGE as well as currently available policy, strategy, guideline that could be piloted. We also looked at availability of data to conduct the pilot. The Community Based Watershed Guideline, which has been the overarching framework, used in watershed rehabilitation for large-scale projects such as SLMP and PSNP was chosen to conduct the pilot.

Final stakeholder meeting was held with small team members of SLPMIII project team on Oct. 28, 2019. The meeting was conducted to validate the information in the document.

National level policy: Community Based Participatory Watershed Development Guideline

National level program: Sustainable Land Management Program III (SLMP III)

4.2 Approach

The approach in the piloting of the Agriculture Guidance was assessment of **Before Policy Implementation**. Before policy implementation approach is preferred for this study in order to assess the expected future impacts of a policy through ex-ante assessment. For the GHG estimation in particular, the approach followed to measure the intervention is Activity data Approach.

4.3 Methodology

The methodology followed for this assessment is the following:

- Review of the Agriculture Guidance for Assessing the Greenhouse Gas Impacts of Agriculture Policies
- Review of policy and program document
- Expert interview

Table 1: Table of programs/project and information covered in the report

Report Items	[Policy] Community Based Participatory Watershed Development Guideline	[Program] Sustainable Land Management Program III (SLMP III)
Program/ policy descriptions		X
Identifying impacts: The causal chain	X	X
Estimating the baseline scenario and emissions		X
Estimating GHG impacts ex-ante		X
Monitoring performance over time		X

5. POLICY AND PROGRAM DESCRIPTION

Overview of the policy selected for assessment

There is one national level policy identified for this pilot test, which is Community Based Participatory Watershed Development Guideline. Below is a brief introduction of the policy.

Community Based Participatory Watershed Development Guideline is one of the strategy used for natural resource watershed based integrated community development in the agriculture sector.

Natural resources is expected to not only contribute to rehabilitation of land but also improve the livelihood of community/households in rural Ethiopia. This guideline has been serving as demonstrating a series of steps in the participatory watershed development planning at a local level and to facilitate broad based sustainable agricultural development in rural area. All stakeholders who are engaged in the community based natural resource development are required to follow the guideline during the planning and implementation of watershed development.

This national level guideline is implemented on the ground through various programs and projects by state and non-state actors. Some of activities are regular government actions while others are stand-alone initiatives/projects financed by the government & development partners. The main difference between the two is that the regular government programs cover larger geographical locations and reach an extended number of household beneficiaries. However, the prime challenge associated with regular programs is the unavailability of detailed & consistent activity data for monitoring and evaluation. In contrary, the stand-alone national or regional level programs are much more organized and detailed activity & monitoring data are readily available across the different structures.

The Sustainable Land Management Program II (SLMP II) which is now called Resilient Landscapes and Livelihoods Project (RLLP) has been using the Community Based Participatory Watershed Development Guideline for its implementation. In this particular assessment and pilot test, SLMP III is selected for deeper program analysis and GHG estimation.

Overview of the program selected for assessment

Sustainable Land Management Program III (SLMP III)/ Resilient Landscapes and Livelihoods Project (RLLP)

The SLMP III (Sustainable Land Use Program) is one of the government flagship programs, which is now named Resilient Landscape Livelihood Project (RLLP). The program complements core investments in biophysical watershed restoration with a set of associated activities supporting sustainable livelihoods in restored landscapes, through CSA, diversified income generating activities as well as value chain improvement, and improved land tenure. The project area will include 152 major watersheds located in the Ethiopian highlands, averaging approximately 10,000 hectares each. Under a phased approach, the 45 watersheds supported under SLMP-I will receive assistance to graduate from project-based support, including creation of WUAs (Watershed User Association) and preparation of Watershed Management and Use Plans (WMUPs). Support for the 90 SLMP-II watersheds will allow implementation of their Multi-Year Development Plans (MYDPs) for watershed restoration to be completed, prior to provision of graduation support as for SLMP-I watersheds. Seventeen new watersheds selected for RLLP, prioritized for extent and severity of land degradation, will receive assistance for the preparation of MYDPs, followed by investment in the identified SLM interventions.

This phased approach will strengthen linkages with other flagship programs of the Ministry of Agriculture (MoA), including the Productive Safety Net Program (PSNP) and the Agricultural Growth Program (AGP), which are both supported by the World Bank. A number of communities graduating from food-insecure status in watersheds newly identified for RLLP will transition from support under PSNP to the SLM Program. The PSNP includes support for food-insecure households in the form of employment in public works, including watershed rehabilitation. As these communities transition out of food-insecure status, those that are living in targeted degraded watersheds will become eligible to participate in SLM, livelihood and other activities, according to the conditions of the SLM Program. At the other end of the SLM project cycle, communities in watersheds restored under SLMP-I and SLMP-II will graduate from the SLM Program, but will receive support for sustainable agricultural productivity under AGP and other government programs.

The Project comprises four components namely,

- Component 1: Investment in Green Infrastructure and Resilient Livelihoods
- Component 2: Investing in Institutions, Information and Monitoring for Resilience
- Component 3: Rural Land administration and Use
- Component 4: Project Management and Reporting

The SLMP III (RLLP) applies a comprehensive intervention strategy, using the micro-watershed as the primary planning and implementation unit, by promoting a set of technically proven demand-driven investments that not only take into consideration environmental challenges and opportunities, but also phases-in a holistic landscape

approach, incorporating the productive and livelihood dimensions of the beneficiary households. More specifically, once satisfactory levels of rehabilitation have been achieved through biophysical measures in a micro-watershed, support to on-farm improved climate-smart crop and livestock practices is phased-in, allowing households to adopt technologies that maximize the benefits of environmental interventions and ultimately achieve a sustainable climate-smart landscape

Policy Description

Community Based Participatory Watershed Guideline (CBPWG)

Inputs of the intervention	Activities	Outcome of the intervention	Potential GHG impacts
<ul style="list-style-type: none"> ● Provide experts and advisory role ● Allocate financial resource ● Provision of materials as needed 	<ul style="list-style-type: none"> ● Enhancing and organizing participation of the beneficiaries for the planning ● Identification of watershed for integrated implementation ● Conduct training ● Organize material and equipment ● Conduct intervention in water harvesting, irrigation, land development, agroforestry, income generating etc. 	<p>Household level:</p> <ul style="list-style-type: none"> ● Improved water availability and fertility levels for crop production and diversification. ● Improved soil quality and better drainage. ● Increased access to biomass for multipurpose use (firewood, fodder, fruits, construction, and others) and higher profits. ● Increased resilience to shocks and Improved livelihoods. ● Increased participation in income generation activities. <p>Community level:</p> <ul style="list-style-type: none"> ● Reduced erosion, deforestation, flooding and water logging. ● Increased overall agricultural productivity and access to markets and basic services. ● Improved livelihood options, including for the poorest households. ● A more dependable, clean water supply for domestic and industrial use – recharge of aquifers. <p>Societal level at large:</p> <ul style="list-style-type: none"> ● Better conservation of natural resources and biodiversity ● Less danger from floods to downstream farmlands. ● Reduced sedimentation of costly irrigation projects and protection of major infrastructure (e.g. roads) ● Increased water supply and improved health. ● Reduced occurrence of drought and increased stability of production systems 	<ul style="list-style-type: none"> ● Increase CO₂ removal from living biomass sequestration ● Increased CO₂ removal from soil carbon sequestration

Program Description

Sustainable Land Management Program III (SLMP III) also called Resilient Landscapes and Livelihoods Project (RLLP)

