

Funding Proposal

FP136: Resilient Landscapes and Livelihoods Project

Ethiopia | International Bank for Reconstruction and Development and International Development Association (World Bank) | Decision B.26/02

21 August 2020



**GREEN
CLIMATE
FUND**

Funding Proposal

Project/Programme title:	Resilient Landscapes and Livelihoods Project
Country(ies):	Ethiopia
Accredited Entity:	World Bank
Date of first submission:	2018/06/22
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Contents

Section A	PROJECT / PROGRAMME SUMMARY
Section B	PROJECT / PROGRAMME INFORMATION
Section C	FINANCING INFORMATION
Section D	EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA
Section E	LOGICAL FRAMEWORK
Section F	RISK ASSESSMENT AND MANAGEMENT
Section G	GCF POLICIES AND STANDARDS
Section H	ANNEXES

Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the [GCF Information Disclosure Policy](#), project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

“FP-[Accredited Entity Short Name]-[Country/Region]-[YYYY/MM/DD]”

A. PROJECT/PROGRAMME SUMMARY			
A.1. Project or programme	Project	A.2. Public or private sector	Public
A.3. Request for Proposals (RFP)	<p>If the funding proposal is being submitted in response to a specific GCF Request for Proposals, indicate which RFP it is targeted for. Please note that there is a separate template for the Simplified Approval Process and REDD+.</p> <p>Not applicable</p>		
A.4. Result area(s)	<p>Check the applicable GCF result area(s) that the <u>overall</u> proposed project/programme targets. For each checked result area(s), indicate the estimated percentage of <u>GCF budget</u> devoted to it. The total of the percentages when summed should be 100%.</p> <p>Mitigation: Reduced emissions from:</p> <p><input type="checkbox"/> Energy access and power generation:</p> <p><input type="checkbox"/> Low-emission transport:</p> <p><input type="checkbox"/> Buildings, cities, industries and appliances:</p> <p><input checked="" type="checkbox"/> Forestry and land use:</p> <p>Adaptation: Increased resilience of:</p> <p><input checked="" type="checkbox"/> Most vulnerable people, communities and regions:</p> <p><input checked="" type="checkbox"/> Health and well-being, and food and water security:</p> <p><input type="checkbox"/> Infrastructure and built environment:</p> <p><input type="checkbox"/> Ecosystem and ecosystem services:</p>		<p>GCF contribution:</p> <p><u>Enter number</u>%</p> <p><u>Enter number</u>%</p> <p><u>Enter number</u>%</p> <p><u>100%</u></p> <p><u>70%</u></p> <p><u>30%</u></p> <p><u>Enter number</u>%</p> <p><u>Enter number</u>%</p>
	A.5. Expected mitigation impact	<p>5,621,615 t CO₂ eq over 5 years</p> <p>43,800,000 t CO₂ eq over 25 years</p>	A.6. Expected adaptation impact
A.7. Total financing (GCF + co-finance)	296,237,602 USD	A.9. Project size	Large (Over USD 250 million)
A.8. Total GCF funding requested	<p>165,237,592 USD</p> <p>Choose an item.</p> <p>For multi-country proposals, please fill out annex 17.</p>		
A.10. Financial instrument(s) requested for the GCF funding	<p>Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.</p> <p><input checked="" type="checkbox"/> Grant <u>58,063,337 USD</u> <input type="checkbox"/> Equity <u>Enter number</u></p> <p><input checked="" type="checkbox"/> Loan <u>107,174,255 USD</u> <input type="checkbox"/> Results-based payment <u>Enter number</u></p> <p><input type="checkbox"/> Guarantee <u>Enter number</u></p>		
A.11. Implementation period	Start: 07-Oct-2020; End: 07-Oct-2025	A.12. Total lifespan	25 years

A.13. Expected date of AE internal approval	<i>This is the date that the Accredited Entity obtained/will obtain its own approval to implement the project/programme, if available.</i> 6/15/2020	A.14. ESS category	<i>Refer to the AE's safeguard policy and GCF ESS Standards to assess your FP category.</i> B
A.15. Has this FP been submitted as a CN before?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	A.16. Has Readiness or PPF support been used to prepare this FP?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
A.17. Is this FP included in the entity work programme?	Yes <input type="checkbox"/> No <input type="checkbox"/>	A.18. Is this FP included in the country programme?	Yes <input type="checkbox"/> No <input type="checkbox"/>
A.19. Complementarity and coherence	<i>Does the project/programme complement other climate finance funding (e.g. GEF, AF, CIF, etc.)? If yes, please elaborate in section B.1.</i> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
A.20. Executing Entity information	<i>If not the Accredited Entity, please indicate the full legal name of the Executing Entity(ies) and provide its country of registration and ownership type. Note that there can be more than one Executing Entity. Also indicate if an Executing Entity is the National Designated Authority. Refer to the definition of Executing Entity in the Accreditation Master Agreement.</i> The Federal Democratic Republic of Ethiopia, represented by the Ministry of Finance and acting through the Ministry of Agriculture.		
A.21. Executive summary (max. 750 words, approximately 1.5 pages)			

Provide an executive summary of the project/programme including:

1. *Climate change problem*
2. *Proposed interventions*
3. *Climate impacts/benefits*

1. Climate Change Problem

Impact of Climate Change on Land Degradation

In the highlands of Ethiopia, climate change is expected to increase both annual precipitation and seasonal variability in rainfall, increasing soil erosion by 7-10% per year and, in the more extreme scenarios, possibly by as much as 40-70% per year by 2050. Conservative estimates suggest that partly as a result of this increased soil erosion, climate change will reduce agricultural crop productivity in Ethiopia by 5 -10 % by 2030¹. Land degradation in Ethiopia has proceeded at an alarming rate and will be increasingly aggravated by climate change. From 1981 to 2003, 296,812 km² (29.7 million ha) of land has been degraded, affecting a population of 20.65 million, approximately one in five people in Ethiopia.

Vulnerability of the agriculture sector and community livelihoods to climate change impacts

The intersection of land management, rights, and use forms the key development issue for millions of rural Ethiopians facing water insecurity, food insecurity, land tenure insecurity, and livelihood insecurity – all amplified by climate variability and change as described above. Climate impacts in Ethiopia are felt primarily through water stress, which is affected by land use and degradation that undermines watershed function. In Ethiopia, the estimated cost of land degradation is 2-3% of GDP, before accounting for downstream effects, such as increased flood risk.

Exposure of farmers to land degradation

Since the 1970s, the Government of Ethiopia has recognized the problem of land degradation as a major challenge to the country's growth and stability. Studies have shown that land degradation has cost the country 2-3 percentage points in agricultural GDP each year. Due to its impact on agricultural productivity alone, soil erosion currently costs the economy of Ethiopia about \$305 million per year. Based on Ethiopia's experience to date, the cost of inaction to address land degradation is estimated to be 4.4 times greater than the cost of preventative action through (SLM).²

Impacts of Climate Change and Variability on farmer livelihoods

Climate variability such as the droughts and floods described above already negatively impacts livelihoods in Ethiopia. This will aggravate the impacts of climate change, which are broad in scope and could be severe. Estimates suggest climate change may reduce Ethiopia's GDP up to 10 % by 2045, primarily through impacts on agricultural productivity. These changes would aggravate existing social and economic challenges.

Recently, the impact of climate change on crop yields in Ethiopia was investigated in a report published by IFPRI.³ Overall, the simulated net effects of increases in average rainfall and higher average temperatures are relatively small. However, the authors note that there is growing evidence that weather outcomes, particularly rainfall, are likely to become more variable in the future, which could lead to substantial effects on crop production and household welfare (as well as on livestock) due to extreme events – droughts, floods, or extremely high temperatures.

Crucially, the models employed in the simulations do not take into account the impact of climate change on land degradation, while noting that in many parts of the country land degradation is already reducing yields. Climate change is likely to accelerate the levels of land degradation and soil erosion. As described in more detail in Annex A.7 and Annex A.8, recent analysis by the Water and Land Resource Centre (WLRC) of Addis Ababa University using soil loss equations calibrated using historical station data from two monitoring stations within the project area in conjunction with the IPCC's RCP4.5 scenario for 2050, show that soil erosion is expected to increase by 7-10% per year and, in the more extreme scenarios, could increase by as much as 40-70% per year by 2050 due to climate change in the absence of interventions to improve land management⁴. As a result, conservative estimates suggest that climate change will reduce agricultural crop productivity in Ethiopia by 5 -10 % by 2030.

1 Refer to Annex A.7., Annex A.8 and Bai, Z. G., Dent, D. L., Olsson, L., & Schaepman, M. E. (2008), "Global assessment of land degradation and improvement. 1. Identification by remote sensing". Wageningen, The Netherlands: International Soil Reference and Information Centre (ISRIC).

2 Gebreelassie et al. (2016).

3 Dorosh, P. and Minten, B. (eds.), 2019, Ethiopia's agri-food system: Past trends, present challenges, and future scenarios, Ethiopia Strategy Support Program (ESSP), IFPRI

4 Based on recent analysis by the Water and Land Resource Centre (WLRC) of Addis Ababa University

The direct impacts on crop productivity could in turn lead to impacts on prices, production, and consumption and on per capita calorie consumption and child malnutrition. Climate change, therefore, complicates efforts to increase food production and improve food security⁵.

Sensitivity of rural communities to the impacts of climate change

Sensitivity to climate change and variability is high in the proposed project communities. More than 80% of Ethiopians are engaged in subsistence rain-fed agriculture and farms are already under significant climate stress. These populations are highly dependent on the performance of productive landscapes for income, energy, food, building materials, and water. Furthermore, agriculture accounts for most jobs and about 40% of output and exports. Low adaptive capacity contributes to high vulnerability in the proposed project communities. Most of the targeted watersheds are situated in regions that have relatively low adaptive capacity. As one study of vulnerability in the Tigray Region concluded, districts most vulnerable to climate change and variability overlapped with districts with the most vulnerable populations; climate vulnerability was inextricably linked to social and economic development.^[8] Households that are short of basic economic and social resources clearly lack the means to undertake adaptive measures or respond to climate shocks.

2. Proposed Interventions/Summary of Project

The objective of the Project is to improve climate resilience, land productivity and carbon storage and increase access to diversified livelihood activities in selected rural watersheds.

The Project consists of the following parts to be carried out in select Regions of Ethiopia:

Part 1. Investment in Green Infrastructure and Resilient Livelihoods

Provide support for the restoration of degraded landscapes in selected watersheds and help build resilient livelihoods through the following program of activities:

- (a) Land Restoration and Watershed Management: Implementation of sustainable soil and water conservation practices in line with Multi-Year Development Plans (“MYDPs”) in watersheds, including land rehabilitation measures and establishment of green infrastructure (including rehabilitation through biological and physical conservation measures that ensure reduced surface run-off and soil erosion, as well as improved land productivity, resulting in enhanced crop and livestock production) through, inter alia: soil and water conservation measures, gully rehabilitation, establishment of green corridors, area closure management and use, establishment of plantation blocks, and enrichment of degraded pasture and rangeland;
- (b) Climate-Smart Agriculture: Enhance the livelihood resilience of beneficiary households in restored micro watersheds by implementing context-specific Climate-Smart Agriculture (“CSA”) activity packages comprising one or more of the following: farm water and soil moisture management, integrated soil fertility and soil health management, crop development and management, and environmentally-friendly livestock production through feed development and management; and
- (c) Livelihood Diversification and Connection to Value Chains: Further increase livelihood resilience by diversifying livelihoods, and helping ensure livelihood sustainability by better connecting products with value chains in selected watersheds through a program of activities, including provision of technical assistance and grants to Common Interest Groups (“CIGs”) and financing activities that facilitate private sector engagement in Project-supported value chains directly or through primary cooperatives and/or coop unions.

Part 2. Investing in Institutions and Information for Resilience

Enhance institutional capacity and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the Project area through the following program of activities:

- (a) Capacity Building, Information Modernization and Policy Development: Provision of technical assistance, at the local government level, to implement the Project and build capacity to sustain land and water management practices in watersheds, including financing of selected staff positions, financing of technical vocational education and training, development of data management plan, piloting of new technologies for information modernization (such as the use of electronic tablets for gathering geospatial information and the use of unmanned aerial vehicles for land certification

mapping), and development and application of a regulatory framework for the establishment of WUAs and community bylaws guiding land-use practices, and strengthening the Land Administration System; and

(b) Impact Evaluation, Knowledge Management and Communication: Carry out impact evaluations of (i) the bio-physical outcomes of MoA's SLM Program, and (ii) the productivity gains associated with the climate-smart agriculture interventions supported by the Project, establish a geospatial knowledge platform accessible to planners and stakeholders, and develop and implement a strategic communication program to inform and mobilize communities, and to enhance Project visibility and transparency among all actors.

Part 3. Land Administration and Use

Strengthen land tenure and the land administration system in Project areas and improve incentives for beneficiary communities to invest in sustainable landscape management through the following: (a) in the micro-watersheds targeted under Part 1 of the Project, improving the land tenure security of rural households and groups through land certification and administration (including issuance of Second Level Landholding Certificates ("SLLCs") to households, and targeted landless youth will receive communal land certificates, inputs, and extension services in exchange for land restoration), and (b) enhancing local level land use planning and support innovations in landscape certification systems (including providing support for participatory local land use planning and the rollout of the National Rural Land Administration Information System ("NRLAIS").

Part 4. Project Management and Reporting

Provision of support for Project management and reporting, including financing of Operating Costs and implementation of Project fiduciary aspects, including financial management, procurement, environmental and social safeguards, and monitoring and evaluation and reporting.

3. Climate Benefits

The proposed project is designed to create resilient landscapes and livelihoods for vulnerable rural populations in Ethiopia. The Resilient Landscapes and Livelihoods Project (RLLP) will improve climate resilience, land productivity and carbon storage, as well as improve access to diversified sources of income in selected vulnerable rural major watersheds in Amhara, Benishangul Gumuz, Gambella, Oromiya, SNNP and Tigray. The project scales up initiatives with demonstrated climate value and co-benefits within the Sustainable Land Management Program (SLMP), and it pilots new innovations. Proposed interventions target rural livelihood productivity and resilience through sustainable land management, low-emission resilient agriculture practices, enhanced land tenure, gender-sensitive livelihood initiatives which contributes to removing barriers to women's ownership of and control over assets and improving voice and agency, and the strengthening of value chains for long-term program durability.

The RLLP will contribute to climate resilience in 210 major watersheds with 8-12 micro-watersheds per major watershed. The beneficiaries of RLLP include the entire population of the selected watersheds, estimated at 4.2 million people, or 834,000 households. The project interventions are also expected to lead to a GHG emissions reduction of 43.9 million tons CO₂eq due to carbon sequestration as a result of improvements to grasslands and agriculture. 152 watersheds will be supported by IDA and MDTF (Contribution by Government of Norway), 18 watersheds by the anticipated contribution to MDTF by the Government of Canada, and 40 watersheds by GCF.

The executing entity is the Federal Democratic Republic of Ethiopia. The GCF Proceeds will be channeled through the World Bank and will be made available to the Federal Democratic Republic of Ethiopia. The World Bank will enter into a grant agreement and a loan agreement with the Federal Democratic Republic of Ethiopia, represented by MoF and acting through MoA for the implementation of the GCF Funded Activity.

B. PROJECT/PROGRAMME INFORMATION

B.1. Climate context (max. 1000 words, approximately 2 pages)

Climate change problem: Describe the climate change problem the proposal is expected to address. Describe the mitigation needs (GHG emissions profile) and/or adaptation needs (climate hazards and associated risks based on impacts, exposure, and vulnerabilities) that the proposed interventions are expected to address. Also describe the most likely scenario (prevailing conditions or other alternative) that would remain or continue in the absence of the proposed interventions. Include baseline information. The methodologies used to derive such information, including the mitigation and adaptation needs, should be included in the feasibility study.

Context: In describing the mitigation and/or adaptation needs, briefly describe the target region/area of the proposed interventions including information on the demographics, economy, topography, etc.

Related projects/interventions: Also describe any recent or ongoing projects/interventions that are related to the proposal from other domestic or international sources of funding, such as the Global Environment Facility, Adaptation Fund, Climate Investment Funds, etc., and how they will be complemented by this project/programme (e.g. scaling up, replication, etc.). Please identify current gaps and barriers regarding recent or ongoing projects and elaborate further how this project/programme complements or addresses these.

Ethiopia is an LDC that is among the most vulnerable to climate change and variability: it is exposed to severe climate impacts, its economy is highly climate-sensitive, and its adaptive capacity is low. In the ND-GAIN country index, Ethiopia ranks 163 out of 181 countries in terms of climate readiness. While the poverty headcount has fallen from 55.5 % to 26.7 % from 2000-2016⁶, these gains are very fragile in a changing climate. Resilient agriculture is a high priority, as agriculture accounts for 41% of GDP, 85% of all employment and nine of the top ten export commodities by value⁷.

Climate Change and Variability in Ethiopia

Ethiopia has a long history of having to cope with extreme weather events. Rainfall is highly erratic and typically falls in the form of intensive convective storms spawned by the country's varied topography. Over the past three decades, Ethiopia has experienced countless localized drought events and seven major droughts, five of which have been associated with famines. Climate varies significantly between and even in each one of the Ethiopian regions. Most of the recent drought and food crisis events have been geographically concentrated in two broad zones of the country, with the eastern and northern parts of the country being the most vulnerable. For example, rainfall variability and associated droughts have been major causes of food shortages and famine in the Tigray region in the north of the country.

There are numerous observed changes in Ethiopia's climate⁸. The most prominent observed climate change trend has been a tendency towards lower rainfall during the main growing seasons (March–May and December–February). A decline in rainfall of 15% on average has been associated with anthropogenic Indian Ocean warming. While floods have historically never been a major economic hazard in Ethiopia, in recent years there has been significant socio-economic disruption due to flooding, e.g. in 1997 and 2006.

Most global climate models project an increase in precipitation in both the dry and wet seasons. Climate scenarios based on the ISP2a emissions scenario run by a suite of Global Climate Models (GCMs) are broadly consistent in indicating increases in annual rainfall for Ethiopia as a whole. These increases are largely a result of increasing rainfall during the 'short' rainfall season (October-December) in southern Ethiopia. October-December rainfall is projected to increase between 10 and 70% on the average over Ethiopia. These changes will lead to an increase in heavy rains and floods. The temperature will very likely continue to increase for the next few decades at a rate similar to that seen in recent years. The projected increases in the inter-annual variability of precipitation in combination with the warming

⁶ WB database, for Poverty headcount ratio at \$1.90 a day (2011 PPP)

⁷ CRGE (2014)

⁸ Climate Risk and Adaptation Country Profile: Vulnerability, Risk Reduction and Adaptation to Climate Change - Ethiopia, World Bank, 2011. Downloaded from: <http://countryadaptationprofiles.gfdr.org>

will likely lead to increases in the occurrence of droughts. Figure 1 depicts changes in precipitation and temperatures during the previous century and under projections beyond the year 2040.

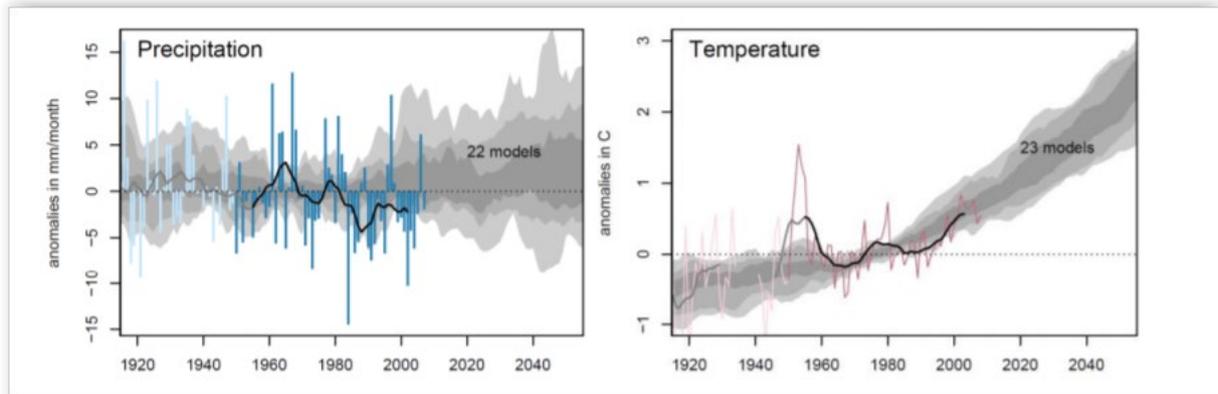


Figure 1 Observed and predicted changes in precipitation and temperature in Ethiopia⁹

In the highlands, climate change is expected to result in an increase in both annual precipitation and seasonal variability in rainfall.

Incremental costs of climate change

The supporting document “Technical Note to modeling soil loss” (Annex A.8) estimates change in soil erosion due to climate change in RLLP Project Watersheds. Results indicate that soil erosion is expected to increase by 7-10% per year and, in the more extreme scenarios, could increase by as much as 40-70% per year by 2050 in the absence of interventions to improve land management that builds resilience to the impacts of climate change. Under business-as-usual, the Sustainable Land Management (SLM) program estimates that a total of about 670 watersheds need approximately \$2.7 million each in investment to prevent soil erosion i.e. \$1.8 billion of total investment in Ethiopia (see Annex A.9. “Cost of watershed development interventions”). Conservatively assuming that (a) climate change could increase annual soil erosion by 50% (b) 1:1 relationship between increase in soil erosion and investment cost to build climate resilience, we expect that \$904 million would be the incremental investment cost to prevent increased soil erosion due to climate change across all 670 watersheds in Ethiopia (\$1.35 million of incremental cost of climate change per watershed). This cost would further increase in watersheds that are highly vulnerable to climate change since community contributions are likely to be less than regular SLM programs due exposure of beneficiaries to severe soil loss.

Both climate smart agriculture and sustainable land management are packages of measures in which several practices are implemented concurrently at the appropriate time and scale to achieve the triple win of climate change adaptation, climate change mitigation and increases in yields resulting in increased climate resilient livelihood. Hence it is not possible to identify the scope of GCF financing on the basis of differentiation between development activities and climate change activities. GCF is requested to finance RLLP activities in watersheds that are highly vulnerable to climate change. In order to identify such watersheds, a vulnerability analysis was undertaken in which 192¹⁰ RLLP major watersheds were ranked by highest to lowest annual soil loss per hectare due to precipitation changes by 2050 under RCP 4.5 scenario (see Annex A.12.) compared to current levels. Top 40 of these watersheds were selected for GCF financing. IDA will finance RLLP activities in remaining 152 watersheds.

⁹ Keller, M. (2009) Climate Risks and Development Projects. Assessment Report for a Community-Level Project in Guduru, Oromiya, Ethiopia

¹⁰ Details of Co-financing from Government of Canada were not available during this analysis, hence 18 Watersheds supported by it were not considered

Vulnerability of the agriculture sector and community livelihoods to climate change impacts

The intersection of land management, rights, and use forms the key development issue for millions of rural Ethiopians facing water insecurity, food insecurity, land tenure insecurity, and livelihood insecurity – all amplified by climate variability and change as described above. Climate impacts in Ethiopia are felt primarily through water stress, which is affected by land use and degradation that undermines watershed function. In Ethiopia, the estimated cost of land degradation is 2-3% of GDP, before accounting for downstream effects, such as increased flood risk.

Exposure of farmers to land degradation

Since the 1970s, the Government of Ethiopia has recognized the problem of land degradation as a major challenge to the country's growth and stability. Studies have shown that land degradation has cost the country 2-3 percentage points in agricultural GDP each year. Due to its impact on agricultural productivity alone, soil erosion currently costs the economy of Ethiopia about \$305 million per year. Based on Ethiopia's experience to date, the cost of inaction to address land degradation is estimated to be 4.4 times greater than the cost of preventative action through (SLM).¹¹

From 1981 to 2003, 296,812 km² (29.7 million ha) of land has been degraded, affecting a population of 20.65 million (Bai et al. 2008),¹² approximately one in five people in Ethiopia. Approximately 27 million ha or almost 50% of highland areas (which make up about 45 % of the total land area), is considered to be significantly eroded. Of this area, 14 million ha are seriously eroded, with over 2 million ha beyond reclamation. It is estimated that some 30,000 ha are lost annually as a result of soil erosion.¹³ For the highland areas, erosion rates have been estimated to average 35 tons/ha/yr, while the estimated rate from the croplands is 130 ton/ha/yr. This has led to the conclusion that almost half of Ethiopia's annual soil losses come from the land under cultivation, even though this land covers only 20% of the country.¹⁴

Figure 2 shows the distribution of annual precipitation in Ethiopia. According to this mapping exercise, the majority of planned watershed restoration was conducted in areas with high levels of precipitation. These areas are highly exposed to erosion.

¹¹ Gebreselassie et al. (2016).

¹² Bai, Z. G., Dent, D. L., Olsson, L., & Schaepman, M. E. (2008), "Global assessment of land degradation and improvement. 1. Identification by remote sensing". Wageningen, The Netherlands: International Soil Reference and Information Centre (ISRIC).

¹³ Berry Leonard (2003) Land Degradation in Ethiopia: Its Extent and Impact

¹⁴ Ibid.

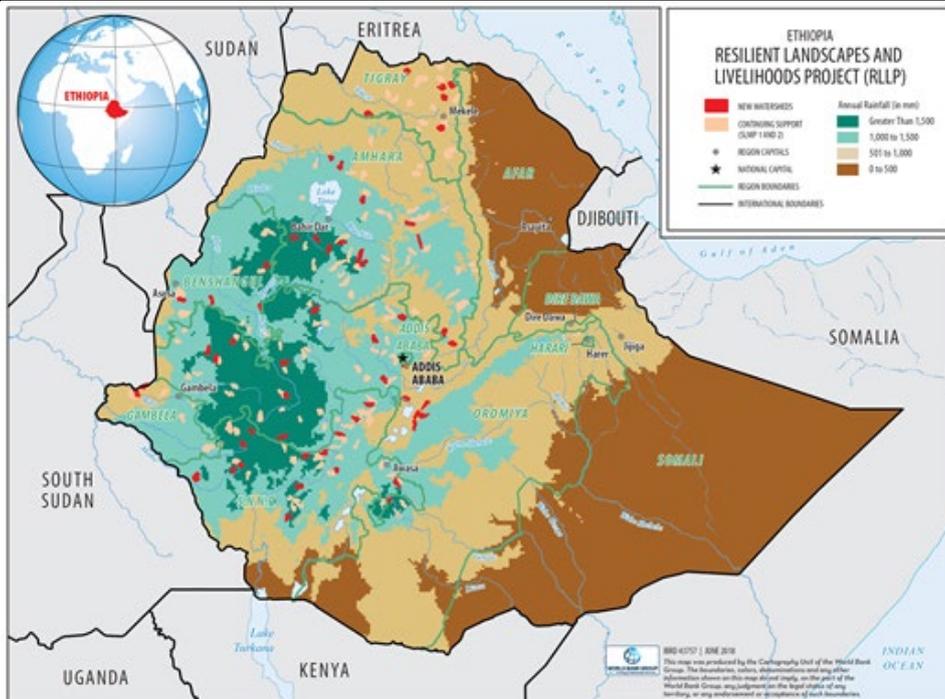


Figure 2. Annual precipitation distribution in Ethiopia

Impacts of Climate Change and Variability on farmer livelihoods

Climate variability such as the droughts and floods described above already negatively impacts livelihoods in Ethiopia. This will aggravate the impacts of climate change, which are broad in scope and could be severe. Estimates suggest climate change may reduce Ethiopia's GDP up to 10 % by 2045, primarily through impacts on agricultural productivity. These changes would aggravate existing social and economic challenges.

Recently, the impact of climate change on crop yields in Ethiopia was investigated in a report published by IFPRI. Overall, the simulated net effects of increases in average rainfall and higher average temperatures are relatively small. However, the authors note that there is growing evidence that weather outcomes, particularly rainfall, are likely to become more variable in the future, which could lead to substantial effects on crop production and household welfare (as well as on livestock) due to extreme events – droughts, floods, or extremely high temperatures.

Crucially, the models employed in the simulations do not take into account the impact of climate change on land degradation, while noting that in many parts of the country land degradation is already reducing yields. Climate change is likely to accelerate the levels of land degradation and soil erosion. As described in more detail in Annex A.7 and Annex A.8, recent analysis by the Water and Land Resource Centre (WLRC) of Addis Ababa University using soil loss equations calibrated using historical station data from two monitoring stations within the project area in conjunction with the IPCC's RCP4.5 scenario for 2050, show that soil erosion is expected to increase by 7-10% per year and, in the more extreme scenarios, could increase by as much as 40-70% per year by 2050 due to climate change in the absence of interventions to improve land management. As a result, conservative estimates suggest that climate change will reduce agricultural crop productivity in Ethiopia by 5 -10 % by 2030.

The direct impacts on crop productivity could in turn lead to impacts on prices, production, and consumption and on per capita calorie consumption and child malnutrition. Climate change, therefore, complicates efforts to increase food production and improve food security.

Sensitivity of rural communities to the impacts of climate change

Sensitivity of rural communities to the impacts of climate change

Sensitivity to climate change and variability is high in the proposed project communities. More than 80% of Ethiopians are engaged in subsistence rain-fed agriculture and farms are already under significant climate stress. These populations are highly dependent on the performance of productive landscapes for income, energy, food, building materials, and water. Furthermore, agriculture accounts for most jobs and about 40% of output and exports. Low adaptive capacity contributes to high vulnerability in the proposed project communities. Most of the targeted watersheds are situated in regions that have relatively low adaptive capacity. As one study of vulnerability in the Tigray Region concluded, districts most vulnerable to climate change and variability overlapped with districts with the most vulnerable populations; climate vulnerability was inextricably linked to social and economic development.¹⁵ Households that are short of basic economic and social resources clearly lack the means to undertake adaptive measures or respond to climate shocks.

Adaptive capacity and barriers to change

Adaptive capacity in rural communities is low. Root causes are a combination of geo-climatic conditions (inherently fragile soils, undulating terrain, and highly erosive rainfall) and anthropogenic factors.

Baseline	BAU with climate change	Alternative
<i>Poor cropland management practices:</i> The farming system, particularly in the highlands, is dominated by subsistence cereal crops, which provide little ground cover when the most erosive rains occur (June-August). This system often requires frequent tillage and pulverization of the soil, rendering it more susceptible to erosion. Furthermore, limited soil conservation practices and the breakdown of traditional restoration measures, such as shifting cultivation, contribute to land degradation.	Current farming practices such as frequent tillage and limited soil conservation practices will lead to increasingly severe impacts as the climate changes, reducing agricultural yields.	Soil conservation measures are (re)introduced, preventing increased land degradation as a result of climate change (Activity 1.1.1, 1.1.2)
<i>Rapid depletion of vegetation cover:</i> Household energy needs are predominantly supported by wood and other biomass, causing an unprecedented level of deforestation. The loss of vegetation cover has been further exacerbated by agricultural expansion and livestock grazing. As a result, land has been stripped of vegetative biomass, exposing it to high levels of soil erosion. Average deforestation rates range	As the climate changes and erosion increases, land in deforested areas will be further degraded.	Promotion of efficient cookstoves reduces deforestation, enabling maintenance of vegetation cover even under the harsher conditions resulting from climate change (activity 1.31., WB funded) Seeds for climate resilient crop varieties, improved farm tools, fertilizer and other inputs are used by farmers to increase the productivity of agriculture, reducing the need for agricultural expansion into land made marginal as a result of climate

¹⁵ Gebrehiwot, T. and A. van der Veen (2013). Climate Change Vulnerability in Ethiopia: disaggregation of Tigray Region. In Journal of Eastern African Studies, Vol. 7, Issue 4: 607.

<p>from 1% to 1.5% annually, a high rate for a low forest cover country. Historically, Ethiopia was about 40% forested. By 2005, forest cover had been reduced to 2.4%, or 3.3. million ha, of high forests.</p>		<p>change (Activity 1.2.1) Free grazing decreases, enabling recovery of vegetation even in the harsher conditions resulting from climate change</p>	
<p><i>Poor livestock management:</i> Ethiopia has one of the largest livestock populations in Africa, with more than 53 million cattle. Only 25 % of cattle graze in rangelands, while the remaining 75 % graze in the highlands, leading to serious overgrazing in areas that are already under high pressure. Because the country has a free grazing system, there is no incentive for cattle holders to apply improved management practices in grazing areas. The scarcity of grazing land and livestock feed has forced the widespread use of crop residues to feed livestock. Removing these crop residues for feed and utilizing cattle manure for fuel further reduces the soil's organic matter and nutrients. This breach in the soil nutrient cycle seriously depletes soil quality, increases erosion, and eventually reduces soil productivity.</p>	<p>As climate change leads to increased erosion, current practices of free grazing, using crop residues to feed livestock and using manure for fuel lead will worsen the impact of climate change on land degradation.</p>	<p>Livestock feed is grown and free grazing is decreased, ensuring grazing of land is in line with the reduced carrying capacity in the face of climate change (Activity 1.2.1) Improved management practices in grazing areas are introduced, decreasing this need to use crop residues to feed livestock and enabling the maintenance of soil organic matter and nutrients even under conditions of climate change. (Activity 1.1.1) Promotion of efficient cookstoves reduces the need to use cattle manure for fuel, meaning manure is available to build up soil organic matter, reducing the impact of increasing erosion as a result of climate change (Activity 1.3.1)</p>	
<p><i>Insecure land tenure system:</i> Ethiopia is Africa's tenth largest and second most populous country. Its rugged topography makes it difficult to conduct rural cadastral surveys of millions of rural properties and hundreds of thousands of land parcels within a short period of time. Shortcomings in infrastructure also hinder the implementation of rural cadastral surveys. At the same time, there exists a pressing need to register and certify rural lands so that users can be secured and good governance and rural development can be promoted and upheld. In the past, land tenure insecurity caused by frequent land redistribution encouraged farmers in Ethiopia to favor short-term exploitation of land resources over long-term conservation, further contributing to land degradation and low farm productivity.</p>	<p>Users of land held under insecure tenure continue to favor short-term exploitation of land resources, even when climate change leads to an increasing need for long-term conservation measures in order to prevent deleterious impacts</p>	<p>Rural cadastral survey conducted with the help of drones (Activity 3.1.1) Land is registered and certified, providing users with the secure land tenure needed in order to invest in building climate resilience (Activity 3.2.1)</p>	
<p>SLMP-I and SLMP-II have supported some watersheds in</p>	<p>The inclusion of climate resilience in SLM activities</p>	<p>RLLP will scale up the introduction of climate resilience to smallholder</p>	

transitioning to sustainable land management, but activities to graduate from project-based support are still needed. Further attention to the creation of resilient livelihoods is still needed.	has been piloted, but not yet introduced at scale	farmers within the framework of sustainable land management. RLLP will put in place the conditions for sustainable implementation of resilience building activities subsequent to the cessation of project based support through support to the creation of resilient livelihoods (Sub-component 1.2)
The PSNP supports food-insecure communities, aiming to achieve food security	Climate change will endanger the newly food secure status of communities graduating from the SNP	RLLP will support climate resilient food security of communities graduating from the PSNP and prevent a return to food insecurity of these communities as a result of climate shocks
The AGP 2 promotes value chain development and private sector engagement	In the absence of activities to build climate resilience, value chains and the private sector are vulnerable to the impacts of climate change	RLLP will work synergistically with the AGP-2 to create climate resilient value chains and a resilient private sector. AGP-2, as a mainstream government program, will continue to support communities to maintain the progress made in RLLP after project end.
The ATA supports some activities that can contribute to resilience such as the introduction of warehouses and Common Interest Groups`	In the absence of activities to build climate resilience, improvements due to ATA initiatives are vulnerable to the impacts of climate change	RLLP will work synergistically with the ATA to create climate resilient livelihoods
Other donors support activities aiming at improving food security and livelihoods in rural Ethiopia	In the absence of activities to build climate resilience, all progress made as a result of other donor funded activities is vulnerable to the damaging impacts of climate change	RLLP shall work with other donor funded projects in those areas where activities overlap to ensure activities are complementary and result in climate resilient progress
The GCF financed project "Responding to the increasing risk of drought: building gender-responsive resilience of the most vulnerable communities" is being implemented by MoFEC	The MoFEC project will increase the climate resilience of water supplies in the targeted areas. It targets a different sector from RLLP, which focuses on resilient land use and agriculture.	RLLP will work closely with this project to ensure that targeted communities have comprehensively addressed the two major factors of vulnerability to climate change – water supply and agricultural productivity.

Barriers to change and the interventions to mitigate the barriers:

Barriers to change	Intervention
Limited awareness of the increasing impact of poor farming and land management practices on water resources and soil fertility as the climate changes	Improved knowledge management and communication (Activity 2.2.2) with both planners and communities, supported by data collection and information sharing (Activity 2.1.2)
The potential of land use planning to enhance resilience is untapped due to weak or absent land use planning	The on-going local-level participatory land-use planning exercise at kebele level is extended within the major watersheds of RLLP with the help of TA for consultation workshops (Activity 3.3.2).
Extension workers and policy makers lack awareness and technical expertise in climate resilient agriculture (CSA) practices. As a result planning and implementation of measures to increase the resilience of agriculture is	Capacity building of extension workers and policy makers equips them with the awareness and technical expertise to support farmers in increasing their climate resilience

insufficient	Robust impact evaluation, knowledge management and communication establish the conditions for national scaling-up of SLM for climate change adaptation and mitigation (Activity 2.1.1)
Lack of soil cover necessary for climate resilience	Mulching and cover crops is part of the package of measures for soil moisture and soil fertility management in CSA (Activity 1.2.1)
Insecure land tenure prevents investments in climate resilience	Outputs 3.1 and 3.2 of the project will initiate a program for the provision of second level land certificates to vulnerable, land insecure groups (WB funded)
Maintaining soil quality under conditions of climate change by using crop residues and manure is impossible due to competing uses	The need for using crop residues as feed is reduced due to improved management of grazing areas and feed production. Improved cookstoves (WB funded activity) will reduce the need for fuel. Soil fertility improvement is part of the CSA package of activities (Activity 1.2.1)
Lack of cash prevents farmers from continuing with the practices introduced as part of the project after project end	Support for resilient livelihoods and income opportunities (Activity 1.3.1 and 1.4.1)
Smallholder farmers are unfamiliar with practices that are part of Sustainable Land Management and climate resilient agriculture	SLM and CSA packages are introduced, including: improved seeds for climate resilient crops, improved farm tools, fertilizer and other inputs adapted to changed climatic conditions (Activity 1.1.1 and 1.1.2, 1.2.1)
Fragmentation, duplication and inefficiency of resilience building actions due to limited coordination among institutions, sectors, programs and projects that aim to support smallholder farmer	Improved coordination reduces duplication, increases efficiency and ensures comprehensive support to increase the resilience of smallholder farmers (Activity 2.1.1, 2.1.3)

Adaptation needs

Recent experience in Ethiopia has shown that a combination of better natural resource management and resource rights, jobs and livelihood enhancements, and gender outreach throughout targeted major watersheds can address the threats posed by land degradation and climate change. Effects of landscape restoration include a range of resilience-related results, including increased soil moisture and soil fertility important for higher and less variable crop yields, improved water availability, and increased carbon sequestration – all of which are high priorities for the government.

Much progress has been made by the government and thousands of local communities in addressing these challenges through proven investment packages under the Government of Ethiopia's SLM Program, with financing from the World Bank and other Development Partners (DPs). To bring these benefits to additional rural communities affected by land degradation, and to help Ethiopia meet its national targets for resilience and low carbon growth, while achieving middle income status in less than 10 years as planned under the Government's Second Growth and Transformation Plan (GTP-2), this work requires greater scale, further innovation, and improved cross-sectoral coordination.

The cost of the investment required to address current levels of land degradation is estimated at \$800 million to over \$2 billion, with approximately 670 watersheds needing approximately US\$2.7 million each in investment to prevent soil erosion (see Annex A.9. "Cost of watershed development interventions"). Thus, the incremental investment in (SLM) required to build resilience to climate change could easily reach hundreds of millions of dollars. Conservatively assuming that (a) climate change could increase annual soil erosion by 50% (b) 1:1 relationship between increase in soil erosion and investment cost to build climate resilience, we expect that \$904 million would be the incremental investment cost to prevent increased soil erosion due to climate change across all 670 watersheds in Ethiopia (\$1.35 million of incremental cost of climate change per watershed). The request for less than US\$ 180 million in GCF funding for this project is at the conservative end of cost estimates.

The RLLP Objective against the baseline: outcomes and impact that the project aims to achieve

The proposed project will draw on Ethiopia's decade of experience in addressing the root causes to scale-up tried and tested interventions. To help address barriers to the ongoing maintenance of restored landscapes, the project will introduce transformative support for resilient livelihoods and income opportunities.

Though significant results have been achieved over the years, much remains to be done. SLMP initiatives have allowed Ethiopia to pilot activities to address the root causes of land degradation in the country. However, no matter how

efficient, they were also a learning process. The RLLP project is a cross-cutting initiative that would scale up and improve the SLMP experience, implement lessons learned from previous activities, and significantly improve adaptive capacity of targeted areas. The project aims to scale up the number of restored watersheds, while also improving the ones already restored and creating an enabling environment, which will lead to productivity, resilience and overall development of livelihoods. The RLLP is a multidisciplinary project which will link together all relevant sectors in order to improve the resilience of livelihoods to the highest possible extent.

CSA measures will preserve restored land and will stop reversion to an erosion-sensitive state. These measures will also significantly increase the adaptive capacity of livelihoods, as they will introduce agrotechnical measures specifically designed to adjust to conditions outlined in climate scenarios, thus maintaining food security. The acquisition of processing equipment and storage facilities, as well as training to farmers and establishment of value chains will add value to goods produced through CSA. All of these activities will enhance adaptive capacity and reduce the exposure of participating communities to climate change.