Information	Description	Specific Description
Title of the Program	Sustainable Land Management Program II	The goal of the program is to improve climate resilience, land productivity and carbon storage, and increase access to diversified livelihood activities in intervention watersheds
Type of Program	Green Infrastructure and Resilient Livelihoods	<ol style="list-style-type: none"> 1. Land area under sustainable landscape management practices (Ha) Average size of each watershed is about 10,000ha, total 152 watersheds to be treated by the program. 1a. Land area restored or reforested/afforested (Ha) 1b. Land area with productivity enhancing practices applied (Ha) 2. Project area showing an increase in the NDVI14 correcting for climate effects (Percent) 3. Project area showing an increase in the Land Surface Water Index (LSWI) 15 correcting for climate effects (Percent) 4. Net greenhouse gas emissions (metric tons) <ul style="list-style-type: none"> ● Impact evaluation, knowledge management and communication. ● Capacity building, information modernization and policy development;
	Investing in Institutions and Information for Resilience	<ul style="list-style-type: none"> ● Provide security of tenure to smallholder farmers in RLLP watersheds through Second, Level Landholding Certification
	Rural Land Administration and Use	Effective implementation and reporting on project activities M&E , Gender sensitive information, communication , disaggregated information
	Project Management and reporting	<ul style="list-style-type: none"> ● A total of 152 major watersheds with a size of 10,000ha each intervened with phased approach (45 during SLPI, 90 during SLPII and 17 during SLMP III). A total project area covers approximately 1.5 Million Ha. ● The adoption of CSA practices in 200 restored micro-watersheds
Description of specific intervention		
Status of the Program	SLMP III plan to be implemented between 2019-2023	Total new budget is about 129 Million USD The primary beneficiaries of the new project (Resilience Landscape Programme: RLLP) will be 645,000 rural households (approximately 3.2 million

		<p>individuals) on degraded land, facing land tenure and water insecurity in 152 selected watersheds. Indirect beneficiaries include:</p> <ul style="list-style-type: none"> (i) Communities adjacent to project intervention areas adopting SLM and Climate Smart Agriculture (CSA) practices through demonstration effects, as observed under SLMP-II; (ii) Private sector participants and end-consumers in value chains targeted by the project; (iii) Households outside project areas benefiting from the creation of land certification capacity at woreda and regional level; Recipients of capacity building at all levels of government, as well as in national partner organizations; and ii) Communities outside project areas benefiting from groundwater recharge reduced flooding, and lower sediment loads, as a result of SLM interventions.
<p>Date of completion Implementing entity</p>	<p>SLMP III (RLLP) 2023 Federal Ministry of Agriculture (MoA), Regional, Zone and Woreda relevant Bureau,</p>	
<p>Objectives and intended impacts or benefits of the Program</p>		<ul style="list-style-type: none"> ● Reduce degradation and improve productivity of watershed ● Improve the livelihood of the beneficiaries Build resilience capacity of beneficiaries of the program through differentiated livelihood activities Build the local government capacity building ● Strengthen land ownership and individual investment on own land ● Contribute to ensure food security of the community ● To sequester million tons of CO₂e in restored productive lands for instance 9million tones of CO₂e sequestered
<p>Level of the program</p>	<p>Federal up to woreda and community Household level.</p>	<p>National</p>

Geographic coverage	6 regions Oromiya, Amhara , Tigray, SNNPRs, Benshangul and Gambela.	
Sectors targeted	Agriculture, water and road	
Green house targeted		Mt co ₂ sequestration from rehabilitated watersheds
Other related action		The SLMP3 (RLLP) is also contribute to improving the technology of energy utilization of the beneficiaries.

6. IDENTIFYING IMPACTS: THE CAUSAL CHAIN

One important step in impact identification is clarifying the intermediate effects. This involves the following activities:

- Stakeholder identification
- Inputs and Activity Identification
- Intermediate Effect Identification and Description
- Potential activities and effects for main types of mitigation policies and practices

Stakeholder Description

Stakeholder	Responsible Sector/s	Specific Topics Discussed
Ministry of Agriculture (MoA)	Natural Resource Management; Crop; Livestock;	Watershed Management; Sustainable Land Management; Afforestation; Reforestation
Environment, Forest & Climate Change Commission (EFCCC)	Forest; Climate Change; Environment	Afforestation; Reforestation

Inputs and Activity Description

Inputs	Detail/explanation	Geographic location of effect	Timing of effect
Proved technical support	Proved technical support for all level project implementers	152 selected SLMP –III major watersheds	30-Jul-2019 - 07-Jul-2023
Budget deployed for technical Assistance for the preparation of Multi-Year Development Plans and input purchase	The project will be deployed financial investment for purpose of providing technical assistance of preparation of multi –year development plans and purchasing the required inputs in different interventions	CSA interventions under SLMP 3 will be implemented in 200 micro-watersheds that have already been supported with landscape restoration during SLMP I and II.	30-Jul-2019 - 07-Jul-2023
Activities	Detail/explanation	Geographic location of effect	Timing of effect
Deliver basic training & awareness training	The project will be provide adequate financing for training, technical assistance and capacity	Training will be provided for local experts from 152	30-Jul-2019 - 07-Jul-2023

for men & women of target group	<p>building at the local level, closely coordinated with the provision of technical assistance as well as supporting a comprehensive set of knowledge management and dissemination initiatives.</p> <p>The activity will be provide security of tenure to smallholder farmers in SLMP watersheds through Second Level Landholding Certification (SLLC) as an incentive to increase the adoption of SLM technologies and practices, and will provide targeted</p>	selected SLMP –III major watersheds.	
Facilitation on providing land use right certification	<p>landless youth with communal land certificates in exchange for land restoration.</p> <p>SLWM interventions on both communal and individual lands will be financed (with differentiated levels of community contribution), as well as infrastructure such as green corridors linking fragmented forests, and community access roads designed to optimize water-harvesting, together with the necessary technical advice.</p>	This activity will be implemented in 152 selected SLMP –III major watersheds.	30-Jul-2019 - 07-Jul-2023
Integrated Watershed and Landscape Management	<p>CSA groups will be organized by the DAs assisted by woreda experts. In each group, the number of members should ideally range between 20 and 30 farmers. These groups will constitute the equivalent of</p>	This activity will be implemented in 107 micro watershed CSA interventions under SLMP 3 will be implemented in 200 micro-watersheds that have already been supported with landscape restoration during SLMP I and II.	30-Jul-2019 - 07-Jul-2024
Introduction of CSA technologies			30-Jul-2019 - 07-Jul-2024

	community investment group (CIGs) promoted by Agriculture growth program (AGP), which will prepare results-oriented subproject proposals, integrating packages of goods, small works, services and/or operating costs) for SLMP-3 financing.		
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Other intermediate effects description

Intermediate effects	Detail/explanation	Affected parameter	Direction of effect	Amount of effect	Geographic location of effect	Timing of effect
Individual & communal degraded land restored	Management change on degraded land which owned by individual and communal lands	Amount of land in ha under the management change	Increase	About 532,000 ha of degraded lands are targeted by the program	This activity will be implemented in 107 micro watershed	Sometimes after five years since started the project
Deforestation reduced due to distribution improved cook stove	Pressure on forest land reduced due to provision of fuel saving stove in project watersheds	Amount of forest land change in project watershed	Increase	Unknown	This activity will be implemented in 107 micro watershed	Sometimes after 2019
Soil erosion reduced from degraded land	Degraded land rehabilitation and other related activities reduced erosion of soil.	Amount of carbon restored in soil due to reduction of soil erosion	Increase	Unknown	This activity will be implemented in 107 micro watershed	Sometimes after 2019

Potential activities and effects description [for the main types of mitigation practices/technologies and policies 9 for soil carbon pool]

Activity, practice or technology	Intermediate effects			Potential GHG Impact
	Effect 1	Effect 2	Effect 3	
Intended				
Individual & communal degraded land restored	Increased biomass coverage in degraded land			Increased CO2 removal from atmosphere due to living biomass sequestration
Deforestation reduced due to distribution improved cook stove	Increased usage of improved cook-stove	Cutting wood for energy purpose reduced	Increased biomass coverage	Increased CO2 removal from atmosphere due to living biomass sequestration
Soil erosion reduced from degraded land	Enhanced soil organic matter	Increased of carbon		Decreased CO2 emission from

Causal Chain

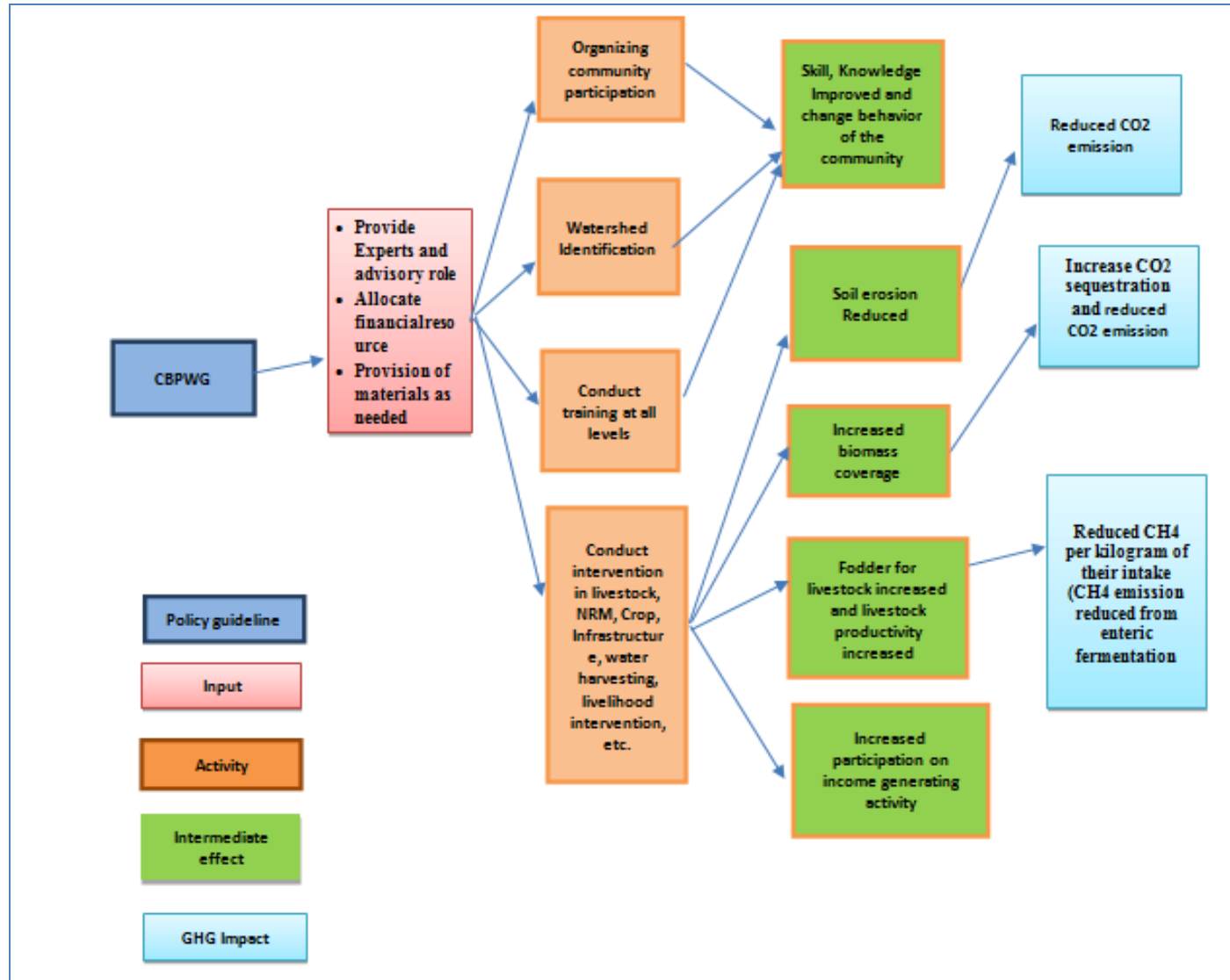
A causal chain approach is used to understand how the policy and its corresponding inputs and activities cause intermediate effects and ultimately result in GHG impacts. A causal chain is a conceptual diagram tracing the process by which the policy leads to GHG impacts through a series of interlinked logical and sequential stages of cause-and-effect relationships. It allows users to visually understand how policies lead to changes in emissions.

For this particular task, two causal chain diagrams are developed for the following policy and program under assessment:

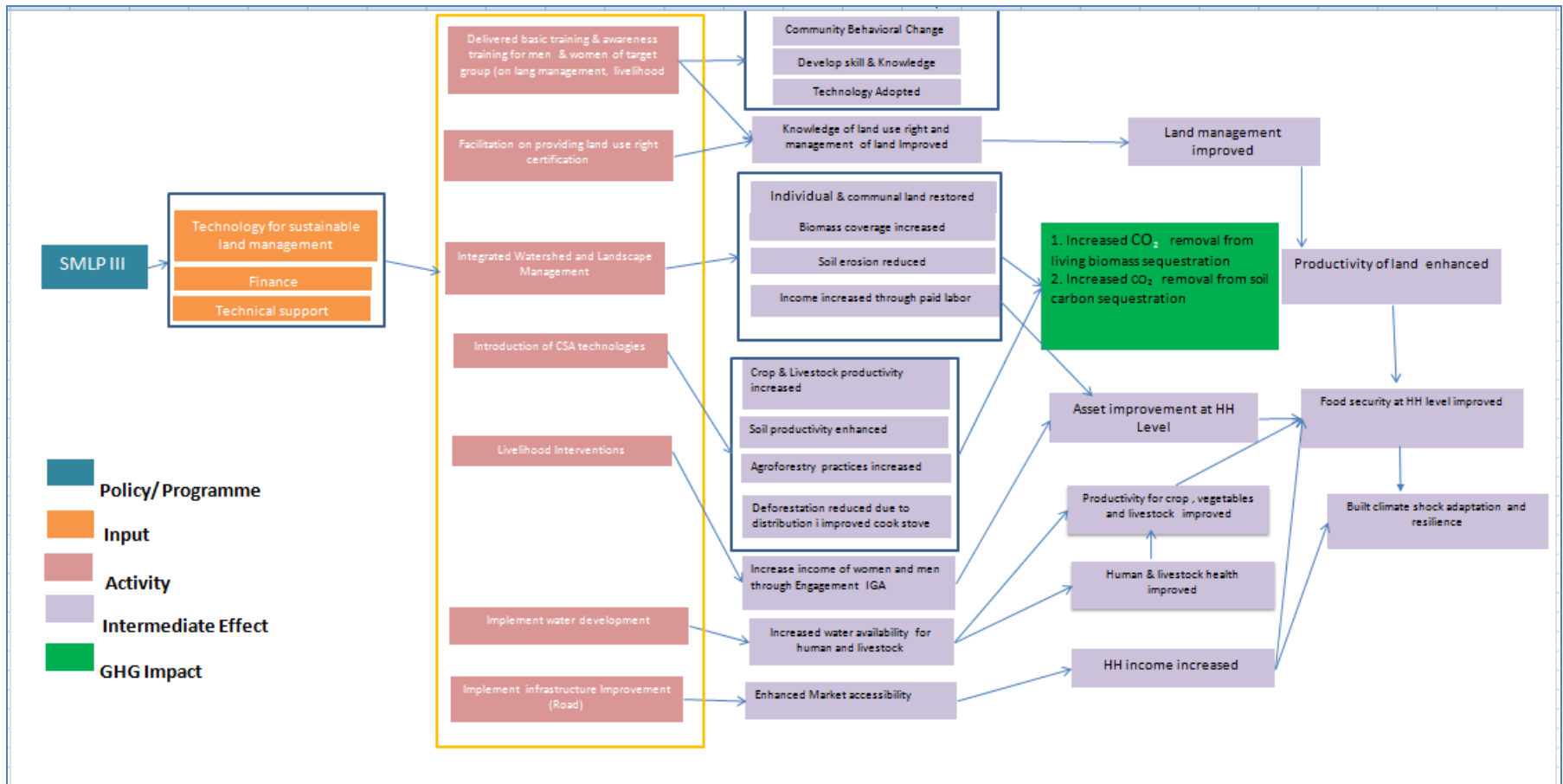
- Community Based Participatory Watershed Development Guideline
- Sustainable Land Management Program III (SLMP III)