This proposed project aims to:

- Increase the resilience of a total of 210 major watersheds located in the Ethiopian Highlands. Watersheds supported under SLMP-I will receive technical assistance to graduate from project-based support, while investments in SLMP-II watersheds will allow completion of their MYDPs. In addition, 57 new watersheds were selected based on criteria set out in the Ethiopia Strategic Investment Framework for Sustainable Land Management (ESIF), prioritized based on extent and severity of land degradation.
- Complete the implementation of Sustainable Land and Water Management (SLWM) practices by rural smallholders and communities under Multi-Year Development Plans (MYDPs) in SLMP-II watersheds and scale up these proven interventions to 57 additional watersheds (average 10,000 ha each) that are vulnerable to climate variability and change, recurrent drought and floods, and land degradation. The implementation of SLWM will increase resilience to sudden onsets and long-term climatic changes now and in the future. This is crucial in order to increase food security through preservation of the land, which is very exposed and sensitive to climate change impacts, especially in Ethiopia.
- CSA interventions under RLLP will be implemented in 135 watersheds that have already been supported with landscape restoration during SLMP I and II. SLMP-II piloted CSA in 70 micro-watersheds. As a result of the lessons learned from this pilot, MoA is now ready to implement CSA at scale and the RLLP, with the GCF support, will increase the number of micro-watersheds implementing CSA to 370. The implementation of CSA-specific measures is crucial in order to achieve sustainable agricultural production in the climate change impacted areas. They will enhance productivity and adaptation capacity of the livelihoods, as well as food security.
- Beyond physical and biological measures, the Sustainable Land Management Projects (SLMP-I and SLMP-II) have promoted livelihood diversification and income-generating activities. About 1,446 Self-Help Groups (SHGs) supported by SLMP-II are engaged in apiculture, poultry, sheep and goat fattening, and vegetable and fruit farming, and have contributed to the reduction of pressure on the watersheds' natural resources through the promotion of improved cook stoves. Improved cookstoves, while using the same type of fuel as baseline cooking technologies (which is mostly wood), reduce the amount of fuel needed. In areas in which some or all of the fuelwood used is nonrenewable due to overexploitation of local forests, the introduction of improved cookstoves reduces GHG emissions. In Ethiopia, the fraction of non-renewable biomass used is 88% (as determined for CDM projects). Hence, the introduction of improved cookstoves will reduce GHG emissions. Based on a review of the SLMP-II experience, RLLP will expand and strengthen these interventions through stronger engagement with the private sector (PS). This will result in a reduced exposure and sensitivity to climate change impacts onto Ethiopian agriculture. A detailed framework for private sector engagement under RLLP is presented in Annex B.1.
- Contribute to Ethiopia's long-term goal of achieving a carbon neutral economy by increasing carbon stocks in biomass and organic soil, as well as through the promotion of low carbon household energy technologies. Case studies across regions in Ethiopia indicate that Soil and Water Conservation (SWC) measures can significantly increase organic carbon content in soil. Soil carbon depletion rates from erosion alone range from 0.02 to 0.97 tons/ha/yr in Ethiopia. Effective land restoration can play a major role in the sequestration of organic carbon that is lost due to poor land management practices. Soil carbon sequestration with the adoption of restoration measures is projected to potentially account for 0.41 tonnes CO₂-eq. per hectare per year associated with rain-fed cropland and 0.63 tonnes per hectare per year on Ethiopian rangeland. Reforestation through assisted natural regeneration will further contribute to the mitigation of carbon emissions, at an estimated rate of 0.92 tonnes of CO₂-eq. per hectare annually.
- The project will enhance production and management of and access to relevant environmental, crop, livestock, forest, weather and geospatial information for land use decision making and disaster risk reduction at the levels

of major watersheds, community watersheds, and farms. Furthermore, it will provide support for developing relevant policies, regulations, and by-laws, including for the establishment of watershed associations.

- The project will improve the legal land tenure security of rural households and groups through land certification and administration, and it will expand and enhance local level land use planning and innovations in landscape certification models.

A mechanism and supporting elements to allow watersheds to “graduate” from project-based assistance and then continue sustainable management of restored landscapes through normal government mechanisms is built in to RLLP. Under SLMP-II, beneficiaries established community watershed teams to discuss natural resource problems and opportunities and to plan and implement interventions on the ground in an empowered, participatory manner. Under RLLP, support will be provided to create Watershed User Associations (WUAs), which would be legal entities capable of sustaining participatory watershed management when project-based support ends. In addition to establishing WUAs, RLLP will also prepare watersheds for graduation through (i) building local government capacity to design and manage SLWM interventions, (ii) strengthening incentives for investment in sustainable land management through land certification, and (iii) improving returns to sustainable productive activities by forging connections to value chains.

It is expected that without the proposed project, land use will continue on its current path while being subjected to negative and progressively more severe climate change impacts. Negative climate change impacts will further influence livelihoods due to insufficient adaptive capacity in project areas. Production yields will decrease while farmers will face increased input costs. Non-agricultural land in the watershed will also continue to deteriorate without the project due to soil erosion as well as overuse of common land through grazing livestock and firewood collection. This will put a further strain on local populations, who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will also affect areas and households through increased flood risk and sedimentation of irrigation dams.

Baseline projects

In addition to the GCF funded MoF project mentioned above, there are several other projects that have been implemented in the RLLP areas from which RLLP could benefit. RLLP will seek to establish synergies and avoid duplication of activities with these other projects.

GoE/WB Second Agricultural Growth Program (AGP-2)

AGP-2 currently operates in some woredas where there are SLMP-2 rehabilitated watersheds. They have implemented interventions to enable irrigation in some woredas. AGP-2 is engaged in support to key livestock and crop value chains (VCs), and is supporting productivity improvement, processing, storage/warehousing, market development in these VCs. AGP-2 and RLLP are implemented by same major donor (WB) and GoE ministry (MoA), and they are expected to have additional geographic overlap in the four main regions. In terms of value chain development and private sector engagement, RLLP will seek to harmonize as many methodologies and activities with AGP-2 as possible.

USDA Feed Enhancement for Ethiopian Development (FEED) II/III Project

FEED II is improving incomes and food security through improved availability, access and utilization of livestock and poultry feed. FEED III has been approved, will begin soon and will be in operation until at least 2020. Some woredas in which FEED II operates include SLMP I/II rehabilitated watersheds, and there promises to be even more geographic overlap in RLLP and FEED III. FEED II/III is seeking to exponentially expand their forage development and has the funds and technical personnel to do so. RLLP will seek to actively collaborate and pilot linking and contributing to activities in some of the overlapping woredas.

USAID Feed the Future Ethiopia (FtFE) Value Chain Activity (VCA)

The overall project objective of this initiative is to improve agricultural productivity and the commercialization of smallholder agriculture in the Tigray, Amhara, SNNP and Oromia regions. They support development of 6 major VCs – chickpeas, coffee, maize, dairy, meat and live animals and poultry. VCA is finalizing their selection of woredas to target, but they are expected to have significant geographical overlap with SLMP/RLLP.

Agricultural Transformation Agency (ATA)

ATA has completed construction of 44 warehouses in Tigray, Amhara, Oromia and SNNP regions, and it is eager to

facilitate and ensure the best possible use of these warehouses. The locations of these warehouses coincide with woredas in which SLMP-2 currently has rehabilitated watersheds and with woredas with new RLLP watersheds. Enterprising Common Interest Groups (CIGs) from SLMP-2 watersheds with RLLP support could assume management of selected warehouses.

B.2. Theory of change (max. 1000 words, approximately 2 pages plus diagram)

Describe the theory of change and provide information on how it serves to shift the development pathway towards a low-emission and/or climate resilient direction. Provide the diagram of the theory of change (approximately 1 page).

The theory of change should include any barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc., as relevant) that need to be addressed. Use a results chain of inputs, activities, outputs, outcomes, and impact statements, and identify the how and why of causal relations to deliver the project's expected results.

This integrated package of activities is the result of the extensive experience gained in previous projects and is essential to achieving paradigm shift. In order to achieve catalytic impact, it is essential to address all the root causes of land degradation, which include (i) poor cropland management practices, (ii) rapid depletion of vegetation cover, (iii) poor livestock management, and (iv) an insecure land tenure system. This approach grows out of the project's theory of change: by delivering more productive, secure and resilient livelihoods to local communities and by establishing the institutional framework needed to support maintenance of restored landscapes over the long term through watershed associations and local governments, the RLLP will lead to a durable shift towards SLM in the degraded watersheds of the Ethiopian highlands. A piecemeal approach in which only some of the drivers of degradation are addressed might lead to temporary, local improvement but would not lead to a sustained, widespread shift towards resilience for poor Ethiopian farmers. Figure 3 shows an illustration of this Theory of Change.

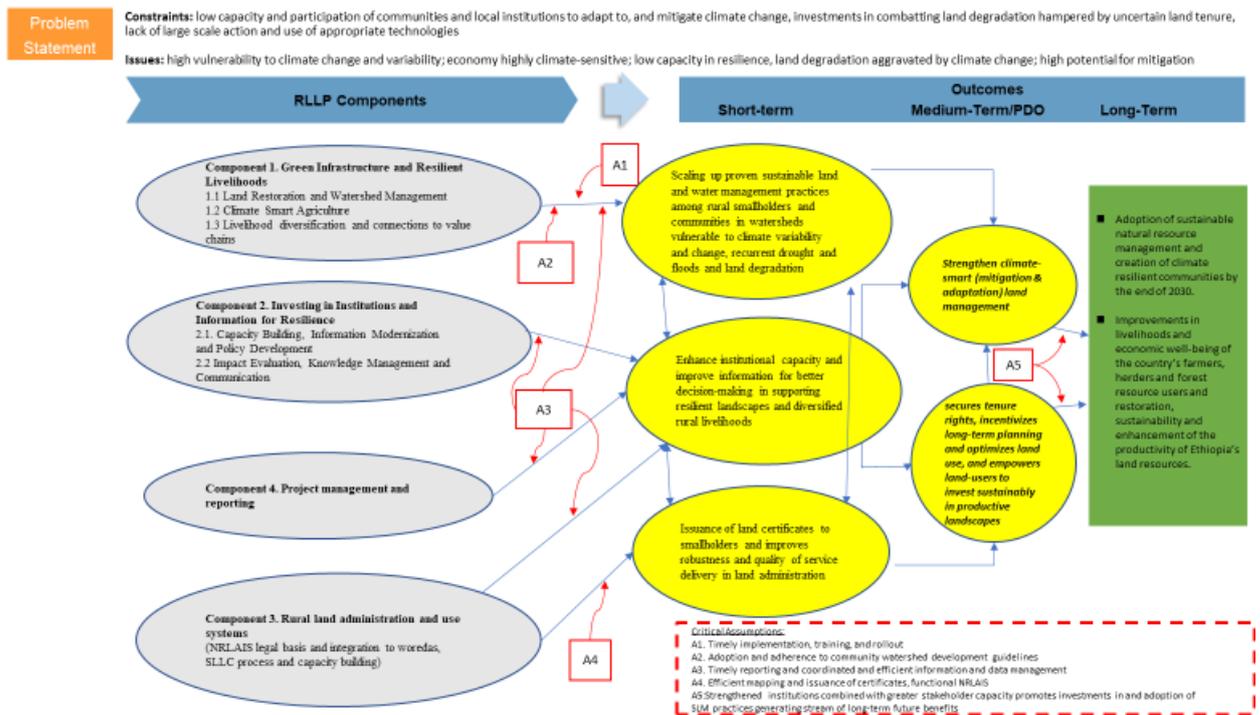


Figure 3. Illustration of Theory of Change

RLLP presents important opportunities for scaling-up and replication. While government and development partner interest in SLM in Ethiopia remains high, a crucial barrier to achieving the level of investment required to restore all

degraded watersheds nationally is the need to demonstrate a strategy for the long-term maintenance of these restored, newly productive, resilient, low emission landscapes. By building policy, institutional and market incentives for long-term SLM and by investing in robust impact evaluation, knowledge management and communication, RLLP will establish the conditions for national scaling-up of SLM for climate change adaptation and mitigation. In the shorter term, replication of the successes of RLLP interventions can also be expected in neighboring watersheds, a process that has already been demonstrated to dramatic effect in the ongoing SLM program as a result of informal dissemination of improved land and water management practices. Such informal dissemination can go far towards enabling scaling up and replication, since once they are introduced many of the project's activities depend on community participation for their success rather than on the private sector or formal financing.

B.3. Project/programme description (max. 2000 words, approximately 4 pages)

Define the project/programme. Describe the proposed set of components, outputs and activities that lead to the expected Fund-level impact and outcome results. Components should reflect the project/programme level outcomes.

This should be consistent with the financing by component in section C.2, the results and performance indicators provided in section E.5, and the implementation timetable in annex 5.

Referring to the feasibility study, describe why this set of interventions was selected instead of alternative solutions and how the project/programme can help unlock the needed support in a sustainable manner. Also identify trade-offs of the selected interventions, if applicable.

For Enhanced Direct Access (EDA) proposals and projects/programmes with financial intermediation (loans or on-granting), describe the selection criteria of the sub-project and types.

The proposed project will significantly enhance the resilience of the target populations' livelihoods to climate change impacts. The proposed interventions will enhance the resilience of interventions in the government's ongoing SLM program through an integrated package of activities and scale up the program while targeting the watersheds and communities that are most vulnerable to climate change. Figure 4 below indicates areas of the country that need SLM interventions, those that have already received support and areas that will receive support for the first time in RLLP.

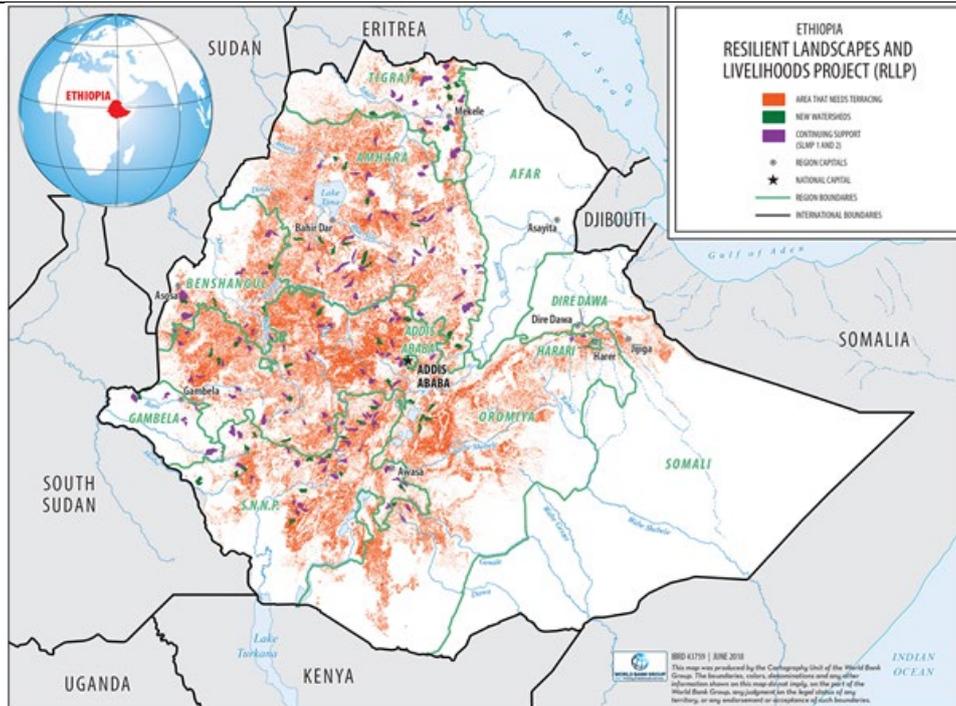


Figure 4 Watersheds mapped by areas needing SLM treatment

Project interventions include soil and water conservation (SWC) structures, reforestation and assisted natural regeneration, as well as low-emission and climate-resilient agriculture practices. The scaling-up of SLM for climate change adaptation and mitigation will be complemented with (i) transformational investments in income opportunities, resilient livelihoods, and the productive value chains associated with SLM, designed to strengthen incentives for communities to maintain restored landscapes; (ii) Cofinance for the promotion of low carbon household energy solutions; and (iii) land tenure.

The RLLP will be implemented through four integrated components: 1. Green infrastructure and resilient livelihoods; 2. Investing in institutions and information for resilience; 3. Rural land administration and use; and 4. Project management and reporting. Taken together, the activities in these components will achieve the project's objective of creating resilient landscapes and livelihoods for vulnerable rural populations in Ethiopia. Component 1 forms the core of the project in that it includes the activities directly implementing sustainable land management and agricultural practices. Component 1 also includes cofinanced activities addressing household energy services. These activities are essential to change the development pathway of rural Ethiopia to one in which land use is climate resilient. Non-sustainable use of biomass for cooking is one of the main drivers of deforestation and degradation in Ethiopia. The key interventions proposed in national policy include improved land use, diversified bioenergy options for cooking, and improving the efficiency of fuel production and use. The Environment Policy also makes the link between sustainable land management and controlled harvest of forest resources, with specific actions proposed including the promotion of technologies to reduce the use of fuelwood. In short, if cooking practices are unchanged then unsustainable harvesting of wood for fuel will continue, undermining progress in resilient land use made through the introduction of sustainable land management and agriculture.

Component 2 will create institutions and build capacity that will enable the interventions introduced in Component 1 to be sustainably implemented even after watersheds graduate from project-based support. Component 3 deals specifically with the barrier of weak tenure rights. The provision of security of tenure to smallholder farmers is essential to motivating to implement the new practices that will be promoted by RLLP. Without clear tenure and

strong land use planning it is likely that interventions introduced by the proposed project will be abandoned once project support ends. Finally, project management activities are covered by Component 4.

This integrated package of activities is the result of the extensive experience gained in previous projects and is essential to achieving paradigm shift. In order to achieve catalytic impact, it is essential to address all the root causes of land degradation, which include (i) poor cropland management practices, (ii) rapid depletion of vegetation cover, (iii) poor livestock management, and (iv) an insecure land tenure system. This approach grows out of the project's theory of change: by delivering more productive, secure and resilient livelihoods to local communities and by establishing the institutional framework needed to support maintenance of restored landscapes over the long term through watershed associations and local governments, the RLLP will lead to a durable shift towards SLM in the degraded watersheds of the Ethiopian highlands. A piecemeal approach in which only some of the drivers of degradation are addressed might lead to temporary, local improvement but would not lead to a sustained, widespread shift towards resilience for poor Ethiopian farmers.

Scale of the project, identification of targeted project area and beneficiaries

In terms of the scale of the project, the World Bank is confident that the benefits of implementing the interventions included in the project at the relatively large scale proposed outweigh the risks. A number of factors mitigate these risks, key among them being that the project builds on experience gained by the World Bank and the Federal Democratic Republic of Ethiopia during previous and ongoing projects. The proposed project benefits from the lessons learned over many years of projects aimed at sustainable land management, poverty alleviation and increasing the sustainability of agriculture in Ethiopia, and in particular the SLMP projects. These lessons led to the creation of the institutions that RLLP will build upon such as bottom-up watershed planning and self-help groups as well as the approach to CSA described in Annex A.3 in which a number of packages of activities are combined to achieve the triple goals of adaptation, mitigation and livelihood development.

For the Executing Entity, RLLP activities will come on top of activities with a budget of \$316 million that are already disbursed or committed for SLMP, which are managed or coordinated by MoA. For both the sums already spent or committed and for the co-financing the World Bank provides to RLLP, the World Bank has conducted risk analysis and identified mitigation actions that resulted in the decision by the World Bank to commit its own funds to the project. The valuable experience gained during implementation of SLMP-II, as well as the significant Recipient-executed and Bank-executed resources allocated in the past five years for coordination and capacity building efforts are expected to be instrumental to improve or identify viable measures to address all the risks.

Total needs were a major consideration in deciding on the scale of the proposed project. Soil degradation is an ongoing problem that is becoming more severe with every passing year. There are significant costs related to inaction – the longer we wait to address the problem, the worse it will get, and the more expensive it will be. To achieve sufficient momentum for scaling up and replication, countrywide implementation is essential. The targeted watersheds for this project were selected with inter-regional equity in mind. A total of 210 major watersheds are included in RLLP, averaging approximately 10,000 hectares each. Out of these, 135 watersheds are those already targeted by SLMP-I and II. In these watersheds RLLP will implement only innovative climate resilient activities that were not included in SLMP. 57 watersheds included in RLLP are new to the implementation of (SLM) measures. The process for the selection of these new watersheds to be targeted by the project is summarized in Section E.4.1 and described in full in Annex A.1.

In order to achieve the aims of the project – achieving restored, productive and low emission landscapes, the project will work with the communities that are using these landscapes. Hence, beneficiaries are selected at the community level and the direct beneficiaries are individuals who are living within a project watershed. The members of these communities are vulnerable smallholder farmers, who are very sensitive and highly exposed to climate change impacts. The total population within the project area is 4.2 million people or 834,000 households (with an average of 5 persons per household). Evidence based data driven implementation and planning will ensure that

interventions benefit smallholder farmers. Detailed bio-physical information for new watersheds, including individual landholdings, will be collected during the Multi-Year Plan (MYP) preparation of each watershed. Local level participatory land use planning teams at woreda and kebele levels would ensure that interventions benefit the smallholder farmers. The baseline study report for 90 watersheds of SLMP II found that the average land holding was only 1.338 ha. Agro-ecologically, watersheds above the altitude of 2300 meters and lowland areas between 500 and 1500 metres, have an average land holding of only 0.83 ha and 2.082 ha respectively. Furthermore, about 4.2% of the households have no land at all (3.5% of male and 6.5% of female headed households), 10.6% have less than a quarter of a hectare and 21.9% less than a hectare.

The experience of previous phases of the project has shown that there is a high willingness to participate by populations of the proposed intervention areas. The World Bank has tracked community contributions during the second phase of SLMP implementation. Translated into monetary terms, the cumulative community contribution in the four budget years from 2014/15 until 2018/19 was 23.5% of the total financial utilization of the project, equal to about USD 27 million. The most important contributions by the population were in the implementation of soil and water conservation measures on both communal land and farmland and community forest management.

The project components and activities are described below. Implementation will be guided by the recommendations and supporting studies that comprise the feasibility study. These documents provide guidance on which technology alternatives should be selected depending on local circumstances. Quantitative information on numbers of beneficiaries and areas benefiting from each activity, as well as a breakdown of funding between GCF and co-finance is provided in the detailed budget in Annex K.1.

Component 1. Green Infrastructure and Resilient Livelihoods

This component will greatly increase the adaptive capacity to climate change of the target population by scaling up proven sustainable land and water management practices. These practices will be introduced to rural smallholders and communities in watersheds vulnerable to climate variability and change, recurrent drought and floods and land degradation. Three complementary approaches form the core of this Component: (i) land restoration through sustainable land management, predominantly targeting communal lands, in which physical and biological interventions are made to prevent erosion and restore degraded land; (ii) a standardized approach to low-carbon resilient agriculture, which targets private lands; and (iii) support for income opportunities and resilient livelihoods, which is designed to provide incentives for maintaining restored landscapes. The project will work through government development agents in the Bureaus of Agriculture at the local level, which will mobilize and support communities, providing them with continuous training.

This component will complete the adoption of Sustainable Land and Water Management (SLWM) practices by rural smallholders and communities under MYDPs in SLMP-II watersheds, and it will scale up these proven interventions to 57 additional watersheds (average 10,000 ha each) that are vulnerable to climate variability and change, recurrent drought and floods, and land degradation. Activities will include financing SLWM interventions on communal and individual lands (with differentiated levels of community contribution), as well as supporting infrastructure such as green corridors linking fragmented forests, and community roads designed to optimize water harvesting. Proven SLWM practices that will be implemented include: soil and water conservation infrastructure such as terraces, water harvesting trenches, check dams, small reservoirs, and other civil works; soil fertility and moisture management; assisted natural regeneration, enclosures plus livestock land use rationalization, intercropping, low tillage, gully reclamation, establishment of grazing corridors, watering points and wells, and silvo-pastoral management strategies. Government Development Agents (DAs) in the Bureaus of Agriculture will mobilize and support communities and receive continuous training to ensure high-quality advice and extension services.

The specific technological solutions implemented under Subcomponent 1.1 and 1.2 in each watershed will be determined using a participatory community-based approach. The approach used is described in the Community Based Participatory Watershed Management Guideline^[1]. The community-based participatory approach will identify the most appropriate technologies that respond to the unique needs of each individual watershed included in the RLLP. This approach will result in a number of benefits, including improved community ownership and engagement, as well as ensuring that expected results are achieved and sustained. More information is provided in Section F.2.

During the participatory planning communities first present the problems they have (problem analysis) and depending on the availability of labor and finance they prioritize interventions based on the Community Based Participatory Watershed Development Guidelines (CBPWDG). Once prioritized and agreed the plan is approved by woreda responsible office (office of Agriculture). The procedures are clearly presented in the Community Based Participatory Watershed Development Guideline, excerpts of which are provided in Annex A.2

The objectives of this component will be achieved through the implementation of the following sub-components: (i) Land restoration and watershed management; (ii) Climate-smart agriculture; and (iii) Livelihood diversification and connections to value chains.

Sub-component 1.1 Land Restoration and Watershed Management

Sustainable Land Management activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 55.9 million) and by GCF in watersheds identified for GCF funding (budget of USD 100 million).

Afforestation-Reforestation-Green Corridor - Activities will be funded by IDA and MDTF only in watersheds identified for IDA funding (budget of USD 1 million).

This sub-component will focus on the implementation of land rehabilitation measures and establishment of green infrastructure through biophysical land and water conservation measures. These measures are required primarily for the rehabilitation of communally-owned degraded forest, pasture and woodlands, but also for privately cultivated lands, as well as to enable and maintain agricultural production in harsh climate conditions which are exacerbated by climate change. One key objective of this sub-component will be to create benefit streams to the communities in the targeted micro watersheds from increased ecological services and land productivity, mainly through productive use and management of landscapes resources. In addition to the proven practices applied during SLMP-II, this sub-component will also introduce the establishment of green corridors, which will further reduce erosion, enhancing watershed restoration, and increase ecological connectivity.

The objective of the sub-component will be achieved through biological and physical conservation measures that ensure reduced surface run-off and soil erosion, as well as improved land productivity, resulting in enhanced crop and livestock production. The following activities will be supported:

- *Soil and water conservation measures on communal and privately cultivated lands:* biological and physical soil and water conservation measures/practices such as construction of terracing, check dams, water harvesting (e.g. trenching), reseeding, re-vegetating, etc. will be implemented on degraded communal and farmlands;

- *Gully rehabilitation:* Cost efficient biophysical gully restoration techniques such as sandbag check dams, sediment storage dams and gabion-check dams will be applied. Productive use and management of the rehabilitated gullies will be supported, such as for forage, fruit and fuel wood production;
- *Establishment of green corridors:* Planting suitable, preferably native, tree species along rivers/streams and all-weather roads connecting forest patches in the watersheds. Post plantation management support including tending, hoeing and soil moisture conservation will be carried out. Green corridors will also be established along gully offsets to ensure stability and productive use of the land;
- *Area closure management and use:* assisted natural regeneration through restrictions on free grazing, enrichment planting, soil fertility improvement and moisture retention will be implemented in communal areas and/or privately managed degraded bush and woodlands. Cost efficient management practices of enclosures will include supporting local communities in the preparation and execution of participatory use and management plans of enclosed areas, including forage cut-and-carry arrangements;
- *Establishment of plantation blocks:* Reforestation and afforestation of degraded forest and shrub/bush lands with a diverse range of tree and shrub species that can be used as a source of food, feed and energy, and enhance fertility of the soil. Planting of appropriate tree seedlings including economically valuable species, and post-plantation management practices such as tending and watering in moisture stressed areas, hoeing and weeding during early stages will be carried out to ensure survival of the planted seedlings; and
- *Enrichment of degraded pasture and rangeland:* Planting and reseeding of appropriate forage species including fodder crops in degraded pasture and rangelands to increase productivity and improve the value of feed for grazing animals. Management of unpalatable invasive species will also be undertaken in pasture and rangelands to ensure optimum forage production.

Suitable rehabilitation interventions for each micro-watershed are determined based on the particular agro-ecological conditions and incorporated in a MYDP, developed through a participatory process, utilizing the technical parameters and procedures established in the Community Based Participatory Watershed Development Guidelines (CBPWDG, 2005) developed by MoA, and currently being updated. MYDPs already exist for SLMP-II watersheds, but they will be developed under the RLLP for the watersheds that have not yet been addressed.

Supported by the Zonal, Regional and National Platforms (see details in Annex 2), implementation of MYDPs is undertaken jointly at the woreda and kebele levels through the Woreda Watershed Development Committee (WWDC), the Kebele Watershed Development Committee (KWDC), and the beneficiary communities. Together with the Development Agents (DA) and Community Facilitators, the WWDC and KWDC assist communities in: (i) developing annual work plans and budgets for submission to the Regions for endorsement and integration into the Regions' work plans and budgets; (ii) facilitating community participation in watershed planning and rehabilitation; (iii) identifying training needs; (iv) monitoring and evaluation; and (v) dissemination of experiences and results. This sub-component will also provide resources for local expertise to be contracted to provide technical assistance to WWDCs, KWDCs and beneficiary communities in planning and implementing their SLM interventions. The operational details for the planning, design, and implementation of MYDPs will be planned during implementation. A guideline has been developed that will be used for this: "*Exit Strategy and Performance Assessment for Watershed Management (ESPAWM) – A Guideline for Sustainability*" (see Annex L.3.).

The alternative technologies and practices selected for Sustainable Land Management are:

- Physical soil and water conservation measure on farmlands
- Physical soil and water conservation measures on communal lands including degraded hillside, shrub land and pastureland
- Gully control measures including gully wall reshaping, check dam and retaining wall construction
- Pitting and planting of multi-purpose trees on degraded lands
- Model plantation blocks with native tree species

Additional alternative technologies and practices selected under this sub-component include:

- Afforestation
- Reforestation
- Green corridor creation
- Multiyear development plans
- Watershed management and use plans
- Watershed user associations

Sub-component 1.2 Climate Smart Agriculture

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 18.5 million) and by GCF in watersheds identified for GCF funding (budget of USD 15 million).

Interventions under this sub-component will aim at enhancing the livelihood resilience of beneficiary households through Climate-Smart Agriculture (CSA) interventions in all eligible micro watersheds assisted by the project. The improved adaptation of restored watersheds to variable rainfall patterns and adverse climatic events, combined with reduced degradation-related risks (achieved through sub-component 1.1), will provide suitable conditions for beneficiaries to adopt improved, climate-smart farming practices and diversify and/or intensify their current production systems. For this, technical and financial assistance will be provided to stabilize soils and increase fertility; improve water retention, harvesting and infiltration; increase biomass (and carbon) accumulation; and promote the adoption of climate-smart tillage and production practices in farm plots and home gardens. The introduction of such practices is needed to ensure agricultural productivity in coming decades given expected climate change impacts as described in section C.2.

This sub-component will build on the achievements of sub-component 1.1, such as improved water run-off retention and infiltration, gully and degraded hillside stabilization, and enhanced biomass production. This connection to the biophysical restoration of the landscape is important, as it will help ensure that unsustainable agricultural practices do not reverse prior restoration measures. In this way, agricultural activities become fully integrated into the watershed/landscape restoration approach and contribute towards the goal of climate resilient watersheds. The ongoing pilot of CSA within SLMP-II and lessons from international experience indicate that CSA cannot be achieved by a single measure or practice. In order to achieve the triple wins of adaptation, mitigation and increased production, technical and financial assistance will be provided to implement context-specific packages of CSA activities. The primary set of technologies for CSA that have been selected for use in the project are described in the manual for Climate Smart Agriculture (Annex A.3) (see also Section F.2 Technical Evaluation for more information). The following CSA activity activities are based on the manual for CSA which outlines 4 work/activity packages, will be supported under this sub-component:

- *Farm water and soil moisture management (based on Work/Activity Package 1 of CSA manual):* This will include in situ soil moisture management practices such as improved tillage, mulching/permanent soil cover and water harvesting including construction of cut-off/on drains and road water harvesting. Provision of improved farm tools/machineries for moisture conservation tillage will be considered under this activity;
- *Integrated soil fertility and soil health management (based on Work/Activity Package 2 of CSA manual):* Various soil fertility management practices such as improved compost making including bio-slurry, vermi-compost and manure management (including bio-digestors); lime and gypsum application for acidic and alkaline soils respectively; promotion of tree-food crop-livestock systems (agro-forestry practices); and crop rotation and legume intercropping will be integrated as a package and promoted based on local conditions and farmers indigenous knowledge and commitment;
- *Crop development and management (based on Work/Activity Package 3 of CSA manual):* Access to better performing crops (drought and disease resistant) will be supported based on local-level adaptive research

and crowd-sourcing by farmers over a wide range of crop varieties (both local and improved cultivars). Integrated pest and disease management, including post-harvest management, will be implemented to minimize crop yield losses. Productive use of increased soil moisture through production and management of high value crops, such as vegetables and fruits, will also be part of this activity package. Improved farm tools and machinery such as line planters, tillage and harvesting equipment will also be tested to improve the efficiency and effectiveness of the cropping system; and

- *Environmentally-friendly livestock production through feed development and management (based on Work/Activity Package 4 of CSA manual)*: High quality and quantity forage in pasture and along farm boundaries, gullies and back yards will be a priority to minimize dependence on crop residue as livestock feed, and to ensure increased use of biomass for soil fertility improvement. Efficient use livestock feed resources through feed treatment and improvement of feeding troughs will also be implemented to reduce losses. Appropriate integration of agro-sylvo-animal husbandry practices will be introduced at the homestead level based on the needs of local farmers and the suitability of local conditions. Practicing an integration of multi-purpose food and tree cropping with livestock rearing at the homestead can improve the fertility and organic matter content of soils and increase crop yields and household food security.

CSA interventions under RLLP will be implemented in micro-watersheds that have already been supported with landscape restoration during SLMP I and II. The following set of criteria was used to select eligible micro-watersheds: (i) at least 75 % of the watershed restoration plans completed; (ii) community agreement on controlled grazing enforced; (iii) forage development partly implemented; (iv) farmland covering more than 50 % of the micro-watershed area; (v) access to functional farmers training centers (FTCs); (vi) adjacent to SLMP-II CSA pilot watersheds; (vii) local knowledge or traditional practice of multi-cropping system; and (viii) commitment of community and kebele watershed teams.

Consistent with existing limitations, the operational unit for CSA interventions in eligible micro-watersheds will be groups of organized farmers and their corresponding contiguous farm plots. The number of groups and farm plots will be determined during the planning phase based on the budget allocated to the woreda for CSA. 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 the Common Interest Groups (CIGs) promoted by AGP, which will prepare results-oriented subproject proposals, integrating packages of goods, small works, services and/or operating costs) for RLLP financing. The project will provide required input to the CSA interest groups to improve efficiency of the farming practice. The operational procedures –including procurement methods--for the implementation of the CSA subcomponent of the project are included in the existing CSA Field Manual, developed by SLMP-II and to be updated for RLLP.

CSA is knowledge intensive and entails moving toward an agro-ecological approach, but these changes are necessary to increase resilience to climate change. Project practitioners will therefore need to extend their support to beneficiaries beyond the planning phase and provide technical assistance throughout the entire adoption cycle. The workload of the local technical unit will therefore include resources to: (i) conduct periodic visits to the plots of farmers implementing CSA practices, (ii) establish demonstration or testing plots, and (iii) organize and conduct dissemination activities such as field days and farmer exchange visits. Equally important, the regional structure should be capable of providing technical backstopping to DAs through periodic joint field visits, on-farm refresher training, as well as assistance in planning and conducting demonstration activities.

CSA technology testing and demonstration activities, as well as collaboration with research and academic institutions, will also be a part of CSA implementation. Farmer Training Centers (FTC) or similar structures will be identified and utilized at the watershed level for these activities, while contributions by research and academic institutions for the identification of appropriate technologies and practices will be implemented through the establishment of a CSA Innovation Platform.

The alternative technologies and practices selected are:

- Soil moisture management including drainage and cutoff drains in micro-watersheds
- Agroforestry
- Disease and drought resistant crops
- Improved farm machines/tools (handheld harvester, ripper, line planter, mechanical weed slasher)
- Compost making
- Organic/biofertilizer
- Improved livestock feeding troughs including feed treatment materials

The RLLP promotes Climate Smart Agriculture, including the use of mulch, cover crops and minimum tillage, which also seeks to minimize the application of agrochemicals. The combination of CSA activities and the implementation of the integrated pest management plan included in the ESMF will reduce vulnerability to pest and disease impacts. The resulting improved crop production together with the provision of high-yielding and disease tolerant seeds will support efforts to minimize the use of pesticides and agro-chemicals in the project area.

RLLP resources will not be used to purchase pesticides, herbicides, biocides, or GMO and Patented Hybrid Seeds.

Sub-component 1.3 Livelihood Diversification and Connections to Value Chains

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 6.1 million) and by GCF in watersheds identified for GCF funding (budget of USD 28 million). Activities for the promotion of high performing cookstoves will be funded only by IDA and MDTF in watersheds identified for IDA funding (budget of USD 0.5 million). No GCF funds will be requested for activities related to the promotion of high performing cookstoves.

This sub-component includes innovative activities that will enhance the sustainability of the resilient, improved livelihoods created as a result of the activities in sub-components 1.1 and 1.2. The generation of sustainable improved incomes for the vulnerable smallholder farmers targeted by the project will enable them to maintain the rehabilitated watersheds. Without the activities in this sub-component there is a risk that poverty will lead the beneficiaries to return to previous, unsustainable practices after the project ends, reversing the gains made through the introduction of sustainable land management and climate smart agriculture.

The activities include advisory services and investment to improve access to and implementation of climate resilient livelihood diversification. These activities will help address the issue of landless/jobless youth/women and the resulting increased stress on the natural resource base and its potential to reduce climate risks. A number of potential interventions have been identified. Examples include support to women-managed local enterprise development, vocational training, processing equipment and CSRPs, facilitation of access to markets, technology and trade and a suite of other initiatives to incentivize private-sector engagement. It will also finance activities that facilitate private sector engagement in RLLP-supported value chains directly or through primary cooperatives and/or coop unions, as well as direct investment in landscape restoration through PES, CSR or volunteer/good citizenship. In addition, this sub-component will provide small, seed-fund grants to SHGs, CIGs and/or WUAs to launch or expand productive, processing and storage activities, based on an analysis of what the markets will purchase, and therefore what will increase incomes of households and sustainability of the rehabilitated watersheds. Finally, the WB will support co-financed activities aimed at creating a market for improved cookstoves (funding from GCF is not being requested for this activity). Non-sustainable use of biomass for cooking is one of the main drivers of deforestation and degradation in Ethiopia. If cooking practices are unchanged then unsustainable harvesting of wood for fuel will continue, undermining progress in resilient land use made through the introduction of sustainable land management and agriculture. Reducing demand for fuelwood is critical to maintaining restored landscapes in

project communities. In addition, as heating and cooking efficiency improves, use of manure and crop residues for cooking and heating decreases, allowing these materials to be used on fields to enhance soil fertility.

MoA has drafted eligibility criteria for choosing watersheds and commodities eligible for value chain. For example, the followings are criteria for watershed selection: Sense of ownership of communities' watersheds managing team. i.e., Capacity, experience and commitment of (CWT, KWT, WTC &WSC,). - Watersheds aligned with GIZ-SURED support. - Existence of other private sector support programs. -Rehabilitation status of watersheds: coverage area of rehabilitated land in watersheds; soil fertility that is suitable for high value commodities; availability of alternative water sources. - Accessibility to all weathered roads and other infrastructure development. - Accessibility for Market linkages and reliability of commodity supply. - Accessibility to inputs providers, extension services deliveries and financial institutions. - Widely existence of proactive community and lead farmers (MHH and FHH) to accept for new innovations, technology, etc. – Whether RLLP is providing support for CSA. -Unemployment status of the community/ies within the watersheds.

RLLP is only (a) providing in-kind support such as warehouses and equipments and (b) organizing awareness, training and workshops for various groups. No sub-loans or sub-grants will be made to any groups or individual beneficiaries.

Innovation for climate resilient livelihood diversification and private sector development

These activities will focus on private sector development (PSD) in RLLP rehabilitated community watersheds. Product processing and bulking capacity will be developed that will enable sustainable, environmentally friendly livelihoods, thus increasing incomes, which in turn will lead to the maintenance of rehabilitated watersheds and improved food security in the face of climate change. Without appropriate infrastructure and facilitated linkage of the private sector, newly developed livelihood interventions will diminish and eventually fail, causing households to revert to previous harmful practices and removing the incentive for maintenance of rehabilitated climate-smart watersheds, leaving them exposed to risks driven by climate change. If watershed communities produce high-quality, semi-processed products for bulk purchase by the private sector, they will encourage the private sector to go the “last mile” to these watershed communities even though lower-quality, unprocessed and unbulked commodities might be closer at hand.

Processing Equipment and Training: Activities will support the shared purchase of and training on key agricultural processing equipment, which will increase the value of crops produced through climate smart agriculture (CSA) and livestock products produced through intensive, environmentally friendly methods by watershed communities/households. Such equipment may include the following: Forage processing mills, grain threshers, weighing scales, grain mills, processing sheds, dairy processing equipment, poultry and egg processing equipment, bamboo processing equipment and tools, and vegetable storage/transport containers.

Heavy equipment is not included in the list of eligible equipment. The use and maintenance of eligible equipment is delineated in the bylaws and governance structures of CIGs, cooperatives, self-help groups, female groups to which equipment may be made available.

Community Storage Receipts Programs: The project will foster the development of community storage receipts programs (CSRPs) in RLLP rehabilitated watersheds by building warehouses or other types of storage facilities and training community organizations to develop and maintain CSRPs. One of the major barriers to the implementation of resilience building measures by farmers is lack of cash. Once the project is completed and concessional finance

is no longer available, farmers will need cash in order to be able to continue practices introduced by the project such as the use of improved seeds, improved farm tools, fertilizer and other inputs. The CSRPs will provide immediate cash to poor farmers, improving their food security and ability to pay for other necessities as well as allowing them to improve productivity by investing in agricultural inputs such as seeds, fertilizer and other inputs through their available income. The CSRPs approach will be managed by organized CIGs/Watersheds Associations or cooperatives which have legal personality to sign contracts, access loans from MFIs or FIs and management capacity as compared to fragmented farmers with weak management capacity and difficulty of accessing loans from MFIs or FIs due to lack of confidence, weak financial management and difficulty of collection/repayment, could not present collateral. Such initiative has never been tested under SLMP-1 and SLMP-2. But WB financed initiative such as the AGP initiated such approach using CIGs.

These CSRPs will store commodities in demand by the private sector that will be weighed and valued according to expected market price at the proposed time of sale and labeled accordingly. The producer will then receive a receipt for the commodity and 50% of the expected purchase price from the CSRPs manager, and the commodities will be stored carefully and properly until the time of sale. After the commodities are sold, the producer will receive the other portion of the proceeds based on the actual sales price and a small deduction for the cost of the service.

Crop and other value chain commodities will vary according to watershed conditions with primary commodities integrated in the Ethiopian Commodity Exchange Trading System such as coffee, sesame, red-kidney beans, white pea bean, green mung bean, chickpeas, soybeans, wheat, maize. The watersheds identified for interventions have agro-ecologies that are suitable for most of the commodities mentioned above. Additionally, domestic demand for teff, barely, fava beans, honey, and spices will inform the selection of value chains to be supported.

CLIMATE INDUCED RISK: The CSRPs will support the establishment of stores sufficient to mitigate temperature/moisture, frost due to climate change and related pests/insects, which might adversely impact the quality and value of the crops. CSRPs: These stakeholder groups will be overseen by the respective cooperative, union, or watershed user association which have legal standing in Ethiopia to sign contracts and access financing. CSRPs Management: Based on their legal standing and capacity, cooperatives, unions, or watershed user associations will manage the CSRPs. CIGs and SHGs will subscribe as members to participate in CSRPs schemes.

SLMP-I and SLMP-II EXPERIENCE: The CSRPs-related initiative was not tested during the SLMP-1 and SLMP-2. However, the Ethiopia Agricultural Growth Program (AGP) provides lessons and experience regarding CSRPs that have been integrated in the RLLP. Other programs such as the Ethiopian Commodity Exchange (<http://www.ecx.com.et>) have also generated relevant experience and capacity in SLMP-I and SLMP-II-supported watersheds

The cooperatives/watershed user associations and the CIGs will be responsible for developing the management and business structure of the CSRPs. Primary management responsibilities will be held by cooperatives or watershed user associations. The coops/watershed associations would set price that accommodates such price risks when designing their bylaws and marketing strategy. The CSRPs supports farmers to overcome their immediate problems, among others. The CSRPs is chiefly applicable to agricultural products which are subject to fluctuating price within the harvest and lean seasons. The System is an important and effective tool for creating liquidity and easing access to credit. It also offers additional benefits such as smoothing the supply and prices in the market, improving smallholder farmers' incomes, and reducing food losses. The system can play dominant role in the development of the overall agricultural sector, by permitting smallholder farmers to hold food back to the lean season, allowing them to access markets on more equitable terms, and enhancing the efficiency of the entire commodity chain. The CSRPs has legal personality and can enter into agreement with the farmers.

There will be a strong emphasis on the formation, strengthening of and support to activities of the CIGs under this sub-component because these semi-formal groups, which may transition to either primary cooperatives or enterprises, are currently the main community-level organizational unit used for AGP-2 activities, and they are governed by MoA-approved guidelines, including requirements for organization, planning and financing. This sub-component will provide resources for local expertise to be contracted to provide technical assistance to support beneficiary communities in forming CIGs, and in planning and implementing income-generating activities and investments to strengthen connections to local value chains.

In the co-financed support of livelihood diversification, emphasis will be given to the establishment of CIGs/SHGs for the production and marketing of improved cook stoves. These groups not only provide an alternative source of income, but they also deliver multiple co-benefits, including time savings for women and girls in fuelwood collection, health improvements through reduced household air pollution, and reduced pressure on local biomass resources through improved household energy efficiency. As heating and cooking efficiency improves, use of manure and crop residues for cooking and heating decreases, allowing these materials to be used on fields to enhance soil fertility.

Initial support for livelihood diversification and connections to value chains will target beneficiaries in watersheds that have already begun or completed implementation of their MYDPs, where support for CSA is being provided and support from AGP and/or other PS-oriented development activities will complement RLLP efforts. This will facilitate success at this pilot level and allow for any needed adjustments before scaling up these activities in later years of the project. In addition to SHGs and CIGs at the watershed and/or woreda level, stakeholders involved in this sub-component include primary cooperatives and their unions, Cooperative Agencies at various administrative levels, the Rural Saving and Credit Associations (RuSACos), private sector enterprises and their sectoral associations, and Woreda Offices of Agriculture, Water, Mineral and Energy. For the production of improved cookstoves, the Woreda office of Cooperative Promotion will: (i) support organization of CIGs/SHGs to produce energy efficient cook stoves and promote improved cook stoves (ICS) host demonstrations at local markets and other local level gatherings; (ii) through the Bureau of Energy, Water and Mineral, provide technical experts to conduct training for the producer groups; and (iii) provide beneficiaries/consumers support in establishing local channels of finance (such as traditional savings groups - *ekub*).

Potential maladaptation risks with initial commodity processing are mitigated through the design of the project. The project promotes sustainable land management on all land belonging to the target watersheds. Hence, even if agricultural production expands as a result of the development of markets for commodities, the expanded production will also use the climate smart agriculture measures that have been introduced. In addition, agricultural production on lands already in use will increase substantially, leading to a decrease in the need for new agricultural land. Land mapping (the cadaster will have information on agricultural land) as well as issuing land certificates will prevent uncontrolled expansion of agricultural land, as only those with land certificates will be eligible to participate in the market. Sustainable land management will ensure that there is no further deforestation in the targeted areas (which are already highly deforested and degraded). Furthermore, the establishment of green corridors and elimination of free grazing will contribute to the preservation of the non-agricultural land, while at the same time enhancing forest cover and preventing deforestation. RLLP will support SLM practices to limit free grazing in project areas including activity packages that address sustainable livestock production, through feed development and integrated agro-silvo-pastoral practices. The creation of information platforms and provision of technical assistance will also reduce the risk of maladaptation, as information and outreach will result in increased awareness and improvements in local livelihoods.

High-performing cookstove technologies

The activities supported were identified and selected based on the results of the study “Assessment of Household Energy Options in RLLP Intervention Areas” that is included as Annex A.4 to this proposal. The WB will support a

set of activities aimed at reducing the use of fuelwood, which is one of the major drivers of deforestation and degradation. Reducing demand for fuelwood is critical to maintaining restored landscapes in project communities. Activities include the establishment of improved cookstove production enterprises, provision of technical and business training to the enterprises, introduction of alternative fuels production including efficient charcoal production, and the creation of consumer awareness of the advantages of using improved cookstoves and new fuels. Details on the technologies that will be promoted and on awareness raising activities planned are provided in the assessment report of household renewable and energy efficient technologies options. The project will lead to the creation of viable businesses producing efficient cookstoves and consumer awareness of the benefits of using them, as well as encouraging rural saving groups to support improved cookstove purchases. The activities will be supported by the Regional Energy Bureaus, who will subsequently introduce similar activities to areas under their remit that are not covered by RLLP.

The alternative practices selected under sub-component 1.3 include support to:

- Common Interest Groups (CIGs)
- Climate resilient livelihood diversification including promotion of improved cookstoves, cultivating fruit trees, bamboo handicrafts, beekeeping, etc
- Self-Help Groups (SHGs)
- Cooperatives
- Unions
- Watershed User Associations (WUA)
- community storage receipts programs (CSRPs)
- Enterprises to manufacture, promote and sale fuel saving cookstove and alternative cooking fuels
- Formal and traditional saving groups for the purchase of RE/EE products

Component 2. Investing in Institutions and Information for Resilience

The objective of this component is to enhance institutional capacity and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the project area, both for the duration of the project and after project completion.

This component will build capacity at the local government level (woreda and kebele) for (i) planning and managing SLWM interventions, and (ii) managing the land certification process. This will include piloting of new technologies for information modernization at the local level, including the use of electronic tablets for gathering geospatial information, and the use of Unmanned Aerial Vehicles (UAVs – or drones) for land certification mapping. Tablets and UAVs will be the property of the project (i.e. MoA) and would be provided to development agents and the woreda focal persons in the project watersheds for mapping and monitoring. The device setup, training, and support provided will be tailored to meet the conditions and realities faced in field environment (i.e. off-line data collection, accessories (protective case, solar charger, etc.), guidance materials, technical and trouble-shooting support).

RLLP intends to monitor all watersheds using UAV. The current capacity within the PCU is classified as low to moderate and is improving. For example, under RLLP the addition of a database manager as key personnel to support data management. The use of UAV's is currently limited in Ethiopia due to GoE security concerns and the lack of a policy governing their use in general. The PCU with assistance from WB is currently supporting efforts to develop guidelines on the use of UAVs that would ultimately support monitoring efforts more broadly and with fewer restrictions. Despite the restrictions, to date the PCU has been a leader in the use of UAVs to support project activities as demonstrated by receiving permission to use UAVs to collect imagery for parcel demarcation under the land administration component. The PCU will need to further improve the quality and efficiency with which M&E data are collected and analyzed with additional expertise to manage the UAV monitoring component.

Support for policy development under this component will focus on the regulatory framework for Watershed User Associations (WUAs), community bylaws guiding land-use practices, and strengthening the Land Administration System. This regulatory framework, once established, will continue to support resilient land use after project completion. To strengthen the evidence base for sustainable land management decision-making, this component will include a bio-physical impact evaluation of SLWM interventions, to be conducted through a partnership arrangement between the MoA, the Water and Land Resource Centre of Addis Ababa University, and the Ethiopia Development Research Institute's Environment and Climate Research Center. This will complement a livelihoods impact evaluation of SLWM interventions to be conducted in parallel led by the Gender Innovation Lab of the World Bank's Africa Region. When completed, these evaluations will be available to interested parties in Ethiopia and the region wishing to institute or improve SLWM. This component will also provide resources to manage the knowledge generated through these and other assessments of SLWM, and to communicate the lessons learnt to a broad audience, including local governments and communities, relevant research institutions and Government agencies, as well as Development Partners.

This component's objectives will be achieved through the implementation of the following sub-components: (i) capacity building, information modernization and policy development, and (ii) impact evaluation, knowledge management and communication.

Sub-component 2.1. Capacity Building, Information Modernization and Policy Development

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 7.9 million) and by GCF in watersheds identified for GCF funding (budget of USD 16.15 million).

This sub-component will build capacity at local government level to implement RLLP, and to sustain SLWM interventions after watershed graduation from project-based support. To achieve this, the sub-component will finance accountants to support the head of the Woreda office of Agriculture (WoA) and a focal person in each participating woreda, and part-time community facilitators at the kebele level (5 community facilitators for in each major watershed). To help build the capacity necessary for an effective land administration system, this sub-component will also provide technical assistance for training in this field.

This sub-component will support information modernization to coordinate data collection and information sharing at all levels and under all components of the project so that this information is well organized, properly documented and accessible. As part of this effort, a data management plan will be developed that specifies how all data used or created during the course of RLLP will be documented, stored and otherwise managed. The use of electronic tablets to collect information on project activities and results, combined with appropriate survey and mapping software, will improve the quality and timeliness of data collection and reduce the effort needed to compile, review, and generate the necessary reports. This framework will facilitate access to information and support timely feedback to the local level.

This sub-component further supports the use of aerial vehicles (UAVs)/drones to generate high-quality and timely aerial imagery data to support planning, monitoring, and land certification. Under this initiative, the drones will be operated by several teams of trained operators who will travel to the project sites. During the course of RLLP each micro-watershed will be re-visited twice each year at appropriate intervals to generate visual and multi-spectral images of the program areas. At each stage the processed imagery will be shared with the woreda and local field staff for the purpose of assisting in planning, monitoring progress and updating implementation plans. The data and materials produced will also be used to support M&E and will serve as a source of information and data for subsequent analysis. Detailed technological specifications and budget have been elaborated including the technical requirements for the drones, all associated equipment and spare parts, operating costs for the duration of the project. The use of the drones is intended for the collection of information and data that will be available for long-

term use and for project planning and monitoring. The project will work with the Information Network Security Agency (INSA) and the Ethiopian Aviation Authority to ensure all necessary permits are obtained.

Policy development under this sub-component will focus on the regulatory framework required for the establishment of Watershed User Associations (WUAs), crucial for sustainability of SLWM interventions, frameworks for reward and incentive schemes such as Payments for Environmental Services (PES), as well as community byelaws guiding land-use practices, and strengthening of the Land Administration System.

In developing the framework for WUAs, the Project will work closely with regional governments for its application in establishing WUAs. This work will commence with reviewing of the environmental legislation that relates to the use and management of Ethiopia's natural resources (soils, forestry, grassland, water, wildlife, etc.). The manual for CSA will be used to proceed and enhance this activity. RLLP will give high attention to the opportunities of engagement of private sector (PS) in all development activities of the project. The first objective of PS engagement in RLLP is, to attract the PS to invest in RLLP interventions. The second objective is to create and increase income streams & diversified livelihoods for the communities in a sustainable manner through the promotion of inclusive business and value chain/partnership relationship based on profitability principles.

Sub-component 2.2 Impact Evaluation, Knowledge Management and Communication

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 5.1 million). No GCF funding is requested for this sub-component.

Impact evaluations (IEs) will use rigorous research methods to look at specific interventions under RLLP, assess the contribution of these to development goals and provide robust evidence of SLM impact. Project funding will focus on the evaluation of bio-physical impacts, which will be conducted in coordination with a livelihoods impact evaluation to be led by the Gender Innovation Lab of the World Bank's Africa Region, financed separately. The bio-physical impact evaluation will examine the response of the environment to SLWM interventions, considering parameters such as peak and base surface water flows, groundwater levels and recharge rates, sediment loads, and remotely sensed information on vegetation cover and soil moisture. For the purposes of this evaluation, the project will extend the existing partnership between MoA, the Water and Land Resource Center of Addis Ababa University, and the Environment and Climate Research Centre of EDRI, and will aim to build new partnerships with relevant international research organizations. IEs are expected to be completed within the Implementation Period (five-years) and the MOA will procure service providers for such purposes. The IE's disclosure will be subject to WB's access to information policies.

In addition to the bio-physical IE and the livelihoods IE an evaluation of climate-smart agriculture will also be conducted. Due to the complexity of the evaluations the details of their implementation are still under development and will be further elaborated in the terms of reference, acceptable to the World Bank. Basic design of the IEs is expected to be as follows: the livelihoods IE is expected to involve random assignment. The biophysical IE will involve a 2-stage sampling where in the first stage a stratified selection of watersheds to be treated will be performed and in the second stage watersheds will be paired with a suitable comparison watershed (outside project watersheds). This is being done to increase the explanatory power of the evaluation given the large cost associated with each watershed monitored. The CSA evaluation is expected to follow a treatment-control comparison methodology and the potential for randomized assignment within the CSA micro-watersheds is being explored. In any case, the sampling of treatment and control will be randomized.

To build a solid and effective knowledge management system both for the project and the SLM program in Ethiopia, this sub-component will establish a geospatial knowledge platform that combines information from a variety of project and other sources and packages it in a format that is accessible to planners and stakeholders at the national, regional, and local levels. This activity will build upon the work being done by WLRC under SLMP II to

develop a web-based knowledge management system. By enabling farmers to improve their planning the platform will decrease their exposure to climate change related risks.

A strategic communication program will be developed and implemented under this sub-component to inform and mobilize communities, enhance project visibility and transparency among all actors, support efforts to scale-up SLM and CSA practices, and build support for the land certification program. Strategic guidelines for the implementation of the Knowledge Management and Communication (KMC) program have been developed following a rapid KMC needs assessment. The guidelines include viable options of knowledge management, knowledge sharing and communication with effective channels, techniques, tools and key messages that address the communication and knowledge management needs of beneficiaries, stakeholders, partners and actors at various level. While following those guidelines, implementers will have room to elaborate, modify and adapt additional communication and knowledge management interventions to meet the overarching goals and specific objectives outlined in this sub-component. The identified overarching goals are: 1) to build and coordinate a strong knowledge base contributing to the effective promotion, reporting and scaling up of SLM within Ethiopia; and 2) to inform and mobilize local communities, strengthen consultation/ participatory development models, and enhance transparency in program-supported activities. The specific objectives of the KMC program are to: a) Support scaling up efforts and adoption of SLM and CSA practices; b) Help evidence based planning and reporting through enhanced information flow among institutions and coordination of monitoring and evaluation; c) Enhance the program visibility among all actors thereby attract new development partners and insure the buy-in of the government; d) Sustain the outcomes of SLM practices through awareness raising campaigns. This includes relevant activities in components 1 and 3 such as land certification. The guidelines include means of verification to evaluate the effectiveness of the activities implemented within the KMC program.

Possible activities include:

- i. knowledge identification, capturing, validation and packaging annually to support scaling up efforts, build capacity of user groups, youth groups, DAs and FTCs (experiential knowledge, best practice and synthesis of explicit knowledge products from various sources such as the geo-spatial knowledge platform, the CSA Innovation Platform, model watershed, etc.);
- ii. strengthening and enhancing functionality of existing FTCs and SLM information centers at woreda level and establishing info centers in new woredas;
- iii. outreach activities (i.e. production of printed, audio and video materials to be used as supporting tools during workshops and events, and media tours for journalists and PR officers of relevant regional bureaus to show project results);
- iv. knowledge sharing/networking events (i.e. annual SLMP Knowledge fair); and
- v. advocacy activities to support private sector engagement, policy development and other key initiatives for RLLP effective implementation (i.e. organization of Stakeholders Workshops).
- vi. grassroots level behavioral change campaign targeted to major/critical watersheds, based on preliminary research to define appropriate media (drama, storytelling, etc.) and effective messengers (i.e. community/religious leaders) and gauged throughout the duration of the program through a mix of qualitative/quantitative research methods (FGDs, community level meetings, survey);
- vii. public information awareness activities on land registration and cadastral surveys, land laws and procedures and conflict resolution mechanism, and to explain the benefits of (formalized) rentals and unlock the blockage set by cultural norms, emphasizing that temporary land renting does not imply abandonment and formalized rental contracts do not result in land being expropriated.

Component 3. Rural Land Administration and Use

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 26.0 million). No GCF funding is requested for this component.

As indicated under the root causes section above, land tenure insecurity caused by frequent land redistribution in the past has encouraged farmers in Ethiopia to favor short-term exploitation of land resources over long-term conservation, contributing to land degradation and declining productivity. The objective of this component will be to strengthen the land administration system that secures tenure rights, optimizes land use, and empowers land-users to invest sustainably in productive landscapes. This component will be funded entirely by co-finance. No funding from GCF is being requested for this component. Refer to detailed budget (Annex K.1.).

Component 3 will provide security of tenure to smallholder farmers through Second Level Landholding Certification (SLLC) as an incentive to increase the adoption of SLWM technologies and practices. The on-going SLLC exercise at kebele level will be extended to all kebeles within the watersheds targeted by RLLP, with resources provided for orthophoto production and para-surveyors for field level data acquisition, and data encoders for office level data management. It will support the use of low-cost, fit-for-purpose surveying and mapping technologies including drone aerial mapping and mobile mapping using tablets as appropriate. Activities to be supported will include (i) orthophoto base map preparation, (ii) adjudication of land rights and demarcation of parcel boundaries on the field map, (iii) scanning, geo-referencing and digitization of parcel boundaries and attributing information, (iv) public display for validating parcel (shape and size) and landholders' information, (v) parcel map and Landholding Certificate preparation, production, authentication and issuance, and (vi) procurement of equipment, materials and consumables for cadaster and land registration activities. Matching funds to complete woreda level coverage of SLLC will be sought from State governments and development partners.

This component will also extend the on-going local-level participatory land-use planning exercise at the kebele level within the major watersheds in the RLLP. Technical assistance will be provided to support consultation workshops for land-use plan development at the kebele level and to connect these consultations to the larger land-use planning exercises underway at the regional and national levels.

This component will also support the rollout of the NRLAIS in RLLP woredas that do not overlap with other land administration support projects. In Gambella, the project will support the installation and roll out of the NRLAIS both at the regional and woreda levels, as none of the development partners have interventions in Gambella. NRLAIS will provide security, transparency, maintenance of the land information with enhanced data management functionality and usability at woreda level in an efficient, effective, spatially integrated and sustainable manner. It will also equip the regional and federal authorities with an adequate tool to produce and avail statistical data on rural land tenure and land use that facilitate evidence based monitoring and ensure a coordinated and consistent approach to the development of policies, legislations, standards, models and research to enhance sound land governance across the country.

At the woreda and kebele levels, implementation of this component will be undertaken jointly by the Woreda Office of Land Administration and Use (WoLAU) through the Kebele Administration Offices, the Kebele Land Administration and Use Committee (KLAUC), the Land Administration and Use DAs, and the communities. Field teams will be contracted, trained and deployed, each comprising a team leader, a para surveyor, a data recorder, a digitizer, and a Woreda GIS expert and a supervisor, to facilitate and undertake the field and office level land certification activities. Woreda and kebele land use teams will anchor the preparation of Participatory Local Land Use Plans. At the Regional and Zonal levels, the Bureau of Land Administration and Use (BoLAU) and related agencies will lead the implementation of this component of the project with support from the Regional RLLP PCU. At Federal level, the Land Administration and Use Department (LAUD) in the MoA will be the main focal point for

policy, planning, and implementation guidance to RLLP Regions and Woredas. A NRLAIS rollout support unit established at regional and federal levels will provide technical assistance for this activity.

Synergies with interventions on land administration support from other development partners have been identified. These include the Responsible and Innovative Land Administration in Ethiopia Project (REILA)¹⁶ being implemented by Finland and the Land Investment for Transformation Project (LIFT)¹⁷ being implemented by the UK Department for International Development (DFID). These two projects together with RLLP will spatially synergize efforts on the national roll-out of the NRLAIS and distribution of SLLCs. Further discussions with DFID will identify possible support to the Rural Land Administration and Use Department (RLAUD) to: (i) expend their economic empowerment interventions to adjacent RLLP woredas to maximize benefits of land certification; and, (ii) complete SLLC in kebeles outside of watershed boundaries in RLLP woredas. Close coordination with other development partners (e.g. GIZ, USAID) will build on experience from SLMP-II and will be ensured through the G7 Donor Working Group on Land.¹⁸

Component 4. Project Management and Reporting

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 11.5 million) and by GCF in watersheds identified for GCF funding (budget of USD 6.09 million).

The objective of this component is to effectively consolidate plans and budget, implement and report on project activities with due diligence and integrity.

This component will finance the operational costs of Regional Project Coordination Units (RPCUs) in MoA and Regional State Bureaus of Agriculture. In total, there will be 7 RPCUs – one in MoA and one in each of the regions in which the project will be implemented (Amhara, Oromia, Tigray, SNNP, Beneshangul/Gumuz, and Gambella). These RPCUs will carry out all fiduciary aspects of project implementation including financial management, procurement, environmental and social safeguards, Monitoring & Evaluation (M&E), sector coordination of investment targeting and policy harmonization, and donor coordination structures. The project will support a modernized M&E system for collecting, managing and analyzing activity data and achievements. A tablet-based system of data collection that incorporates tools for capturing spatially explicit activities and area treated will be integrated into the project-wide strategy for the modernization of information management outlined under sub-component 2.1. The enhancements and functionality incorporated into the M&E system will improve the quality and accuracy of data while at the same time serving as a platform for providing feedback to the local level on progress, which will support improved decision-making.

¹⁶ REILA II is a 4.5-year project with a total budget of € 7.81 million. The project aims to: 1) Improved regional LA and increased and certified land tenure security for land users (in 6 woredas in Benishangul Gumuz and 11 Woredas in Amhara region) and NRLAIS rollout; 2) Improved capacity for federal and regional LA for planning, management and coordination, and for accurate and efficient land surveying; and 3) Improved supply of skilled manpower to the LA sector.

¹⁷ LIFT operates in four regions (Oromia, Amhara, SNNR, and Tigray) with a total funding of £ 63 million. LIFT aims to support the Government of Ethiopia in the provision of map based land certificates to farmers and assist them to fully benefit from increased investment and productivity through the development of the rural land market and its supporting operations.

¹⁸ In 2013, the Governments of Ethiopia, the United Kingdom, the United States of America, and the Federal Republic of Germany announced an agreement to enter a **land country partnership** to work together to improve rural land governance for economic growth and to protect the land rights of Ethiopians. The partnership was envisioned to build on existing programs and serve as a vehicle for increased coordination and collaboration among the Government of Ethiopia and its development partners. Since then the WBG has been an active member of the G7 **Land Partnership** through its active operations managed under ENR portfolio such as SLMP, OFLP, and CRGE TA.

Reporting at the federal, regional, woreda and community levels will aim to ensure sound tracking of progress information (activity/output level results), to evaluate information from a variety of sources relevant to outcome-level results, and to promote learning and adaptive management. The outputs under this activity include: (i) implementation of a new Results Based M&E Plan based on clear guidance on what to collect and how to collect it (indicator protocols); (ii) a well-functioning MIS system; (iii) improved capacity of stakeholders in M&E; and (iv) improved quality of information collected.

Scale of the project, identification of targeted project area and beneficiaries

In terms of the scale of the project, the World Bank is confident that the benefits of implementing the interventions included in the project at the relatively large scale proposed outweigh the risks. A number of factors mitigate these risks, key among them being the fact that the project builds on experience gained by the World Bank and the Federal Democratic Republic of Ethiopia, acting through MoA, during previous and ongoing projects. The proposed project benefits from the lessons learned over many years of projects aimed at sustainable land management, poverty alleviation and increasing the sustainability of agriculture in Ethiopia, and in particular the SLMP projects. These lessons led to the creation of the institutions that RLLP will build upon such as bottom-up watershed planning and self-help groups as well as the approach to CSA described in Annex A.3 in which a number of packages of activities are combined to achieve the triple goals of adaptation, mitigation and livelihood development.

For the Executing Entity, RLLP activities will come on top of activities with a budget of \$316 million that are already spent or committed for SLMP, which are managed or coordinated by MoA. For both the sums already spent or committed and for the co-financing the World Bank provides to RLLP, the World Bank has conducted risk analysis and identified mitigation actions that resulted in the decision by the World Bank to commit its own funds to the project. The valuable experience gained during implementation of SLMP-II, as well as the significant Recipient-executed and Bank-executed resources allocated in the past five years for coordination and capacity building efforts are expected to be instrumental to improve or identify viable measures to address all the risks.

Total needs were a major consideration in deciding on the scale of the proposed project. Soil degradation is an ongoing problem that is becoming more severe with every passing year. There are significant costs related to inaction – the longer we wait to address the problem, the worse it will get, and the more expensive it will be. To achieve sufficient momentum for scaling up and replication, countrywide implementation is essential. The targeted watersheds for this project were selected with inter-regional equity in mind. A total of 210 major watersheds are included in RLLP, averaging approximately 10,000 hectares each. Out of these, 135 watersheds are those already targeted by SLMP-I and II. In these watersheds RLLP will implement only innovative climate resilient activities that were not included in SLMP. 57 watersheds included in RLLP are new to the implementation of (SLM) measures. For GCF financing, 40 watersheds out of 192 were identified based on their vulnerability to climate change¹⁹. The process for the selection of these new watersheds is described in full in Annex A.1.

In order to achieve the aims of the project – achieving restored, productive and low emission landscapes, the project will work with the communities that are using these landscapes. Hence, beneficiaries are selected at the community level and the direct beneficiaries are individuals who are living within a project watershed. The members of these communities are vulnerable smallholder farmers, who are very sensitive and highly exposed to climate change impacts. The total population within the project area is 4.2 million people or 834,000 households (with an average of 5 persons per household). Evidence based data driven implementation and planning will ensure that

¹⁹ Details of Co-financing from Government of Canada were not available during this analysis, hence 18 Watersheds supported by it were not considered

interventions benefit smallholder farmers. Detailed bio-physical information for the 57 new watersheds, including individual landholdings, will be collected during the Multi-Year Plan (MYP) preparation of each watershed. Local level participatory land use planning teams at woreda and kebele levels would ensure that interventions benefit the smallholder farmers. The baseline study report for 90 watersheds of SLMP II found that the average land holding was only 1.338 ha. Agro-ecologically, watersheds above the altitude of 2300 meters and lowland areas between 500 and 1500 meters, have an average land holding of only 0.83 ha and 2.082 ha respectively. Furthermore, about 4.2% of the households have no land at all (3.5% of male and 6.5% of female headed households), 10.6% have less than a quarter of a hectare and 21.9% less than a hectare.

Beneficiaries are categorized as direct and indirect. The direct beneficiaries are individuals who are living within a project watershed. The members of these communities are vulnerable smallholder farmers, who are very sensitive and highly exposed to climate change impacts. The primary beneficiaries of the project will be the rural households on degraded land, facing land tenure and water insecurity in selected watersheds. Indirect beneficiaries include: (i) communities adjacent to Project intervention areas adopting SLM and 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; (iv) recipients of capacity building at all levels of government, as well as in national partner organizations; and (v) communities outside Project areas benefiting from groundwater recharge, reduced flooding, and lower sediment loads, as a result of SLM interventions. Women will be specifically targeted to ensure that they fully participate in Project benefits through a variety of mechanisms, including: (i) required participation of women in Community Watershed Teams (CWTs), Kebele Watershed Teams (KWTs), Kebele Land Administration and Use Committees (KLAUCs), and Watershed User Associations (WUAs); (ii) provision of joint land certificates to married couples, and individual land titles for women in Female-Headed Households; (iii) promotion of women's participation in Common-Interest Groups (CIGs) for income-generating activities; and (iv) targeted support for the production and marketing of improved cook-stoves, bringing health gains and time-savings that benefit women in particular. Make note that beneficiaries for Income generating activities are selected by the community watershed teams. The team has criteria for selecting such as the beneficiary should be the poorest of the poor, able to contribute to the project, refrain from doing negative harm to environment for example degradation of forest through charcoal making.

The experience of previous phases of the project has shown that there is a high willingness to participate by populations of the proposed intervention areas. The World Bank has tracked community contributions during the second phase of SLMP implementation. Translated into monetary terms, the cumulative community contribution in the four budget years from 2014/15 until 2018/19 was 23.5% of the total financial utilization of the project, equal to about USD 27 million. The most important contributions by the population were in the implementation of soil and water conservation measures on both communal land and farmland and community forest management.

The project components and activities are described below. Implementation will be guided by the recommendations and supporting studies that comprise the feasibility study. These documents provide guidance on which technology alternatives should be selected depending on local circumstances. Quantitative information on numbers of beneficiaries and areas benefiting from each activity, as well as a breakdown of funding between GCF and co-finance is provided in the detailed budget in Annex K.1.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

Provide a description of the project/programme implementation structure, outlining legal, contractual, institutional and financial arrangements from and between the GCF, the Accredited Entity (AE) and/or the Executing Entity(ies) (EE) or any third parties (if applicable) and beneficiaries.

- Provide information on governance arrangements (supervisory boards, consultative groups among others) set to oversee and guide project implementation. Provide a composition of the decision-making body and oversight function, particularly for Enhanced Direct Access (EDA) proposals.
- Provide information on the financial flows and implementation arrangements (legal and contractual) between the AE and the EE, between the EE or any third party and beneficiaries. For EEs that will administer GCF funds, indicate if a Capacity Assessment has been carried out. Where applicable, summarize the results of the assessment.
- Describe the experience and track record of the AE and EEs with respect to the activities (sector and country/region) that they are expected to undertake in the proposed project/programme.

Provide a diagram(s) or organogram(s) that maps such arrangements including the governance structure, legal arrangements, and the flow and reflow of funds between entities.

Detailed Project Institutional and Implementation Arrangements

The organizational structure and arrangements acceptable to the World Bank for the implementation of the recently completed SLMP-II will be maintained and strengthened for the execution of RLLP. Implementation will be carried out at four levels: Federal, Regional (including Zonal), Woreda (district) and Kebele (sub-district). and decisions in the meetings are subject to MoA concurrence.

The National SLM Steering Committee, chaired by the State Minister responsible for Natural Resources Management in MoA, comprises high level representation from MoF, MoWIE, MEFCC and DPs. The Steering Committee is responsible for the following tasks in the SLM project: (a) providing policy guidance, oversight and overall supervision for project implementation; (b) reviewing and approving the consolidated annual work plan, budget and procurement plan; (c) reviewing and approving the annual implementation performance report, and overseeing the execution of any corrective actions that may be designed.

The National SLM Technical Committee is also chaired by the State Minister responsible for Natural Resource Management in MoA. It is made up of senior technical staff from institutions such as MoA, MoWIE, MoF, MEFCC, MoWCA (Ministry of Women and Children Affairs, the Ethiopian Institute for Agricultural Research (EIAR), Cooperative Promotion Agency, development partners supporting SLM projects or initiatives, and civil society organizations (non-governmental organizations) actively engaged in SLM activities. Generally, this body is responsible for providing technical advice to MoA on SLM. Specific to RLLP, this Committee will provide technical advice on the quality of implementation performance reports and special studies such as policy and legislative drafts, financial and audit reports, documentation of best practices, and M&E reports.

The SLMP Project Coordination Unit (PCU) at MoA, which is staffed by 33 technical and fiduciary staff, will continue to play the role of managing and facilitating the day-to-day implementation of the project. Specific tasks will include: (a) consolidating regional annual work plans, budgets and procurement plans; (b) facilitating and supervising implementation of work plans and corrective actions, safeguards instruments including management/mitigation plans; (c) processing and procuring works, goods and services; (d) monitoring overall implementation progress, safeguards instruments (and management/mitigation plans) and evaluating project impacts; and (e) preparing progress reports. The Unit will maintain a team of experts including a National Project Coordinator, procurement and financial management specialists, M&E expert and technical experts in diverse disciplines (including watershed management, agronomy, forestry/agroforestry, land administration/land use planning, knowledge management & communication, livelihoods, private sector development).

Regional and Zonal level

Implementation of activities on the ground is supported by, among others, Regional steering and technical committees. The Regional Steering Committees will be accountable and responsible for the execution of the annual work plans developed by the local level implementers in the regions. At the Regional level, the Bureau of Agriculture (BoA) and the Bureau of Land and Environmental Protection (BoLEP) will lead implementation of the project in close collaboration with relevant public institutions. Serving as the link between the Federal, Zonal and Woreda implementation entities, the BoA will review and consolidate annual work plans, budgets, procurement plans submitted by the woredas. It will also review and approve implementation progress reports (including M&E, financial, audits, safeguards, etc.) originating from the woredas. The project will finance a project coordinator, M&E expert, accountant and procurement officer per region to assist the BoA and Woreda Office of Agriculture (WoA) to implement the project on a day-to-day basis. Together, these will form a regional Project Coordination Unit for each of the six Regions in which the project will be implemented (including Amhara, Oromia, Tigray, SNNP, Beneshangul/Gumuz, and Gambella). At the Zonal level, the Zonal Agriculture Office (ZAO) will provide technical support, extension services and M&E to a group of Woredas under its jurisdiction. The ZAOs will coordinate with the WoAs to discharge their responsibilities. Moreover, RLLP shall provide opportunities to zonal implementing entities to participate in the implementation of activities, draw lessons from the project and support scaling up of SLM practices to wider landscapes. In addition to the existing government staff, RLLP will contract technical advisors for specific outputs (such as preparation of MYDPs and WMUPs, establishment of WUAs, and preparation of business plans for IGAs and value chain linkages) in 29 zones where RLLP will be implemented.

Woreda and Kebele levels

On-the-ground planning and execution of activities under the project will be undertaken jointly by WOA, the Kebele Watershed Development Committee (KWDC), Development Agents (DAs) and communities. Accountants will be recruited at woreda level to improve financial management capacities and reduce implementation risk. Thus, WoAs, KWDCs and DAs will be assisting communities in: (a) developing annual work plans and budgets as well as procurement plans for submissions to the BoAs for review and endorsement and integration into a Region's annual work/development plans and budgets; (b) facilitating and mobilizing community participation in watershed planning and rehabilitation; (c) undertaking awareness campaigns and training; (d) participatory monitoring and evaluation; (e) extension service delivery and dissemination of best-fit technologies and innovations, etc. Implementation of Component 3, Rural Land Administration and Use, will be undertaken jointly by the WoLAU through the Kebele Administration Offices, the Kebele Land Administration and Use Committee (KLAUC), the land administration and use DAs and the communities.

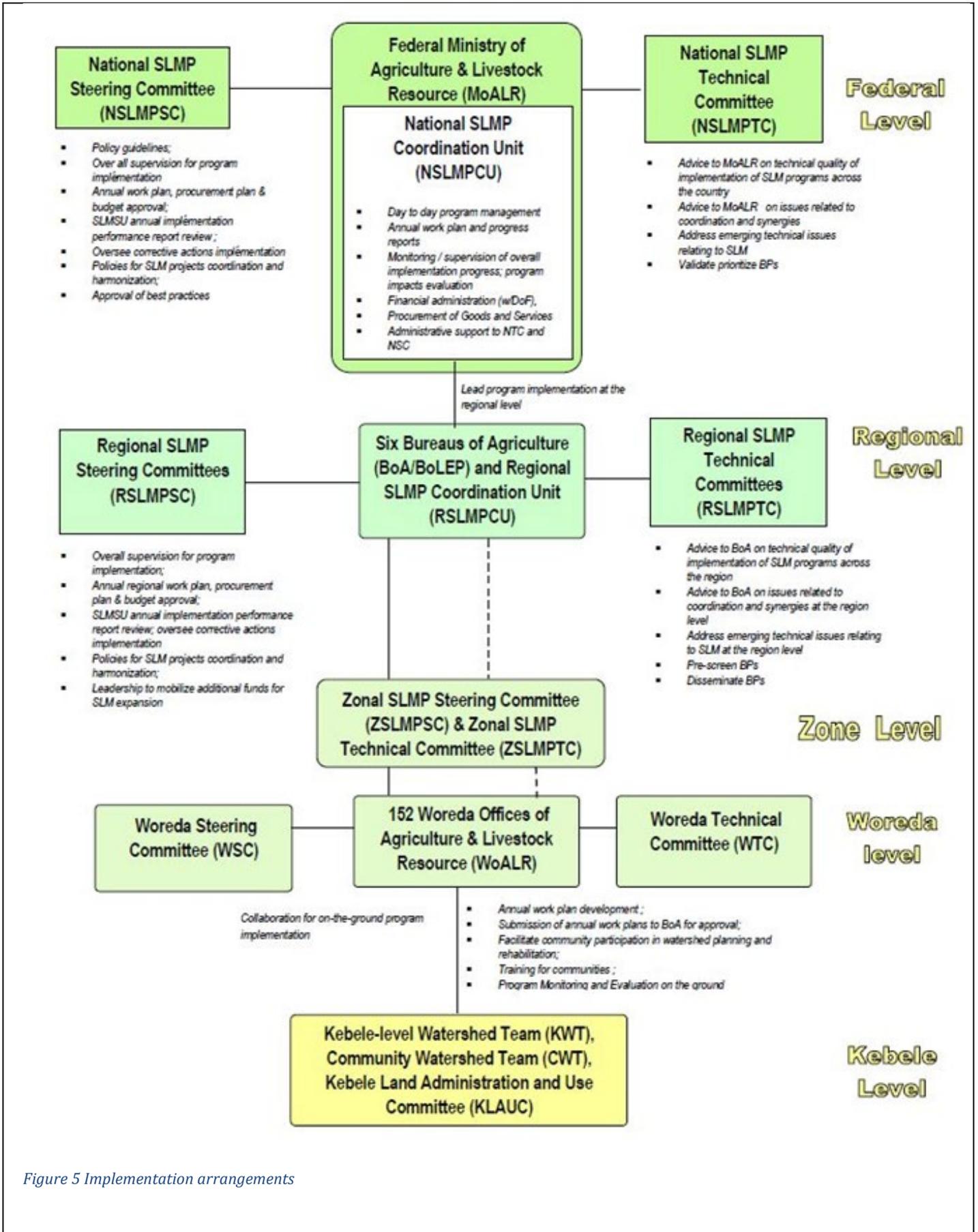


Figure 5 Implementation arrangements

The Project Implementation Manual (PIM) will set forth fiduciary requirements as well as project implementation arrangements. Importantly, the PIM will clarify the implementation support and supervision roles and responsibilities of the Regional Bureau of Agriculture (RBA), Woreda Office of Agriculture (WOA) and MoA. To enhance the accountability and quality of deliverables and the functionality of the program coordination platform at regional and woreda levels, project implementation arrangements acceptable to the WB and agreed by the MoA and regional governments will be established to clarify accountability and targets at all levels of project implementation. . This text is now added in FP in this section after Figure 5.

Roles and responsibilities of the World Bank

The World Bank as the Accredited Entity of the project will play an important role in programme supervision and implementation. The WB will ensure that the RLLP is executed in line with the WB policies and procedures. The WB's roles and responsibilities regarding financial management and procurement are described below. More detail, including a disbursement plan, is provided in section F.4. Financial Management and Procurement.

Financial management

Payments will be based upon an approved annual work plan and budget. To ensure transparency as well as to enhance the level of disbursement under the RLLP, quarterly Interim Financial Reports (IFRs) follow international reporting standards and are submitted promptly at the end of each quarter.

An external audit of the project will be conducted annually by the Supreme Audit Institution or an accredited private audit firm. The audit will be conducted in accordance with Terms of Reference prepared by the EE and the objective of the audit will be to ascertain whether project funds have been used for the intended purpose. The WB, as the AE, is responsible for reviewing and providing a no objection for the recruitment of the auditor including no objection of the ToR. The WB will verify that the audit is conducted in accordance with the International Standards on Auditing and that appropriate actions based on the findings ensue. If necessary, the WB will issue corrective actions throughout the execution of the RLLP.

The GCF Proceeds will be channeled through the World Bank and will be made available to the Federal Democratic Republic of Ethiopia. The World Bank will enter into a grant agreement and a loan agreement with Ethiopia, represented by MoF and acting through MoA for the implementation of the GCF Funded Activity. MoA is responsible for overall Project implementation and accountable for the Funded Activity's outcome indicators.

MoA will be working closely with MoF, the Ministry of Environment, Forest and Climate Change (MEFCC), the Ministry of Water, Irrigation and Energy (MoWIE) and other relevant public sector agencies. Project implementation is according to signed financing agreement(s) (Subsidiary Agreement(s)), procurement procedures, environmental & social management framework and other applicable WB procedures. The WB's project supervision covers monitoring, evaluative review, reporting, and technical assistance activities.

Procurement

As the AE, the World Bank is responsible for ensuring that MoA has the necessary procurement capacity required for the RLLP. To this end, The WB has conducted a procurement capacity and risk assessment of MoA (see Annex L.1). The WB will be responsible for ensuring that procurement under the project will be carried out in accordance with the WB's Procurement Procedures.

Communities and individuals receive cash payments as an incentive to contribute labor in support of rehabilitation works under sub-component 1.1 and 1.2. 41 ETB per Person Day (PD) is provided as labor incentive for participation in rehabilitation work. RLLP will pay 20% of this labor incentive for rehabilitation work on private land and 50% for rehabilitation work on communal land. The distribution of rehabilitation work needed across both types of land cannot be determined Ex-Ante. However, if we consider an equal distribution for estimation purposes, it means that RLLP will pay for 35% of the labor incentive. Based on this, we estimate that **RLLP will pay in total USD 40.4 million as labor incentive**. The total number of beneficiaries in watersheds where rehabilitation work will be undertaken is 3.27 million. Based on previous SLMP experience, typically 3 members out of 5 from each household participate in rehabilitation work. This translates to **1.96 million beneficiaries receiving labor incentive**

under RLLP. Thus, the estimated amount of labor incentive paid per beneficiary by RLLP will be USD 20.61. Please note that these are indicative estimates and may vary during implementation due to inflation and operational factors such as participation of beneficiaries and change in intensity of rehabilitation work due to extent of land degradation. We confirm that the activities under which labor incentive is provided are sub-components 1.1 and 1.2.

B.5. Justification for GCF funding request (max. 1000 words, approximately 2 pages)

Explain why the project/programme requires GCF funding, i.e. Why is the project/programme not currently being financed by public and/or private sector? Which market failure is being addressed with GCF funding? Are there any other domestic or international sources of financing?

Explain why the proposed financial instruments were selected in light of the proposed activities and the overall financing package. i.e. What is the coherence between activities financed by grants and those financed by reimbursable funds? How were co-financing amounts and prices determined? How does the concessionality of the GCF financing compare to that of the co-financing? If applicable, provide a short market read on the prevailing of the pricing and/or financial markets for similar projects/programmes.

Justify why the level of concessionality of the GCF financial instrument(s) is the minimum required to make the investment viable. Additionally, how does the financial structure and the proposed pricing fit with the concept of minimum concessionality? Who benefits from concessionality?