The causal chain diagrams development is based on the above tables that describe impacts.

Causal Chain 1: Community Based Participatory Watershed Development Guideline



Causal Chain 2: Sustainable Land Management Program III (SLMP III)



7. GHG ESTIMATION

7.1 About the GHG Estimation

SLMP III (RLLP) Implementation: Summary

Building on lessons learnt through implementation of the SLM Program, the RLLP will complement core investments in biophysical watershed restoration with a set of associated activities supporting sustainable livelihoods in restored landscapes¹⁶, through support for CSA, diversified IGAs, connections to value chains, and improved land tenure. The project area will include a total of 152 major watersheds located in the Ethiopian Highlands, averaging approximately 10,000 hectares each. Under a phased approach, the 45 watersheds supported under SLMP-I will receive assistance to graduate from project-based support, including creation of WUAs and preparation of Watershed Management and Use Plans (WMUPs). Support for the 90 SLMP-II watersheds will allow implementation of their Multi-Year Development Plans (MYDPs) for watershed restoration to be completed, prior to provision of graduation support as for SLMP-I watersheds. Seventeen new watersheds selected for RLLP, prioritized for extent and severity of land degradation will receive assistance for the preparation of MYDPs, followed by investment in the identified SLM interventions.

SLMP III Program: Component 1 Summary

Total amount estimated/allocated: US\$78.5 million

This component will support the restoration of degraded landscapes in selected watersheds and help build resilient livelihoods on this newly productive foundation. This will be achieved through three sub-components, supporting: (i) the implementation of Sustainable Land and Water Management (SLWM) practices in line with MYDPs in 90 SLMP-II watersheds and 17 newly identified watersheds; (ii) the adoption of CSA practices in 200 restored micro-watersheds selected from SLMP-I and SLMP-II intervention watersheds; and (iii) the promotion of livelihood-diversifying IGAs in all RLLP watersheds, and support in 16 pilot watersheds for linkages to value chains.

This component will complement the implementation of SLWM interventions identified in the MYDPs of 90 SLMP-II watersheds, and extend these proven interventions to 17 additional watersheds that are vulnerable to climate variability and change, recurrent drought and floods, and land degradation. SLWM interventions on both communal and individual lands will be financed (with differentiated levels of community contribution), as well as infrastructure such as green corridors linking fragmented forests, and community access roads designed to optimize water-harvesting, together with the necessary technical advice for specific outputs, such as the preparation of MYDPs and WMUPs, and the establishment of WUAs. Proven SLWM practices include: (i) soil and

water conservation infrastructure such as terraces, water harvesting trenches, check dams, small reservoirs and wells, and other civil works; (ii) soil fertility and moisture management; and (iii) assisted natural regeneration, vegetative gully reclamation, enclosures plus livestock land-use rationalization, establishment of grazing corridors, as well as intercropping, low tillage, and silvo-pastoral management strategies.

Building on the biophysical landscape restoration achieved through SLWM practices, this component will extend the ongoing CSA pilot under SLMP-II to a further 200 micro watersheds, providing support for activity packages that address: (i) farm water and soil moisture management; (ii) integrated soil fertility and soil health management; (iii) crop development and management; and (iv) sustainable livestock production, through feed development and integrated agro-silvo-pastoral practices. To strengthen community resilience through livelihood diversification, this component will extend the support for IGAs provided under SLMP-II to all RLLP watersheds, providing grants to CIGs for activities such as apiculture, poultry rearing, sheep and goat fattening, vegetable and fruit farming, and the production and marketing of improved cook stoves which help reduce pressure on watersheds’ natural resources. The RLLP will further promote CSA and livelihood diversification through stronger engagement with the private sector, providing support in 16 pilot watersheds for value chain connections in the form of: (i) business plan development; (ii) storage facilities and small equipment for grading and processing; (iii) collaboration with other value chain programs to facilitate market linkages; and (iv) development of contracts with cooperatives, cooperative unions and other private sector partners.

Baseline and Policy Scenario Considerations

Component 1 activities

Component 1: Activities	Significance Test (GHG Emission & Emission Reduction)
Individual & communal land restored <i>Biomass coverage increased</i>	Soil Carbon reduction <i>Biomass Carbon sequestration and emission reduction</i>
Soil erosion reduced	Soil Carbon reduction
Crop productivity increased	Soil Carbon reduction
Livestock productivity increased	Methane emission reduction
Soil productivity enhanced	Soil Carbon reduction
Agro-forestry practices increased	Carbon sequestration and emission reduction
Deforestation reduced due to distribution of improved cook stove	Biomass Carbon emission reduction

Intervention/Activity selected for estimation: Biomass coverage increased

Intervention total area (ha): SLMP III program targets 30% to 40% of a given watershed for NRM. For the purpose of this pilot test, the average value, which is 35% of the total area, was taken. The total area of intervention at national level is

1.5 million hectare. 35% of this is 525,000 hectare of land. To increase biomass, the major activity that will be carried out on this land is A/R.

Assessment period: The total accounting period is 20 years. This time period is divided into two: 5 years of implementation period and 15 years of capitalization period. The assessment period is in line with IPCC recommendation for GHG impacts that involve carbon sequestration in soils and/or biomass.

GHG emission and removal dynamics: Changes in land use or land management can change soil carbon sequestration rates until a new equilibrium is reached. Because of this, the dynamics used during calculation was linear. Tier 1 method is applied.

Approach to determine the baseline scenario: A constant baseline was found to be appropriate as the A/R activity was considered likely to remain stable over the baseline scenario time. The assumption used here was that there will be no change in agricultural practices, the use of technology, or land use during the baseline period with respect to the situation prior to SLMP III implementation. This means land will remain degraded under the baseline scenario and there will be no A/R activity. This baseline scenario was developed for SLPM III ex-ante GHG impact.