In your answer, please consider the risk sharing structure between the public and private sectors, the barriers to investment and the indebtedness of the recipient. Please reference relevant annexes, such as the feasibility study, economic analysis or financial analysis when appropriate.

In terms of the requirement for GCF funding, there are two types of interventions in this project.

The first type of intervention involves scaling up demonstrated measures for SLM. In past activities, WB and the GoE have laid the foundations for sustainable agricultural production and improvement of livelihoods. SLMP-I and SLMP-II program activities have proved to be successful in restoring degraded lands and significant lessons have been learned for further improvement of activities in the future.

With over 95% of agriculture output generated by smallholder farmers with average farm sizes between 0.5 and 2 hectares, the agricultural sector does not yet have the means to fund the introduction of SLM in all degraded watersheds without concessional funding. The Ethiopian government is investing heavily in climate change adaptation. Between 2007 and 2013, the government's total investment in agriculture was around \$1.1 billion, of which around 40% (\$0.4 billion) was from within the federal budget of the Ministry of Agriculture. 60% of the federal budget (\$0.3 bn) was spent on resilience activities related to addressing key climate risks. Around 80% of current resilience spending (\$0.2 bn) is on protecting the most vulnerable people in society through a program of safety nets that provide income support and social assistance. However, due to the significant impacts of climate change expected in Ethiopia and the vulnerability of most of the population, this investment will not be sufficient and GCF funding is required to fully finance the incremental costs of climate change adaptation.

The government of Ethiopia has been investing successfully in the development of SLM. SLM practices address both the short-term (erosion control, flood control) and the long-term goals of the government, which are part of efforts to rehabilitate degraded areas through soil and water conservation measures. However, national resources are insufficient to fund the remaining SLM investments required and additional funding is needed to finance the required interventions in degraded watersheds. To date, the World Bank has supported these interventions through concessional IDA credit. The loans requested from GCF for these investments are of a similar level of concessionality as the IDA Credit. Highly concessional funding is appropriate due to Ethiopia's status as a Least Developed Country with a GDP per capita of \$707 in 2017. In addition to SLM investments, GCF funding will also be used to mitigate the risk and overcome the barrier of limited capacity to scale up the current coverage of SLM activities. This risk includes the limited human resources to support beneficiaries in the planning and

implementation of complex interventions, the challenge of implementing a cost-effective M&E system, and the need to strengthen coordination among institutions, sectors, programs and projects.

The GCF highly concessional funding, along with additional financing from IDA, MDTF and GoE, would build upon previous SLM practices, taking into account lessons learned and introducing new activities in order to achieve landscape restoration and establish green corridors. Activities would include land use rationalization, intercropping, low tillage, gully reclamation, establishing grazing corridors, watering points and wells, and sylvo-pastoral strategies. Large-scale landscape restoration is only achievable through GCF co-financing due to the nature and scale of the needed investments. Land restoration lays the foundations for increased resilience to climate change and mitigation capacity while it enables agricultural production.

The second type of intervention for which GCF funding is requested is that of measures intended to encourage the adoption of Climate Smart Agriculture (CSA) practices and the development of strong value chains associated with livelihoods based on SLM and CSA. By strengthening value chains linking livelihoods based on SLM and CSA practices with the private sector, activities funded by GCF will contribute to the development of sustainable livelihoods, providing incentives for maintaining SLM and CSA practices.

If correctly implemented, CSA helps increase yields while building farmer resilience and contributing to the achievement of the NDC and several SDGs. Thus, CSA jointly addresses food security and climate change adaptation and mitigation. The determining factors for effective CSA outcomes are the combination of practices such as minimum tillage, crop residue management and crop rotation and intercropping. Challenges remain in the implementation of this combination of practices, such as the need for a change of mindset of farmers, extension workers and policy makers, competition for crop residue, lack of cover crops and lack of suitable technologies. Concessional funding is needed in order to remove these barriers and create a culture and knowledge base within which CSA can continue to be promoted by the extension services and implemented by farmers in future.

Without GCF involvement, Ethiopia cannot finance the proposed interventions. The national Climate Resilient Green Economy strategy has called for annual spending of \$7.5 billion to respond to climate change. With national budgetary resources for climate-change relevant actions estimated to be in the order of \$440 million per year and international sources contributing tens of millions of dollars per year, there is a major financing gap. Poor access to credit, high lending rates and an insufficient budget are not conducive to the investments required for handling local climate change impacts. In addition, Ethiopia's Debt Sustainability Assessment recently changed the risk of debt distress to high. Thus, GCF concessional financing, including a high degree of concessionality, is needed to ensure improved resilience to climate change impacts and food security in Ethiopia.

Public goods include: management of communal land; externalities from soil erosion; and water-insecurity (risk of droughts and floods). Market failures are found in the incomplete markets associated with: land-insecurity (lack of defined land ownership); water-insecurity; and soil loss.

Improving management of non-cropland areas under communal use requires a public good approach. Livestock grazing and firewood collection leads to deforestation and soil erosion on these communal lands (e.g. non-crop land). Using private investments to improve resource management on communal lands is not possible unless all costs and benefits can be internalized to a well-defined and functioning group of beneficiaries. Watershed management is one approach to this, but it requires long-term public investments and capacity building beyond what the private sector can do in the short term.

Soil erosion may lead to impacts outside the watershed management area (externalities). This means that costs and benefits from the investment will be accrued by people outside the project area. There is no functioning market for internalizing downstream negative effects and solving them with private sector investments or loans. Public sector investment is required.

Water-insecurity (risk of droughts and floods) are exacerbated by poor water/land management as well as climate change. There are no functioning markets for pricing water and impacts of disasters especially if the future holds greater risks. This is a market failure that requires public investments due also to the long-term solutions required to improve resource management.

The impact of poor soil management is felt by farmers and downstream beneficiaries, but there is no market value put on soil or the loss of soil. The solutions to reducing soil erosion require investments as well as short-term loss of income and food production while benefits accrue in the long term. Some benefits will also accrue externally to the project area. This is a market failure. In addition, the lack of land security prevents private sector investments from being realized due to increased risk from unclear property rights. Providing land security is a public responsibility.

Without land-, water- and soil-security no amount of private investment can ensure sustainable resource management in the future. This fits neatly with GCF's stated innovation is to use public investment to stimulate private finance. The incremental net benefits in the 40 watersheds at most risk from climate change target already poor and vulnerable populations. The grant proportion is justified compared to a loan because the net benefits are not expected to improve the fiscal position of the GoE including no additional tax revenue from these populations.

Without the Project intervention, beneficiaries both in the area and downstream will continue to struggle to establish or maintain their livelihoods and it is expected that without the Project, land use will continue on its current path. Continued soil erosion, water insecurity, and land insecurity leads to land degradation with direct losses to those that rely on crop and livestock production and related industries for their livelihood. Production yields will go down or farmers will have to increase their input costs, on e.g. fertilizer, to maintain current yields. In the absence of storage facilities, farmers will continue to experience post-harvest losses. They will also be unable to capture higher crop prices that are only obtainable a few months after harvest and in larger markets. Non-agricultural land in the watershed will also continue to deteriorate without the Project due to soil erosion and overuse of common land through grazing livestock and firewood collection. This will put a further strain on the population who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will also affect areas and households through increased flood risk and sedimentation of irrigation dams.

Figure 6 illustrates how this analysis assumes a declining production without Project interventions due to soil erosion. With Project interventions the yield loss is avoided and, for some production systems (crops, livestock, and grassland), with-project yields increase over time. This yield increase is attributed to adoption of improved cultivars, improved seeds, better animal breeds, land restoration, water management, and implementing climate smart agricultural techniques. The sum of the two shaded areas in the Figure constitute the incremental benefit

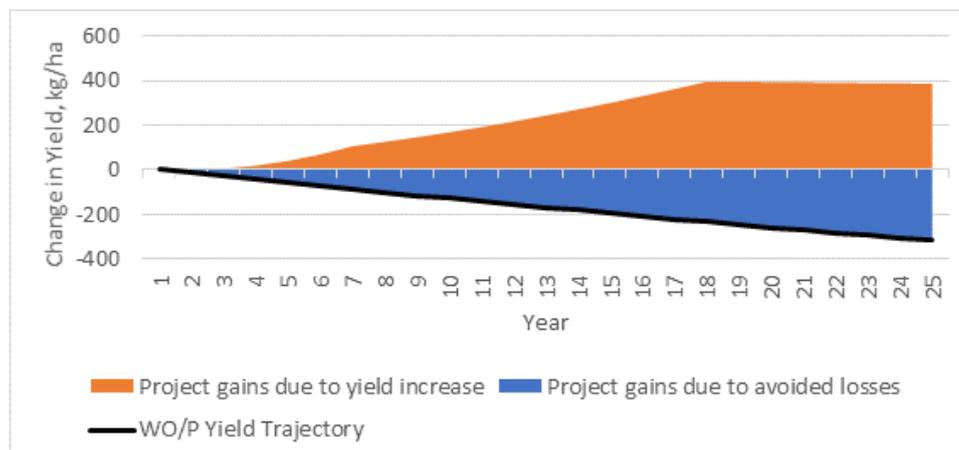


Figure 6 Illustration of incremental benefits

B.6. Exit strategy and sustainability (max. 500 words, approximately 1 page)

Explain how the project/programme sustainability (financial, institutional, social, gender equality, environmental) will be ensured in the long run after project closure, including how the project's results and benefits will be sustained.

Include information pertaining to the longer-term ownership, project/programme exit strategy, operations and maintenance of investments (e.g. key infrastructure, assets, contractual arrangements). In case of private sector, please describe the GCF's financial exit strategy through IPOs, trade sales, etc.

Provide information on additional actions to be undertaken by public and private sector or civil society as a consequence of the project/programme implementation for scaling up and continuing best practices.

The project will seek to ensure the long-term maintenance of restored landscapes through (i) an emphasis on strengthening the value chains associated with sustainable agricultural practices in restored watersheds, designed to build incentives for local communities to continue SLM practices, (ii) a focus on the provision of land-holding certificates, to encourage investment in long-term landscape productivity, and (iii) policy an implementation support for the establishment of watershed associations, combined with capacity building of local governments, to provide a durable institutional framework SLM. For value chain connections including CSRPs – these investments will be made through CIGs and cooperatives based on business plans that will include the identification O&M costs and the revenues necessary to cover them, that will be generated through the connections to value chains

GCF funding will be used to enhance the climate resilience of and add innovative elements to the government's ongoing SLM program. Strong government ownership ensures long-term commitment to the promotion of SLM and CSA practices, as part of the broader national goals of enhancing agricultural productivity, building resilience to climate change, and achieving a carbon neutral economy. Specifically, MoF and MoA are committed to scaling up and enhancing the success of the Government's proven flagship SLM Program. Beyond this national commitment, a particular focus of the RLLP is providing support for watersheds to graduate from development partner assistance for SLM, such that maintenance of restored landscapes and CSA will become mainstreamed into local community practices and local government functions. Component 2 of the proposed project will create institutions and build capacity that will enable the CSA interventions to be sustainably implemented in watersheds that graduate from project-based support. Spillover effects of successful SLM interventions have already been observed under the ongoing program. For example, CSA pilot watersheds have been visited by farmers and extension workers from adjacent areas and replicated through the government extension system. In addition to this spillover effect, the RLLP will provide four specific forms of support for the graduation of watersheds:

- First, the principal emphasis of policy development under RLLP will be the establishment of a regulatory framework for the creation of watershed associations, bringing together all stakeholders in restored watersheds. This initiative will build on a pioneering effort in the Regional State of Amhara and will draw on international best practice in this regard. In addition to providing the institutional framework required for maintenance and further investment in SLM, the establishment of watershed associations is also designed to leverage possible new sources of funding for SLM. This includes funding through Payment for

Ecosystem Services (PES), such as payments for sustainable watershed management to deliver downstream benefits, for example by reducing flooding and sediment loads affecting hydrological infrastructure (such as reservoirs for hydro-electric power generation), as well as payments for groundwater recharge from private sector entities dependent on reliable water supply;

- Second, support for capacity building and information modernization under RLLP will emphasize building permanent capacity in local governments to plan, implement and manage investments in SLM and CSA;
- Third, the focus of RLLP on strengthening value chains associated with livelihoods based on SLM and CSA practices is designed to strengthen incentives for communities and local governments to maintain and expand these initiatives;
- Fourth, in Component 3 support for land-holding certification will help secure land tenure for smallholders, enhancing income opportunities and promoting resilient livelihoods in the long term. Land tenure provides incentives to maintain restored landscapes, to abandon destructive practices such as free grazing, and to persevere with CSA practices.

Measures that will be taken to enhance institutional capacity for implementation and sustainability are: (i) continual training on project management and monitoring at all levels, in coordination with the GIZ SURED project; (ii) project implementation arrangements acceptable to the World Bank and agreed by the MoA and regional governments clarifying accountability and targets at all levels; and (iii) coordination between development partners Technical Committee on SLM.

Sustainability will be ensured through the creation of exit strategies for each participating watershed, based on the guideline *Exit Strategy and Performance Assessment for Watershed Management (ESPAWM)* (see Annex L.3.), which also covers operation and maintenance (O&M). Annex 1 of the ESPAWM provides a sample framework for a watershed-specific exit strategy, including activities and milestones specifically for highland water and land management projects in Ethiopia. This framework includes the development of an O&M plan for all infrastructure financed by the project. Annex 1 of the ESPAWM includes pointers on ensuring the O&M of community service facilities, which have not been considered as a part of watershed development plans in the past, and consequently not covered in O&M plans. Annex 1 also indicates the importance of establishing utilization arrangements for springs/shallow wells, guarding, user fees, community-level trainings for O&M and O&M of introduced improved farm machinery.

By the end of the project period, all watersheds included in the project are expected to have completed a Multi-Year Development Plan (MYDP) and those already supported under SLMP will receive assistance to graduate from project-based support for SLM. To help ensure the sustainability of the SLM interventions, the Project will provide support for the creation of Watershed User Associations (WUAs) in each graduating watershed to replace the project-based Community Watershed Teams (CWTs) and Kebele Watershed Development Committees (KWDCs) with a legally recognized institution for the ongoing planning and management of the watershed.

Watershed Management and Use Plans (WMUPs) adopted by WUAs will detail management and use for graduating watersheds, outlining agreements to conserve and utilize the resources and establishing bylaws for managing and implementing conservation activities and the distribution of benefits. The development of these WMUPs is critical to ensure land resources are used and managed in a way that enhances absorptive and adaptive capacity to climate change, promoting resilience broadly at the landscape level.

Ongoing monitoring of the success of SLM and CSA will be ensured at the local level through the RLLP's support for information modernization as part of local government capacity building. At the national level, the involvement of MoA and national research organizations in the impact evaluation, knowledge management and communication

sub-component will help ensure long-term commitment to monitoring, evaluating and improving the performance of these initiatives.

The loan component of the GCF financing will be provided on similar concessional terms as IDA financing, and repayments will be managed by the Government of Ethiopia through similar mechanisms.

C. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount	Currency
	165.24	million USD (\$)

GCF financial instrument	Amount	Tenor	Grace period	Pricing
(i) Senior loans	107,174,255	40 years	10 years	0 %
(ii) Subordinated loans	Enter amount	Enter years	Enter years	Enter %
(iii) Equity	Enter amount	Enter years		Enter % equity return
(iv) Guarantees	Enter amount			
(v) Reimbursable grants	Enter amount			
(vi) Grants	58,063,337			
(vii) Results-based payments	Enter amount			

(b) Co-financing information	Total amount	Currency
	131	million USD (\$)

Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
IDA	Senior Loans	100	million USD (\$)	36 years 5 years	0%	senior
Ethiopia Resilient Landscapes and Livelihoods multi-donor trust fund ("MDTF"), administered by the World Bank as Trustee	Grant	31	million USD (\$)	Enter years Enter years	Enter%	Options
Click here to enter text.	Options	Enter amount	Options	Enter years Enter years	Enter%	Options

(c) Total financing (c) = (a)+(b)	Amount	Currency
	296.24	million USD (\$)

(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)	<p>Please explain if any of the financing parties including the AE would benefit from any type of guarantee (e.g. sovereign guarantee, MIGA guarantee).</p> <p>Please also explain other contributions such as in-kind contributions including tax exemptions and contributions of assets.</p> <p>Please also include parallel financing associated with this project or programme.</p>
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C.2. Financing by component

Please provide an estimate of the total cost per component and output as outlined in section B.3. above and disaggregate by source of financing. More than one co-financing institution can fund a single component or output. Provide the summarised cost estimates in the table below and the detailed budget plan as annex 4.

Component	GCF financing	Co-financing	Co-financing

	Indicative cost million USD (\$)	Amount million USD (\$)	Financial Instrument	Amount million USD (\$)	Financial Instrument	Name of Institutions	Amount million USD (\$)	Financial Instrument	Name of Institutions	
Component 1. Green Infrastructure and Resilient Livelihoods	222.5	57.51	Grants	65	Senior Loans	IDA	15.5	Grants	MDTF	
		85.49	Senior Loans							
Component 2. Investing in Institutions and Information for Resilience	29.65	16.15	Senior Loans	6						7.0
Component 3. Rural Land Administration and Use	26	0		20						6
Component 4. Project Management and Reporting	18.09	0.49	Grants	9	2.5					
		5.60	Senior Loans							
Indicative total cost (USD)	296.24	165.24		100		31				

This table should match the one presented in the term sheet and be consistent with information presented in other annexes including the detailed budget plan and implementation timetable.

In case of a multi-country/region programme, specify indicative requested GCF funding amount for each country in annex 17, if available.

Component	Sub-component	GCF funding (USD)	IDA (USD)	MDTF (USD)
Component 1. Green Infrastructure and Resilient Livelihoods	Sub-component 1.1. Land Restoration and Watershed Management	100,000,000	49,000,000	6,941,189
	Sub-component 1.2. Climate Smart Agriculture	15,000,000	10,000,000	8,462,561
	Sub-component 1.3. Livelihood Diversification and Connection to Value Chain	28,000,000	6,000,000	96,250
Component 2. Investing in Institutions and Information for Resilience	Sub-component 2.1. Capacity building, information modernization and policy development	16,149,572	3,000,000	4,879,380
	Sub-component 2.2. Impact Evaluation, Knowledge Management and Communication	0	3,000,000	2,120,620
Component 3. Rural Land Administration and Use		0	20,000,000	6,000,009

Component 4. Project Management and Reporting		6,088,020	9,000,000	2,500,001
Total (excluding Accredited Entity Fee)		165,237,592	100,000,000	31,000,010

Total project financing includes the following sources of co-financing:

- International Development Association (IDA) loan: \$100,000,000 concessional loan from IDA.
- Multi-donor trust fund (MDTF) grant: \$19,000,000 from Norway and \$12,000,000 from Canada. Donor contributions to the MDTF are in the respective currencies of the donor and are expected in tranches over the life of the RLLP. Donor contributions to the MDTF are translated to United States dollars when the World Bank receives the funds.

Grant vs Loan

The GCF loan will be applied across all sub-components funded by GCF except for some specific activities in Sub-component 1.1 and Component 4 where GCF grant will be applied. Based on GCF's feedback emailed on November 18th, GCF stated that the grant portion should be in support of activities directly linked to the climate benefits. Accordingly, considering the direct carbon sequestration associated with the set of activities and the need to build gender-responsive resilience, following activities, listed below with their indicative estimates in brackets (actual request is rounded off to \$58 million), were selected for GCF grant funding:

Sub-component 1.1

- Construction of physical soil and water conservation measures on communal lands including degraded hillside, shrub land and pastureland (\$26,080,515)
- Pitting and planting of multi-purpose trees on degraded lands (\$12,922,858)
- Establishment of model plantation blocks with native tree species (\$2,268,510)
- Post plantation management of planted trees on communal lands (\$ 15,856,773)
- Grass seeds for pastureland development (\$ 450,313)

Component 4

- Gender mainstreaming (\$ 484,368)

GCF loans are treated like IBRD/IDA loans and will be repaid in parallel following a repayment schedule to be negotiated with GCF at Term Sheet and FAA stage. GCF loan is senior and not sub-ordinated.

C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
C.3.2. Does GCF funding finance technology development/transfer?	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>

If the project/programme is expected to support capacity building and technology development/transfer, please provide a brief description of these activities and quantify the total requested GCF funding amount for these activities, to the extent possible.

Component 2. Investing in Institutions and Information for Resilience

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 13.0 million) and by GCF in watersheds identified for GCF funding (budget of USD 16.15 million).

The objective of this component is to enhance institutional capacity and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the project area, both for the duration of the project and after project completion.

This component will build capacity at the local government level (woreda and kebele) for (i) planning and managing SLWM interventions, and (ii) managing the land certification process. This will include piloting of new technologies for information modernization at the local level, including the use of electronic tablets for gathering geospatial information, and the use of Unmanned Aerial Vehicles (UAVs – or drones) for land certification mapping. Tablets and UAVs will be the property of the project (i.e. MoA) and would be provided to development agents and the woreda focal persons in the project watersheds for mapping and monitoring. The device setup, training, and support provided will be tailored to meet the conditions and realities faced in field environment (i.e. off-line data collection, accessories (protective case, solar charger, etc.), guidance materials, technical and trouble-shooting support).

Support for policy development under this component will focus on the regulatory framework for Watershed User Associations (WUAs), community bylaws guiding land-use practices, and strengthening the Land Administration System. This regulatory framework, once established, will continue to support resilient land use after project completion. To strengthen the evidence base for sustainable land management decision-making, this component will include a bio-physical impact evaluation of SLWM interventions, to be conducted through a partnership arrangement between the MoA, the Water and Land Resource Centre of Addis Ababa University, and the Ethiopia Development Research Institute’s Environment and Climate Research Center. This will complement a livelihoods impact evaluation of SLWM interventions to be conducted in parallel led by the Gender Innovation Lab of the World Bank’s Africa Region. When completed, these evaluations will be available to interested parties in Ethiopia and the region wishing to institute or improve SLWM. This component will also provide resources to manage the knowledge generated through these and other assessments of SLWM, and to communicate the lessons learnt to a broad audience, including local governments and communities, relevant research institutions and Government agencies, as well as Development Partners.

This component’s objectives will be achieved through the implementation of the following sub-components: (i) capacity building, information modernization and policy development, and (ii) impact evaluation, knowledge management and communication.

Sub-component 2.1. Capacity Building, Information Modernization and Policy Development

This sub-component will build capacity at local government level to implement RLLP, and to sustain SLWM interventions after watershed graduation from project-based support. To achieve this, the sub-component will finance accountants to support the head of the Woreda office of Agriculture (WoA) and a focal person in each participating woreda, and part-time community facilitators at the kebele level (5 community facilitators for in each major watershed). To help build the capacity necessary for an effective land administration system, this sub-component will also provide technical assistance for training in this field.

This sub-component will support information modernization to coordinate data collection and information sharing at all levels and under all components of the project so that this information is well organized, properly documented and accessible. As part of this effort, a data management plan will be developed that specifies how all data used or created during the course of RLLP will be documented, stored and otherwise managed. The use of electronic tablets to collect information on project activities and results, combined with appropriate survey and mapping software, will

improve the quality and timeliness of data collection and reduce the effort needed to compile, review, and generate the necessary reports. This framework will facilitate access to information and support timely feedback to the local level.

This sub-component further supports the use of aerial vehicles (UAVs)/drones to generate high-quality and timely aerial imagery data to support planning, monitoring, and land certification. Under this initiative, the drones will be operated by several teams of trained operators who will travel to the project sites. During the course of RLLP each micro-watershed will be re-visited twice each year at appropriate intervals to generate visual and multi-spectral images of the program areas. At each stage the processed imagery will be shared with the woreda and local field staff for the purpose of assisting in planning, monitoring progress and updating implementation plans. The data and materials produced will also be used to support M&E and will serve as a source of information and data for subsequent analysis. Detailed technological specifications and budget have been elaborated including the technical requirements for the drones, all associated equipment and spare parts, operating costs for the duration of the project. The use of the drones is intended for the collection of information and data that will be available for long-term use and for project planning and monitoring. The project will work with the Information Network Security Agency (INSA) and the Ethiopian Aviation Authority to ensure all necessary permits are obtained.

Policy development under this sub-component will focus on the regulatory framework required for the establishment of Watershed User Associations (WUAs), crucial for sustainability of SLWM interventions, frameworks for reward and incentive schemes such as Payments for Environmental Services (PES), as well as community byelaws guiding land-use practices, and strengthening of the Land Administration System.

In developing the framework for WUAs, the Project will work closely with regional governments for its application in establishing WUAs. This work will commence with reviewing of the environmental legislation that relates to the use and management of Ethiopia's natural resources (soils, forestry, grassland, water, wildlife, etc.). The manual for CSA will be used to proceed and enhance this activity. RLLP will give high attention to the opportunities of engagement of private sector (PS) in all development activities of the project. The first objective of PS engagement in RLLP is, to attract the PS to invest in RLLP interventions. The second objective is to create and increase income streams & diversified livelihoods for the communities in a sustainable manner through the promotion of inclusive business and value chain/partnership relationship based on profitability principles.

Sub-component 2.2 Impact Evaluation, Knowledge Management and Communication

Impact evaluations (IEs) will use rigorous research methods to look at specific interventions under RLLP, assess the contribution of these to development goals and provide robust evidence of SLM impact. Project funding will focus on the evaluation of bio-physical impacts, which will be conducted in coordination with a livelihoods impact evaluation to be led by the Gender Innovation Lab of the World Bank's Africa Region, financed separately. The bio-physical impact evaluation will examine the response of the environment to SLWM interventions, considering parameters such as peak and base surface water flows, groundwater levels and recharge rates, sediment loads, and remotely sensed information on vegetation cover and soil moisture. For the purposes of this evaluation, the project will extend the existing partnership between MoA, the Water and Land Resource Center of Addis Ababa University, and the Environment and Climate Research Centre of EDRI, and will aim to build new partnerships with relevant international research organizations.

In addition to the bio-physical IE and the livelihoods IE an evaluation of climate-smart agriculture will also be conducted. Due to the complexity of the evaluations the details of their implementation are still under development. Basic design of the IEs is expected to be as follows: the livelihoods IE is expected to involve random assignment. The biophysical IE will involve a 2-stage sampling where in the first stage a stratified selection of watersheds to be treated will be performed and in the second stage watersheds will be paired with a suitable comparison watershed (outside project watersheds). This is being done to increase the explanatory power of the evaluation given the large cost associated with each watershed monitored. The CSA evaluation is expected to follow a treatment-control comparison methodology and the potential for randomized assignment within the CSA micro-watersheds is being explored. In any case, the sampling of treatment and control will be randomized.

To build a solid and effective knowledge management system both for the project and the SLM program in Ethiopia, this sub-component will establish a geospatial knowledge platform that combines information from a variety of project and other sources and packages it in a format that is accessible to planners and stakeholders at the national, regional, and local levels. This activity will build upon the work being done by WLRC under SLMP II to develop a web-

based knowledge management system. By enabling farmers to improve their planning the platform will decrease their exposure to climate change related risks.

A strategic communication program will be developed and implemented under this sub-component to inform and mobilize communities, enhance project visibility and transparency among all actors, support efforts to scale-up SLM and CSA practices, and build support for the land certification program. Strategic guidelines for the implementation of the Knowledge Management and Communication (KMC) program have been developed following a rapid KMC needs assessment. The guidelines include viable options of knowledge management, knowledge sharing and communication with effective channels, techniques, tools and key messages that address the communication and knowledge management needs of beneficiaries, stakeholders, partners and actors at various level. While following those guidelines, implementers will have room to elaborate, modify and adapt additional communication and knowledge management interventions to meet the overarching goals and specific objectives outlined in this sub-component. The identified overarching goals are: 1) to build and coordinate a strong knowledge base contributing to the effective promotion, reporting and scaling up of SLM within Ethiopia; and 2) to inform and mobilize local communities, strengthen consultation/ participatory development models, and enhance transparency in program-supported activities. The specific objectives of the KMC program are to: a) Support scaling up efforts and adoption of SLM and CSA practices; b) Help evidence based planning and reporting through enhanced information flow among institutions and coordination of monitoring and evaluation; c) Enhance the program visibility among all actors thereby attract new development partners and insure the buy-in of the government; d) Sustain the outcomes of SLM practices through awareness raising campaigns. This includes relevant activities in components 1 and 3 such as land certification. The guidelines include means of verification to evaluate the effectiveness of the activities implemented within the KMC program.

Possible activities include:

- i. knowledge identification, capturing, validation and packaging annually to support scaling up efforts, build capacity of user groups, youth groups, DAs and FTCs (experiential knowledge, best practice and synthesis of explicit knowledge products from various sources such as the geo-spatial knowledge platform, the CSA Innovation Platform, model watershed, etc.);
- ii. strengthening and enhancing functionality of existing FTCs and SLM information centers at woreda level and establishing info centers in new woredas;
- iii. outreach activities (i.e. production of printed, audio and video materials to be used as supporting tools during workshops and events, and media tours for journalists and PR officers of relevant regional bureaus to show project results);
- iv. knowledge sharing/networking events (i.e. annual SLMP Knowledge fair); and
- v. advocacy activities to support private sector engagement, policy development and other key initiatives for RLLP effective implementation (i.e. organization of Stakeholders Workshops).
- vi. grassroots level behavioral change campaign targeted to major/critical watersheds, based on preliminary research to define appropriate media (drama, storytelling, etc.) and effective messengers (i.e. community/religious leaders) and gauged throughout the duration of the program through a mix of qualitative/quantitative research methods (FGDs, community level meetings, survey);
- vii. public information awareness activities on land registration and cadastral surveys, land laws and procedures and conflict resolution mechanism, and to explain the benefits of (formalized) rentals and unlock the blockage set by cultural norms, emphasizing that temporary land renting does not imply abandonment and formalized rental contracts do not result in land being expropriated.

D.EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF's [Initial Investment Framework](#).

D.1. Impact potential (max. 500 words, approximately 1 page)

Describe the potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas. As applicable, describe the envisaged project/programme impact for mitigation and/or adaptation. Provide the impact for mitigation by elaborating on how the project/programme contributes to low-emission sustainable development pathways. Provide the impact for adaptation by elaborating on how the project/programme contributes to increased climate-resilient sustainable development. Calculations should be provided as an annex. This should be consistent with section E.2 reporting GCF's core indicators.

In terms of the requirement for GCF funding, there are two types of interventions in this project. The first type of intervention involves scaling up demonstrated measures for SLM. In past activities, WB and the GoE have laid the foundations for sustainable agricultural production and improvement of livelihoods. SLMP-I and SLMP-II program activities have proved to be successful in restoring degraded lands and significant lessons have been learned for further improvement of activities in the future.

With over 95% of agriculture output generated by smallholder farmers with average farm sizes between 0.5 and 2 hectares, the agricultural sector does not yet have the means to fund the introduction of SLM in all degraded watersheds without concessional funding. The Ethiopian government is investing heavily in climate change adaptation. Between 2007 and 2013, the government's total investment in agriculture was around \$1.1 billion, of which around 40% (\$0.4 billion) was from within the federal budget of the Ministry of Agriculture. 60% of the federal budget (\$0.3 bn) was spent on resilience activities related to addressing key climate risks. Around 80% of current resilience spending (\$0.2 bn) is on protecting the most vulnerable people in society through a program of safety nets that provide income support and social assistance. However, due to the significant impacts of climate change expected in Ethiopia and the vulnerability of most of the population, this investment will not be sufficient and GCF funding is required to fully finance the incremental costs of climate change adaptation.

The government of Ethiopia has been investing successfully in the development of SLM. SLM practices address both the short-term (erosion control, flood control) and the long-term goals of the government, which are part of efforts to rehabilitate degraded areas through soil and water conservation measures. However, national resources are insufficient to fund the remaining SLM investments required and additional funding is needed to finance the required interventions in degraded watersheds. To date, the World Bank has supported these interventions through concessional IDA credit. The loans requested from GCF for these investments are of a similar level of concessionality as the IDA Credit. Highly concessional funding is appropriate due to Ethiopia's status as a Least Developed Country with a GDP per capita of \$707 in 2017. In addition to SLM investments, GCF funding will also be used to mitigate the risk and overcome the barrier of limited capacity to scale up the current coverage of SLM activities. This risk includes the limited human resources to support beneficiaries in the planning and implementation of complex interventions, the challenge of implementing a cost-effective M&E system, and the need to strengthen coordination among institutions, sectors, programs and projects.

The GCF highly concessional funding, along with additional financing from IDA, MDTF and GoE, would build upon previous SLM practices, taking into account lessons learned and introducing new activities in order to achieve landscape restoration and establish green corridors. Activities would include land use rationalization, intercropping, low tillage, gully reclamation, establishing grazing corridors, watering points and wells, and sylvo-pastoral strategies. Large-scale landscape restoration is only achievable through GCF co-financing due to the nature and scale of the needed investments. Land restoration lays the foundations for increased resilience to climate change and mitigation capacity while it enables agricultural production.

The second type of intervention for which GCF funding is requested is that of measures intended to encourage the adoption of Climate Smart Agriculture (CSA) practices and the development of strong value chains associated with livelihoods based on SLM and CSA. By strengthening value chains linking livelihoods based on SLM and CSA practices with the private sector, activities funded by GCF will contribute to the development of sustainable livelihoods, providing incentives for maintaining SLM and CSA practices.

If correctly implemented, CSA helps increase yields while building farmer resilience and contributing to the achievement of the NDC and several SDGs. Thus, CSA jointly addresses food security and climate change adaptation and mitigation. The determining factors for effective CSA outcomes are the combination of practices such as minimum tillage, crop residue management and crop rotation and intercropping. Challenges remain in the implementation of this combination of practices, such as the need for a change of mindset of farmers, extension workers and policy makers, competition for crop residue, lack of cover crops and lack of suitable technologies. Concessional funding is needed in order to remove these barriers and create a culture and knowledge base within which CSA can continue to be promoted by the extension services and implemented by farmers in future.

Without GCF involvement, Ethiopia cannot finance the proposed interventions. The national Climate Resilient Green Economy strategy has called for annual spending of \$7.5 billion to respond to climate change. With national budgetary resources for climate-change relevant actions estimated to be in the order of \$440 million per year and international sources contributing tens of millions of dollars per year, there is a major financing gap. Poor access to credit, high lending rates and an insufficient budget are not conducive to the investments required for handling local climate change impacts. In addition, Ethiopia's Debt Sustainability Assessment recently changed the risk of debt distress to high. Thus, GCF concessional financing, including a high degree of concessionality, is needed to ensure improved resilience to climate change impacts and food security in Ethiopia.

Without the Project intervention, beneficiaries both in the area and downstream will continue to struggle to establish or maintain their livelihoods and it is expected that without the Project, land use will continue on its current path. Continued soil erosion, water insecurity, and land insecurity leads to land degradation with direct losses to those that rely on crop and livestock production and related industries for their livelihood. Production yields will go down or farmers will have to increase their input costs, on e.g. fertilizer, to maintain current yields. In the absence of storage facilities, farmers will continue to experience post-harvest losses. They will also be unable to capture higher crop prices that are only obtainable a few months after harvest and in larger markets. Non-agricultural land in the watershed will also continue to deteriorate without the Project due to soil erosion and overuse of common land through grazing livestock and firewood collection. This will put a further strain on the population who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will also affect areas and households through increased flood risk and sedimentation of irrigation dams.

Figure 6 illustrates how this analysis assumes a declining production without Project interventions due to soil erosion. With Project interventions the yield loss is avoided and, for some production systems (crops, livestock, and grassland), with-project yields increase over time. This yield increase is attributed to adoption of improved cultivars, improved seeds, better animal breeds, land restoration, water management, and implementing climate smart agricultural techniques. The sum of the two shaded areas in the Figure constitute the incremental benefit

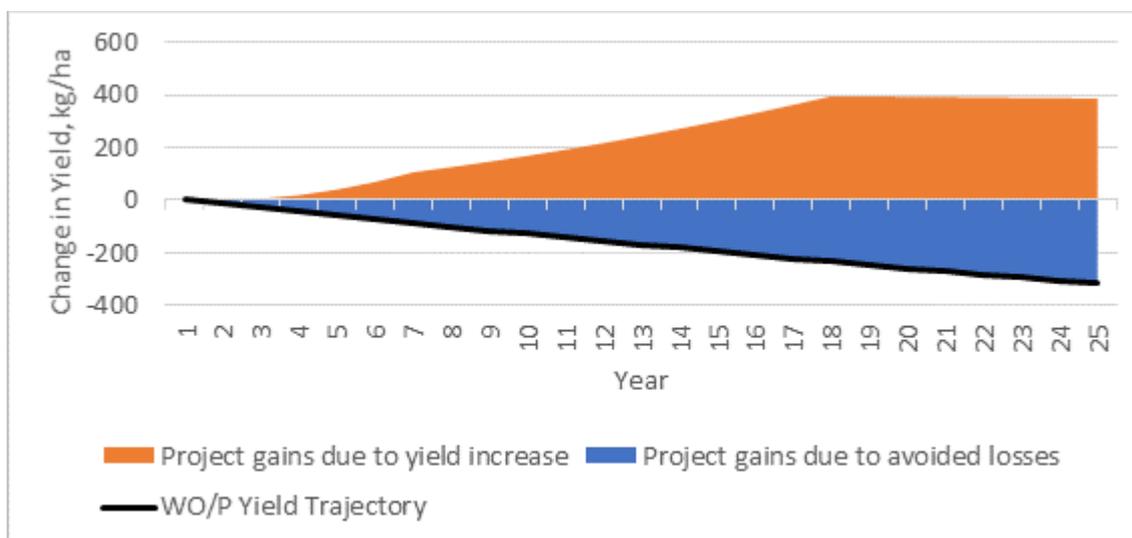


Figure 6 Illustration of incremental benefits

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

Describe the degree to which the proposed activity can catalyze impact beyond a one-off project or programme investment. Describe the following, if applicable:

- *Potential for scaling up and replication*
- *Potential for knowledge sharing and learning*
- *Contribution to the creation of an enabling environment*
- *Contribution to the regulatory framework and policies*
- *Overall contribution to climate-resilient development pathways consistent with relevant national climate change adaptation strategies and plans*

The RLLP will scale up, transform and innovate through the government of Ethiopia's ongoing SLM program. Following the success of earlier SLM interventions, the RLLP represents a paradigm shift by focusing on building the institutions and incentives necessary for long-term investment in, and maintenance of, restored landscapes that are both resilient to climate change and sequester carbon. Transformative elements of the RLLP include (i) an emphasis on strengthening the value chains associated with sustainable agricultural practices in restored watersheds, designed to build incentives for local communities to maintain restored landscapes over the long term, (ii) a focus on the provision of land-holding certificates, to encourage investment in long-term landscape productivity, and (iii) policy support for the establishment of watershed associations, combined with capacity building of local governments, to provide an institutional framework for long-term maintenance of restored landscapes.

The theory of change behind this package of interventions (as shown in the illustration below) is that by delivering more productive, secure and resilient livelihoods to local communities and by establishing the institutional framework needed to support maintenance of restored landscapes over the long term through watershed associations and local governments, the RLLP will lead to a durable shift towards SLM in the degraded watersheds of the Ethiopian highlands.

Such dissemination will be encouraged through awareness generating initiatives and training programs undertaken under Component 2.1, including farmer to farmer experience exchange visits, field schools, and awareness raising workshops (refer to Annex K.1. RLLP Detailed Budget). These activities will mobilize traditional self-help institutions of the communities in the project woredas, which have already contributed immensely to effective Project implementation and sustainability. For example, in all implementing regions and woredas, there are indigenous institutions (such as "Idir", "Yehager Shimaglewoch", (Elders), religious fathers, "Maheber", etc.), which have been established by the community for different purposes and are also working for the successful implementation and dissemination of SLM practices (refer to Annex D.1. RLLP Social Assessment). In addition, Ethiopian communities are used to financing investments through rotating savings and credit associations (ROSCA) called ekub rather than through the underdeveloped formal financial sector.

RLLP will be implemented by MoA, the ministry responsible for agriculture in the entire country. The ministry, working together with WB and other donors, already has a clear history of scaling up – SLMP-II expanded the area included in SLMP-I and RLLP will expand the project area further (see Figure 2). The Government of Ethiopia aims to introduce sustainable land use practices for all agricultural land in the country and if RLLP is as successful as the preceding SLM programs, there is every intention to continue the process of scaling up in the coming years. MoF and MoA are committed to scaling-up and ensuring the long-term sustainability of the Government's proven flagship SLM Program.

RLLP will also seek to identify innovative sources of SLM financing, including Payment for Ecosystem Services (PES) from either (i) private sources with an interest in restored watersheds, as exemplified by the recent agreement with Raya Brewery-BGI Ethiopia in the Tigray Region, or (ii) public sources such as municipalities and River Basin Authorities with an interest in improved catchment management to extend the lifetime and productivity of hydrological infrastructure, including for hydropower, irrigation and water supply. Further information on the project's engagement with the private sector is provided in Section E.5.3 and Annex B.1.

The knowledge generated and experience gained through implementation and evaluation of RLLP will also be disseminated more broadly to inform the design of SLM interventions internationally.

D.3. Sustainable development (max. 500 words, approximately 1 page)

Describe the wider benefits and priorities of the project/programme in relation to the Sustainable Development Goals and provide an estimation of the impact potential in terms of:

- *Environmental co-benefits*
- *Social co-benefits including health impacts*
- *Economic co-benefits*
- *Gender-sensitive development impact*

The proposed interventions are designed to support climate change adaptation and mitigation, enhancing long-term resource productivity while generating multiple social, environmental and economic co-benefits.

Environmental Benefits

Benefits from improved water management include increased soil moisture and reduced variability in response to flood/drought conditions. Soil retention provides benefits both on-site in terms of soil quality and off-site in terms of reduced erosion; it can be measured in terms of land savings or erosion prevention. Increased soil fertility is a determining factor for higher and less variable crop yields. Increased vegetation cover also helps to prevent erosion and improves downstream water quality, while simultaneously supporting biodiversity, which will be further enhanced through investment in green corridors.

An illustration of the benefits that sustainable land management can provide in Ethiopia is provided by the Productive Safety Net Program (PSNP). Under RLLP, a number of communities graduating from food-insecure status in newly identified watersheds will transition from support under PSNP to join the SLM Program. The PSNP implements land restoration and sustainable land management and mitigates nearly 3.4 million t CO₂e per year (+/-20%), achieved by sequestering carbon in biomass and soils.¹⁹ This equates to 1.5% of Ethiopia's Nationally Determined Contribution (NDC) to mitigation.²⁰

Social and Economic Benefits

The principal direct set of benefits from the RLLP will be improved incomes and more resilient livelihoods of vulnerable communities in degraded watersheds targeted by the project as a result of investments in SLM, climate resilient livelihood diversification (including grain-, meat-, dairy-, and bamboo-processing; tree seedling nurseries; manufacturing of improved cook stoves, production of improved environmental services; and private sector initiatives for PES or CSR), value chain strengthening, and land-holding certification. These interventions are also expected to deliver co-benefits, including: (i) health benefits of reduced exposure to household air pollution and of improved nutrition due to a more varied food production, (ii) reduced time spent on biomass fuel collection through the use of improved cookstoves, and (iii) enhanced infrastructure resilience as a result of reducing flooding and sediment loads. Benefits from improved administration and tenure rights include conservation of protected areas, biodiversity and tourism.

RLLP will support climate resilient food security of communities graduating from the PSNP and prevent a return to food insecurity of these communities as a result of climate shocks, resulting in social and economic benefits for vulnerable communities in the targeted watersheds. Through the PSNP, the immediate food needs of 8 million people were met by improving land restoration and infrastructure, and smallholder farmers increased maize yields by an average of 38%.²¹

Project-funded capacity building and institutional development at all levels have direct value in that they increase the skill level in public sector institutions and enable them to work more efficiently in providing essential and enhanced public goods and services. These institutional benefits are not quantified in the Economic and Financial Analysis (EFA), but they are seen as critical to ensuring that the other benefits can be realized when it comes to building productive alliances with access to agricultural financing, land, and other business enabling services.

According to a financial and economic analysis (EFA) of the RLLP, the estimated value of avoided soil erosion varies between US\$ 0.1 and US\$ 0.3/tonne of soil depending on the gross marginal value land use (US\$ 0.11/tonne of soil represents non-cropland, while US\$ 0.26/tonne is the value of avoided erosion for cropland). The Integrated Financial and Economic Analysis conducted during project preparation estimates a farm-level gross margins increase of more than USD 101/year/person, including the value of production used for home consumption, which is 1.2 times the Food Poverty Line. When assuming 5 persons per household farm, the gross margin can increase to at least USD 101 per household member per year. To associate this result with a measure of absolute poverty, we use the National Poverty Line for Ethiopia. The poverty line indicates the money required to afford the food covering the minimum required caloric intake (Food Poverty Line) and additional non-food items. The improvement in farm gross

margin is around 1.2 times the Food Poverty Line in 2018 terms (USD 85/person/year). This improvement is also about 63% of the total National Poverty Line (USD 162/person/year). Other representative farms are estimated to capture higher growth in gross margins of up to USD 135/person/year. This is a direct measure of increased resilience in the project area.

Gender Sensitive Development Impact

In addition to promoting women's participation in community watershed committees, the RLLP will extend experience under the ongoing SLM program to ensure women fully share in project benefits. In particular, women will continue to be specifically targeted in the issuance of land-holding certificates, and in the design of support for income-generating activities. Women and children will benefit disproportionately in the health and time-savings benefits of improved cookstoves. To ensure that gender-specific lessons are learnt during implementation of the RLLP, a socio-economic impact evaluation will be conducted by the World Bank's Africa Region Gender Innovation Lab. Specific gender-sensitive development impacts include:

- Strengthened implementation practices (planning, implementation and monitoring processes) for equitable and meaningful participation of females and males in sustainable land restoration and water conservation practices (50 % female representation in all stages)
- Integrated landscape management practices adopted by local communities based on practical and strategic gender needs and priorities.

The SLMP-II has produced several gender-related benefits. For example, it had a positive influence on gender norms and perceptions about women. Income generation through the SLMP-II was appreciated by women participants, who pointed out that they have gained more respect from community members because of their increased self-reliance. Another substantial impact was an increase in women's self-confidence. There have been changes in attitudes about women's roles and capacity, and women have started to feel more confident and motivated to engage in IGAs and climate smart agriculture. The land holding certification component also anticipates benefits by enhancing women's access to and control over one of the most important productive assets in a rural community: land. Land tenure will address the strategic needs of women, such as economic empowerment, enhanced decision-making power, and improved power relations in the household.

D.4. Needs of recipient (max. 500 words, approximately 1 page)

Describe the scale and intensity of vulnerability of the country and beneficiary groups and elaborate how the project/programme addresses the issue (e.g. the level of exposure to climate risks for beneficiary country and groups, overall income level, etc.). Describe how the project/programme addresses the following needs:

- *Vulnerability of the country and/or specific vulnerable groups, including gender aspects (for adaptation only)*
- *Economic and social development level of the country and the affected population*
- *Absence of alternative sources of financing (e.g. fiscal or balance of payments gap that prevents government from addressing the needs of the country; and lack of depth and history in the local capital market)*
- *Need for strengthening institutions and implementation capacity*

Ethiopia's Second National Communication identified the primary cause of vulnerability to climate variability and change as a high dependence on rain-fed agriculture, which is sensitive to climate variability and change. Other causes cited included under-development of water resources, low health service coverage, a high population growth rate, low economic development, low adaptive capacity, inadequate road infrastructure in drought prone areas, weak institutional structures, and lack of awareness.²²

According to the vulnerability assessment in the SNC based on existing information and assessments, the most vulnerable sectors to climate variability and change are agriculture, water and human health. In terms of livelihoods, smallholder rain-fed farmers and pastoralists are found to be the most vulnerable. Ethiopia's rural livelihoods are highly dependent on the performance of the agriculture and forestry sectors, which are highly sensitive to climate change. Over 80 % of the Ethiopian population lives in rural areas and are consequently highly dependent on the performance of productive landscapes for income, energy, food, building materials, and water. Furthermore, agriculture accounts for most jobs and about 40 % of output and exports, exacerbating exposure to the risks of climate change, which include increased soil erosion and more frequent droughts and floods. The arid, semi-arid and dry sub-humid parts of the country are affected most by drought.²³

Furthermore, the project regions exhibit low adaptive capacity, which increases vulnerability. Although it is not possible to have an exhaustive list of indicators that assess adaptive capacity of a region due availability of processed data for the proposed project regions, the indicators in Table 2 below relates directly to usage and quality of water, energy and settlement, and indirectly to the level and quality of education and health facilities. For example, the use of modern construction materials directly indicates the quality of settlements available to resist the physical impacts of climate variation. The under 5-mortality rate, however, may indirectly indicate that health facilities are of poorer quality, or that lower levels of supplementation and vaccinations are being provided.

Table 2 Adaptive capacity indicators in project regions²⁴

Adaptive capacity Indicators (share in %)	Country	Tigray	Gambella	Amhara	Oromia	Benishang SNNPR	
# watersheds		17	7	38	44	11	36
Literate population aged 10 and above (-)	56.28	53.54	58.95	41.14	45.39	47.28	46.79
HHs by Protected Well/Spring as a Source of Drinking Water in Dry Season (-)	18.77	27.81	24.46	22.65	16.83	49.28	18.23
HHs using collected firewood for cooking (+)	72.61	64.43	77.91	68.23	79.07	89.61	84.08
HHs with modern construction material* (-)	1.76	11.27	2.01	0.68	0.69	0.63	1.22
HHs suffered from Food Shortage for at least 1 month (+)	21.21	12.97	30.39	22.96	16.38	5.3	34.3
HHs suffered from Food Shortage in the last 12 months (+)	22	32.34	27.61	27.6	19.09	11.66	23.77
HHs Limiting their Meal Portions to cope with Food Shortage (+)	21	25.6	9.46	18.41	27.16	29.84	16.82
Under-5 mortality rate in deaths per 1000 live births (+)	67	59	88	85	79	98	88

The adaptive capacity indicators assessed above indicate that most of the targeted watersheds are situated in regions that have relatively low adaptive capacity. The regions of Afar, Somali, Oromia, and Tigray, which have relatively high poverty levels, are comparatively more vulnerable to climate change than other regions in the country.²⁵ Institutional capacity to respond to impacts in those areas is also low. One study assessed the flood risks and health-related issues in the Gambella region of the country. It identified three critically important weaknesses, including a lack of flood-specific policy, absence of risk assessment, and weak institutional capacity.²⁶

A recent World Bank book examines the potential impact of climate change and climate policies on poverty reduction²⁷. It suggests that as a result of differences in exposure and vulnerability, natural disasters increase inequality and may contribute to a decoupling of economic growth and poverty reduction. For instance, after Ethiopia's 1984–85 famine, it took a decade on average for asset-poor households to bring livestock holdings back to pre-famine levels. Poor people can become more resilient to shocks in agriculture thanks to trade and food reserves that can overcome local shortages in times of need, better access of poor farmers to markets, and improved technologies and climate-smart production techniques. Access to functioning markets, however, depends on better infrastructure and better institutions. For instance, in Ethiopia, the incidence of poverty decreased by 6.7 % following farmers' access to all-weather roads. Case studies from Ethiopia provided in the book further suggest that the cost of a drought to households can increase from zero to about \$50 per household if support is delayed by four months, and to about \$1,300 if support is delayed by six to nine months. This rapid increase, which is due to irreversible impacts on children and distress sales of assets (especially livestock), helps explain why most post-disaster responses have multiple stages. Typically, initial support is delivered quickly—even at the expense of targeting and accuracy—and larger recovery and reconstruction efforts are provided later with more emphasis on appropriate targeting. The authors conclude that providing resources for climate risk analysis and project preparation and ensuring that financial instruments and resources are available for development and poverty reduction investments can provide a window of opportunity before the impacts of climate change materialize.²⁸

Figure 6 shows the population density in Ethiopia as well as population density against all restored watersheds and those planned by RLLP. This map shows that most of the restored and planned watersheds are located in densely populated parts of the country.

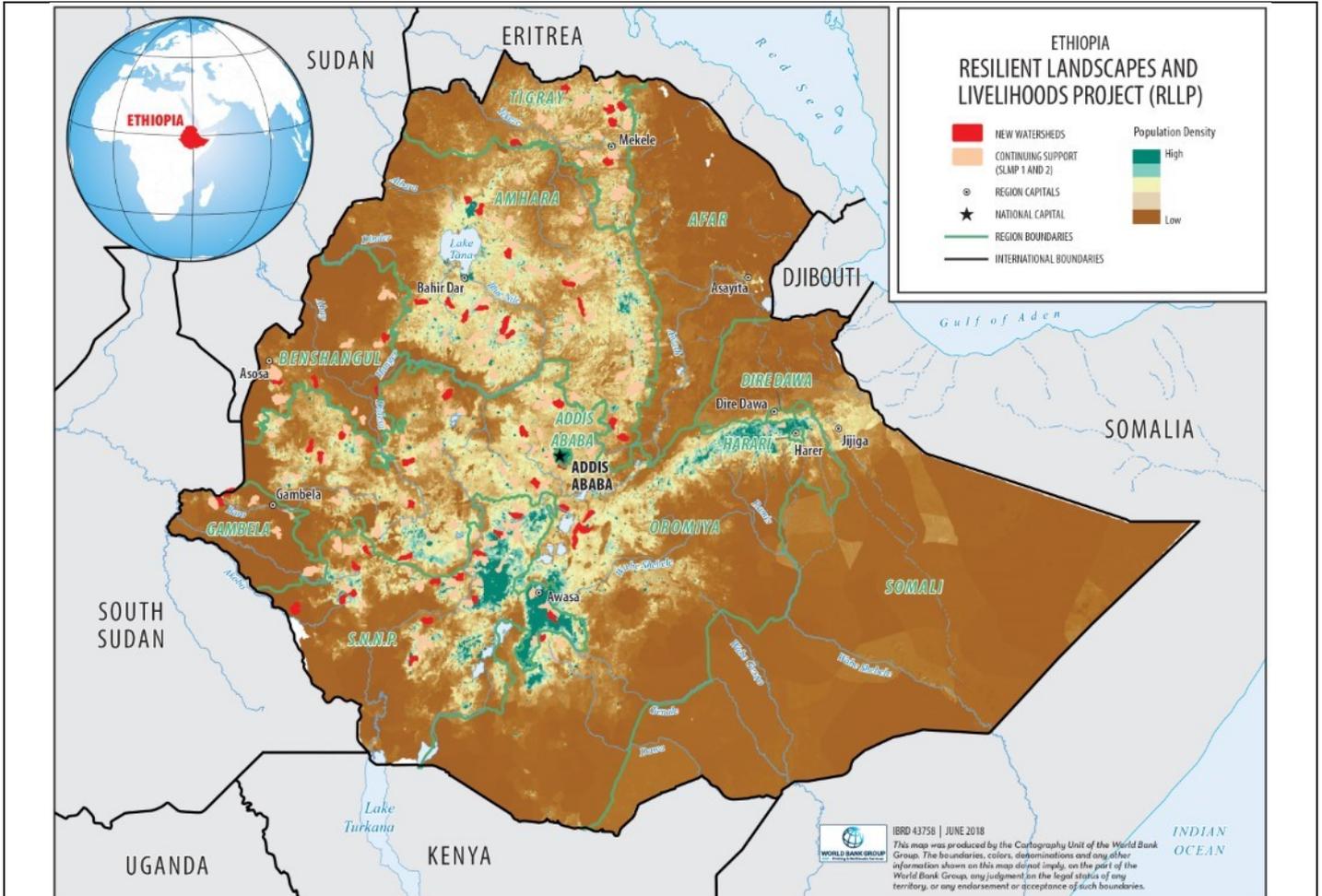


Figure 6 Population density in Ethiopia

By focusing on the most degraded watersheds in the Ethiopian highlands, the RLLP will target the communities most vulnerable to climate change impacts. Under Component 1, sustainable soil and water conservation practices will reduce exposure to climate-related impacts such as erosion and drought. Climate-smart agricultural practices will reduce the sensitivity of the sector to climate change and variability, and livelihood diversification will reduce the sensitivity of communities to impacts affecting the agricultural sector. Under Component 2, the capacity building and information modernization activities will increase adaptive capacity at the local government level. Under Component 3, activities to secure land tenure for small-holder farmers will increase household resources and encourage the adoption of SLMPs, which will reduce sensitivity to climate impacts and increase adaptive capacity through the dissemination of adaptive measures across highly vulnerable regions. In addition, the roll-out of the NRLAIS under this component will increase adaptive capacity at the regional and national level by introducing evidence-based monitoring and ensuring a coordinated and consistent approach to the development of policies, legislation, regulations, models and research to enhance sustainable land governance.

The project will work with the most vulnerable populations in the target areas. Detailed bio-physical information will be used to prepare MYDPs for new watersheds. Local-level participatory land use planning teams at the woreda and kebele level will ensure that interventions benefit smallholder farmers. The project also includes activities specifically targeting the particularly vulnerable group of landless and jobless youth and women. In these activities, landless youth will be provided with communal land certificates in exchange for land restoration. The project will also ensure that the provision of landholding certification will be implemented in such a way that half of the title-holders will be women. This will enable these groups to participate in agricultural production, as well as on the agricultural market, thus enhancing their income opportunities.

D.5. Country ownership (max. 500 words, approximately 1 page)

Please describe how the beneficiary country takes ownership of and implements the funded project/programme. Describe the following:

- Existing national climate strategy
- Existing GCF country programme
- Alignment with existing policies such as NDCs, NAMAs, and NAPs
- Capacity of Accredited Entities or Executing Entities to deliver
- Role of National Designated Authority
- Engagement with civil society organizations and other relevant stakeholders, including indigenous peoples, women and other vulnerable groups

The RLLP will build on and scale up the results of the two completed Sustainable Land Management Programs, SLMP-I and SLMP-II. RLLP is also designed to be complementary to and avoid overlap with related government programs such as the Productive Safety Net Program (PSNP), The Second Agricultural Growth Program (AGP 2), the Agricultural Transformation Agency (ATA) and others. The diagram below summarizes the relationship of the RLLP to the most important baseline projects, which are described further below.

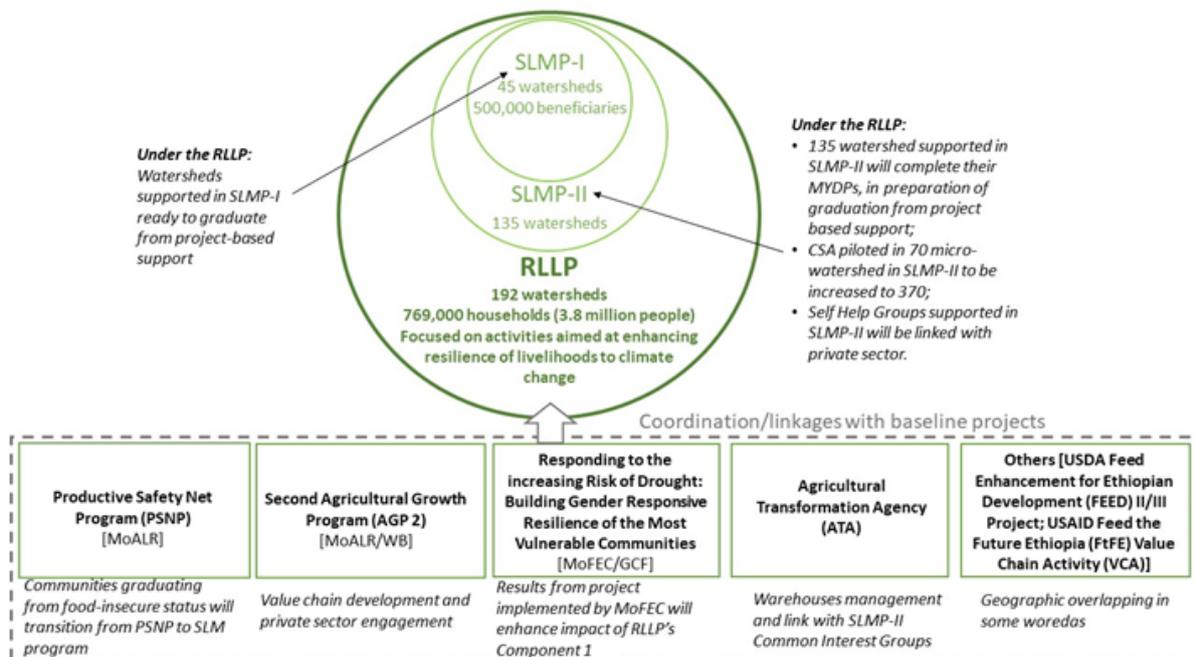


Figure 2 Baseline projects

Baseline projects

The proposed project has been requested by the government of Ethiopia to both scale up the success of the ongoing SLM program and introduce new, transformative and innovative elements. Ethiopia's problem of land degradation caused by erosion, drought, loss of vegetative cover, and unsustainable grazing and cultivation practices has led to the development of official government programs for better land management. These programs have evolved from an unsuccessful "top-down" approach to one that recognizes the importance of community participation in decision making, not simply as a source of labor.

The Government developed, with support from the TerrAfrica partnership, the *Ethiopia Strategic Investment Framework for SLM*. This investment plan anchored the establishment of the GoE's programmatic approach to scaling up SLM. Called the SLM Program, it provided the platform for convening and coordinating assistance from donors. When it was developed, the SLM Program targeted 177 "high potential, food secure" watersheds. Before this programmatic approach was undertaken by the GoE and partners, efforts to address land degradation were piecemeal and scattered throughout the country.

Sustainable Land Management Program-I (SLMP-I)

As part of the SLM Program, the World Bank/GEF-financed SLMP-I operation targeted 35 watersheds initially, later expanding to 45. The initial target group was an estimated 500,000 beneficiaries, representing rural households living in 35 large watersheds assisted by the project. These large watersheds, with an average size of about 8,500 ha, were located in six Regional States of Ethiopia (Amhara, Oromia, Tigray, SNNP, Beneshangul/Gumuz, and Gambella). In addition, through the capacity building activities of the project, technical staff at the central (Federal Ministry of Agriculture and Livestock Resource, MoA), regional (Woreda) and district (Kebele) levels benefited from training and improved working conditions. The project was declared effective in March 2009 and closed on schedule 4.5 years later (September 2013) with no extensions.

Key conclusions of the final evaluation of SLMP-I were that the project's objectives were substantially relevant to the country context and priorities. As part of the project, 45 participatory Watershed Management Plans and 613 community-based micro-watershed management plans were prepared. The area under sustainable land management in the targeted watersheds increased from 86,892 ha to 209,926 ha by project closure. The Normalized Difference Vegetation Index (NDVI), a measure of vegetation cover and a proxy measure for the reduction of land degradation, increased in the project areas by 0.543 (9%) over baseline of 0.498 and soil carbon increased by 31% during the period 2009-2013. At appraisal, the project team estimated an overall Economic Rate of Return (ERR) of 10-17% and a Financial Rate of Return (FRR) of 8-11%. The cost benefit analysis conducted at closure calculated an IRR that ranged from 10.41% to 22.60%.

SLMP-II

SLMP-I was considered successful by the GoE, which committed to a larger follow-on project, SLMP-II, that aimed to consolidate the SLM platform and expand the number of large watersheds assisted from 45 to 135. In SLMP-II MoA continued to develop and implement the innovative, integrated and inclusive SLM Program that supports (i) efforts to address land degradation and climate risks and productivity constraints through a landscape approach, and (ii) contributes to growth in the agricultural sector in general. SLMP-II aimed at (i) further scaling up and consolidating the pioneering efforts and achievements of the project, mainly through replicating the project's assistance to 90 additional watersheds; (ii) contributing to the consolidation and harmonization of MoA's multi-donor SLM program; and (iii) synergizing the project's achievements in terms of reduced soil degradation and improved water management by promoting a comprehensive livelihood improvement strategy anchored on "climate-smart" agricultural practices in beneficiary farmlands, households, and communities.

In SLMP-II, natural and economic wealth was built on over 1.3 million hectares of degraded communal and smallholder lands through an integrated package of activities in targeted watersheds that included: (i) management of natural resources (soil and water conservation structures, agroforestry, participatory forest management, enclosures to reduce free grazing and allow assisted natural regeneration, small-scale irrigation, water point development, climate-smart technologies on household farmland, and land use planning); (ii) improved land rights through issuance of legal landholding certificates to one million people, including women and landless youth; and, (iii) livelihoods support, including for promotion of improved cookstove adoption that reduces fuelwood demand, women's labour, and respiratory illnesses.

Results from SLMP-II financing are well documented. During a major drought in 2015-16 there is some evidence that water and food security in participating districts were strengthened compared to untreated areas. Degraded lands have been brought back into production for local farmers, dry season base flow of streams and depth to water table are improving, and protective vegetation cover was either maintained or expanded, as verified by remote sensing. In addition, approximately 9 million tons of additional CO₂eq have been accumulated in restored productive lands in SLMP-II areas, a proxy for system function as well as a contribution to climate change mitigation. Smallholder farmers regularly express how their identity and sense of place has also been restored through landscape restoration and improved legal land rights. Many community members who were ready to migrate remained in their birthplace and were able to afford to send their children to school. They were able to improve nutrition by producing vegetables and fruits using small-scale irrigation, by diversifying through poultry, apiculture and woodlot production, and by increasing livestock productivity through forage management.

Linkages with other government programs and projects

Flagship programs of the MoA include the Second Agricultural Growth Program (AGP) and the Productive Safety Net Program (PSNP). PSNP is aimed at enabling the rural poor facing chronic food insecurity to resist shocks, create assets and become food self-sufficient. It provides multi-annual predictable transfers, as food, cash or a combination of both,

to help chronically food insecure people survive food deficit periods and avoid depleting their productive assets while attempting to meet their basic food requirements. Under RLLP, a number of communities graduating from food-insecure status in newly identified watersheds will transition from support under PSNP to join the SLM Program, while at the other end of the SLM cycle a number of restored watersheds that benefitted from investments under SLMP-I and SLMP-II will graduate from project-based SLM support to continue investment in sustainable, productive landscape management through mainstream government programs.

With support from the Pilot Program for Climate Resilience and the BioCarbon Fund, the Bank is further supporting the government's Climate Resilient Green Economy (CRGE) Facility and four line ministries led by the Ministry of Finance and Economic Cooperation (MoF) to implement a Multi-Sector Investment Plan (MSIP) for climate resilience in key sectors, including agriculture, forestry, water resources, irrigation, and energy, in the context of resilient landscapes.

RLLP plans to work closely with the GCF financed project "Responding to the increasing risk of drought: building gender-responsive resilience of the most vulnerable communities" that is being implemented by MoF. Progress in the implementation of Component 1: *Improved access to water to build a resilient livelihood* and Component 2: *Management of Natural Resources for Sustained Water Availability* of the MoF project will enhance the impact of Component 1 of RLLP: *Investment on Green Infrastructure and Resilient Livelihoods*.

The link between the SLMP I and II, RLLP and the MoF project is quite close. As Section C.2, Paragraph 36 of the MoF project proposal explains, "Project results will feed into other on-going national initiatives such as the IWRM projects being implemented in the various watersheds, SLMP, AGP and REDD+ programs being implemented in the adjacent Kebeles. This project could be considered as one of the few initiatives in Ethiopia that has put climate change in to building the resilience of the communities. Whilst there are various ongoing national development programs and projects, climate change has not been captured at the core of it. This program has been strategically designed to address current and future water supply issues to the community as well as integrate initiatives and structural adjustments to efficiently manage this resource."

The creation of resilient landscapes and livelihoods as a result of RLLP will work synergistically with the improvement in drought resilience of communities that will emerge from the MoF project to enhance resilience of the rural population in Ethiopia to a degree that the participating projects could not achieve on their own.

National strategies

Ethiopia's long-term goal is to ensure that climate change adaptation and mitigation are fully mainstreamed into development activities. The proposed project is designed to be transformative, contributing to a number of key national strategies, including Growth and Transformation Plan 2 (GTP-2), the Climate Resilient Green Economy (CRGE) Strategy, and accompanying 2015 Climate Resilience Strategy for Agriculture and Forest, Ethiopia's Nationally Determined Contribution (NDC), the 2017 National Adaptation Plan to Address Climate Change, the Ethiopia SLM Investment Framework, the emerging National Forest Sector Strategy and National REDD+ Strategy, as well as sector strategies for energy, water, and agriculture.

The CRGE Strategy aims at developing a green economy and promoting greater resilience to climate change into a single policy framework in support of its national development objectives. Some of the key objectives of the CRGE, which this project supports, include improving crop and livestock production practices to improve food security and increase farmers' incomes while reducing emissions; and protecting and re-establishing forests for their economic and ecosystem services, including as carbon stocks. This project will address crucial issues for the resilience of the agricultural sector identified in the CRGE. It will also contribute to the National Adaptation Plan (NAP-ETH) launched in September 2017. NAP-ETH aims to bring about transformational change in the country's capacity to address the adverse consequence of climate change, focusing in particular on agriculture and forestry.

The project will also contribute to the climate, forest, water, energy, and land tenure targets in the Growth and Transformation Plan 2 (GTP-2) as well as the forthcoming GTP-3. The institutions strengthened as a result of the project will also contribute to the implementation of Ethiopia's Strategic Investment Framework for Sustainable Land Management (ESIF).

The proposed project is also in line with the intention of Ethiopia to limit its net greenhouse gas (GHG) emissions in 2030 to 145 Mt CO₂e or lower. Achieving this goal would mean a 255 MtCO₂e (64%) reduction from 'business-as usual' (BAU) emission projections by 2030. The agriculture sector and REDD+ are targeted to reduce 88% of the volume of GHGs.

Finally, the Policy Implementation Principles of the National Policy and Strategy on Disaster Risk Management (July 2013) include 'decentralized and community-centered' approach towards disasters and points out the importance to 'forecast the hazard, analyze, and take early action'. The goal of the Environment Policy is to enhance the health and quality of life of citizens and to promote sustainable social and economic development through the sound management and use of natural, human made and cultural resources and the environment.

Alignment with NDC and NAPA

As a result of the development of the Climate Change National Adaptation Program of Action (NAPA) in 2007, Ethiopia has made significant advances towards integrating climate change into national planning processes. The NAPA was replaced in 2010 by the Ethiopian Program of Adaptation to Climate Change (EPACC), which calls for mainstreaming climate change into decision-making at the national level. In September 2017 Ethiopia launched a 15-year National Adaptation Plan which focuses on a number of vulnerable sectors including agriculture and forestry. This project is in line with these documents and other government policy.

Ethiopia's NDC states that adaptation initiatives to reduce vulnerability will be based on the country's Climate Resilient Green Economy Strategy (CRGE). The CRGE has informed the design of adaptation activities of the RLLP (see above). Given that 80% of the population depends on agriculture for their livelihoods, increasing the resilience of agriculture is a priority for Ethiopia. The SLMP is mentioned in the NDC as one of the adaptation actions that has already been undertaken and that will contribute to building resilience to climate change. RLLP will contribute towards many of the adaptation interventions identified in the NDC, which concentrate strongly on increasing the resilience of agriculture. The adaptation intervention strategy identified in the NDC towards which RLLP contributes most strongly is "*Enhancing ecosystem health through ecological farming, sustainable land management practices and improved livestock production practices to reverse soil erosion, restore water balance, and increase vegetation cover, including drought tolerant vegetation.*". The project will also strongly contribute towards the actions "*Improve and diversity economic opportunities from agroforestry and sustainable afforestation of degraded forest areas*" and "*Enhance the adaptive capacity of ecosystems, communities and infrastructure through an ecosystem rehabilitation approach in the highlands of Ethiopia. Rehabilitation of degraded lands/forests will also increase resilience of communities, infrastructures and ecosystems to droughts and floods.*". Ethiopia seeks to maximize the synergies between adaptation and mitigation, especially involving agriculture and forests. RLLP will contribute towards two of the pillars for mitigation of GHG emissions: "*Improving crop and livestock production practices for greater food security and higher farmer incomes while reducing emissions;*" and "*Protecting and re-establishing forests for their economic and ecosystem services, while sequestering significant amounts of carbon dioxide and increasing the carbon stocks in landscapes;*".

Capacity of Accredited Entities and Executing Entities

Project financing will flow through MoF, which is mandated to mobilize both domestic and external resources for the implementation of the Climate Resilient Green Economy (CRGE) Strategy. The Project will be implemented by Federal Ministry of Agriculture (MoA).

Significant progress in remediation of degraded lands has been achieved in recent years by the Government of Ethiopia and thousands of local communities largely through investment and technical assistance under MoA's SLM Program. MoA has been implementing the SLMP with World Bank support in six regional states by coordinating investments from major donors and partners (IDA, Norway, Canada, Germany, GEF, LDCF) into a holistic and coordinated landscape management framework. With financing from IDA through the SLMP-II, over 1.3 million hectares of degraded communal and smallholder lands in selected watersheds is being converted into a sustainable source of natural and economic wealth through an integrated package of activities. Working through Regional Bureaus of Agriculture (BoAs) and woreda (equivalent to district) administrations over the last ten years, the SLM Program has restored productivity in more than two million hectares of degraded watersheds in six regional states

of the Ethiopian highlands. Up to now, the SLM Program has supported interventions in a total of 223 major watersheds, out of an estimated 700 that would benefit from SLM interventions.

The project is featured in the World Bank's Country Partnership Framework (CPF) for FY 17-21 as a flagship operation addressing the CPF's resilience pillar, with a funding commitment from IDA-18 for US\$100 million.

IDA financing has helped restore productive capacity and build resilient livelihoods in 135 highland watersheds through an integrated package of activities that includes management of natural resources on more than half a million hectares of degraded communal and smallholder lands. Through soil and water conservation structures, enclosures to limit free grazing, and afforestation or reforestation of more than 80,000 hectares, these activities have led to an average 9 % increase in vegetation cover in treated watersheds. Complementing these physical interventions, IDA financing for the SLM Program has strengthened MoA's support for land rights through the issuance of landholding certificates to over 300,000 households, including more than 200,000 women who have received titles either individually or jointly with their husbands, and more than 7,000 landless youth who have received titles to communal holdings in exchange for restoring land. To further ensure that local communities derive livelihood benefits from these investments, more than 130,000 smallholders in the targeted watersheds have participated in income-generating activities under the SLM Program, including for improved cookstove adoption that reduces fuelwood demand, women's labor and respiratory illnesses.

SLMP-II benefitted from parallel financing from GIZ for Cluster Advisors who supported extension, technical planning, and results reporting at woreda and kebele levels. The new GIZ program launched in 2018, Sustainable Use of Resources for Economic Development (SURED), will play an important role in providing training for technical assistance to be contracted under RLLP, as well as quality control of these services.

D.6. Efficiency and effectiveness (max. 500 words, approximately 1 page)

Describe how the financial structure is adequate and reasonable in order to achieve the proposal's objectives, including addressing existing bottlenecks and/or barriers, and providing the minimum concessionality to ensure the project is viable without crowding out private and other public investments. Refer to section B.5 on the justification of GCF funding requested as necessary.

Please describe the efficiency and effectiveness of the proposed project/programme, taking into account the total financing and mitigation/ adaptation impact the project/programme aims to achieve, and explain how this compares to an appropriate benchmark.

Please specify the expected economic rate of return based on a comparison of the scenarios with and without the project/programme.

Please specify the expected financial rate of return with and without the Fund's support to illustrate the need for GCF funding to illustrate overall cost effectiveness.

Please explain how best available technologies and practices have been considered and applied. If applicable, specify the innovations/modifications/adjustments that are made based on industry best practices.

Project co-financing is USD 131 million, bringing the co-financing ratio (total amount of co-financing divided by the Fund's investment in the project) to 0.79. In addition to this co-financing, parallel financing is provided by the Government of Ethiopia, who will provide USD 10 million in kind, and by GIZ, which is providing USD 13 million in the form of technical assistance. The project will leverage private sector and beneficiary contributions through activities aimed at providing household energy solutions and strengthening value chains associated with SLM interventions.

A detailed framework for private sector engagement under RLLP is presented in Annex B.1. This framework identifies three major categories of partners. The first are partners with activities currently being supported by other funders. RLLP will collaborate with existing private sector engagement activities in order to best utilize available funding and avoid unnecessary duplication. The figure below shows the relationships between players in this category who can support private sector engagement in the project. RLLP will facilitate these existing activities to extend their activities to rehabilitated watersheds. The second category is made up of private enterprises who have the potential to buy RLLP products or sell products that watershed households need. RLLP will engage with enterprises that already have a base in or plan to focus on the geographical areas of rehabilitated watersheds. A strong example of this type of opportunity is the MOU signed with Raya Brewery-BGI Ethiopia in Enda-Mohoni Woreda of South Tigray Zone. In the final category are long-term opportunities for the private sector to begin to implement activities in the targeted watersheds. RLLP will identify gaps and potential partners and suggest pilot collaborations, for example with enterprises who may be interested in specific crop varieties that can be grown in the targeted watersheds.

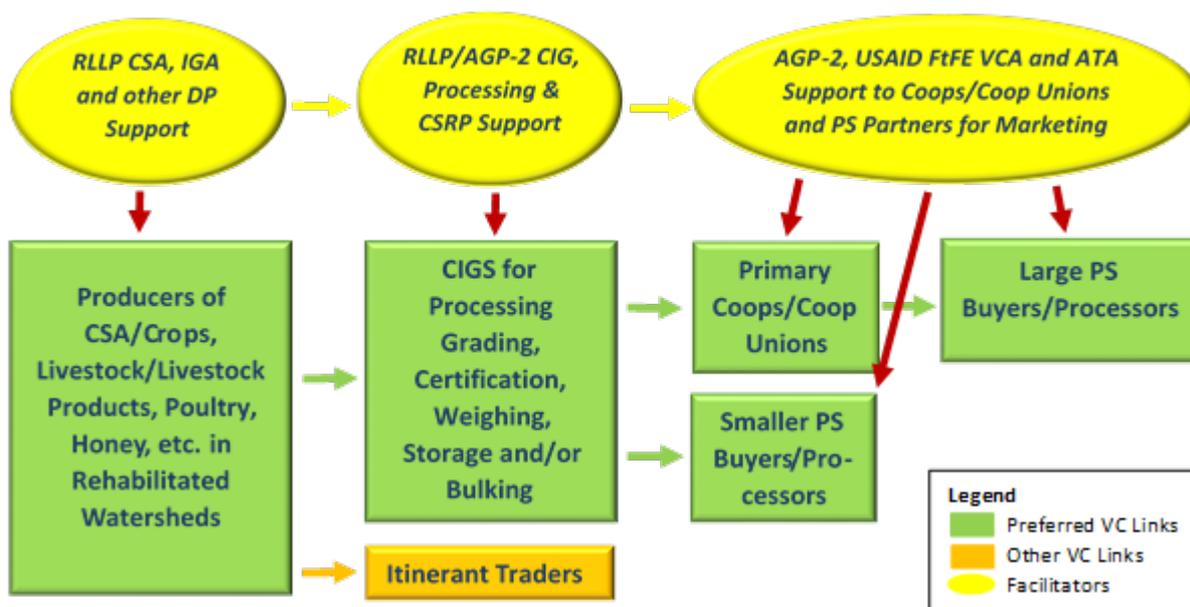


Figure 7 RLLP Linkages from Diversified Livelihoods to Value Chains and Markets

Narrative and rationale for the detailed economic and financial analysis

To assess the ex-ante efficiency of the project investment, a cost benefit model is used. Annual cost and benefit flows are estimated as the difference between without-project and with-project net benefits for direct beneficiaries (See Annex E.1: Economic and Financial Analysis for more details). Efficiency indicators include the Economic Net Present Value (ENPV) and the Economic Internal Rate of Return (EIRR), as well as impact on farm productivity, household incomes, soil erosion, and GHG emissions. Based on available information compiled during preparation, gross margins and representative farm models have been developed for selected cropland, non-cropland, and livestock production in the project area. Additional net benefits are analyzed from establishing Community Storage Receipts Program (CRSP) facilities.

In the counterfactual scenario without the Project, land use will continue on its current path. Continued soil erosion, water insecurity, and land insecurity will result in land degradation. It is expected that climate change will exacerbate soil erosion and water insecurity leading to direct losses to those who rely on crop and livestock production and related industries for their energy use and livelihood. Production yields will go down or farmers will have to increase their input costs, such as fertilizer use, to maintain current yields. In the absence of CSRP facilities, farmers will continue to experience post-harvest losses. They will also be unable to capture higher crop prizes that are obtainable a few months after harvest and in larger markets. Non-agricultural land in the watershed will also continue to deteriorate without the Project due to climate change and soil erosion as well as overuse of common land through livestock grazing and firewood collection. This will put a further strain on the population who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will

also affect areas and households through increased flood risk and sediment build-up in irrigation and hydroelectric dams.

Incremental benefits are estimated for investments in green infrastructure and resilient livelihoods (Component 1). It is assumed that these benefits will only accrue if the outcomes in the remaining three components are also achieved: 2. Strengthening institutions, information and monitoring for resilience; 3. Land administration and use; and 4. Project management and reporting. Investment costs include USD 165.24 million from GCF, USD 100 million from IDA, USD 19 million from MDTF, and USD 12 million from expected MDTF Contribution from the Government of Canada for a total of USD 296.24 million.

Following World Bank guidelines, the economic analysis considers anticipated costs and benefits with and without the project, including social costs and benefits. This necessitates the consideration of funding sources and labor costs outside the GCF project. In this project, the following are included as additional costs for capacity building and project management totaling USD 23 million (USD 13 million from GIZ and USD 10 million from the GoE). In addition, the analysis includes an estimated USD 99.1 million in in-kind contributions from project beneficiaries minus USD 3.8 million in price contingencies. With all costs included, the total budget included in the analysis is USD 319.2 million. As part of the exit strategy, recurrent costs in the years after the project has ended are estimated to be 2.5% of initial costs, including beneficiary in-kind contributions of USD 10.4 million per year.

The Project will increase climate resilience in 210 major watersheds covering an area of 2.1 million ha. Based on 2007 census numbers, the Project has an estimated 4.2 million beneficiaries (or 834,000 households) in the selected watersheds. Since population growth since 2007 census is estimated to be 15% or more, for the present day this is a conservative estimate.

Project interventions are assumed to lead to direct net benefits to crop and livestock producers as well as forests and other non-croplands through watershed management plans. These activities will reduce soil erosion and yield losses that are expected to result from climate change in the absence of Project intervention. Activities will also improve productivity and increase resilience against the negative impacts of climate change. To further increase resilience against future climate change, the Project will encourage climate resilient livelihood diversification through community groups including CSRPs. Project activities will also constitute a net carbon sink when analyzing impact on GHG emissions. While not included quantitatively in this EFA, benefits will also accrue from strengthening institutions and improving information and monitoring systems. Improved administration and secure tenure rights will create incentives for beneficiaries to adopt sustainable management practices. The Project is also expected to have positive impact on indirect beneficiaries in neighboring areas through informal dissemination of new management practices as well as downstream improvements from reduced floor risk and sediment build-up.

In the current 25-year net benefit analysis using a 5 percent discount rate, the project yields an Economic NPV of USD 3,312 million (ETB 92.7 billion) and has a benefit cost ratio of 3.8. The Economic IRR is 47%. The payback period is 5.3 years. In economic investment analyses, the Project therefore meets the requirement by yielding a rate of return higher than the economic discount rate of 5%. Note that, a 25-year model is used to account for the long-term gradual build-up of benefits from SLM interventions combined with a 5-year implementation phase followed by 20-year capitalization phase for forest plantations and green corridors.

World Bank guidelines recommend using a 5% economic discount rate.²⁰ Increasing the discount rate from 5% to 10% reduces project returns by 51% to USD 1,617 million. Project returns are still considerable at a 10% discount rate with a BCR of 3.2.

If the Project only reaches half of the targeted area for example due to unexpected cost increases, estimated project returns fall by 53% to USD 1,560 million and the rate of return drops from 47% to 26%.

If base case assumptions are too conservative or climate change leads to accelerated soil erosion in the future, the estimated net benefit of Project interventions would be higher. When assuming a 50% increase in annual soil loss by year 25 the estimated economic return is USD 3,462 million with a 47% rate of return. Under this accelerated soil erosion scenario, the estimated Project net benefit of avoiding this larger soil erosion is therefore USD 150 million across the 25-year period. In the base case, estimated value of soil erosion varies between USD 0.11 and 0.26/tonne soil per year depending on the gross margin value of different land uses. In the scenario with accelerated soil loss, this estimated value ranges between USD 0.17 and 0.38/tonne soil per year.

²⁰ World Bank (2015). Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects. Washington, DC.

When excluding the social value of reduced GHG emissions, the net economic project return is USD 2,238 million (ETB 62.7 billion) with a benefit cost ratio of 2.9, an EIRR of 29% and a payback period of 7.3 years. This is 3.1% of Ethiopia's GDP in 2016 terms.

When excluding the GHG emissions, 49% of incremental net benefits are generated through activities on non-cropland areas, particularly due to the transformation of 41,000 ha from bush and grassland to forest plantation but also due to avoided soil erosion. This constitutes an ENPV of USD 108 per year per treated hectare and an EIRR of 43%. A substantial part of Project returns is also generated by cropland and livestock production at USD 49/ha/year and USD 39/ha/year, respectively. Much of the incremental benefit estimated from cropland comes from transforming 30,000 ha of unproductive land to green corridor plantations and some is from avoided soil erosion. With exacerbated problems from climate change, forest plantations and green corridors will enhance watershed restoration and ecological connectivity as well as extend the lifespan and resilience of drainage, irrigation, and road infrastructure.

In financial terms the NPV is USD 696 million (ETB 19.5 billion) with a Financial IRR of 28%, a benefit cost ratio of 2 and a payback period of 7.5 years. This estimated net return constitutes 1% of Ethiopia's GDP in 2016. In the financial analysis a 12% discount rate is used to reflect the opportunity cost of capital in Ethiopia.