Data source: The source of data for this calculation was SLMP III Project. The total area used for the calculation was generated through expert judgment as mentioned above.

About Ex-Ante Carbon-balance Tool (EX-ACT)

For the GHG estimation EX-ACT tool is used. This tool has been accepted to be used for GHG estimations by the Government of Ethiopia (agriculture, livestock & NRM sectors). The Ex-Ante Carbon-balance Tool (EX-ACT) is an appraisal system developed by FAO providing estimates of the impact of agriculture and forestry development projects, programmes and policies on the carbon-balance. The carbon-balance is defined as the net balance from all greenhouse gases (GHGs) expressed in CO₂ equivalent that were emitted or sequestered due to project implementation as compared to a business-as-usual scenario.

EX-ACT is a land-based accounting system, estimating C stock changes (i.e. emissions or sinks of CO₂) as well as GHG emissions per unit of land, expressed in equivalent tons of CO₂ per hectare and year. The tool helps project designers to estimate and prioritize project activities with high benefits in economic and climate change mitigation terms. The amount of GHG mitigation may also be used as part of economic analyses as well as for the application for additional project funds.

EX-ACT can be applied on a wide range of development projects from all AFOLU sub-sectors, including besides others projects on climate change mitigation, sustainable land management, watershed development, production intensification, food security, livestock, forest management or land use change. Further, it is cost effective, requires a compared small amount of data, and has resources (tables, maps) which can help finding the required information. While EX-ACT is mostly used at project level it may easily be up-scaled to the programme/sector level and can also be used for policy analysis.

7.2 Estimating the baseline scenario and emissions

In this section baseline and baseline scenario estimation results are presented with the below stated assumptions and other considerations.

Assumption

SLMP III targets 152 major watersheds. The entire watershed in each plot is considered as degraded land. The approximate size of each watershed is 10,000 ha. The total area of degraded land in the project area is estimated to be 1,520,000 ha. At the start of the project and without project intervention, the total degraded land is assumed to remain the same: 1,520,000 ha. With project, the total degraded land size is estimated to be 35% of the total degraded land, which is 532,000 ha. Therefore, the GHG emission and emission reduction is calculated considering the above data.

Other Considerations for the Estimation

- Scope of emission: scope 1.
- GHG gases included: CO₂

Activity Data: 532,000 hectare of land

Result Summary:

2019 Baseline emission: 14,769,333 ton CO₂e emission

Baseline Scenario: 61,615,290 ton CO₂e emission is expected

Tabular presentation of estimation

Baseline emission result in table

EX-ANTE CARBON-BALANCE TOOL - EX-ACT													
Food and Agriculture Organization of the United Nations													
Start	Description	Land Use Change	Crop production	Grassland Livestock	Management Degradation	Coastal Wetlands	Inputs Investments	Fisheries Aquaculture	Detailed Results				
Project Name	SLMP 2		Climate		Duration of the Project (Years)			0					
Continent	Africa		Tropical Mountain (Dry)		Total area (ha)			1520000					
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year			Production of products	
	Without	With	Balance	All GHG in tCO ₂ eq			Without	With	Balance	Without	With		
Positive = source / negative = sink													
Land use changes	All GHG in tCO ₂ eq			Biomass	Soil	Other	N ₂ O	CH ₄					
Deforestation	0	0	0	0	0	0	0	0	0	0	0	0	0
Afforestation	-14,769,333	0	14,769,333	*****	0	0	0	0	0	0	0	0	0
Other LUC	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture													
Annual	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0
Grassland & Livestocks													
Grassland	0	0	0	0	0	0	0	0	0	0	0	0	0
Livestocks	0	0	0	0	0	0	0	0	0	0	0	0	0
Degradation & Management													
Forest degradation	0	0	0	0	0	0	0	0	0	0	0	0	0
Peat extraction	0	0	0	0	0	0	0	0	0	0	0	0	0
Drainage organic soil	0	0	0	0	0	0	0	0	0	0	0	0	0
Rewetting organic soil	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire organic soil	0	0	0	0	0	0	0	0	0	0	0	0	0
Coastal wetlands													
Wetlands	0	0	0	0	0	0	0	0	0	0	0	0	0
Inputs & Investments													
Inputs	0	0	0	0	0	0	0	0	0	0	0	0	0
Fishery & Aquaculture													
Fishery	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	-14,769,333	0	14,769,333	*****	0	0	0	0	0	0	0	0	0
Per hectare	-9.7	0.0	9.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Per hectare per year	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Baseline scenario (without project or BAU) result in table

Food and Agriculture Organization of the United Nations												
EX-ANTE CARBON-BALANCE TOOL - EX-ACT												
Start	Description	Land Use Change	Crop production	Grassland Livestock	Management Degradation	Coastal Wetlands	Inputs Investments	Fisheries Aquaculture	Detailed Results			
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year			Production of products Without With
	Without	With	Balance	All GHG in tCO ₂ e					Without	With	Balance	
Positive = source / negative = sink												
All GHG in tCO ₂ e												
CO ₂												
Biomass												
Soil												
Other												
N ₂ O												
CH ₄												
Land use changes												
Deforestation	0	0	0	0	0	0	0	0	0	0	0	0
Afforestation	-61,615,290	0	61,615,290	#####	17,737,133	0	0	0	0	#####	0	#####
Other LUC	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture												
Annual	0	0	0	0	0	0	0	0	0	0	0	0
Perennial	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0
Grassland & Livestocks												
Grassland	0	0	0	0	0	0	0	0	0	0	0	0
Livestocks	0	0	0	0	0	0	0	0	0	0	0	0
Degradation & Management												
Forest degradation	0	0	0	0	0	0	0	0	0	0	0	0
Peat extraction	0	0	0	0	0	0	0	0	0	0	0	0
Drainage organic soil	0	0	0	0	0	0	0	0	0	0	0	0
Rewetting organic soil	0	0	0	0	0	0	0	0	0	0	0	0
Fire organic soil	0	0	0	0	0	0	0	0	0	0	0	0
Coastal wetlands	0	0	0	0	0	0	0	0	0	0	0	0
Inputs & Investments	0	0	0	0	0	0	0	0	0	0	0	0
Fishery & Aquaculture	0	0	0	0	0	0	0	0	0	0	0	0
Total	-61,615,290	0	61,615,290	#####	17,737,133	0	0	0	0	#####	0	#####
Per hectare	-40.5	0.0	40.5	28.9	11.7	0.0	0.0	0.0	0.0			
Per hectare per year	-8.1	0.0	8.1	5.8	2.3	0.0	0.0	0.0	0.0	-8.1	0.0	8.1
<i>Fluxes per component</i>				<i>Balance per component</i>								

Interpretation: During the base year (2019), the degradation is expected to continue. Hence, the baseline emission is found to be 14,769,333 tCO₂e as can be seen on table above. Similar pattern will continue as the baseline scenario period and the emission estimated under business as usual is 61,615,230 tCO₂e.

7.3 Estimating GHG impacts ex-ante

In this section ex-ante estimation results are presented with the below stated assumptions and other considerations.

Assumption

Activities other than A/R are not included in this calculation. This was done based on its significance as it covers 35% of the total area under consideration and the only activity determined through expert judgment.