By supporting the establishment of financially viable enterprises in the area, the Project helps build resilience and future self-sufficiency. Without Project support for initial investments and working capital, CSRPs may be financially viable to also cover future capital maintenance costs, but only if available commercial loan interest rate is below their FIRR of 18-21% and a payback period of over 5 years. Initial information indicates that commercial loans for investments may be available at this rate but not the size of loans required. It can be expected that demonstrated implementation of CSRPs can reduce commercial banks' future risk perception. CSRPs can improve their financial viability to an FIRR over 24% for example by using more of their available storage capacity, obtaining a matching investment grant and reducing their initial working capital requirements. To be financially viable, the CSRPs will require project support to cover their initial investment costs in the absence of commercial loans at favorable rates. As part of an exit strategy, this increased level of return would also enable them to cover assumed future capital maintenance costs.

The National Poverty Line for Ethiopia is a measure of absolute poverty. The poverty line indicates the money required for food to provide the minimum required caloric intake (Food Poverty Line) and additional non-food items. In the financial analysis, estimated farm-level gross margins can increase by over USD 101/year/person (including the value of production used for home consumption), which is 1.2 times the Food Poverty Line (USD 85/person/year in 2018 terms), or 63% of the National Poverty Line (USD 162/person/year). This is a direct measure of increased resilience in the Project area.

The planned investment Project is expected to yield high returns even when considering key risk factors such as: yield and price changes; adoption rates; and project delays. As part of a risk management plan, it is particularly important to ensure that farmers can negotiate and obtain fair output prices and achieve target yields going forward. Part of the risk management plan could also be to ensure that planned CSRPs are used to their full capacity and that they receive sufficient financial support toward initial investment and working capital costs to ensure their financial viability. Close monitoring and support for target farmers and communities to implement water management plans could help increase the adoption rate. While not always avoidable, project delays can be minimized with close monitoring and by ensuring implementation does not lose momentum.

The full economic and financial analysis is provided in Annex E.1.

Economic and financial justification for the concessionality that GCF provides

Despite Ethiopia's Debt Sustainability Assessment having rated the risk of debt distress as high, the Ethiopian Government has agreed to take on significant debt for this project, with \$100 million in loans to be provided by IDA and a request of an additional \$107 million in loans from GCF. In addition to the \$100 million in loans, \$31 million in grants is provided as co-financing, bringing the percentage of grant funding in the co-finance to 24%. \$58 million in grant finance is also requested from GCF, bringing the percentage of grant funding in the GCF financing to 35%. GCF funding will be used for the introduction at scale of climate smart agriculture. While some of the individual activities included in the package of measures for CSA may be business as usual in other parts of the world, they are new to the target population of smallholder farmers in Ethiopia. In particular, the implementation of such measures in a coordinated way as part of a larger package faces multiple barriers. RLLP has been designed to mitigate these barriers to a degree sufficient that upon project end it is expected that the measures will continue to be implemented without concessional finance. However, for their introduction at scale highly concessional funding is essential. The

initial validation of the package of measures is being conducted as part of SLMP2. GCF financing is required to scale up implementation in all watersheds covered by RLLP subsequent to the pilot phase, in which the package is being validated in 30 watersheds as part of SLMP2.

While beneficiaries will derive some private benefits as a result of the implementation of this package of measures, these beneficiaries are vulnerable rural smallholder farmers facing food, land tenure and water insecurity. Any benefits derived will be used to increase food and water security and cover other basic needs. Due to the high risk aversion of such a population and the fact that it is overwhelmingly unbanked, it would not be feasible to pass on the cost of any loans to the beneficiaries.

Activities for the expansion of SLM, the development of income opportunities and resilient livelihoods as well as those improving the enabling environment will also be funded by GCF finance.

The Economic Net Present Value (ENPV) is USD 3,312 million discounted at 5% over a 25-year period (ETB 92.7 billion). This generates a benefit cost ratio (EBCR) of 3.8 and an Economic Internal Rate of Return (EIRR) of 47% with a payback period of 5.3 years. In economic investment analyses, the project therefore meets the World Bank requirement by yielding a rate of return higher than the economic discount rate of 5%.

Financial viability for this investment in the long run is ensured, because once the barriers to implementation of sustainable land management and climate smart agriculture practices promoted by the project have been removed and the project has established mechanisms to encourage their implementation, individual farmers will see their incomes rise. Those practices that are implemented at the farm level will have short payback times that will motivate farmers to continue with these practices in the long run beyond the project's intervention. Furthermore, institutions will be established to ensure that communities continue to maintain collective infrastructure that has been established. The resilient livelihood interventions that are also part of the project will strengthen the project's impact and further ensure long-term maintenance. Private sector development will mean households will see a sustainable increase in income, which will in turn provide an incentive for them to continue maintaining the green infrastructure and climate resilient agricultural practices introduced by the project.

By supporting the establishment of financially viable enterprises in the area, the Project helps build resilience and future self-sufficiency. Without the support of the project for initial investment and working capital, CSRPs might be able to cover future capital maintenance costs, but only if the commercial interest rate is below their FIRR of 18-21% and if the payback period is greater than five years. Initial information indicates that commercial loans for smaller investments may be available at this rate, but not the size of loans required. CSRPs can, however, improve their ability to afford an FIRR over 24% by using more of their available storage capacity, obtaining a matching investment grant, or reducing their initial working capital requirements. To be financially viable, the CSRPs will require project support to cover the initial investment costs in the absence of commercial loans at favorable rates. As part of an exit strategy, this increased level of return would also enable them to cover estimated future capital maintenance costs.

Ongoing sustainable land management activities in Ethiopia have resulted in the development of a number of guidelines for the types of interventions included in RLLP. Additional guidelines covering issues not yet dealt with in the existing guidelines are under development.

The following guidelines will be used to ensure that best available technologies and practices are applied in the project:

Guidelines already developed and updated:

1. Climate Smart Agriculture (CSA) field manual
2. Income Generating Activities (IGA) guideline
3. HM&E Guideline
4. Gender Mainstreaming Guideline
5. Watersheds Performance Assessment and exit strategy guideline (PA&ES)
6. SLM Best Practice identification guideline
7. Below Woreda Level Data Collection Guideline
8. ESMF guideline (translated into three local languages - Amharic, Oromiffa and Tigrigna)
9. Value Chain Development in SLMP Context
10. Bamboo Development Training Manual
11. Training Manual for FTC Support (HIV)
12. LAU Implementation Strategy
13. Communication Strategy

14. Stakeholders Participation Strategy

Guidelines under development:

1. CBPWDG - Community Based Participatory Watershed Development Guidelines ESIF
2. Capacity Development Guideline
3. Rehabilitated communal Land, use and management
4. Small Scale Irrigation
5. Bamboo Development Strategy
6. Payment for ecosystem services (PES)

Quality assurance and sustainable delivery of training is ensured by the SLM Best Practices Task Force. The SLM Best Practices Task Force was established in August 2011 with a view to expediting the process of screening, documenting, dissemination and expanding SLM best practices across the country. The Task Force comprises members from government organizations and development partners whose expertise relates to sustainable land management. By 2015, it had already achieved impressive results, identifying 105 SLM technologies and 9 SLM approaches with best-practice potential. The screening criteria to help categorize and prioritize SLM practices are described in Annex A.2.

The SLM Best Practices Task Force has the following responsibilities:

- To provide initial training to national and regional experts who then train woreda experts and development agents;
- To pre-screen the list of existing SLM practices against the established criteria;
- To validate the list of pre-screened existing practices with SLM experts (in a validation workshop);
- To submit screened and approved SLM practices to the SLM TC for approval;
- To oversee the documentation of each screened SLM best practice as per the description form provided.

After the SLM Best Practices Task Force is eventually dissolved, the national-level structure (such as the case team or coordination unit of the Natural Resource Management Directorate) must take over the responsibility of both continuing an effective system of best-practice documentation and building capacity of staff and other stakeholders.

D. E. LOGICAL FRAMEWORK

This section refers to the project/programme's logical framework in accordance with the GCF's [Performance Measurement Frameworks](#) under the [Results Management Framework](#) to which the project/programme contributes as a whole, including in respect of any co-financing.

E.1. Paradigm shift objectives

Please select the appropriated expected result. For cross-cutting proposals, tick both.

- Shift to low-emission sustainable development pathways
- Increased climate resilient sustainable development

E.2. Core indicator targets

Provide specific numerical values for the GCF core indicators to be achieved by the project/programme. Methodologies for the calculations should be provided. This should be consistent with the information provided in section A.

E.2.1. Expected tonnes of carbon dioxide equivalent (t CO ₂ eq) to be reduced or avoided (mitigation and cross-cutting only)	Annual	1,752,000 CO ₂ eq
	Lifetime	43,800,000 t CO ₂ eq
E.2.2. Estimated cost per t CO ₂ eq, defined as total investment cost / expected lifetime emission reductions (mitigation and cross-cutting only)	(a) Total project financing	<u>296,237,602</u> USD
	(b) Requested GCF amount	<u>165,237,592</u> USD
	(c) Expected lifetime emission reductions	<u>43.9 mn</u> t CO ₂ eq
	(d) Estimated cost per t CO₂eq (d = a / c)	<u>6.75</u> Choose an item. / t CO ₂ eq
	(e) Estimated GCF cost per t CO₂eq removed (e = b / c)	<u>3.76</u> Choose an item. / t CO ₂ eq
E.2.3. Expected volume of finance to be leveraged by the proposed project/programme as a result of the Fund's financing, disaggregated by public and private sources (mitigation and cross-cutting only)	(f) Total finance leveraged	<u>131 mn</u> USD
	(g) Public source co-financed	<u>131 mn</u> USD
	(h) Private source finance leveraged	___ Choose an item.
	(i) Total Leverage ratio (i = f / b)	<u>0.79</u>
	(j) Public source co-financing ratio (j = g / b)	<u>0.79</u>
	(k) Private source leverage ratio (k = h / b)	___
E.2.4. Expected total number of direct and indirect beneficiaries, (disaggregated by sex)	Direct	4,168,000 Of which 50% are female
	Indirect	26,244,000 Of which 50% are female
	<i>For a multi-country proposal, indicate the aggregate amount here and provide the data per country in annex 17.</i>	
E.2.5. Number of beneficiaries relative to total population (disaggregated by sex)	Direct	4.0% (Expressed as %) of country(ies)
	Indirect	25.0% (Expressed as %) of country(ies)
	<i>For a multi-country proposal, leave blank and provide the data per country in annex 17.</i>	

E.3. Fund-level impacts²¹

Select the appropriate impact(s) to be reported for the project/programme. Select key result areas and corresponding indicators from GCF RMF and PMFs as appropriate. Note that more than one indicator may be selected per expected impact result. The result areas indicated in this section should match those selected in section A.4 above. Add rows as needed.

Expected Results	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
<i>M4.0 Reduced emissions from land use, reforestation, reduced deforestation, and through sustainable forest management and conservation and enhancement of forest carbon stocks</i>	<i>M4.1 Tonnes of carbon dioxide equivalent (t CO2 eq) reduced or avoided (including increased removals) - forest and land use</i>	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment areas to verify ²² .	0	2,948,153 t CO2 eq	5,621,615 t CO2 eq	Net change in CO2 emissions is calculated using the ExAct carbon balance estimation tool for a lifetime of 25 years is 43,800,000 t CO2 eq. Mid-term target is for 2.5 years while final target if for 5 years.
<i>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions</i>	<i>A1.2 Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)</i>	Covered as part of the beneficiary survey conducted by independent 3rd party.	0	Total: 238,560 Of which female: 130,760	Total: 596,400 Of which female: 326,900	Measured as the number of land users adopting SLM practices. Target is based on 40% of adults in project area adopting. Women are targeted at a higher rate of 45%.
<i>Choose appropriate expected results</i>	<i>Choose appropriate indicators</i>					

E.4. Fund-level outcomes

Select the appropriate outcome(s) to be reported for the project/programme. Select key expected outcomes and corresponding indicators from GCF RMF and PMFs as appropriate. Note that more than one indicator may be selected per expected outcome. Add rows as needed.

Expected Outcomes	Indicator		Baseline	Target	Assumptions
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²¹ Excludes impacts of 18 watersheds supported by Expected MDTF Government of Canada, which will be determined in later stages of funding appraisal

²² Specific company/firm has not been selected for 3rd party verification. A competitive request for proposals would be issued to select a suitable firm. If using EX-ACT as proposed here, the firm would be responsible for verifying the figures used (conduct a representative sample and collect the necessary data).

		Means of Verification (MoV)		Mid-term)	Final	
M9.0 Improved management of land or forest areas contributing to emissions reductions	<i>M9.1 Hectares of land or forests under improved and effective management that contributes to CO2 emission reductions</i>	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment areas to verify.	406,000 ha	1,003,200 ha	1,899,000 ha	The entire area of the (micro) watershed is considered treated when the multi-year development plan is complete.
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks	<i>A7.1 Use by vulnerable households, communities, businesses and public-sector services of Fund-supported tools instruments, strategies and activities to respond to climate change and variability</i>	Covered as part of the beneficiary survey conducted by independent 3rd party and project reporting.	0	Number of individuals: 180,240 Of which women: 100,120	Number of individuals: 450,600 Of which women: 250,300	Measures the number of individuals participating in income generating activities supported by the project. Target reflects adoption by 30% of adults. Women are targeted at a higher rate of 35%. This indicator will draw on a number of questions included as part of the beneficiary survey. A score card approach will be developed focusing on the adoption of tools and strategies including participation in income generating activities.

<p>A8.0 Strengthened awareness of climate threats and risk-reduction processes</p>	<p><i>A8.1 Number of males and females made aware of climate threats and related appropriate responses</i></p>	<p>Covered as part of the beneficiary survey conducted by independent 3rd party.</p>	<p>n/a</p>	<p>Number of individuals: 480,100 Of which women: 264,000</p>	<p>Number of individuals: 1,200,400 Of which women: 660,200</p>	<p>Awareness raising activities reach 80% of the land users in the area targeted (women targeted at a higher rate). This indicator will draw on a number of questions included as part of the beneficiary survey. A score card approach will be developed to assess awareness to climate threats and related issues.</p>
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E.5. Project/programme performance indicators²³

The performance indicators for progress reporting during implementation should seek to measure pre-existing conditions, progress and results at the most relevant level for ease of GCF monitoring and AE reporting. Add rows as needed.

Expected Results	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
Land Restoration and Watershed Management	Land area under sustainable landscape management practices	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment areas to verify.	406,000 ha	1,003,200 ha	1,899,000 ha	The entire area of the (micro) watershed is considered treated when the multi-year development plan is complete.
Land Restoration and Watershed Management	Land area restored or reforested/afforested	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment areas to verify.	113,000 ha	141,400 ha	184,000 ha	It is calculated as a subset of the total land area with sustainable land management practices (indicator 1) that is treated with measures to return the land to its natural, semi-natural, or forested state. It includes habitat restoration and other conservation measures to restore biodiversity, establishment of forest on land with and without recent tree cover, gully area stabilization, degraded area closures, degraded area woodlot establishment,

²³ Excludes impacts of 18 watersheds supported by Expected MDTF Government of Canada, which will be determined in later stages of funding appraisal

						area covered by bamboo plantation on degraded area. This indicator does not include areas, which have been cleared during or in anticipation of the project. Area re/afforested refers to “establishment of forest through planting, and/or deliberate seeding on land that, until then, was not classified as forest” or “re-establishment of forest through planting and/or deliberate seeding on land classified as forest” expressed in hectare (ha). This can include also assisted natural regeneration, coppicing or other locally appropriate methods.
Land Restoration and Watershed Management	Land area with productivity enhancing practices applied	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment	6,000 ha	76,240 ha	181,600 ha	Covers land on which Climate Smart Agriculture (CSA) practices have been adopted under the project.

		areas to verify.				
Land Restoration and Watershed Management	Project area showing an increase in Normalized Difference Vegetation Index (NDVI) correcting for climate effects	3rd party analysis	0	20%	50%	The Normalized Difference Vegetation Index (NDVI) uses the visible and near-infrared bands of the electromagnetic spectrum to analyze remote sensing measurements to determine the extent to which a target contains live green vegetation
Land Restoration and Watershed Management	Project area showing an increase in the Land Surface Water Index (LSWI) correcting for climate effects	3rd party analysis	0	20%	50%	The Land Surface Water Index (LSWI) uses the shortwave infrared and near-infrared bands of the electromagnetic spectrum to analyze remote sensing measurements to determine the amount of water in vegetation and soil.
Adoption of climate resilient diversification activities	Land users adopting sustainable land management practices as a result of the project, disaggregated by gender	Based on information collected as part of stakeholder / beneficiary survey and project reporting.	0	238,560 Of which women: 130,760 Including female headed households: 22,280	596,400 Of which women: 326,900 Including female headed households: 55,700	

<p>Adoption of climate resilient diversification activities</p>	<p>Households adopting diversified livelihood activities supported by the project, disaggregated by gender of head of household</p>	<p>Based on information collected as part of stakeholder / beneficiary survey and project reporting.</p>	<p>0</p>	<p>99,600 Of which female headed: 17,400</p>	<p>249,000 Of which female headed: 43,500</p>	<p>The target value reflects a household adoption rate of 30 percent. Female-headed households (approx. 15% of all households) are targeted at a higher rate of 35 percent.</p>
<p>Adoption of climate resilient diversification activities</p>	<p>People participating in income-generating activities supported by the project disaggregated by gender</p>	<p>Based on information collected as part of stakeholder / beneficiary survey and project reporting.</p>	<p>0</p>	<p>180,240 Of which women: 100,120</p>	<p>450,600 Of which women: 250,300</p>	
<p>Adoption of climate resilient diversification activities</p>	<p>Functional Common-Interest Groups established or supported</p>	<p>Based on information collected as part of stakeholder / beneficiary survey and project reporting.</p>	<p>0</p>	<p>1,259</p>	<p>3,148</p>	
<p>Strengthening resilience through Institutions and Information</p>	<p>Watershed User Associations established and strengthened</p>	<p>Project reporting.</p>	<p>0</p>	<p>75</p>	<p>188</p>	<p>Watershed Management and Use Plan that has been approved locally by the community user group, and either the Woreda or regional SLMP coordination platform. Micro watershed land management and use plans, established by farmers user associations, detail management and use for treated areas,</p>

						outline agreements with the Kebele Watershed Team to conserve and utilize the resources, and outlines bylaws for managing and implementing conservation activities and the distribution/sharing of benefits. The development of these plans are a critical for ensuring land resources are used and managed in a way that enhances absorptive and adaptive capacity to climate change, promoting resilience broadly at the landscape level.
Strengthening resilience through Institutions and Information	Watershed User Associations with Watershed Management and Use Plan	Project reporting.	0	59	148	
Strengthening resilience through Institutions and Information	Woreda information centers being effectively used by project stakeholders	Functionality and effectiveness tracked as part of the stakeholder/beneficiary survey and project reporting.	0	66	166	The functionality and effectiveness of these information centers is expected to be tracked as part of the stakeholder/beneficiary survey using a scorecard

						approach to assess the quality of services.
Improved tenure security to Incentivize long-term investments in SLM	Parcels of land surveyed and mapped for certification	Processed centrally using information extracted from NRLAIS database.	2,034,000	3,296,400	5,190,000	This includes the number of individual and communal land parcels surveyed (using one or a combination of GPS, total stations, ortho-photo, or satellite imagery), mapped and registered with the woreda land administration office as part of second-level land certification activities. Interventions that increase tenure security and define the associated rights provides holders with an incentive to take a long-term term perspective when managing the land resources and undertaking investments, increasing productivity and enhancing resilience through adaptive and transformative means.
Improved tenure security to Incentivize long-term investments in SLM	Households who have received second level land holding certificates,	Processed centrally using information extracted	484,000 Of which women individually or	743,200 Of which women individual	1,132,000 Of which women	Second-level certification differs from the earlier first-level certification

	disaggregated by gender	from NRLAIS database.	jointly with a man: 328,000	lly or jointly with a man: 521,800	individually or jointly with a man: 812,500	program by providing additional spatial (i.e. location and boundary) data in the form of a parcel map. Interventions that increase tenure security and define the associated rights provides holders with an incentive to take a long-term perspective when managing the land resources and undertaking investments, increasing productivity and enhancing resilience through adaptive and transformative means.
Improved tenure security to Incentivize long-term investments in SLM	Second level land certificates issued as a result of the project	Processed centrally using information extracted from NRLAIS database.	0	1,060,800	2,652,000	
Improved tenure security to Incentivize long-term investments in SLM	Landless youth that received certificates in exchange for the work, disaggregated by gender	Project reporting.	14,000 Of which women: 4,200	22,260 Of which women: 6,748	34,650 Of which women: 10,570	

E.6. Activities

All project activities should be listed here with a description and sub-activities. Significant deliverables should be reflected in the implementation timetable. Add rows as needed.

Activity	Description	Sub-activities	Deliverables ²⁴
1.1.1: Sustainable Land Management	Promotes the restoration of degraded landscapes in selected watersheds and help build resilient livelihoods.	<ul style="list-style-type: none"> - Soil and water conservation measures -Gully rehabilitation -Area closure management and use -Enrichment of degraded pasture and rangeland 	<ul style="list-style-type: none"> Establish functional platform Establish Micro watershed Team Plan preparation by CWT and KWT, approval by General assembly Formulation and compilation of a Multi-Year Plan by Woreda Technical Committee

²⁴ Deliverables are indicative

			Construction of Soil and Water Conservation works
1.1.2 Aforestaion- Reforestation+Green Corrdior management at Zonal Level	Promotes the restoration of degraded landscapes in selected watersheds	-Establishment of green corridors -Establishment of plantation blocks	Site preparation for A/R or biological measures Approval of consolidated plan by Woreda Steering Committee & procurement of necessary inputs such as tree seed, tools and equipment Afforestation/reforestation & procurement of necessary inputs such as tree seed, tools and equipment Nursery establishment/seedling production
1.2.1: On-farm CSA 1.2.2 Training and awareness raising on CSA	Promotes resilient agriculture	-Farm water and soil moisture management -Integrated soil fertility and soil health management -Crop development and management -Environmentally-friendly livestock production through forage development and management	Organizing Common Interest Groups (20-30 farmers) Develop robust CSA plan and prepare to implement CSA practices Coach and provide support for the CIGs during implementation of CSA practices & procure necessary inputs, tools and equipment Nursery establishment/seedling production Land preparation for CSA implementation coach and provide support for the CIGs during implementation of CSA practices & procure necessary inputs such as seed Evaluation

<p>1.3.1 IGAs and Connection to Value Chain</p>	<p>Support resilient livelihoods.</p>	<p>-Processing Equipment and Training -Community Storage Receipts Programs</p>	<p>Identify and Establish CIGs support for development of business plans for different commodities</p> <p>Avail equipment and other inputs including construction and establishment of CSRPs</p> <p>Implement business plan; provide CRSP service to members</p> <p>Marketing including provision of CSRPs service</p>
<p>1.3.2 Energy Efficiency Cookstoves 1.3.3 Investment Planning for Economic Development</p>	<p>Strengthen supply chain for RE/EE products</p>	<ul style="list-style-type: none"> - Rural RE/EE Enterprise Establishment - Establish Fuel Saving Cookstove producer enterprises 	<p>Contract signing with cooperatives or/and cooperative unions and members</p> <p>Partner with other value chain actors</p>
<p>2.1.1 Kebele and Woreda Capacity Building 2.1.2 Information Modernization and Data Base Management/Policy Development 2.1.3 Technical training on cadaster and land registration 2.1.4 TA (Cluster Approach at Zonal level) 2.1.5 Policy Development 2.1.6 Capacity building at Regional level 2.1.7 TA at National level</p>	<p>Build capacity for the promotion and management of SLWM practices, and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the project area. Support information modernization to coordinate data collection and information sharing at all levels and under all components of the project so that this information is well organized, properly documented and accessible</p>	<p>Technical Assistance, operating of capacity building activities and Monitoring on local level</p>	<p>Recruitment of training for woreda and kebele level platforms</p> <p>Provide awareness creation to farmers</p> <p>Support different CIGs to develop and adopt bylaws; conduct training needs assessment, & Provide tailor-made TOTs to at Federal, Regional, woreda and community level</p> <p>Provide additional TOTs technical advisors for specific outputs linked to CIGs in sub-component 1.1, 1.2 & 1.3</p> <p>Provide technical support to on-the-ground operations/implementation</p> <p>Exposure visit of technical advisors for specific outputs linked to CIGs in</p>

			<p>sub-component 1.1, 1.2 & 1.3</p> <p>Provide refresher TOT technical advisors for specific outputs linked to CIGs in sub-component 1.1, 1.2 & 1.3</p>
<p>2.2.1 Impact Evaluation (IE)</p> <p>2.2.2 Knowledge Management and Communication</p>		Monitoring and Evaluation	<p>Initiate impact evaluation research/study</p> <p>Identify materials for woreda information center establishment</p> <p>Construction of woreda information center</p> <p>Develop communication material</p> <p>Consultation on communication material completed</p> <p>Impact evaluations; dissemination of knowledge products</p> <p>Knowledge sharing/networking events</p> <p>Support associations to develop Watershed Management and Use plans</p>
3.1.1-Second Level Landholding Certification (SLLC)	<p>Strengthens the rural land administration system that secures tenure rights, optimizes land use, and empowers land-users to sustainably invest in productive landscapes. Improves security of tenure to smallholder farmers in RLLP watersheds through SLLC as an incentive to increase the adoption of SLM technologies and practices.</p>	Participatory Local Land Use Planning and Development Control	<p>orthophoto base map preparation</p> <p>consultations on land rights using orthophoto</p> <p>base maps</p> <p>scanning and geo-referencing of adjudication maps, vectorization of parcel boundaries and</p> <p>keying-in of attribute information</p> <p>public display for validating parcels (shape and size) and landholders' Information</p>

			<p>parcel map and Landholding Certificate preparation, production, authentication and issuance</p> <p>support development, testing, and roll-out of National Rural Land Administration Information System</p>
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E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)

Besides the arrangements (e.g. annual performance reports) laid out in AMA, please give a summary of the project/programme specific arrangements for monitoring and evaluation. Please provide the types of interim and final evaluations. Describe Accredited Entity (AE) project reporting relationships, including to the NDA/Focal Point and between AE and Executing Entity (EE) as relevant, identifying reporting obligations from the EE to the AE. This should relate to the frequency of reporting on project indicators, implementation challenges and financial status.

The institutional arrangements for M&E will encompass four levels that are well aligned with the RLLP institutional and implementation arrangement.

Federal Level. The federal level sets the expectations for what is to be accomplished in M&E and oversees that capacity, ensuring skills and tools are available for staff in the regions and at field level. Federal level M&E staff ensure that data collected meet quality standards, review aggregated field data to analyze and pull out program level results and trends and identify best practices important for scale up. The federal level M&E staff prepare reports to the government and donors and provide feedback to stakeholders. The Federal M&E team will include: a Senior M&E/Evaluator, a Senior Data Analyst/ MIS Specialist, a Senior Communication/Knowledge Management Specialist, and a Documentation/Planning and Reporting Specialist. The team will also provide: technical assistance to develop a new Results-Based M&E (RBME) plan, manual and indicator protocols; TA support in M&E Training (various topics including advanced excel, data analysis and reporting, and evaluation practice); a functional web-based data management system (in English and local languages), which will help to aggregate mobile application data and collect geo spatial data.

Regional Level. The regional level leads the rollout of the M&E system to the field; builds skills and capacity in regional and field level stakeholders; ensures that data collected meet quality standards; aggregates field data to analyze and pull out regional levels results and trends and identify best practices important for scale up; prepares reports to the government and donors and provides feedback to stakeholders. The regional team will include a M&E Specialist and a Communication/Knowledge Manager/Spatial Analyst. The team will also support: special studies in the region, involve regional officers in Joint Monitoring Missions (JMM), improved data management system in English and local languages, and incentives for good regional performance, TA for training using TOT approach.

Zonal level. RLLP will strengthen the functionality of the zonal government structures/offices, mainly the Agriculture and Natural Resources Office. The project will provide a budget allocation at the zonal level to provide staff to support regional technical capacity and mentoring, conduct data quality assessments, provide clear guidance on which data to collect and how, and provide ongoing M&E training and capacity building in M&E.

Woreda Level. This level identifies watershed needs and completes annual workplans and budgets, making sure that activities get rolled out on time. The woreda team includes the NRM process owner and technical expert, who receive data from the DAs and aggregate results to determine whether activity implementation is occurring at the right scale. They prepare reports based on results achieved. Woreda officers are supported by regional and federal M&E staff (particularly in completing reports).

Kebele Level. Development Agents (DAs) play a significant role at kebele level. Clear guidance is needed for DAs on what and how to collect data (strengthen data collection methods), to strengthen ongoing M&E training and capacity building, and to provide educational opportunities/exchange visits to DAs assigned to follow-up project activities to help motivate them and reduce frequent turnover.

Community Level. There are several levels of community members who are involved in M&E, but the Community Facilitator (CF) is the main project interlocuter. Foremen/Forewomen, nursery operators and self-help group leaders collect data and pass it to the CF, who also collects additional household level data. The CF aggregates data and passes it to the Community Watershed Team (CWT). The CF is a member of the CWT and serves as a secretary. The CWT reviews and approve the data and informs the CF to send it to the concerned DA in the respective kebele. The DA presents the data to the Kebele Watershed Team (KWT) for review and approval, and finally sends the approved data to the woreda office.

The methodology for monitoring key outcomes of the project is as follows:

Land area under sustainable landscape management practices: this indicator counts as treated the total area of a micro watershed once all the prescribed soil and water conservation measures identified in the relevant Multi-Year Development Plan (MYDP) have been fully implemented.

Net GHG greenhouse emissions: estimated using the ExAct carbon balance estimation tool, which calculates carbon accumulation and emissions based on project biophysical output data. The economic lifetime of the project is assumed to be 25 years (5 implementation and 20 post-project years, the same time horizon used in the Economic and Financial Analysis).

Households adopting diversified livelihood activities supported by the project: this is measured as the percent of households engaging in approved, non-traditional activities, relative to the total number of households in the project area. The definition of what constitutes the set of potential non-traditional activities will be set during implementation and applied to activities that are expected to reduce households' vulnerability to future shocks associated with extreme weather events and climate change by diversifying livelihood activities and increasing the resilience of natural (i.e. land) resources.

A beneficiary survey conducted by an independent 3rd party will be conducted in the first year, at mid-term and at completion of the project. Administered to households as well as at the woreda and kebele administrative levels, the beneficiary survey – a tool normally used to help improve the quality of development operations - will be enhanced and expanded to support monitoring and verification of key indicators including adoption of diversified livelihood activities and SLM practices as well as awareness of climate threats and appropriate responses.

An **M&E operational manual** will be developed that defines the function of the program level M&E system and its nested RLLP level M&E systems. The manual will embed the tracking of the main GCF indicators related to avoided emissions and number of beneficiaries of the project.

See Annex D.3 RLLP Gender Approach and Annex D.4 RLLP Gender Action Plan for further information on statements in terms of number of women involved in the activities. Baseline data for Gender are not available, however, the RF provides an alternative way to track progress (e.g., starting from baseline of N/A or "0,") the indicator measures incremental changes/values throughout project implementation to demonstrate progress.

E. RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures (max. 3 pages)

Please describe financial, technical, operational, macroeconomic/political, money laundering/terrorist financing (ML/TF), sanctions, prohibited practices, and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures. Insert additional rows if necessary.

For probability: High has significant probability, Medium has moderate probability, Low has negligible probability

For impact: High has significant impact, Medium has moderate impact, Low has negligible impact

Prohibited practices include abuse, conflict of interest, corruption, retaliation against whistleblowers or witnesses, as well as fraudulent, coercive, collusive, and obstructive practices

Key Financial and Operational Risks

In the identification of key risks and their rating, the size of the project was taken into account. While several risks to achievement of project objectives have been identified, the experience gained during implementation of SLMP-2, as well as the significant resources allocated in the past 5 years for coordination and capacity building efforts are expected to be instrumental in implementing measures to address the key financial and operational risks identified below:

- **Political and governance risk:** Although the state of emergency ended in June 2018, sporadic civil unrest in project areas continues to be a risk to implementation. Implementation of SLM activities continues in all highland regions, however, there remains a risk that preparation and/or implementation of the proposed operation could slow or be suspended due to a potential re-emergence of civil disturbances. Institutional capacity for implementation and sustainability risk: While considerable capacity for SLM interventions exists in current SLM project areas, limited institutional and human capacity in proposed new project areas contribute to this risk, which is mitigated through a project design including significant training and coordination at the national level.
- **Fiduciary risk:** Issues related to procurement and financial management have been observed in previous projects. However, implementation of the WB-supported SLMP2 has developed significant capacity for procurement and financial management, that are currently rated satisfactory and moderately satisfactory, respectively.
- **Stakeholder risk:** This includes (i) weak multi-sectoral coordination, and (ii) risk of potential elite capture of project benefits at the local level and exclusion of some stakeholders, particularly underserved members of targeted communities. These are addressed through intersectoral coordination mechanisms at the Federal, Regional and woreda levels, strong communication measures, and a grievance redress mechanism.

An Implementation Support Plan has been developed that describes how the World Bank will support the implementation of the risk mitigation measures identified in the risk matrix.

Selected Risk Factor 1

Category	Probability	Impact
Governance	High	Low
Description		

Please describe the risk to the best of your knowledge at this point in time.

Political and governance risk. The GoE declared a state of emergency from October 2016 to August 2017, which was re-instated in February 2018 but ended in June 2018. Although the situation has stabilized since the nomination of a new Prime Minister in April 2018, there remains a risk that implementation of the proposed operation could be negatively impacted should civil disturbances recur.

Mitigation Measure(s)

While the extent to which project-specific measures can mitigate this risk is limited, the RLLP will adopt the approach of other Bank-financed operations, including: (i) careful supervision mission planning that emphasizes security; (ii) strategic communication and outreach; (iii) sound safeguards monitoring building on SLMP-II experience and capacity; and (iv) enhanced transparency in project-supported activities. RLLP will also contribute to alleviating some of the drivers of civil unrest, including natural resource degradation and rural landlessness and joblessness.

Selected Risk Factor 2

Category	Probability	Impact
Technical and operational	Medium	Medium

Description

Please describe the risk to the best of your knowledge at this point in time.

Institutional capacity for implementation and sustainability risk due to a number of issues including: (i) the restructuring of the GIZ program in support of SLM; (ii) the limited human resources available at the field level; (iii) the challenge of implementing a reliable and cost-effective M&E system; and (v) weak coordination among institutions and programs, including between the NRM Directorate of MoA and the PCU.

Mitigation Measure(s)

Please describe how the identified risk will be mitigated or managed. Do the mitigation measures lower the probability of risk occurring? If so, to what level?

This set of risks will be mitigated through: (i) continual training on project management and monitoring at all levels, in coordination with the GIZ SURED project; (ii) project implementation arrangements acceptable to the World Bank and agreed by the MoA and regional governments clarifying accountability and targets at all levels; and (iii) coordination between development partners and Technical Committee on SLM.

Selected Risk Factor 3

Category	Probability	Impact
Other	Medium	Low

Description

Please describe the risk to the best of your knowledge at this point in time.

Fiduciary risk due to persistent issues related to procurement and financial management. Although SLMP-II has only had “unqualified” audits to date, which is excellent, there has been high turnover of project fiduciary staff.

Mitigation Measure(s)

Please describe how the identified risk will be mitigated or managed. Do the mitigation measures lower the probability of risk occurring? If so, to what level?

Mitigation of this risk centers on MoF’s recent increase and harmonization of salaries for project procurement and financial management staff.



G.GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

Provide the environmental and social risk category assigned to the proposal as a result of screening and the rationale for assigning such category. Present also the environmental and social assessment and management instruments developed for the proposal (for example, ESIA, ESMP, ESMF, ESMS, environmental and social audits, etc.). Provide a summary of the main outcomes of these instruments. Present the key environmental and social risks and impacts and the measures on how the project/programme will avoid, minimize and mitigate negative impacts at each stage (e.g. preparation, implementation and operation), in accordance with GCF's ESS standards. If the proposed project or programme involves investments through financial intermediations, describe the due diligence and management plans by the Executing Entities (EEs) and the oversight and supervision arrangements. Describe the capacity of the EEs to implement the ESMP and ESMF and arrangements for compliance monitoring, supervision and reporting. Include a description of the project/programme-level grievance redress mechanism, a summary of the extent of multi-stakeholder consultations undertaken for the project/programme, the plan of the Accredited Entity (AE) and EEs to continue to engage the stakeholders throughout project implementation, and the manner and timing of disclosure of the applicable safeguards reports following the requirements of the GCF [Information Disclosure Policy](#) and [Environmental and Social Policy](#).

Describe any potential impacts on indigenous peoples and the measures to address these impacts including the development of an Indigenous Peoples Plan and the process for meaningful consultation leading to free, prior and informed consent, pursuant to the GCF [Indigenous Peoples Policy](#).

Attach the appropriate assessment and management instruments or other applicable studies, depending on the environmental and social risk category as annex 6.

The RLLP has been assigned as an EA category of B, for the potential social and environmental impacts on humans and sensitive areas (wetlands, forests, natural habitats, etc...) are less adverse, site specific, few if any of them are irreversible. The ESMF was required to comply with not only the relevant national policy and legal frameworks but also with the applicable environmental and social safeguard policies of the World Bank. Based on the framework of SLMP-II, and considering its principal features and aspects, the RLLP social assessment was carried out and updated with the following major objectives in focus:

- Assess key socio-economic factors that require consideration;
- Identify vulnerable and historically underserved groups that may be excluded from the project and be adversely affected as a result, and the necessary impact mitigating measures.
- Assess any potential adverse social impacts of RLLP, and determine whether the project is likely to trigger the World Bank social safeguards policies;
- Recommend in the early stage of project preparation the appropriate measures towards addressing World Bank requirements on social safeguards triggered by the project (OP/BP 4.10 and OP/BP 4.12).

In line with the Ethiopian Government's decentralization policy, organizational structure and implementation arrangement and with due consideration to the implementation of project activities at the grassroots level, RLLP is designed to operate at federal, regional, zonal, *woreda kebele* levels as well as the beneficiary community level. The monitoring and evaluation (M&E) and reporting system of the project is in-built in the implementation arrangement to be executed at all levels of the organizational structure. The institutional arrangement includes RLLP related conflict/grievance redress mechanism/GRM, consisting of community watershed teams, indigenous local institutions, kebele watershed teams, and people from woreda agriculture and natural resources offices.

In RLLP the environmental and social management process starts with the sub-project planning process during the identification of sub-projects by local communities based on their needs and priorities through a participatory

watershed planning process guided by the Community Based Participatory Watershed Development Guidelines (CBPWDG), technical support from Development Agents (DAs) and Woreda experts. The DA will screen/design/plan subprojects applying a simple checklist as a format for fast track eligibility checking of identified sub-projects. This is done in consultation with the communities and kebele development committee at the early stages of subproject selection and prioritization phase. Once the checklist is approved at the kebele level, the project design/plan will then be sent to the Woreda Agriculture Office and/or the Woreda Technical Committee. The Technical Committee, depending on the scale, nature and type of subproject, will further screen the sub-projects. The Woreda Focal Person (WFP), woreda implementing office, and regional project support unit will ensure and document such procedures are properly followed. And a team led by experts from the Woreda Environmental regulatory body will review the screened subproject and the mitigation measures planned. If any design modifications are required, the environmental regulatory body passes recommendations and give clearance and/or certificate of subprojects. The Woreda council will then approve plans based on the recommendations of the team. After approval, the plan document is referred to the regional Bureau of Agriculture and Natural Resources (BoANR) with all the accompanying environmental and social screening documents/files.

Monitoring of environmental and social safeguard performance of the project will be conducted regularly. Performance monitoring will ensure that safeguards instruments are prepared and approved to the required standard and the proper implementation of ESMP, SA, RPF and GMGs. While the implementation of ESMP is done by the community at kebele level with the responsibility of the woreda implementing offices, performance monitoring will be done by the RLLP-PCU environmental and social safeguard specialists at national and regional level and other stakeholders. The results of the monitoring involve the monitoring compliance and effectiveness of the safeguards instruments, and the overall environmental, socio-economic and climate-related assessment of the Program's interventions. The monitoring will be done on an annual and quarter basis by the RPCU Specialists with support from the NPCU Environmental and Social Safeguards Specialists, M&E Specialist and WB's Environmental Safeguards, Social Safeguards and Social Development team.

Quarterly and annual reviews workshops will be held at regional and national level with a view to enhance the positive performances of ESMF, SA, RPF and the Gender Mainstreaming Guideline identifying bottlenecks and gaps in implementing the ESMF and proposing solutions in addressing the gaps. Environmental and social auditing will be done by the RLLP concerned specialists (both federal and regional) and field verification by independent consultants to be recruited. This auditing will be conducted twice in the program life, i.e. during MTR and completion period of the project.

The RLLP triggered OP 4.10 Indigenous People as it was determined that the physical and sociocultural characteristics of the proposed intervention areas and the people living in these sites meet the policy requirements. The decision to trigger the policy is also based on the Ethiopian Constitution, which recognizes the presence of different socio-cultural groups, including historically disadvantaged or

underserved peoples, as well as their rights to their identity, culture, language, customary livelihoods,

socio-economic equity, etc. The social safeguard issues relating to the policy are assessed through an SA and extensive consultation with potential project beneficiaries, including those identified as vulnerable

groups and underserved peoples.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

Provide a summary of the gender assessment and project/programme-level gender action plan that is aligned with the objectives of GCF's [Gender Policy](#). Confirm a gender assessment and action plan exists describing the process used to develop both documents. Provide information on the key findings (who is vulnerable and why) and key recommendations (how to address the vulnerability identified) of the gender assessment. Indicate if stakeholder

consultations have taken place and describe the key inputs integrated into the action plan, including: how addressing the vulnerability will ensure equal participation and benefits from funds investment; key gender-related results to be expected from the project/programme with targets; implementation arrangements that the AE has put in place to ensure activities are implemented and expected outcomes will be achieved, monitored and evaluated.

Provide the full gender assessment and project-level gender action plan as annex 8.

Gender Considerations

Land degradation has important gender dimensions. For example, UNDP finds that land degradation increases the pressures on women differentially from men in their effort to meet practical needs of supporting their families under increasingly difficult environmental, physical, social, and economic conditions. Women are also challenged by the consequences of land and environmental degradation induced fuel-wood and water shortage, making their work even more challenging.

Analysis also indicated the constraints to women's access to equitable roles in decision-making concerning land resources and their engagement in sustainable environmental and land management such as: (a) insecure land use rights, (b) the low value assigned to labor and subsistence farming, (c) lack of access to credit and (d) lack of opportunities to gain and share technical knowledge. Further, the United Nations Convention to Combat Desertification (UNCCD) illustrated that, often 'women's inequitable access to secure property rights forces them onto marginal, fragile, highly degradable lands.

The Sustainable Development Goals (SDGs) emphasize gender equality and empowering all women and girls as not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world. This is part of each of the SDGs as well as being reflected in the stand-alone goal (Goal 5), to achieve gender equality. Providing women and girls with equal access to the natural resource base and equal representation in decision-making processes will boost the returns of RLLP investment and benefit broader society. The design of RLLP will therefore create opportunities for women's equal rights to economic resources, as well as access to ownership and control over land and other forms of the natural capital, in accordance with GoE laws.

Gender Dimensions of Land Degradation in Ethiopia

Understanding gender aspects of natural resources management is an entry point for reversing environmental and land degradation in RLLP landscapes. Women manage natural resources daily in their roles as farmers and household providers; typically, they are responsible for growing homestead crops, collecting fuel wood and water. Climate change disproportionately affects rural women, as they are most reliant on natural resources for their livelihoods but have fewer resources (natural, physical and social capital) to adapt to climate change and cope with climate change impacts such as droughts, landslides, and food shortages. Climate vulnerabilities affect not only women's health, productivity, and development, but also contribute to the intensification of existing gender gaps, including gender-based violence. The Ethiopia Demographic and Health Survey (2016) shows that 33% of women ages 15-49 have experience physical or sexual violence; domestic violence is the most common form of violence towards women.

Gender gaps are amplified when adaptation measures fail to consider specific needs and preferences of women. Further, local cultural norms and practices have a major impact on access to natural resources and the level of engagement of women in the agriculture sector. Inequitable access and unequal playing fields have led women farmers to produce on average 23% less than their male counterparts in Ethiopia. For instance, women in rural Ethiopia have lower access to inputs such as training and technology that help increase resilience by improving agricultural knowledge. However, notwithstanding their reliance on natural resources, women have less access and control than men, despite their constitutional rights to equal land ownership, administration and use. Landless rural women often depend on common property resources for fuel wood, fodder and food. Lack of land and property ownership and control limits women's voice and agency, because assets are an important factor in bargaining power

and household decision-making, access to finance, and overall economic independence. Protection of the natural resource base is the centerpiece of the overall RLLP investment so that rural women and men will be empowered to participate in decisions that affect their needs and vulnerabilities, and in turn lend a hand in effective interventions for the conservation and sustainable use of these resources.

RLLP Gender Approach

The operational steps encompass resilience building through soil and water conservation works, enhanced tenure security, homestead and farmland development, livelihood improvements (access to improved, targeted livelihoods support in rehabilitated watersheds including creating jobs, organized cooperatives, women or girls only), climate smart agriculture, and affordable and innovative technology (household energy). For RLLP, facilitating the acquisition of improved cookstoves, will free up women's time, which could potentially enable them to engage in climate resilient livelihood diversification. Activities could include promotion of improved cookstoves, cultivating fruit trees, bamboo handicrafts, beekeeping, etc.

The RLLP components will take into account the different roles of men and women in advancing resilient livelihoods at multiple scales, and respond to the unique interests, priorities and needs of women and men in order to close gender gaps. Women and men at all levels of the RLLP decision-making should be involved as key actors in the assessment, design, monitoring, and evaluation of interventions starting from the community watershed committee. Both women and men need to benefit from a gender approach that reinforces their joint participation and equitable benefit in RLLP through participatory, inclusive approaches, including actions such as designing, implementing, and strengthening guidelines incorporating gender perspectives in the project. The RLLP program is well aligned with the WBG's Gender Strategy 2016-2023 – seeks to close gender gaps in human endowments, more and better jobs, and ownership and control of assets; and promote women's voice and agency, which constitute the four pillars of strategy.

An impact evaluation of gender innovations under RLLP is currently being carried out. The gender assessment of SLMP-II experiences helped to determine constraints and experiences that limited female and male project beneficiaries and whether women's abilities to realize equitable benefits from the natural and environmental resources were effectively improved by the project's activities/innovations.

A Gender Approach and Action Plan is included in Annex D.3. and Annex D.4., to address the gender aspects of land degradation and natural resource use. This will be further informed through an assessment of the SLMP-II gender mainstreaming strategy, which is currently underway.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

Describe the project/programme's financial management including the financial monitoring systems, financial accounting, auditing, and disbursement structure and methods. Refer to section B.4 on implementation arrangements as necessary.

Articulate any procurement issues that may require attention, e.g. procurement implementation arrangements and the role of the AE under the respective proposal, articulation of procurement risk assessment undertaken and how that will be managed by the AE or the implementing agency. Provide a detailed procurement plan as annex 10.

Financial Management

The financial management (FM) arrangements for the proposed project- RLLP will be based on the existing FM systems and structures established under SLMP-II. The FM arrangements for RLLP and SLMP II are in line with the World Bank (AE) policies and procedures. This includes the accounting capacity maintained by the implementing entity (Ministry of Agriculture and Natural Resources) at the Federal, Regional and Woreda (District) levels. SLMP II was audited in accordance with the International Standards on Auditing. The audit for the financial year ended July 7,

2017 expressed unqualified (clean) opinion but highlighted some internal control weaknesses in the management letter. This includes delays in funds flow between federal level and regional and woreda levels, weak control of advances to Woredas, weak accounting capacity in some Woredas and weak control of fixed assets in some Woredas. The project addressed these weaknesses progressively in line with an FM Action Plan agreed with the World Bank (AE). For RLLP, the Federal PCU based at the MoA will retain the overall fiduciary responsibility for the implementation of the project supported by other federal level PCU's, Regional Support Units in the six regional Bureaus of Agriculture (BoA's) and the administrations of all the implementing woredas. Project annual budgets will be prepared based on consolidated annual work plans initiated at the woreda and regional levels and compiled at the federal level. Disbursements are based on the approved budget and accounted for using quarterly interim financial reports submitted to the World Bank (AE) within 45 days after the end of each quarter. An external audit of the project will be conducted annually by the Supreme Audit Institution or an accredited private audit firm. The audit will be conducted in accordance with Terms of Reference prepared by the EE and the objective of the audit will be to ascertain whether project funds have been used for the intended purpose. The AE reviews and provides clearance for the recruitment of the auditor including clearance of the ToR. In each of the federal level-implementing entities, the six regions and all woredas will maintain segregated local currency bank accounts where project funds will be deposited and payments made. Proceeds of the IDA Credit and MDTF will initially flow into the DA before further disbursement into each of the local currency project accounts based on the approved annual work plan and budget. In addition to receiving advances through the DA, the project may use other disbursement methods such as reimbursements, direct payment and special commitment. To enhance the level of disbursements under the new project, the team will ensure prompt submission of quarterly IFRs immediately after the end of each quarter. Financial reporting for the proposed project will follow international financial reporting and auditing standards. The FM risk rating for the implementation of the RLLP is considered Substantial. An FM assessment of the implementing entities including sampled woredas has been completed and used to update the FM arrangements for the RLLP (see Annex D.5.). Procurement under the project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers - 'Procurement in Investment Project Financing, Goods, Works, Non-Consulting, and Consulting Services', dated July 2016, revised November 2017 and 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', revised as of July 1, 2016, and the provisions stipulated in the Legal Agreement. A Project Procurement Strategy Document (PPSD) has been prepared by the MoA, which forms the basis for a Procurement Plan that details procurement methods, estimated costs, post/prior review requirements, etc. for each contract to be financed by project proceeds. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. Procurement of RLLP will be carried out in a decentralized manner in each of the major watersheds participating in the project. At the federal level, the PCU is the focal organization for implementation of RLLP. The BoAs and the Woreda Agricultural Development Offices shall serve as the implementing organizations of RLLP in the respective regions. The land and watershed management activities will be carried out in the existing and new watersheds in the beneficiary woredas and may involve local community participation in procurement. The project procurement plan includes community level procurement activities and targets. The procurement at community level has a separate operational guideline. Training will be provided for the community level procurement committee to improve capacity and reduce risks. Based on the threshold and procurement plan target there will be regular monitoring by district (woreda) level procurement authorities to effect payments. Regional level procurement specialists regularly monitor the procurement plan and its implementation. Moreover, during regular Joint Implementation Support Missions from the federal level procurement is one of the fiduciary components monitored. There are also internal and external audits on a yearly basis and a comprehensive independent procurement audit will be conducted for the entire project period.

Taxation: Where goods and services are procured by the project, these will be subject to income tax, import duties, withholding tax and Value Added Tax. GCF proceeds can be used to pay taxes.

Taxation of farmland is low due to the use rights of farmers. Farmer cooperatives received a tax incentive, exempting them from paying profit tax. A proposal has been submitted to exempt irrigation pumps from import tax.

Authorizations needed for project implementation: The World Bank will sign a financing agreement with the Federal Democratic Republic of Ethiopia. Once this agreement is signed, authorization for project implementation will need to

be obtained from Ethiopia's House of Parliament. During project implementation, the Steering Committee will have oversight of the project. Steering committee members include various Ethiopian government bodies, as described in Section C.7.

G.4. Disclosure of funding proposal

Note: The Information Disclosure Policy (IDP) provides that the GCF will apply a presumption in favour of disclosure for all information and documents relating to the GCF and its funding activities. Under the IDP, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Information provided in confidence is one of the exceptions, but this exception should not be applied broadly to an entire document if the document contains specific, segregable portions that can be disclosed without prejudice or harm.

Indicate below whether or not the funding proposal includes confidential information.

- No confidential information:** The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.
- With confidential information:** The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:
- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
 - redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

F. ANNEXES

H.1. Mandatory annexes

- Annex 1 NDA no-objection letter(s) ([template provided](#))
- Annex 2 Feasibility study - and a market study, if applicable
- Annex 3 Economic and/or financial analyses in spreadsheet format
- Annex 4 Detailed budget plan ([template provided](#))
- Annex 5 Implementation timetable including key project/programme milestones ([template provided](#))
- Annex 6 E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3):
[\(ESS disclosure form provided\)](#)
 - Environmental and Social Impact Assessment (ESIA) or
 - Environmental and Social Management Plan (ESMP) or
 - Environmental and Social Management System (ESMS)
 - Resettlement Policy Framework, Social Assessment
- Annex 7 Summary of consultations and stakeholder engagement plan
- Annex 8 Gender assessment and project/programme-level action plan ([template provided](#))
- Annex 9 Legal due diligence (regulation, taxation and insurance)
- Annex 10 Procurement plan ([template provided](#))
- Annex 11 Monitoring and evaluation plan ([template provided](#))
- Annex 12 AE fee request ([template provided](#))
- Annex 13 Co-financing commitment letter, if applicable ([template provided](#))
- Annex 14 Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

- Annex 15 Evidence of internal approval ([template provided](#))
- Annex 16 Map(s) indicating the location of proposed interventions
- Annex 17 Multi-country project/programme information ([template provided](#))
- Annex 18 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- Annex 19 Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
- Annex 20 First level AML/CFT (KYC) assessment
- Annex 21 Operations manual (Operations and maintenance)
- Annex x Other references

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

Funding Proposal

Project/Programme title:	Resilient Landscapes and Livelihoods Project
Country(ies):	Ethiopia
Accredited Entity:	World Bank
Date of first submission:	2018/06/22
Date of current submission	2020/03/19
Version number	<u>[V.000]</u>



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Contents

Section A	PROJECT / PROGRAMME SUMMARY
Section B	PROJECT / PROGRAMME INFORMATION
Section C	FINANCING INFORMATION
Section D	EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA
Section E	LOGICAL FRAMEWORK
Section F	RISK ASSESSMENT AND MANAGEMENT
Section G	GCF POLICIES AND STANDARDS
Section H	ANNEXES

Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the [GCF Information Disclosure Policy](#), project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

“FP-[Accredited Entity Short Name]-[Country/Region]-[YYYY/MM/DD]”

A. PROJECT/PROGRAMME SUMMARY			
A.1. Project or programme	Project	A.2. Public or private sector	Public
A.3. Request for Proposals (RFP)	<p>If the funding proposal is being submitted in response to a specific GCF Request for Proposals, indicate which RFP it is targeted for. Please note that there is a separate template for the Simplified Approval Process and REDD+.</p> <p>Not applicable</p>		
A.4. Result area(s)	<p>Check the applicable GCF result area(s) that the overall proposed project/programme targets. For each checked result area(s), indicate the estimated percentage of GCF budget devoted to it. The total of the percentages when summed should be 100%.</p> <p>Mitigation: Reduced emissions from:</p> <p><input type="checkbox"/> Energy access and power generation:</p> <p><input type="checkbox"/> Low-emission transport:</p> <p><input type="checkbox"/> Buildings, cities, industries and appliances:</p> <p><input checked="" type="checkbox"/> Forestry and land use:</p> <p>Adaptation: Increased resilience of:</p> <p><input checked="" type="checkbox"/> Most vulnerable people, communities and regions:</p> <p><input checked="" type="checkbox"/> Health and well-being, and food and water security:</p> <p><input type="checkbox"/> Infrastructure and built environment:</p> <p><input type="checkbox"/> Ecosystem and ecosystem services:</p>		<p>GCF contribution:</p> <p><u>Enter number</u>%</p> <p><u>Enter number</u>%</p> <p><u>Enter number</u>%</p> <p><u>100</u>%</p> <p><u>70</u>%</p> <p><u>30</u>%</p> <p><u>Enter number</u>%</p> <p><u>Enter number</u>%</p>
	A.5. Expected mitigation impact	<p>5,621,615 t CO₂ eq over 5 years</p> <p>43,800,000 t CO₂ eq over 25 years</p>	A.6. Expected adaptation impact
A.7. Total financing (GCF + co-finance)	296,237,602 USD	A.9. Project size	Large (Over USD 250 million)
A.8. Total GCF funding requested	<p>165,237,592 USD</p> <p>Choose an item.</p> <p>For multi-country proposals, please fill out annex 17.</p>		
A.10. Financial instrument(s) requested for the GCF funding	<p>Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.</p> <p><input checked="" type="checkbox"/> Grant <u>58,063,337 USD</u> <input type="checkbox"/> Equity <u>Enter number</u></p> <p><input checked="" type="checkbox"/> Loan <u>107,174,255 USD</u> <input type="checkbox"/> Results-based payment <u>Enter number</u></p> <p><input type="checkbox"/> Guarantee <u>Enter number</u></p>		
A.11. Implementation period	Start: 07-Oct-2020; End: 07-Oct-2025	A.12. Total lifespan	25 years

A.13. Expected date of AE internal approval	<i>This is the date that the Accredited Entity obtained/will obtain its own approval to implement the project/programme, if available.</i> 6/15/2020	A.14. ESS category	<i>Refer to the AE's safeguard policy and GCF ESS Standards to assess your FP category.</i> B
A.15. Has this FP been submitted as a CN before?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	A.16. Has Readiness or PPF support been used to prepare this FP?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
A.17. Is this FP included in the entity work programme?	Yes <input type="checkbox"/> No <input type="checkbox"/>	A.18. Is this FP included in the country programme?	Yes <input type="checkbox"/> No <input type="checkbox"/>
A.19. Complementarity and coherence	<i>Does the project/programme complement other climate finance funding (e.g. GEF, AF, CIF, etc.)? If yes, please elaborate in section B.1.</i> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
A.20. Executing Entity information	<i>If not the Accredited Entity, please indicate the full legal name of the Executing Entity(ies) and provide its country of registration and ownership type. Note that there can be more than one Executing Entity. Also indicate if an Executing Entity is the National Designated Authority. Refer to the definition of Executing Entity in the Accreditation Master Agreement.</i> The Federal Democratic Republic of Ethiopia, represented by the Ministry of Finance and acting through the Ministry of Agriculture.		
A.21. Executive summary (max. 750 words, approximately 1.5 pages)			

Provide an executive summary of the project/programme including:

1. *Climate change problem*
2. *Proposed interventions*
3. *Climate impacts/benefits*

1. Climate Change Problem

Impact of Climate Change on Land Degradation

In the highlands of Ethiopia, climate change is expected to increase both annual precipitation and seasonal variability in rainfall, increasing soil erosion by 7-10% per year and, in the more extreme scenarios, possibly by as much as 40-70% per year by 2050. Conservative estimates suggest that partly as a result of this increased soil erosion, climate change will reduce agricultural crop productivity in Ethiopia by 5 -10 % by 2030¹. Land degradation in Ethiopia has proceeded at an alarming rate and will be increasingly aggravated by climate change. From 1981 to 2003, 296,812 km² (29.7 million ha) of land has been degraded, affecting a population of 20.65 million, approximately one in five people in Ethiopia.

Vulnerability of the agriculture sector and community livelihoods to climate change impacts

The intersection of land management, rights, and use forms the key development issue for millions of rural Ethiopians facing water insecurity, food insecurity, land tenure insecurity, and livelihood insecurity – all amplified by climate variability and change as described above. Climate impacts in Ethiopia are felt primarily through water stress, which is affected by land use and degradation that undermines watershed function. In Ethiopia, the estimated cost of land degradation is 2-3% of GDP, before accounting for downstream effects, such as increased flood risk.

Exposure of farmers to land degradation

Since the 1970s, the Government of Ethiopia has recognized the problem of land degradation as a major challenge to the country's growth and stability. Studies have shown that land degradation has cost the country 2-3 percentage points in agricultural GDP each year. Due to its impact on agricultural productivity alone, soil erosion currently costs the economy of Ethiopia about \$305 million per year. Based on Ethiopia's experience to date, the cost of inaction to address land degradation is estimated to be 4.4 times greater than the cost of preventative action through (SLM).²

Impacts of Climate Change and Variability on farmer livelihoods

Climate variability such as the droughts and floods described above already negatively impacts livelihoods in Ethiopia. This will aggravate the impacts of climate change, which are broad in scope and could be severe. Estimates suggest climate change may reduce Ethiopia's GDP up to 10 % by 2045, primarily through impacts on agricultural productivity. These changes would aggravate existing social and economic challenges.

Recently, the impact of climate change on crop yields in Ethiopia was investigated in a report published by IFPRI.³ Overall, the simulated net effects of increases in average rainfall and higher average temperatures are relatively small. However, the authors note that there is growing evidence that weather outcomes, particularly rainfall, are likely to become more variable in the future, which could lead to substantial effects on crop production and household welfare (as well as on livestock) due to extreme events – droughts, floods, or extremely high temperatures.

Crucially, the models employed in the simulations do not take into account the impact of climate change on land degradation, while noting that in many parts of the country land degradation is already reducing yields. Climate change is likely to accelerate the levels of land degradation and soil erosion. As described in more detail in Annex A.7 and Annex A.8, recent analysis by the Water and Land Resource Centre (WLRC) of Addis Ababa University using soil loss equations calibrated using historical station data from two monitoring stations within the project area in conjunction with the IPCC's RCP4.5 scenario for 2050, show that soil erosion is expected to increase by 7-10% per year and, in the more extreme scenarios, could increase by as much as 40-70% per year by 2050 due to climate change in the absence of interventions to improve land management⁴. As a result, conservative estimates suggest that climate change will reduce agricultural crop productivity in Ethiopia by 5 -10 % by 2030.

1 Refer to Annex A.7., Annex A.8 and Bai, Z. G., Dent, D. L., Olsson, L., & Schaepman, M. E. (2008), "Global assessment of land degradation and improvement. 1. Identification by remote sensing". Wageningen, The Netherlands: International Soil Reference and Information Centre (ISRIC).

2 Gebreelassie et al. (2016).

3 Dorosh, P. and Minten, B. (eds.), 2019, Ethiopia's agri-food system: Past trends, present challenges, and future scenarios, Ethiopia Strategy Support Program (ESSP), IFPRI

4 Based on recent analysis by the Water and Land Resource Centre (WLRC) of Addis Ababa University

The direct impacts on crop productivity could in turn lead to impacts on prices, production, and consumption and on per capita calorie consumption and child malnutrition. Climate change, therefore, complicates efforts to increase food production and improve food security⁵.

Sensitivity of rural communities to the impacts of climate change

Sensitivity to climate change and variability is high in the proposed project communities. More than 80% of Ethiopians are engaged in subsistence rain-fed agriculture and farms are already under significant climate stress. These populations are highly dependent on the performance of productive landscapes for income, energy, food, building materials, and water. Furthermore, agriculture accounts for most jobs and about 40% of output and exports. Low adaptive capacity contributes to high vulnerability in the proposed project communities. Most of the targeted watersheds are situated in regions that have relatively low adaptive capacity. As one study of vulnerability in the Tigray Region concluded, districts most vulnerable to climate change and variability overlapped with districts with the most vulnerable populations; climate vulnerability was inextricably linked to social and economic development.^[8] Households that are short of basic economic and social resources clearly lack the means to undertake adaptive measures or respond to climate shocks.

2. Proposed Interventions/Summary of Project

The objective of the Project is to improve climate resilience, land productivity and carbon storage and increase access to diversified livelihood activities in selected rural watersheds.

The Project consists of the following parts to be carried out in select Regions of Ethiopia:

Part 1. Investment in Green Infrastructure and Resilient Livelihoods

Provide support for the restoration of degraded landscapes in selected watersheds and help build resilient livelihoods through the following program of activities:

- (a) Land Restoration and Watershed Management: Implementation of sustainable soil and water conservation practices in line with Multi-Year Development Plans (“MYDPs”) in watersheds, including land rehabilitation measures and establishment of green infrastructure (including rehabilitation through biological and physical conservation measures that ensure reduced surface run-off and soil erosion, as well as improved land productivity, resulting in enhanced crop and livestock production) through, inter alia: soil and water conservation measures, gully rehabilitation, establishment of green corridors, area closure management and use, establishment of plantation blocks, and enrichment of degraded pasture and rangeland;
- (b) Climate-Smart Agriculture: Enhance the livelihood resilience of beneficiary households in restored micro watersheds by implementing context-specific Climate-Smart Agriculture (“CSA”) activity packages comprising one or more of the following: farm water and soil moisture management, integrated soil fertility and soil health management, crop development and management, and environmentally-friendly livestock production through feed development and management; and
- (c) Livelihood Diversification and Connection to Value Chains: Further increase livelihood resilience by diversifying livelihoods, and helping ensure livelihood sustainability by better connecting products with value chains in selected watersheds through a program of activities, including provision of technical assistance and grants to Common Interest Groups (“CIGs”) and financing activities that facilitate private sector engagement in Project-supported value chains directly or through primary cooperatives and/or coop unions.

Part 2. Investing in Institutions and Information for Resilience

Enhance institutional capacity and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the Project area through the following program of activities:

- (a) Capacity Building, Information Modernization and Policy Development: Provision of technical assistance, at the local government level, to implement the Project and build capacity to sustain land and water management practices in watersheds, including financing of selected staff positions, financing of technical vocational education and training, development of data management plan, piloting of new technologies for information modernization (such as the use of electronic tablets for gathering geospatial information and the use of unmanned aerial vehicles for land certification

mapping), and development and application of a regulatory framework for the establishment of WUAs and community bylaws guiding land-use practices, and strengthening the Land Administration System; and

(b) Impact Evaluation, Knowledge Management and Communication: Carry out impact evaluations of (i) the bio-physical outcomes of MoA's SLM Program, and (ii) the productivity gains associated with the climate-smart agriculture interventions supported by the Project, establish a geospatial knowledge platform accessible to planners and stakeholders, and develop and implement a strategic communication program to inform and mobilize communities, and to enhance Project visibility and transparency among all actors.

Part 3. Land Administration and Use

Strengthen land tenure and the land administration system in Project areas and improve incentives for beneficiary communities to invest in sustainable landscape management through the following: (a) in the micro-watersheds targeted under Part 1 of the Project, improving the land tenure security of rural households and groups through land certification and administration (including issuance of Second Level Landholding Certificates ("SLLCs") to households, and targeted landless youth will receive communal land certificates, inputs, and extension services in exchange for land restoration), and (b) enhancing local level land use planning and support innovations in landscape certification systems (including providing support for participatory local land use planning and the rollout of the National Rural Land Administration Information System ("NRLAIS").

Part 4. Project Management and Reporting

Provision of support for Project management and reporting, including financing of Operating Costs and implementation of Project fiduciary aspects, including financial management, procurement, environmental and social safeguards, and monitoring and evaluation and reporting.

3. Climate Benefits

The proposed project is designed to create resilient landscapes and livelihoods for vulnerable rural populations in Ethiopia. The Resilient Landscapes and Livelihoods Project (RLLP) will improve climate resilience, land productivity and carbon storage, as well as improve access to diversified sources of income in selected vulnerable rural major watersheds in Amhara, Benishangul Gumuz, Gambella, Oromiya, SNNP and Tigray. The project scales up initiatives with demonstrated climate value and co-benefits within the Sustainable Land Management Program (SLMP), and it pilots new innovations. Proposed interventions target rural livelihood productivity and resilience through sustainable land management, low-emission resilient agriculture practices, enhanced land tenure, gender-sensitive livelihood initiatives which contributes to removing barriers to women's ownership of and control over assets and improving voice and agency, and the strengthening of value chains for long-term program durability.

The RLLP will contribute to climate resilience in 210 major watersheds with 8-12 micro-watersheds per major watershed. The beneficiaries of RLLP include the entire population of the selected watersheds, estimated at 4.2 million people, or 834,000 households. The project interventions are also expected to lead to a GHG emissions reduction of 43.9 million tons CO₂eq due to carbon sequestration as a result of improvements to grasslands and agriculture. 152 watersheds will be supported by IDA and MDTF (Contribution by Government of Norway), 18 watersheds by the anticipated contribution to MDTF by the Government of Canada, and 40 watersheds by GCF.

The executing entity is the Federal Democratic Republic of Ethiopia. The GCF Proceeds will be channeled through the World Bank and will be made available to the Federal Democratic Republic of Ethiopia. The World Bank will enter into a grant agreement and a loan agreement with the Federal Democratic Republic of Ethiopia, represented by MoF and acting through MoA for the implementation of the GCF Funded Activity.

B. PROJECT/PROGRAMME INFORMATION

B.1. Climate context (max. 1000 words, approximately 2 pages)

Climate change problem: Describe the climate change problem the proposal is expected to address. Describe the mitigation needs (GHG emissions profile) and/or adaptation needs (climate hazards and associated risks based on impacts, exposure, and vulnerabilities) that the proposed interventions are expected to address. Also describe the most likely scenario (prevailing conditions or other alternative) that would remain or continue in the absence of the proposed interventions. Include baseline information. The methodologies used to derive such information, including the mitigation and adaptation needs, should be included in the feasibility study.

Context: In describing the mitigation and/or adaptation needs, briefly describe the target region/area of the proposed interventions including information on the demographics, economy, topography, etc.

Related projects/interventions: Also describe any recent or ongoing projects/interventions that are related to the proposal from other domestic or international sources of funding, such as the Global Environment Facility, Adaptation Fund, Climate Investment Funds, etc., and how they will be complemented by this project/programme (e.g. scaling up, replication, etc.). Please identify current gaps and barriers regarding recent or ongoing projects and elaborate further how this project/programme complements or addresses these.

Ethiopia is an LDC that is among the most vulnerable to climate change and variability: it is exposed to severe climate impacts, its economy is highly climate-sensitive, and its adaptive capacity is low. In the ND-GAIN country index, Ethiopia ranks 163 out of 181 countries in terms of climate readiness. While the poverty headcount has fallen from 55.5 % to 26.7 % from 2000-2016⁶, these gains are very fragile in a changing climate. Resilient agriculture is a high priority, as agriculture accounts for 41% of GDP, 85% of all employment and nine of the top ten export commodities by value⁷.

Climate Change and Variability in Ethiopia

Ethiopia has a long history of having to cope with extreme weather events. Rainfall is highly erratic and typically falls in the form of intensive convective storms spawned by the country's varied topography. Over the past three decades, Ethiopia has experienced countless localized drought events and seven major droughts, five of which have been associated with famines. Climate varies significantly between and even in each one of the Ethiopian regions. Most of the recent drought and food crisis events have been geographically concentrated in two broad zones of the country, with the eastern and northern parts of the country being the most vulnerable. For example, rainfall variability and associated droughts have been major causes of food shortages and famine in the Tigray region in the north of the country.

There are numerous observed changes in Ethiopia's climate⁸. The most prominent observed climate change trend has been a tendency towards lower rainfall during the main growing seasons (March–May and December–February). A decline in rainfall of 15% on average has been associated with anthropogenic Indian Ocean warming. While floods have historically never been a major economic hazard in Ethiopia, in recent years there has been significant socio-economic disruption due to flooding, e.g. in 1997 and 2006.

Most global climate models project an increase in precipitation in both the dry and wet seasons. Climate scenarios based on the ISP2a emissions scenario run by a suite of Global Climate Models (GCMs) are broadly consistent in indicating increases in annual rainfall for Ethiopia as a whole. These increases are largely a result of increasing rainfall during the 'short' rainfall season (October-December) in southern Ethiopia. October-December rainfall is projected to increase between 10 and 70% on the average over Ethiopia. These changes will lead to an increase in heavy rains and floods. The temperature will very likely continue to increase for the next few decades at a rate similar to that seen in recent years. The projected increases in the inter-annual variability of precipitation in combination with the warming

⁶ WB database, for Poverty headcount ratio at \$1.90 a day (2011 PPP)

⁷ CRGE (2014)

⁸ Climate Risk and Adaptation Country Profile: Vulnerability, Risk Reduction and Adaptation to Climate Change - Ethiopia, World Bank, 2011. Downloaded from: <http://countryadaptationprofiles.gfdr.org>

will likely lead to increases in the occurrence of droughts. Figure 1 depicts changes in precipitation and temperatures during the previous century and under projections beyond the year 2040.

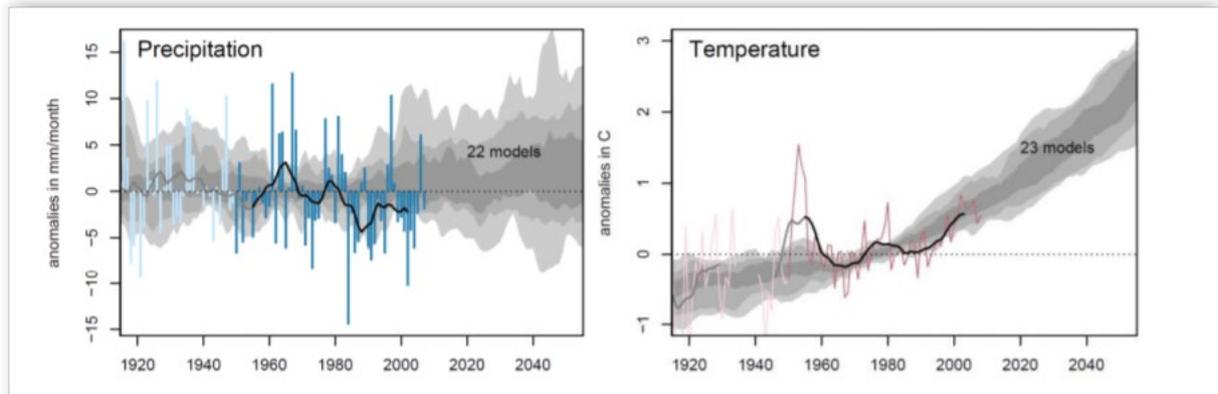


Figure 1 Observed and predicted changes in precipitation and temperature in Ethiopia⁹

In the highlands, climate change is expected to result in an increase in both annual precipitation and seasonal variability in rainfall.

Incremental costs of climate change

The supporting document “Technical Note to modeling soil loss” (Annex A.8) estimates change in soil erosion due to climate change in RLLP Project Watersheds. Results indicate that soil erosion is expected to increase by 7-10% per year and, in the more extreme scenarios, could increase by as much as 40-70% per year by 2050 in the absence of interventions to improve land management that builds resilience to the impacts of climate change. Under business-as-usual, the Sustainable Land Management (SLM) program estimates that a total of about 670 watersheds need approximately \$2.7 million each in investment to prevent soil erosion i.e. \$1.8 billion of total investment in Ethiopia (see Annex A.9. “Cost of watershed development interventions”). Conservatively assuming that (a) climate change could increase annual soil erosion by 50% (b) 1:1 relationship between increase in soil erosion and investment cost to build climate resilience, we expect that \$904 million would be the incremental investment cost to prevent increased soil erosion due to climate change across all 670 watersheds in Ethiopia (\$1.35 million of incremental cost of climate change per watershed). This cost would further increase in watersheds that are highly vulnerable to climate change since community contributions are likely to be less than regular SLM programs due exposure of beneficiaries to severe soil loss.

Both climate smart agriculture and sustainable land management are packages of measures in which several practices are implemented concurrently at the appropriate time and scale to achieve the triple win of climate change adaptation, climate change mitigation and increases in yields resulting in increased climate resilient livelihood. Hence it is not possible to identify the scope of GCF financing on the basis of differentiation between development activities and climate change activities. GCF is requested to finance RLLP activities in watersheds that are highly vulnerable to climate change. In order to identify such watersheds, a vulnerability analysis was undertaken in which 192¹⁰ RLLP major watersheds were ranked by highest to lowest annual soil loss per hectare due to precipitation changes by 2050 under RCP 4.5 scenario (see Annex A.12.) compared to current levels. Top 40 of these watersheds were selected for GCF financing. IDA will finance RLLP activities in remaining 152 watersheds.

⁹ Keller, M. (2009) Climate Risks and Development Projects. Assessment Report for a Community-Level Project in Guduru, Oromiya, Ethiopia

¹⁰ Details of Co-financing from Government of Canada were not available during this analysis, hence 18 Watersheds supported by it were not considered

Vulnerability of the agriculture sector and community livelihoods to climate change impacts

The intersection of land management, rights, and use forms the key development issue for millions of rural Ethiopians facing water insecurity, food insecurity, land tenure insecurity, and livelihood insecurity – all amplified by climate variability and change as described above. Climate impacts in Ethiopia are felt primarily through water stress, which is affected by land use and degradation that undermines watershed function. In Ethiopia, the estimated cost of land degradation is 2-3% of GDP, before accounting for downstream effects, such as increased flood risk.

Exposure of farmers to land degradation

Since the 1970s, the Government of Ethiopia has recognized the problem of land degradation as a major challenge to the country's growth and stability. Studies have shown that land degradation has cost the country 2-3 percentage points in agricultural GDP each year. Due to its impact on agricultural productivity alone, soil erosion currently costs the economy of Ethiopia about \$305 million per year. Based on Ethiopia's experience to date, the cost of inaction to address land degradation is estimated to be 4.4 times greater than the cost of preventative action through (SLM).¹¹

From 1981 to 2003, 296,812 km² (29.7 million ha) of land has been degraded, affecting a population of 20.65 million (Bai et al. 2008),¹² approximately one in five people in Ethiopia. Approximately 27 million ha or almost 50% of highland areas (which make up about 45 % of the total land area), is considered to be significantly eroded. Of this area, 14 million ha are seriously eroded, with over 2 million ha beyond reclamation. It is estimated that some 30,000 ha are lost annually as a result of soil erosion.¹³ For the highland areas, erosion rates have been estimated to average 35 tons/ha/yr, while the estimated rate from the croplands is 130 ton/ha/yr. This has led to the conclusion that almost half of Ethiopia's annual soil losses come from the land under cultivation, even though this land covers only 20% of the country.¹⁴

Figure 2 shows the distribution of annual precipitation in Ethiopia. According to this mapping exercise, the majority of planned watershed restoration was conducted in areas with high levels of precipitation. These areas are highly exposed to erosion.

¹¹ Gebreselassie et al. (2016).

¹² Bai, Z. G., Dent, D. L., Olsson, L., & Schaepman, M. E. (2008), "Global assessment of land degradation and improvement. 1. Identification by remote sensing". Wageningen, The Netherlands: International Soil Reference and Information Centre (ISRIC).

¹³ Berry Leonard (2003) Land Degradation in Ethiopia: Its Extent and Impact

¹⁴ Ibid.

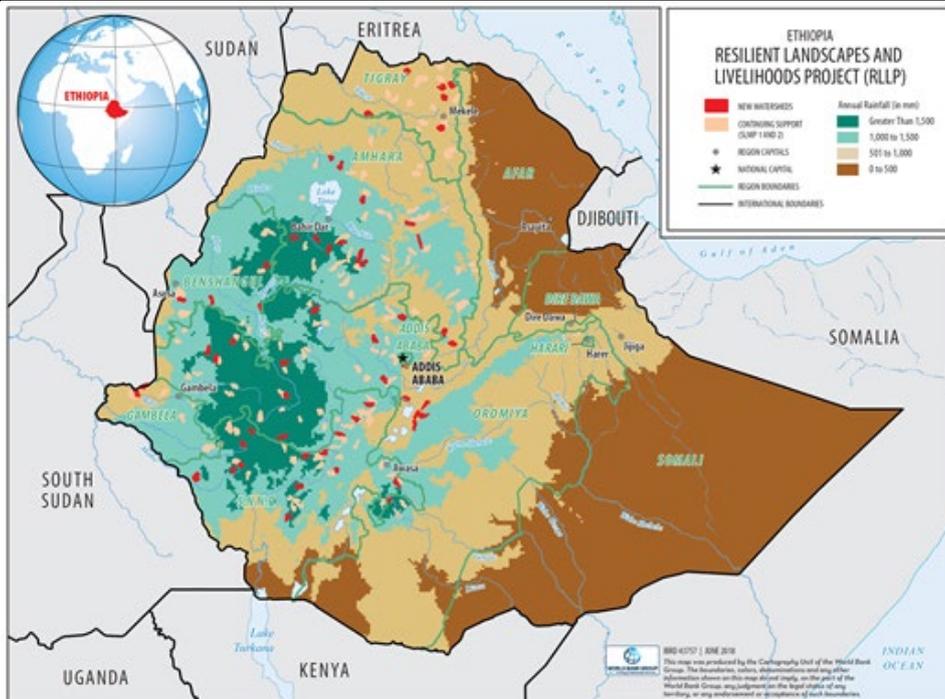


Figure 2. Annual precipitation distribution in Ethiopia

Impacts of Climate Change and Variability on farmer livelihoods

Climate variability such as the droughts and floods described above already negatively impacts livelihoods in Ethiopia. This will aggravate the impacts of climate change, which are broad in scope and could be severe. Estimates suggest climate change may reduce Ethiopia's GDP up to 10 % by 2045, primarily through impacts on agricultural productivity. These changes would aggravate existing social and economic challenges.

Recently, the impact of climate change on crop yields in Ethiopia was investigated in a report published by IFPRI. Overall, the simulated net effects of increases in average rainfall and higher average temperatures are relatively small. However, the authors note that there is growing evidence that weather outcomes, particularly rainfall, are likely to become more variable in the future, which could lead to substantial effects on crop production and household welfare (as well as on livestock) due to extreme events – droughts, floods, or extremely high temperatures.

Crucially, the models employed in the simulations do not take into account the impact of climate change on land degradation, while noting that in many parts of the country land degradation is already reducing yields. Climate change is likely to accelerate the levels of land degradation and soil erosion. As described in more detail in Annex A.7 and Annex A.8, recent analysis by the Water and Land Resource Centre (WLRC) of Addis Ababa University using soil loss equations calibrated using historical station data from two monitoring stations within the project area in conjunction with the IPCC's RCP4.5 scenario for 2050, show that soil erosion is expected to increase by 7-10% per year and, in the more extreme scenarios, could increase by as much as 40-70% per year by 2050 due to climate change in the absence of interventions to improve land management. As a result, conservative estimates suggest that climate change will reduce agricultural crop productivity in Ethiopia by 5 -10 % by 2030.

The direct impacts on crop productivity could in turn lead to impacts on prices, production, and consumption and on per capita calorie consumption and child malnutrition. Climate change, therefore, complicates efforts to increase food production and improve food security.

Sensitivity of rural communities to the impacts of climate change

Sensitivity of rural communities to the impacts of climate change

Sensitivity to climate change and variability is high in the proposed project communities. More than 80% of Ethiopians are engaged in subsistence rain-fed agriculture and farms are already under significant climate stress. These populations are highly dependent on the performance of productive landscapes for income, energy, food, building materials, and water. Furthermore, agriculture accounts for most jobs and about 40% of output and exports. Low adaptive capacity contributes to high vulnerability in the proposed project communities. Most of the targeted watersheds are situated in regions that have relatively low adaptive capacity. As one study of vulnerability in the Tigray Region concluded, districts most vulnerable to climate change and variability overlapped with districts with the most vulnerable populations; climate vulnerability was inextricably linked to social and economic development.¹⁵ Households that are short of basic economic and social resources clearly lack the means to undertake adaptive measures or respond to climate shocks.

Adaptive capacity and barriers to change

Adaptive capacity in rural communities is low. Root causes are a combination of geo-climatic conditions (inherently fragile soils, undulating terrain, and highly erosive rainfall) and anthropogenic factors.

Baseline	BAU with climate change	Alternative
<i>Poor cropland management practices:</i> The farming system, particularly in the highlands, is dominated by subsistence cereal crops, which provide little ground cover when the most erosive rains occur (June-August). This system often requires frequent tillage and pulverization of the soil, rendering it more susceptible to erosion. Furthermore, limited soil conservation practices and the breakdown of traditional restoration measures, such as shifting cultivation, contribute to land degradation.	Current farming practices such as frequent tillage and limited soil conservation practices will lead to increasingly severe impacts as the climate changes, reducing agricultural yields.	Soil conservation measures are (re)introduced, preventing increased land degradation as a result of climate change (Activity 1.1.1, 1.1.2)
<i>Rapid depletion of vegetation cover:</i> Household energy needs are predominantly supported by wood and other biomass, causing an unprecedented level of deforestation. The loss of vegetation cover has been further exacerbated by agricultural expansion and livestock grazing. As a result, land has been stripped of vegetative biomass, exposing it to high levels of soil erosion. Average deforestation rates range	As the climate changes and erosion increases, land in deforested areas will be further degraded.	Promotion of efficient cookstoves reduces deforestation, enabling maintenance of vegetation cover even under the harsher conditions resulting from climate change (activity 1.31., WB funded) Seeds for climate resilient crop varieties, improved farm tools, fertilizer and other inputs are used by farmers to increase the productivity of agriculture, reducing the need for agricultural expansion into land made marginal as a result of climate

¹⁵ Gebrehiwot, T. and A. van der Veen (2013). Climate Change Vulnerability in Ethiopia: disaggregation of Tigray Region. In Journal of Eastern African Studies, Vol. 7, Issue 4: 607.