With project

A/R refers to Afforestation/Reforestation. Afforestation activity involves planting trees on degraded area under intervention whereas reforestation considers area closure so that the target land is free of human intrusion that causes emission

Activity Data: 532,000 hectare of degraded land

Implementation period: 5 Years

Result Summary

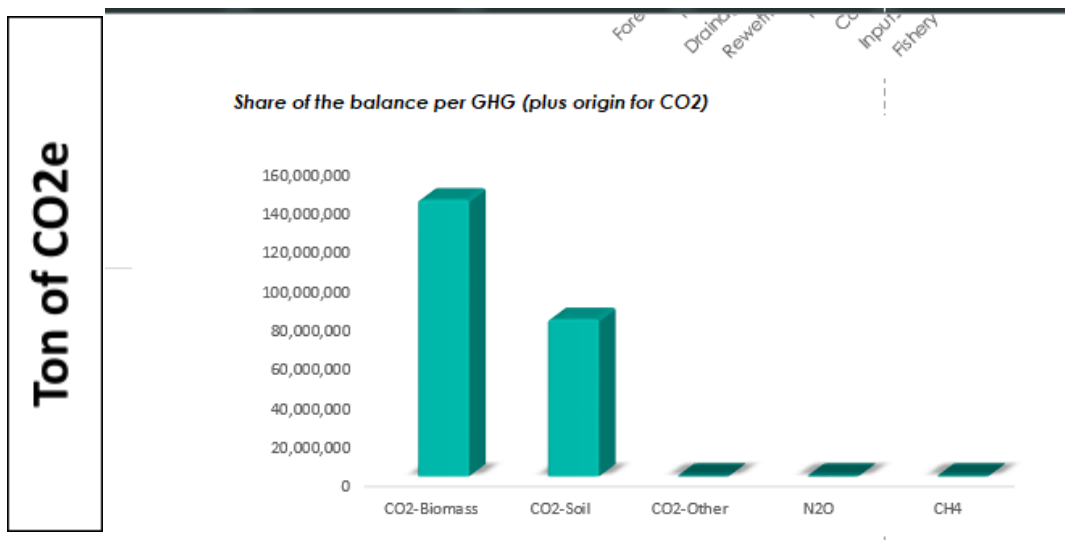
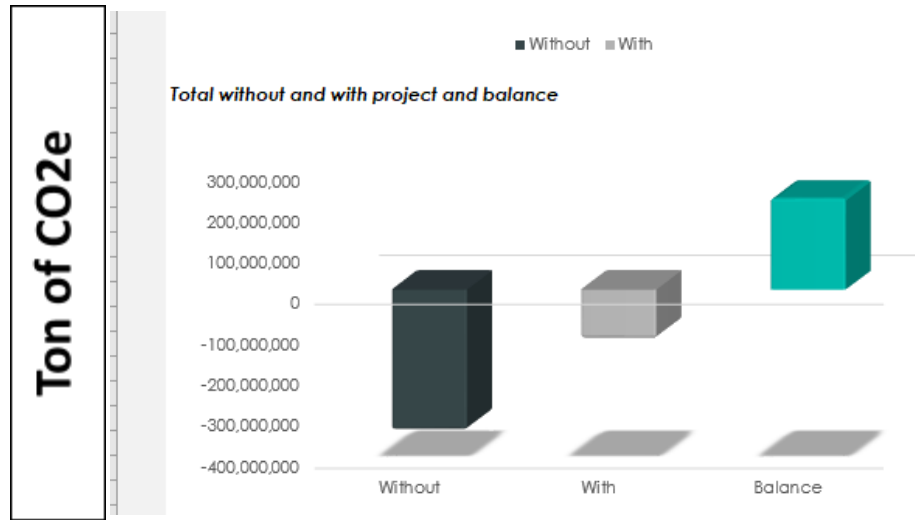
Ex-Ante Estimation: The GHG estimated **per hectare per year** is 7.3 tCO₂e of emission.

Tabular Presentation

Ex-Ante Estimation in table

EX-ANTE CARBON-BALANCE TOOL - EX-ACT														
Start	Description	Land Use Change	Crop production	Grassland Livestock	Management Degradation	Coastal Wetlands	Inputs Investments	Fisheries Aquaculture	Detailed Results					
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year			Production of product		
	Without	With	Balance	All GHG in tCO ₂ e			N ₂ O		CH ₄	Without	With	Balance	Without	With
Land use changes			Positive = source / negative = sink			Biomass	Soil	Other						
Deforestation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Afforestation	-342,631,030	-119,341,861	222,749,170	*****	80,703,357	0	0	0	-17,134,552	-5,337,093	11,137,458	0	0	
Other LUC	0	0	0	0	0	0	0	0	0	0	0	0	0	
Agriculture														
Annual	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grassland & Livestocks														
Grassland	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Livestock	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Degradation & Management														
Forest degradation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peat extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drainage organic soil	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rewetting organic soil	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire organic soil	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coastal wetlands														
Coastal wetlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inputs & Investments														
Inputs & Investments	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fishery & Aquaculture														
Fishery & Aquaculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	-342,631,030	-119,341,861	222,749,170	*****	80,703,357	0	0	0	-17,134,552	-5,337,093	11,137,458	0	0	
Per hectare	-225.5	-78.9	146.5	93.5	53.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Per hectare per year	-11.3	-3.9	7.3	4.7	2.7	0.0	0.0	0.0	-11.3	-3.9	7.3	0.0	0.0	

Graphical Presentation



Interpretation: The estimation result shows that the overall balance shows emission. This is due to the fact that A/R covers only 35% of total watershed. The overall program balance will be removal, as other activities that reduce emission will be implemented.

8. PERFORMANCE MONITORING PLAN

The performance-monitoring plan is prepared for the following:

- Action
- Input
- Intermediate effect

Monitoring Plan (Action)

Project/ Program	Action	Indicator and unit	Potential sources of data	Parameter type	Monitoring frequency	Responsible	Remark
SLMP III	Afforestation and reforestation	Total land 532,000 ha	Quarter, six-month and Annual report and mid-term review	Activity Data	Annual	SLMP Program Office MoA, CRGE Directorate; EFCCC	

Monitoring Plan (Input)

Project/ Program	Input	Indicator and unit	Potential sources of data	Parameter type	Monitoring frequency	Responsible	Remark
SLMP III	<ul style="list-style-type: none"> • Technical support , • Financial support • Materials required 	Total amount of money utilized	Quarter, six-month and Annual report and mid-term review	Activity Data	Annual	SLMP Program Office MoA, CRGE Directorate; EFCCC	Amount of money will be stated during reporting period

Monitoring Plan (Intermediate Effect)

Project/ Program	Intermediate Effect	Indicator and unit	Potential sources of data	Parameter type	Monitoring frequency	Responsible	Remark
SLMP III	<ul style="list-style-type: none"> • Individual and communal land restored • Deforestation reduced 	Total land 532,000 ha	Quarter, six-month and Annual report and mid-term review	Activity Data	Annual	SLMP Program Office MoA, CRGE Directorate; EFCCC	Confirmed during reporting period

9. REFERENCE

- Climate Resilient Green Economy Strategy (CRGE); Government of Ethiopia; 2011
- Community-based Participatory Watershed Development; Government of Ethiopia;
Ministry of Agriculture & Rural Development (MoARD); 2005
- Ex-Ante Carbon-balance Tool (EX-ACT) User Manual; Estimating and Targeting
Greenhouse Gas Mitigation in Agriculture; Food and Agriculture Organization of
the United Nations (FAO); 2016
- Guidance for assessing the greenhouse gas impacts of agriculture policies; Greenhouse
Gas Management Institute; Verra; 2018
- Project Appraisal Document for Ethiopia Resilient Landscapes and Livelihoods Project;
Government of Ethiopia & World Bank; 2018

Annex I: Attendance sheet from stakeholder participation

Annex II: Summary of related projects

Information	Description	
Title of the Program	Agricultural Growth Program II	<p>The principal aim of the program is to support the government's strategy for agricultural growth, as articulated in its GTP and agricultural PIF (Policy Investment Framework). This requires both increases in productivity and creating access to market. To achieve program objectives the program designed in comprehensive approach which includes;</p> <ul style="list-style-type: none"> ● Ensuring women benefit equally as men from the components ● Demand-driven and incentive-(performance) based approach along the value chains. ● Targeted group of commodities with strong domestic/export market potential and ● Demand-led service and infrastructure interventions that respond both, to community priorities and market signals.
Type of Program	<p>Research</p> <p>Technical support to households and woredas</p> <p>Capacity building</p>	<p>Agricultural research to introduce new climate smart technologies</p> <p>Financial support of (\$24 Million) to adopt new technologies and increase productivity</p> <p>Value chain improvement through the following activities</p> <ul style="list-style-type: none"> ● Promotion and distribution of inputs ● Strengthening unions and cooperatives ● Support in preparation of business plan and formalizing informal markets ● Strengthening selected livestock and crop markets ● Modernizing market infrastructure
Description of specific interventions	<p>The program introduces several Climate Smart Agriculture (CSA) interventions that also aim to reduce GHG</p>	<ul style="list-style-type: none"> ● 1350 ha land will have the following selected activities <ul style="list-style-type: none"> ▪ Application of composting practices, crop rotation, crop residue management, Manure application and intercropping, ▪ Bio fertilizers and Integrated Pest Management (IPM) technologies

		<ul style="list-style-type: none"> • Improve artificial insemination service delivery in four different regional centers and access to improved livestock breed for enhanced productivity and lower GHG emissions
Status of the Program	Under implementation	The program will support 1.6m households as direct beneficiaries. These are farmers who organized in different categories including common interest groups, farmers benefiting from small-scale irrigation, farmers in farmer research extension groups and farmers being linked to the market by the program. The program also reached out to a significant number of indirect beneficiaries, including household members and farmers benefiting from improved public agricultural services overall and access to some markets.
Date of implementation	Program started in 2016 and will go until 2021	
Date of completion (if relevant)	2021	
Implementing entity or entities	<p>Federal Ministry of Agriculture, regional bureaus of agriculture as well as zonal and woreda level agriculture bureaus.</p> <p>Ethiopian Institute of Agricultural Research, Agricultural Transformation Agency, Federal Cooperative Agency</p>	
Objectives and intended impacts or benefits of the Program	The Program Objective is “to increase agricultural productivity and commercialization of small holder farmers targeted by the Program and also contributes to dietary diversity and consumption at house	

	hold level.”	
Level of the Program	Household, woreda and regional level	
Geographic coverage	Seven regional states and one city administration that counts to 157 woreda & 1.6m households as direct beneficiaries	
Sectors targeted	Agriculture	
Greenhouse gases targeted	Not specified	
Other related actions	SLMP	

Program II:

Information	Description	Example
Title of the Program	Regional pastoral livelihood resilience project	<p>The Project aimed at establishing effective models of Natural Resource Management, Market access and Trade and livelihood support and Pastoral Disaster Management in the ASALs (arid and semi-arid lands) area and focuses on pastoral communities' priority needs, improve their livelihoods and reduce their vulnerability. This will be achieved through a community-based demand driven development participatory planning process and implementation. The Project also supports a participatory disaster management program to reduce the risk to pastoral communities of drought and other natural threats to livelihoods. The project also identified and develops the alternative sources of incomes for pastoral households in addition to livestock sources through high value crops production, honey production and fishing. The project gives attention to select ASALS woreda where location factors are conducive for livestock development. The project used national criteria's for purpose of select project areas. The fooling are criteria's used by project;</p> <ul style="list-style-type: none"> (i) Selecting adjacent woredas to borders and marketing routes (ii) Adapting a "cluster approach" if and when appropriate to optimize financial, logistical issues and impact; (iii) The level of vulnerability of woredas, based on key indicators such as food insecurity, hunger, malnutrition and household incomes; (iv) Proximity to roads to ensure connectively between investments and markets; (v) Complementarities and synergies with other projects and similar interventions; (vi) Willingness of the community and its demonstrated interest in the project interventions and; (vii) Livelihoods potential, which could include potential for value chain development and market engagement.
Type of Program	Natural Resource Management	<p>The objective of the activity is to :</p> <ul style="list-style-type: none"> ● Enhance access of pastoral and agro-pastoral communities to sustainably managed natural resources. ● Address deep rooted problems in selected regions and woredas , namely: the low level of water infrastructures for water supply, fed and food production, poor land management, and ● Accessing natural resources which drive pastoralists and agro-pastoralists to move with their livestock.

	<p>Market Access and Trade</p> <p>Pastoral Drought Disaster risk management</p> <p>Livelihood support</p>	<p>This program activity focus on demand-driven infrastructure investment packages to improve national systems for livestock marketing and trade. Investments identified through infrastructure gap analysis, discussions with regional and local stakeholders.</p> <p>The selected RPLRP woredas are highly vulnerable to recurrent drought, flood and human and animal diseases affecting their lives and livelihood. To build the resilience to such hazards the project designed three interventions under this component which are pastoral risk early warning and response systems; disaster risk management and climate change management. The objective of this project activity is to sustainably enhance animal production and productivity in targeted pastoral areas.</p>
Description of specific interventions	<ul style="list-style-type: none"> • Rangelands that have trans-boundary implications for animal movements rehabilitated • Capacity of the pastoral Community to access sustainable Animal Health services Enhanced • Improved animal nutrition promoted • Drought tolerant Food and feed crop technologies will be promoted and disseminated 	<ul style="list-style-type: none"> • Construction of diversion irrigation scheme (pumped and diversion weir) 5000USD per hectare having 45ha per scheme on average for single of growing season • The existing land resource map will be further refined to a scale of 1:100,000 by IGAD to identify the available rangeland. • Biological and physical conservation (reforestation, physical conservation in the most depleted areas etc): 4000 USD/ha • Established a nursery sites (258,000USD/ha) • Distribute 1200 qt drought tolerant varieties to 4800 beneficiaries. Trained 200 pastoralist on certified seed production • 12 national & regional experts capacitate their skill through experience sharing workshops. • 120 pastoralists and agro pastoralists will capacitate through experience sharing. • 200 pastoralists and agro pastoralists trained on income generation activities.
Status of the	Under	

Program	implementation	
Date of implementation	Program started in 2014 and will go until December, 2019	
Date of completion (if relevant)	December 2019	
Implementing entity or entities	Federal Ministry of Agriculture, Federal ministry of finance and cooperation, IGAD, regional bureaus of agriculture, as well as zonal and woreda level agriculture bureaus.	
Objectives and intended impacts or benefits of the Program	The project aims “to enhance livelihood resilience of pastoral and agro-pastoral communities in drought prone areas”. It contributes to the poverty reduction priorities of the country specifically focuses on achieving the millennium development goal of eradicate extreme poverty and hunger through the enhancement of livestock and other alternatives sources of income.	
Level of the Program	Household, woreda and regional level	55,000 ha of land irrigated by developing irrigation new irrigation schemes and rehabilitated existing infrastructures

Geographic coverage	The project focus on 21 woreda selected from four national regional states. The four regions (woredas) are oromia (6), SNNP (5), Somalia (6) and Afar (4).	
Sectors targeted	Agriculture	
Greenhouse gases targeted	Not specified	
Other related actions		

Information	Description	
Title of the Program	Productive Safety Net Program (PSNP) IV	The PSNP provided food and/or cash transfers to food insecure households in chronically food insecure woredas (that receiving food aid in exchange for labor-intensive public works, while labor-poor households received unconditional “direct support” transfers. The public works component, which covered approximately 80% of programme participants, focused on the implementation of soil and water conservation measures and the development of community assets such as roads, water infrastructure, schools, and clinics.
Type of Program	Social protection	<ul style="list-style-type: none"> ● Number of safety net clients expressed as a percentage of people living below poverty line. ● Number of safety net clients benefiting from fee waivers and nutrition-related conditionality.
	Disaster Risk Management	<ul style="list-style-type: none"> ● Reduction in distress sales of assets by safety net clients as compared to previous similar disasters in operational areas. ● Reduction in the number of children in operational areas affected by severe malnutrition.
	Climate Resilient Green Economy	<ul style="list-style-type: none"> ● % of land covered by improved watershed and rangeland management structures and practices ● Mt CO2e sequestered in public works supported watersheds.
	National Nutrition Program	<ul style="list-style-type: none"> ● Reduction in % of stunting in children under 5 in operational areas
Description of specific intervention	PSNP is designed to address, rehabilitating the degraded land, improve community asset and protect household productive asset, improve household food security and economic wellbeing.	<ul style="list-style-type: none"> ● Community road 3900Km constructed and 89000km maintained ● 600,000 soil and stone bund constructed ● 900 health post constructed ● 4300 primary classroom constructed ● 644,000 ha area enclosure, soil fertility retained and soil carbon sequestered ● Over 208, 000 ponds constructed, and 55,000 hand dug wells ● 8100 springs developed ● 8300km irrigation canal constructed

Status of the Program	Going on PSNP IV 2015-2020 adding additional component in HH nutrition improvement	To meet all the above issues including sustainable HH nutrition requirement for beneficiaries of 8.3 million in 8 regions, about 350 woreda (District) with a total budget cost , including operational expenditure is about GoE3, 625,000,000
	Date of completion IV	2020
Implementing entity	Federal Ministry of Agriculture (MoA), Ministry of Finance and economic cooperation(MoFEC), National Disaster Management Commission (NDRMC),MOLSA, Federal Cooperative Agency, Regional, Zone and Woreda relevant Bureau, NGOs ,	
Objectives and intended impacts or benefits of the Program	<ul style="list-style-type: none"> ● Reduce Household asset depletion ● Improve the livelihood of the beneficiaries ● Build resilience capacity of beneficiaries of the program ● Improve Nutrition of the beneficiaries ● Improve productivity of the environment ● Contribute to ensure food security of the community ● Contribute to sequestration of CO₂ 	
Level of the program	Federal up to woreda and community Household level.	

Geographic coverage	8 regions Oromiya, Amhara, Tigray, SNNPRs, Afar, Somali, Harer and Dire Dawa city administration ,	The estimated maximum annual program caseload is about 10 million clients consisting of 8.3 million chronic food insecure clients and the capacity to support additional 1.7 million transitor clients if need exists when determined by using generated data by early warning system through a joint seasonal assessment conducted in December.
Sectors targeted	Agriculture, Education, Health, water, Road	
Green house targeted	Mt co ₂ sequestration from rehabilitated watersheds	

Information	Description	
Title of the Program	Participatory Small-scale Irrigation Development Programme Phase II	<p>The Programme area covers four regions of Ethiopia. These are: Amhara, Oromiya, Southern Nations, Nationalities and Peoples Region (SNNPR) and Tigray. The choice of the area was based on the Government's desire to build on lessons and experience generated by PASIDP and to scale up the Programme's successful interventions. The core target group consider by the programme consists of poor and food insecure rural households, mainly their livelihood rely on rain-fed agriculture or traditional irrigation schemes. These households predominantly practices mixed crop-livestock farming system, and living on an average per capital income of less than US\$0.3 per day.</p> <p>A key requirement for participation in the program depends on the confirmed Willingness of the benefiting farmers to significantly contribute to the investment cost and future operation of the scheme.</p>
Type of Program	<p>Small-scale Irrigation Infrastructure Development</p> <p>Technical Capacity development for Sustainable Agriculture</p> <p>Watershed Development and Management</p>	<p>The objective of this activity is to increase productivity and resilience of small farm enterprises by increasing areas under sustainable agricultural water management and enable them to improve household revenues and food and nutrition security from the production and marketing of selected crops.</p> <p>This activities support a range of interventions designed to ensure that the target beneficiaries operate in an environment that is more conducive to rural commercial development. The interventions put emphasis on agribusiness linkages and market access and capacity building and empowerment of small holder farmers. Agribusiness linkages and market access activity is focus on to improve access to input and output markets and financial services.</p> <p>This activity aimed to improved soil and water resources on rain-fed area adjust to area selected for irrigated agriculture</p>
Description of specific interventions	<p>Developing new and upgrade selected existing irrigation</p> <ul style="list-style-type: none"> ● Introduction of Conservation 	<ul style="list-style-type: none"> ● This intervention aims at developing new and upgrade selected existing irrigation scheme infrastructure on about 12,000ha and 46,250 small-scale irrigation schemes as identified through value chain analysis for selected commodities. The infrastructure included

	<p>Agriculture (CA) techniques for rainfed farmers</p> <ul style="list-style-type: none"> ● Rehabilitation degraded land which located within targeted watershed 	<p>irrigation infrastructure and, to a limited extent improved market facilities and rehabilitation of access roads where necessary to ensure adequate access to markets.</p> <ul style="list-style-type: none"> ● 15,000 people trained in sustainable production practices and technologies include NRM and CA. ● 60,000 ha of degraded land rehabilitated using improved watershed management measures and restored ecosystem services.
Status of the Program	Under implementation	PASIDP-II targets 100,000 beneficiary households: 30,000 households in small-scale irrigation schemes and some fields in the adjacent watersheds; 30,000 households in the adjacent watersheds; 20,000 employment opportunities for youth and landless people created due to the growing labour need requirements in irrigation schemes and related downstream and upstream agribusiness development; and 20,000 households that benefitted from irrigation support under PASIDP-I.
Date of implementation	Program started in 2017 and will go until 2021	
Date of completion (if relevant)	2021	
Implementing entity or entities	<p>Federal Ministry of Agriculture, regional bureaus of agriculture as well as zonal and woreda level agriculture bureaus.</p> <p>Ethiopian Institute of Agricultural Research, Federal Cooperative Agency</p>	
Objectives and intended impacts or benefits of the Program	The programme development objective is to improve income and food security for rural households on a	

	sustainable basis.	
Level of the Program	Watershed, Household, woreda and regional level	
Geographic coverage	Four regions of Ethiopia. These are: Amhara, Oromiya, Southern Nations, Nationalities and Peoples Region (SNNPR) and Tigray	46,250 farm households cultivating 18,400 ha of
Sectors targeted	Agriculture and water	
Greenhouse gases targeted	Not specified	
Other related actions	SLMP and AGP	