<p>from 1% to 1.5% annually, a high rate for a low forest cover country. Historically, Ethiopia was about 40% forested. By 2005, forest cover had been reduced to 2.4%, or 3.3. million ha, of high forests.</p>		<p>change (Activity 1.2.1) Free grazing decreases, enabling recovery of vegetation even in the harsher conditions resulting from climate change</p>	
<p><i>Poor livestock management:</i> Ethiopia has one of the largest livestock populations in Africa, with more than 53 million cattle. Only 25 % of cattle graze in rangelands, while the remaining 75 % graze in the highlands, leading to serious overgrazing in areas that are already under high pressure. Because the country has a free grazing system, there is no incentive for cattle holders to apply improved management practices in grazing areas. The scarcity of grazing land and livestock feed has forced the widespread use of crop residues to feed livestock. Removing these crop residues for feed and utilizing cattle manure for fuel further reduces the soil's organic matter and nutrients. This breach in the soil nutrient cycle seriously depletes soil quality, increases erosion, and eventually reduces soil productivity.</p>	<p>As climate change leads to increased erosion, current practices of free grazing, using crop residues to feed livestock and using manure for fuel lead will worsen the impact of climate change on land degradation.</p>	<p>Livestock feed is grown and free grazing is decreased, ensuring grazing of land is in line with the reduced carrying capacity in the face of climate change (Activity 1.2.1) Improved management practices in grazing areas are introduced, decreasing this need to use crop residues to feed livestock and enabling the maintenance of soil organic matter and nutrients even under conditions of climate change. (Activity 1.1.1) Promotion of efficient cookstoves reduces the need to use cattle manure for fuel, meaning manure is available to build up soil organic matter, reducing the impact of increasing erosion as a result of climate change (Activity 1.3.1)</p>	
<p><i>Insecure land tenure system:</i> Ethiopia is Africa's tenth largest and second most populous country. Its rugged topography makes it difficult to conduct rural cadastral surveys of millions of rural properties and hundreds of thousands of land parcels within a short period of time. Shortcomings in infrastructure also hinder the implementation of rural cadastral surveys. At the same time, there exists a pressing need to register and certify rural lands so that users can be secured and good governance and rural development can be promoted and upheld. In the past, land tenure insecurity caused by frequent land redistribution encouraged farmers in Ethiopia to favor short-term exploitation of land resources over long-term conservation, further contributing to land degradation and low farm productivity.</p>	<p>Users of land held under insecure tenure continue to favor short-term exploitation of land resources, even when climate change leads to an increasing need for long-term conservation measures in order to prevent deleterious impacts</p>	<p>Rural cadastral survey conducted with the help of drones (Activity 3.1.1) Land is registered and certified, providing users with the secure land tenure needed in order to invest in building climate resilience (Activity 3.2.1)</p>	
<p>SLMP-I and SLMP-II have supported some watersheds in</p>	<p>The inclusion of climate resilience in SLM activities</p>	<p>RLLP will scale up the introduction of climate resilience to smallholder</p>	

transitioning to sustainable land management, but activities to graduate from project-based support are still needed. Further attention to the creation of resilient livelihoods is still needed.	has been piloted, but not yet introduced at scale	farmers within the framework of sustainable land management. RLLP will put in place the conditions for sustainable implementation of resilience building activities subsequent to the cessation of project based support through support to the creation of resilient livelihoods (Sub-component 1.2)
The PSNP supports food-insecure communities, aiming to achieve food security	Climate change will endanger the newly food secure status of communities graduating from the SNP	RLLP will support climate resilient food security of communities graduating from the PSNP and prevent a return to food insecurity of these communities as a result of climate shocks
The AGP 2 promotes value chain development and private sector engagement	In the absence of activities to build climate resilience, value chains and the private sector are vulnerable to the impacts of climate change	RLLP will work synergistically with the AGP-2 to create climate resilient value chains and a resilient private sector. AGP-2, as a mainstream government program, will continue to support communities to maintain the progress made in RLLP after project end.
The ATA supports some activities that can contribute to resilience such as the introduction of warehouses and Common Interest Groups`	In the absence of activities to build climate resilience, improvements due to ATA initiatives are vulnerable to the impacts of climate change	RLLP will work synergistically with the ATA to create climate resilient livelihoods
Other donors support activities aiming at improving food security and livelihoods in rural Ethiopia	In the absence of activities to build climate resilience, all progress made as a result of other donor funded activities is vulnerable to the damaging impacts of climate change	RLLP shall work with other donor funded projects in those areas where activities overlap to ensure activities are complementary and result in climate resilient progress
The GCF financed project "Responding to the increasing risk of drought: building gender-responsive resilience of the most vulnerable communities" is being implemented by MoFEC	The MoFEC project will increase the climate resilience of water supplies in the targeted areas. It targets a different sector from RLLP, which focuses on resilient land use and agriculture.	RLLP will work closely with this project to ensure that targeted communities have comprehensively addressed the two major factors of vulnerability to climate change – water supply and agricultural productivity.

Barriers to change and the interventions to mitigate the barriers:

Barriers to change	Intervention
Limited awareness of the increasing impact of poor farming and land management practices on water resources and soil fertility as the climate changes	Improved knowledge management and communication (Activity 2.2.2) with both planners and communities, supported by data collection and information sharing (Activity 2.1.2)
The potential of land use planning to enhance resilience is untapped due to weak or absent land use planning	The on-going local-level participatory land-use planning exercise at kebele level is extended within the major watersheds of RLLP with the help of TA for consultation workshops (Activity 3.3.2).
Extension workers and policy makers lack awareness and technical expertise in climate resilient agriculture (CSA) practices. As a result planning and implementation of measures to increase the resilience of agriculture is	Capacity building of extension workers and policy makers equips them with the awareness and technical expertise to support farmers in increasing their climate resilience

insufficient	Robust impact evaluation, knowledge management and communication establish the conditions for national scaling-up of SLM for climate change adaptation and mitigation (Activity 2.1.1)
Lack of soil cover necessary for climate resilience	Mulching and cover crops is part of the package of measures for soil moisture and soil fertility management in CSA (Activity 1.2.1)
Insecure land tenure prevents investments in climate resilience	Outputs 3.1 and 3.2 of the project will initiate a program for the provision of second level land certificates to vulnerable, land insecure groups (WB funded)
Maintaining soil quality under conditions of climate change by using crop residues and manure is impossible due to competing uses	The need for using crop residues as feed is reduced due to improved management of grazing areas and feed production. Improved cookstoves (WB funded activity) will reduce the need for fuel. Soil fertility improvement is part of the CSA package of activities (Activity 1.2.1)
Lack of cash prevents farmers from continuing with the practices introduced as part of the project after project end	Support for resilient livelihoods and income opportunities (Activity 1.3.1 and 1.4.1)
Smallholder farmers are unfamiliar with practices that are part of Sustainable Land Management and climate resilient agriculture	SLM and CSA packages are introduced, including: improved seeds for climate resilient crops, improved farm tools, fertilizer and other inputs adapted to changed climatic conditions (Activity 1.1.1 and 1.1.2, 1.2.1)
Fragmentation, duplication and inefficiency of resilience building actions due to limited coordination among institutions, sectors, programs and projects that aim to support smallholder farmer	Improved coordination reduces duplication, increases efficiency and ensures comprehensive support to increase the resilience of smallholder farmers (Activity 2.1.1, 2.1.3)

Adaptation needs

Recent experience in Ethiopia has shown that a combination of better natural resource management and resource rights, jobs and livelihood enhancements, and gender outreach throughout targeted major watersheds can address the threats posed by land degradation and climate change. Effects of landscape restoration include a range of resilience-related results, including increased soil moisture and soil fertility important for higher and less variable crop yields, improved water availability, and increased carbon sequestration – all of which are high priorities for the government.

Much progress has been made by the government and thousands of local communities in addressing these challenges through proven investment packages under the Government of Ethiopia's SLM Program, with financing from the World Bank and other Development Partners (DPs). To bring these benefits to additional rural communities affected by land degradation, and to help Ethiopia meet its national targets for resilience and low carbon growth, while achieving middle income status in less than 10 years as planned under the Government's Second Growth and Transformation Plan (GTP-2), this work requires greater scale, further innovation, and improved cross-sectoral coordination.

The cost of the investment required to address current levels of land degradation is estimated at \$800 million to over \$2 billion, with approximately 670 watersheds needing approximately US\$2.7 million each in investment to prevent soil erosion (see Annex A.9. "Cost of watershed development interventions"). Thus, the incremental investment in (SLM) required to build resilience to climate change could easily reach hundreds of millions of dollars. Conservatively assuming that (a) climate change could increase annual soil erosion by 50% (b) 1:1 relationship between increase in soil erosion and investment cost to build climate resilience, we expect that \$904 million would be the incremental investment cost to prevent increased soil erosion due to climate change across all 670 watersheds in Ethiopia (\$1.35 million of incremental cost of climate change per watershed). The request for less than US\$ 180 million in GCF funding for this project is at the conservative end of cost estimates.

The RLLP Objective against the baseline: outcomes and impact that the project aims to achieve

The proposed project will draw on Ethiopia's decade of experience in addressing the root causes to scale-up tried and tested interventions. To help address barriers to the ongoing maintenance of restored landscapes, the project will introduce transformative support for resilient livelihoods and income opportunities.

Though significant results have been achieved over the years, much remains to be done. SLMP initiatives have allowed Ethiopia to pilot activities to address the root causes of land degradation in the country. However, no matter how

efficient, they were also a learning process. The RLLP project is a cross-cutting initiative that would scale up and improve the SLMP experience, implement lessons learned from previous activities, and significantly improve adaptive capacity of targeted areas. The project aims to scale up the number of restored watersheds, while also improving the ones already restored and creating an enabling environment, which will lead to productivity, resilience and overall development of livelihoods. The RLLP is a multidisciplinary project which will link together all relevant sectors in order to improve the resilience of livelihoods to the highest possible extent.

CSA measures will preserve restored land and will stop reversion to an erosion-sensitive state. These measures will also significantly increase the adaptive capacity of livelihoods, as they will introduce agrotechnical measures specifically designed to adjust to conditions outlined in climate scenarios, thus maintaining food security. The acquisition of processing equipment and storage facilities, as well as training to farmers and establishment of value chains will add value to goods produced through CSA. All of these activities will enhance adaptive capacity and reduce the exposure of participating communities to climate change.

This proposed project aims to:

- Increase the resilience of a total of 210 major watersheds located in the Ethiopian Highlands. Watersheds supported under SLMP-I will receive technical assistance to graduate from project-based support, while investments in SLMP-II watersheds will allow completion of their MYDPs. In addition, 57 new watersheds were selected based on criteria set out in the Ethiopia Strategic Investment Framework for Sustainable Land Management (ESIF), prioritized based on extent and severity of land degradation.
- Complete the implementation of Sustainable Land and Water Management (SLWM) practices by rural smallholders and communities under Multi-Year Development Plans (MYDPs) in SLMP-II watersheds and scale up these proven interventions to 57 additional watersheds (average 10,000 ha each) that are vulnerable to climate variability and change, recurrent drought and floods, and land degradation. The implementation of SLWM will increase resilience to sudden onsets and long-term climatic changes now and in the future. This is crucial in order to increase food security through preservation of the land, which is very exposed and sensitive to climate change impacts, especially in Ethiopia.
- CSA interventions under RLLP will be implemented in 135 watersheds that have already been supported with landscape restoration during SLMP I and II. SLMP-II piloted CSA in 70 micro-watersheds. As a result of the lessons learned from this pilot, MoA is now ready to implement CSA at scale and the RLLP, with the GCF support, will increase the number of micro-watersheds implementing CSA to 370. The implementation of CSA-specific measures is crucial in order to achieve sustainable agricultural production in the climate change impacted areas. They will enhance productivity and adaptation capacity of the livelihoods, as well as food security.
- Beyond physical and biological measures, the Sustainable Land Management Projects (SLMP-I and SLMP-II) have promoted livelihood diversification and income-generating activities. About 1,446 Self-Help Groups (SHGs) supported by SLMP-II are engaged in apiculture, poultry, sheep and goat fattening, and vegetable and fruit farming, and have contributed to the reduction of pressure on the watersheds' natural resources through the promotion of improved cook stoves. Improved cookstoves, while using the same type of fuel as baseline cooking technologies (which is mostly wood), reduce the amount of fuel needed. In areas in which some or all of the fuelwood used is nonrenewable due to overexploitation of local forests, the introduction of improved cookstoves reduces GHG emissions. In Ethiopia, the fraction of non-renewable biomass used is 88% (as determined for CDM projects). Hence, the introduction of improved cookstoves will reduce GHG emissions. Based on a review of the SLMP-II experience, RLLP will expand and strengthen these interventions through stronger engagement with the private sector (PS). This will result in a reduced exposure and sensitivity to climate change impacts onto Ethiopian agriculture. A detailed framework for private sector engagement under RLLP is presented in Annex B.1.
- Contribute to Ethiopia's long-term goal of achieving a carbon neutral economy by increasing carbon stocks in biomass and organic soil, as well as through the promotion of low carbon household energy technologies. Case studies across regions in Ethiopia indicate that Soil and Water Conservation (SWC) measures can significantly increase organic carbon content in soil. Soil carbon depletion rates from erosion alone range from 0.02 to 0.97 tons/ha/yr in Ethiopia. Effective land restoration can play a major role in the sequestration of organic carbon that is lost due to poor land management practices. Soil carbon sequestration with the adoption of restoration measures is projected to potentially account for 0.41 tonnes CO₂-eq. per hectare per year associated with rain-fed cropland and 0.63 tonnes per hectare per year on Ethiopian rangeland. Reforestation through assisted natural regeneration will further contribute to the mitigation of carbon emissions, at an estimated rate of 0.92 tonnes of CO₂-eq. per hectare annually.
- The project will enhance production and management of and access to relevant environmental, crop, livestock, forest, weather and geospatial information for land use decision making and disaster risk reduction at the levels

of major watersheds, community watersheds, and farms. Furthermore, it will provide support for developing relevant policies, regulations, and by-laws, including for the establishment of watershed associations.

- The project will improve the legal land tenure security of rural households and groups through land certification and administration, and it will expand and enhance local level land use planning and innovations in landscape certification models.

A mechanism and supporting elements to allow watersheds to “graduate” from project-based assistance and then continue sustainable management of restored landscapes through normal government mechanisms is built in to RLLP. Under SLMP-II, beneficiaries established community watershed teams to discuss natural resource problems and opportunities and to plan and implement interventions on the ground in an empowered, participatory manner. Under RLLP, support will be provided to create Watershed User Associations (WUAs), which would be legal entities capable of sustaining participatory watershed management when project-based support ends. In addition to establishing WUAs, RLLP will also prepare watersheds for graduation through (i) building local government capacity to design and manage SLWM interventions, (ii) strengthening incentives for investment in sustainable land management through land certification, and (iii) improving returns to sustainable productive activities by forging connections to value chains.

It is expected that without the proposed project, land use will continue on its current path while being subjected to negative and progressively more severe climate change impacts. Negative climate change impacts will further influence livelihoods due to insufficient adaptive capacity in project areas. Production yields will decrease while farmers will face increased input costs. Non-agricultural land in the watershed will also continue to deteriorate without the project due to soil erosion as well as overuse of common land through grazing livestock and firewood collection. This will put a further strain on local populations, who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will also affect areas and households through increased flood risk and sedimentation of irrigation dams.

Baseline projects

In addition to the GCF funded MoF project mentioned above, there are several other projects that have been implemented in the RLLP areas from which RLLP could benefit. RLLP will seek to establish synergies and avoid duplication of activities with these other projects.

GoE/WB Second Agricultural Growth Program (AGP-2)

AGP-2 currently operates in some woredas where there are SLMP-2 rehabilitated watersheds. They have implemented interventions to enable irrigation in some woredas. AGP-2 is engaged in support to key livestock and crop value chains (VCs), and is supporting productivity improvement, processing, storage/warehousing, market development in these VCs. AGP-2 and RLLP are implemented by same major donor (WB) and GoE ministry (MoA), and they are expected to have additional geographic overlap in the four main regions. In terms of value chain development and private sector engagement, RLLP will seek to harmonize as many methodologies and activities with AGP-2 as possible.

USDA Feed Enhancement for Ethiopian Development (FEED) II/III Project

FEED II is improving incomes and food security through improved availability, access and utilization of livestock and poultry feed. FEED III has been approved, will begin soon and will be in operation until at least 2020. Some woredas in which FEED II operates include SLMP I/II rehabilitated watersheds, and there promises to be even more geographic overlap in RLLP and FEED III. FEED II/III is seeking to exponentially expand their forage development and has the funds and technical personnel to do so. RLLP will seek to actively collaborate and pilot linking and contributing to activities in some of the overlapping woredas.

USAID Feed the Future Ethiopia (FtFE) Value Chain Activity (VCA)

The overall project objective of this initiative is to improve agricultural productivity and the commercialization of smallholder agriculture in the Tigray, Amhara, SNNP and Oromia regions. They support development of 6 major VCs – chickpeas, coffee, maize, dairy, meat and live animals and poultry. VCA is finalizing their selection of woredas to target, but they are expected to have significant geographical overlap with SLMP/RLLP.

Agricultural Transformation Agency (ATA)

ATA has completed construction of 44 warehouses in Tigray, Amhara, Oromia and SNNP regions, and it is eager to

facilitate and ensure the best possible use of these warehouses. The locations of these warehouses coincide with woredas in which SLMP-2 currently has rehabilitated watersheds and with woredas with new RLLP watersheds. Enterprising Common Interest Groups (CIGs) from SLMP-2 watersheds with RLLP support could assume management of selected warehouses.

B.2. Theory of change (max. 1000 words, approximately 2 pages plus diagram)

Describe the theory of change and provide information on how it serves to shift the development pathway towards a low-emission and/or climate resilient direction. Provide the diagram of the theory of change (approximately 1 page).

The theory of change should include any barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc., as relevant) that need to be addressed. Use a results chain of inputs, activities, outputs, outcomes, and impact statements, and identify the how and why of causal relations to deliver the project's expected results.

This integrated package of activities is the result of the extensive experience gained in previous projects and is essential to achieving paradigm shift. In order to achieve catalytic impact, it is essential to address all the root causes of land degradation, which include (i) poor cropland management practices, (ii) rapid depletion of vegetation cover, (iii) poor livestock management, and (iv) an insecure land tenure system. This approach grows out of the project's theory of change: by delivering more productive, secure and resilient livelihoods to local communities and by establishing the institutional framework needed to support maintenance of restored landscapes over the long term through watershed associations and local governments, the RLLP will lead to a durable shift towards SLM in the degraded watersheds of the Ethiopian highlands. A piecemeal approach in which only some of the drivers of degradation are addressed might lead to temporary, local improvement but would not lead to a sustained, widespread shift towards resilience for poor Ethiopian farmers. Figure 3 shows an illustration of this Theory of Change.

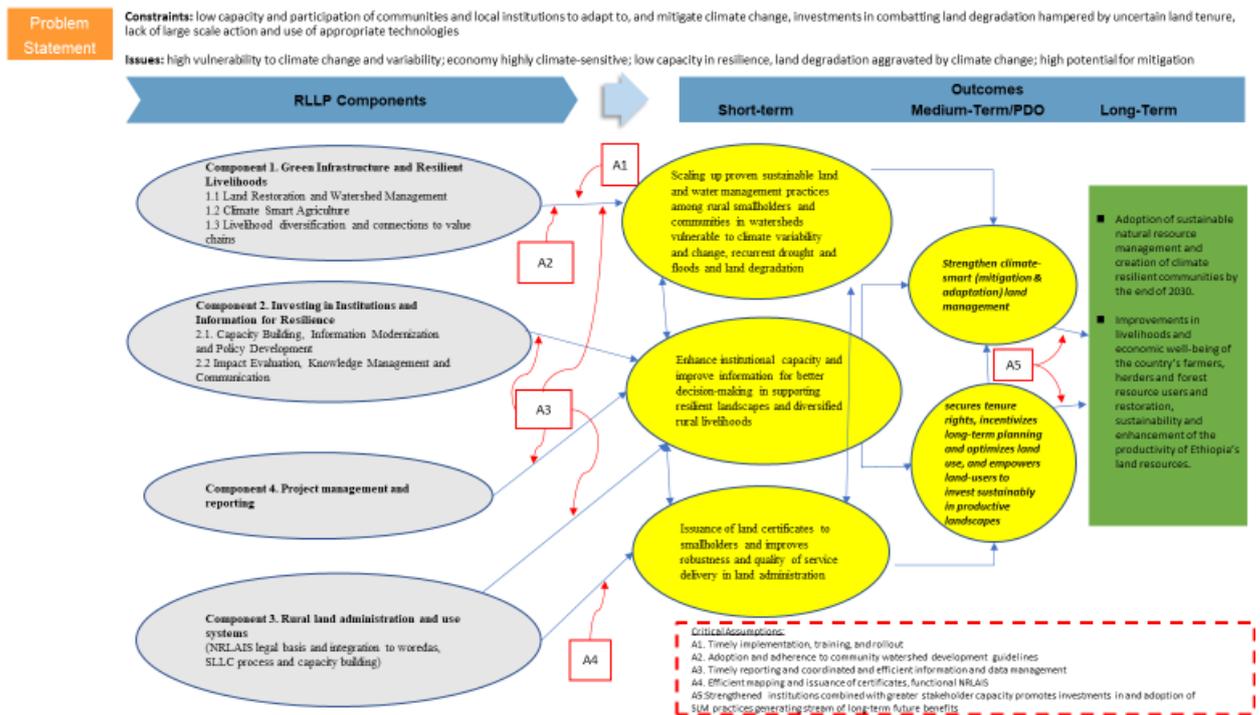


Figure 3. Illustration of Theory of Change

RLLP presents important opportunities for scaling-up and replication. While government and development partner interest in SLM in Ethiopia remains high, a crucial barrier to achieving the level of investment required to restore all

degraded watersheds nationally is the need to demonstrate a strategy for the long-term maintenance of these restored, newly productive, resilient, low emission landscapes. By building policy, institutional and market incentives for long-term SLM and by investing in robust impact evaluation, knowledge management and communication, RLLP will establish the conditions for national scaling-up of SLM for climate change adaptation and mitigation. In the shorter term, replication of the successes of RLLP interventions can also be expected in neighboring watersheds, a process that has already been demonstrated to dramatic effect in the ongoing SLM program as a result of informal dissemination of improved land and water management practices. Such informal dissemination can go far towards enabling scaling up and replication, since once they are introduced many of the project's activities depend on community participation for their success rather than on the private sector or formal financing.

B.3. Project/programme description (max. 2000 words, approximately 4 pages)

Define the project/programme. Describe the proposed set of components, outputs and activities that lead to the expected Fund-level impact and outcome results. Components should reflect the project/programme level outcomes.

This should be consistent with the financing by component in section C.2, the results and performance indicators provided in section E.5, and the implementation timetable in annex 5.

Referring to the feasibility study, describe why this set of interventions was selected instead of alternative solutions and how the project/programme can help unlock the needed support in a sustainable manner. Also identify trade-offs of the selected interventions, if applicable.

For Enhanced Direct Access (EDA) proposals and projects/programmes with financial intermediation (loans or on-granting), describe the selection criteria of the sub-project and types.

The proposed project will significantly enhance the resilience of the target populations' livelihoods to climate change impacts. The proposed interventions will enhance the resilience of interventions in the government's ongoing SLM program through an integrated package of activities and scale up the program while targeting the watersheds and communities that are most vulnerable to climate change. Figure 4 below indicates areas of the country that need SLM interventions, those that have already received support and areas that will receive support for the first time in RLLP.

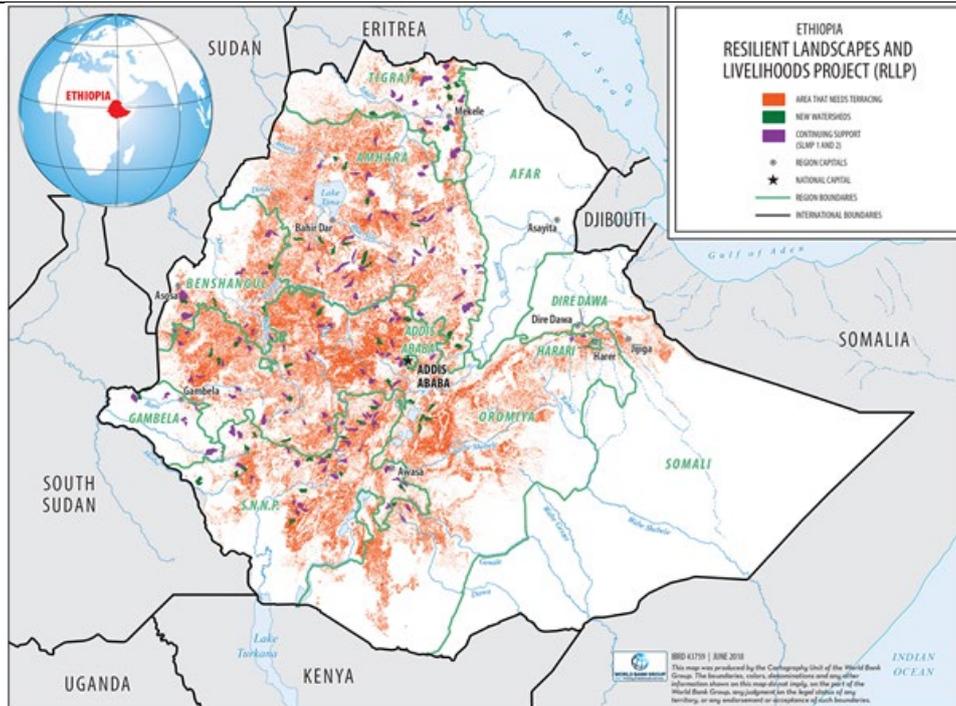


Figure 4 Watersheds mapped by areas needing SLM treatment

Project interventions include soil and water conservation (SWC) structures, reforestation and assisted natural regeneration, as well as low-emission and climate-resilient agriculture practices. The scaling-up of SLM for climate change adaptation and mitigation will be complemented with (i) transformational investments in income opportunities, resilient livelihoods, and the productive value chains associated with SLM, designed to strengthen incentives for communities to maintain restored landscapes; (ii) Cofinance for the promotion of low carbon household energy solutions; and (iii) land tenure.

The RLLP will be implemented through four integrated components: 1. Green infrastructure and resilient livelihoods; 2. Investing in institutions and information for resilience; 3. Rural land administration and use; and 4. Project management and reporting. Taken together, the activities in these components will achieve the project's objective of creating resilient landscapes and livelihoods for vulnerable rural populations in Ethiopia. Component 1 forms the core of the project in that it includes the activities directly implementing sustainable land management and agricultural practices. Component 1 also includes cofinanced activities addressing household energy services. These activities are essential to change the development pathway of rural Ethiopia to one in which land use is climate resilient. Non-sustainable use of biomass for cooking is one of the main drivers of deforestation and degradation in Ethiopia. The key interventions proposed in national policy include improved land use, diversified bioenergy options for cooking, and improving the efficiency of fuel production and use. The Environment Policy also makes the link between sustainable land management and controlled harvest of forest resources, with specific actions proposed including the promotion of technologies to reduce the use of fuelwood. In short, if cooking practices are unchanged then unsustainable harvesting of wood for fuel will continue, undermining progress in resilient land use made through the introduction of sustainable land management and agriculture.

Component 2 will create institutions and build capacity that will enable the interventions introduced in Component 1 to be sustainably implemented even after watersheds graduate from project-based support. Component 3 deals specifically with the barrier of weak tenure rights. The provision of security of tenure to smallholder farmers is essential to motivating to implement the new practices that will be promoted by RLLP. Without clear tenure and

strong land use planning it is likely that interventions introduced by the proposed project will be abandoned once project support ends. Finally, project management activities are covered by Component 4.

This integrated package of activities is the result of the extensive experience gained in previous projects and is essential to achieving paradigm shift. In order to achieve catalytic impact, it is essential to address all the root causes of land degradation, which include (i) poor cropland management practices, (ii) rapid depletion of vegetation cover, (iii) poor livestock management, and (iv) an insecure land tenure system. This approach grows out of the project's theory of change: by delivering more productive, secure and resilient livelihoods to local communities and by establishing the institutional framework needed to support maintenance of restored landscapes over the long term through watershed associations and local governments, the RLLP will lead to a durable shift towards SLM in the degraded watersheds of the Ethiopian highlands. A piecemeal approach in which only some of the drivers of degradation are addressed might lead to temporary, local improvement but would not lead to a sustained, widespread shift towards resilience for poor Ethiopian farmers.

Scale of the project, identification of targeted project area and beneficiaries

In terms of the scale of the project, the World Bank is confident that the benefits of implementing the interventions included in the project at the relatively large scale proposed outweigh the risks. A number of factors mitigate these risks, key among them being that the project builds on experience gained by the World Bank and the Federal Democratic Republic of Ethiopia during previous and ongoing projects. The proposed project benefits from the lessons learned over many years of projects aimed at sustainable land management, poverty alleviation and increasing the sustainability of agriculture in Ethiopia, and in particular the SLMP projects. These lessons led to the creation of the institutions that RLLP will build upon such as bottom-up watershed planning and self-help groups as well as the approach to CSA described in Annex A.3 in which a number of packages of activities are combined to achieve the triple goals of adaptation, mitigation and livelihood development.

For the Executing Entity, RLLP activities will come on top of activities with a budget of \$316 million that are already disbursed or committed for SLMP, which are managed or coordinated by MoA. For both the sums already spent or committed and for the co-financing the World Bank provides to RLLP, the World Bank has conducted risk analysis and identified mitigation actions that resulted in the decision by the World Bank to commit its own funds to the project. The valuable experience gained during implementation of SLMP-II, as well as the significant Recipient-executed and Bank-executed resources allocated in the past five years for coordination and capacity building efforts are expected to be instrumental to improve or identify viable measures to address all the risks.

Total needs were a major consideration in deciding on the scale of the proposed project. Soil degradation is an ongoing problem that is becoming more severe with every passing year. There are significant costs related to inaction – the longer we wait to address the problem, the worse it will get, and the more expensive it will be. To achieve sufficient momentum for scaling up and replication, countrywide implementation is essential. The targeted watersheds for this project were selected with inter-regional equity in mind. A total of 210 major watersheds are included in RLLP, averaging approximately 10,000 hectares each. Out of these, 135 watersheds are those already targeted by SLMP-I and II. In these watersheds RLLP will implement only innovative climate resilient activities that were not included in SLMP. 57 watersheds included in RLLP are new to the implementation of (SLM) measures. The process for the selection of these new watersheds to be targeted by the project is summarized in Section E.4.1 and described in full in Annex A.1.

In order to achieve the aims of the project – achieving restored, productive and low emission landscapes, the project will work with the communities that are using these landscapes. Hence, beneficiaries are selected at the community level and the direct beneficiaries are individuals who are living within a project watershed. The members of these communities are vulnerable smallholder farmers, who are very sensitive and highly exposed to climate change impacts. The total population within the project area is 4.2 million people or 834,000 households (with an average of 5 persons per household). Evidence based data driven implementation and planning will ensure that

interventions benefit smallholder farmers. Detailed bio-physical information for new watersheds, including individual landholdings, will be collected during the Multi-Year Plan (MYP) preparation of each watershed. Local level participatory land use planning teams at woreda and kebele levels would ensure that interventions benefit the smallholder farmers. The baseline study report for 90 watersheds of SLMP II found that the average land holding was only 1.338 ha. Agro-ecologically, watersheds above the altitude of 2300 meters and lowland areas between 500 and 1500 metres, have an average land holding of only 0.83 ha and 2.082 ha respectively. Furthermore, about 4.2% of the households have no land at all (3.5% of male and 6.5% of female headed households), 10.6% have less than a quarter of a hectare and 21.9% less than a hectare.

The experience of previous phases of the project has shown that there is a high willingness to participate by populations of the proposed intervention areas. The World Bank has tracked community contributions during the second phase of SLMP implementation. Translated into monetary terms, the cumulative community contribution in the four budget years from 2014/15 until 2018/19 was 23.5% of the total financial utilization of the project, equal to about USD 27 million. The most important contributions by the population were in the implementation of soil and water conservation measures on both communal land and farmland and community forest management.

The project components and activities are described below. Implementation will be guided by the recommendations and supporting studies that comprise the feasibility study. These documents provide guidance on which technology alternatives should be selected depending on local circumstances. Quantitative information on numbers of beneficiaries and areas benefiting from each activity, as well as a breakdown of funding between GCF and co-finance is provided in the detailed budget in Annex K.1.

Component 1. Green Infrastructure and Resilient Livelihoods

This component will greatly increase the adaptive capacity to climate change of the target population by scaling up proven sustainable land and water management practices. These practices will be introduced to rural smallholders and communities in watersheds vulnerable to climate variability and change, recurrent drought and floods and land degradation. Three complementary approaches form the core of this Component: (i) land restoration through sustainable land management, predominantly targeting communal lands, in which physical and biological interventions are made to prevent erosion and restore degraded land; (ii) a standardized approach to low-carbon resilient agriculture, which targets private lands; and (iii) support for income opportunities and resilient livelihoods, which is designed to provide incentives for maintaining restored landscapes. The project will work through government development agents in the Bureaus of Agriculture at the local level, which will mobilize and support communities, providing them with continuous training.

This component will complete the adoption of Sustainable Land and Water Management (SLWM) practices by rural smallholders and communities under MYDPs in SLMP-II watersheds, and it will scale up these proven interventions to 57 additional watersheds (average 10,000 ha each) that are vulnerable to climate variability and change, recurrent drought and floods, and land degradation. Activities will include financing SLWM interventions on communal and individual lands (with differentiated levels of community contribution), as well as supporting infrastructure such as green corridors linking fragmented forests, and community roads designed to optimize water harvesting. Proven SLWM practices that will be implemented include: soil and water conservation infrastructure such as terraces, water harvesting trenches, check dams, small reservoirs, and other civil works; soil fertility and moisture management; assisted natural regeneration, enclosures plus livestock land use rationalization, intercropping, low tillage, gully reclamation, establishment of grazing corridors, watering points and wells, and silvo-pastoral management strategies. Government Development Agents (DAs) in the Bureaus of Agriculture will mobilize and support communities and receive continuous training to ensure high-quality advice and extension services.

The specific technological solutions implemented under Subcomponent 1.1 and 1.2 in each watershed will be determined using a participatory community-based approach. The approach used is described in the Community Based Participatory Watershed Management Guideline^[1]. The community-based participatory approach will identify the most appropriate technologies that respond to the unique needs of each individual watershed included in the RLLP. This approach will result in a number of benefits, including improved community ownership and engagement, as well as ensuring that expected results are achieved and sustained. More information is provided in Section F.2.

During the participatory planning communities first present the problems they have (problem analysis) and depending on the availability of labor and finance they prioritize interventions based on the Community Based Participatory Watershed Development Guidelines (CBPWDG). Once prioritized and agreed the plan is approved by woreda responsible office (office of Agriculture). The procedures are clearly presented in the Community Based Participatory Watershed Development Guideline, excerpts of which are provided in Annex A.2

The objectives of this component will be achieved through the implementation of the following sub-components: (i) Land restoration and watershed management; (ii) Climate-smart agriculture; and (iii) Livelihood diversification and connections to value chains.

Sub-component 1.1 Land Restoration and Watershed Management

Sustainable Land Management activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 55.9 million) and by GCF in watersheds identified for GCF funding (budget of USD 100 million).

Afforestation-Reforestation-Green Corridor - Activities will be funded by IDA and MDTF only in watersheds identified for IDA funding (budget of USD 1 million).

This sub-component will focus on the implementation of land rehabilitation measures and establishment of green infrastructure through biophysical land and water conservation measures. These measures are required primarily for the rehabilitation of communally-owned degraded forest, pasture and woodlands, but also for privately cultivated lands, as well as to enable and maintain agricultural production in harsh climate conditions which are exacerbated by climate change. One key objective of this sub-component will be to create benefit streams to the communities in the targeted micro watersheds from increased ecological services and land productivity, mainly through productive use and management of landscapes resources. In addition to the proven practices applied during SLMP-II, this sub-component will also introduce the establishment of green corridors, which will further reduce erosion, enhancing watershed restoration, and increase ecological connectivity.

The objective of the sub-component will be achieved through biological and physical conservation measures that ensure reduced surface run-off and soil erosion, as well as improved land productivity, resulting in enhanced crop and livestock production. The following activities will be supported:

- *Soil and water conservation measures on communal and privately cultivated lands:* biological and physical soil and water conservation measures/practices such as construction of terracing, check dams, water harvesting (e.g. trenching), reseeding, re-vegetating, etc. will be implemented on degraded communal and farmlands;

- *Gully rehabilitation:* Cost efficient biophysical gully restoration techniques such as sandbag check dams, sediment storage dams and gabion-check dams will be applied. Productive use and management of the rehabilitated gullies will be supported, such as for forage, fruit and fuel wood production;
- *Establishment of green corridors:* Planting suitable, preferably native, tree species along rivers/streams and all-weather roads connecting forest patches in the watersheds. Post plantation management support including tending, hoeing and soil moisture conservation will be carried out. Green corridors will also be established along gully offsets to ensure stability and productive use of the land;
- *Area closure management and use:* assisted natural regeneration through restrictions on free grazing, enrichment planting, soil fertility improvement and moisture retention will be implemented in communal areas and/or privately managed degraded bush and woodlands. Cost efficient management practices of enclosures will include supporting local communities in the preparation and execution of participatory use and management plans of enclosed areas, including forage cut-and-carry arrangements;
- *Establishment of plantation blocks:* Reforestation and afforestation of degraded forest and shrub/bush lands with a diverse range of tree and shrub species that can be used as a source of food, feed and energy, and enhance fertility of the soil. Planting of appropriate tree seedlings including economically valuable species, and post-plantation management practices such as tending and watering in moisture stressed areas, hoeing and weeding during early stages will be carried out to ensure survival of the planted seedlings; and
- *Enrichment of degraded pasture and rangeland:* Planting and reseeding of appropriate forage species including fodder crops in degraded pasture and rangelands to increase productivity and improve the value of feed for grazing animals. Management of unpalatable invasive species will also be undertaken in pasture and rangelands to ensure optimum forage production.

Suitable rehabilitation interventions for each micro-watershed are determined based on the particular agro-ecological conditions and incorporated in a MYDP, developed through a participatory process, utilizing the technical parameters and procedures established in the Community Based Participatory Watershed Development Guidelines (CBPWDG, 2005) developed by MoA, and currently being updated. MYDPs already exist for SLMP-II watersheds, but they will be developed under the RLLP for the watersheds that have not yet been addressed.

Supported by the Zonal, Regional and National Platforms (see details in Annex 2), implementation of MYDPs is undertaken jointly at the woreda and kebele levels through the Woreda Watershed Development Committee (WWDC), the Kebele Watershed Development Committee (KWDC), and the beneficiary communities. Together with the Development Agents (DA) and Community Facilitators, the WWDC and KWDC assist communities in: (i) developing annual work plans and budgets for submission to the Regions for endorsement and integration into the Regions' work plans and budgets; (ii) facilitating community participation in watershed planning and rehabilitation; (iii) identifying training needs; (iv) monitoring and evaluation; and (v) dissemination of experiences and results. This sub-component will also provide resources for local expertise to be contracted to provide technical assistance to WWDCs, KWDCs and beneficiary communities in planning and implementing their SLM interventions. The operational details for the planning, design, and implementation of MYDPs will be planned during implementation. A guideline has been developed that will be used for this: "*Exit Strategy and Performance Assessment for Watershed Management (ESPAWM) – A Guideline for Sustainability*" (see Annex L.3.).

The alternative technologies and practices selected for Sustainable Land Management are:

- Physical soil and water conservation measure on farmlands
- Physical soil and water conservation measures on communal lands including degraded hillside, shrub land and pastureland
- Gully control measures including gully wall reshaping, check dam and retaining wall construction
- Pitting and planting of multi-purpose trees on degraded lands
- Model plantation blocks with native tree species

Additional alternative technologies and practices selected under this sub-component include:

- Afforestation
- Reforestation
- Green corridor creation
- Multiyear development plans
- Watershed management and use plans
- Watershed user associations

Sub-component 1.2 Climate Smart Agriculture

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 18.5 million) and by GCF in watersheds identified for GCF funding (budget of USD 15 million).

Interventions under this sub-component will aim at enhancing the livelihood resilience of beneficiary households through Climate-Smart Agriculture (CSA) interventions in all eligible micro watersheds assisted by the project. The improved adaptation of restored watersheds to variable rainfall patterns and adverse climatic events, combined with reduced degradation-related risks (achieved through sub-component 1.1), will provide suitable conditions for beneficiaries to adopt improved, climate-smart farming practices and diversify and/or intensify their current production systems. For this, technical and financial assistance will be provided to stabilize soils and increase fertility; improve water retention, harvesting and infiltration; increase biomass (and carbon) accumulation; and promote the adoption of climate-smart tillage and production practices in farm plots and home gardens. The introduction of such practices is needed to ensure agricultural productivity in coming decades given expected climate change impacts as described in section C.2.

This sub-component will build on the achievements of sub-component 1.1, such as improved water run-off retention and infiltration, gully and degraded hillside stabilization, and enhanced biomass production. This connection to the biophysical restoration of the landscape is important, as it will help ensure that unsustainable agricultural practices do not reverse prior restoration measures. In this way, agricultural activities become fully integrated into the watershed/landscape restoration approach and contribute towards the goal of climate resilient watersheds. The ongoing pilot of CSA within SLMP-II and lessons from international experience indicate that CSA cannot be achieved by a single measure or practice. In order to achieve the triple wins of adaptation, mitigation and increased production, technical and financial assistance will be provided to implement context-specific packages of CSA activities. The primary set of technologies for CSA that have been selected for use in the project are described in the manual for Climate Smart Agriculture (Annex A.3) (see also Section F.2 Technical Evaluation for more information). The following CSA activity activities are based on the manual for CSA which outlines 4 work/activity packages, will be supported under this sub-component:

- *Farm water and soil moisture management (based on Work/Activity Package 1 of CSA manual):* This will include in situ soil moisture management practices such as improved tillage, mulching/permanent soil cover and water harvesting including construction of cut-off/on drains and road water harvesting. Provision of improved farm tools/machineries for moisture conservation tillage will be considered under this activity;
- *Integrated soil fertility and soil health management (based on Work/Activity Package 2 of CSA manual):* Various soil fertility management practices such as improved compost making including bio-slurry, vermi-compost and manure management (including bio-digestors); lime and gypsum application for acidic and alkaline soils respectively; promotion of tree-food crop-livestock systems (agro-forestry practices); and crop rotation and legume intercropping will be integrated as a package and promoted based on local conditions and farmers indigenous knowledge and commitment;
- *Crop development and management (based on Work/Activity Package 3 of CSA manual):* Access to better performing crops (drought and disease resistant) will be supported based on local-level adaptive research

and crowd-sourcing by farmers over a wide range of crop varieties (both local and improved cultivars). Integrated pest and disease management, including post-harvest management, will be implemented to minimize crop yield losses. Productive use of increased soil moisture through production and management of high value crops, such as vegetables and fruits, will also be part of this activity package. Improved farm tools and machinery such as line planters, tillage and harvesting equipment will also be tested to improve the efficiency and effectiveness of the cropping system; and

- *Environmentally-friendly livestock production through feed development and management (based on Work/Activity Package 4 of CSA manual)*: High quality and quantity forage in pasture and along farm boundaries, gullies and back yards will be a priority to minimize dependence on crop residue as livestock feed, and to ensure increased use of biomass for soil fertility improvement. Efficient use livestock feed resources through feed treatment and improvement of feeding troughs will also be implemented to reduce losses. Appropriate integration of agro-sylvo-animal husbandry practices will be introduced at the homestead level based on the needs of local farmers and the suitability of local conditions. Practicing an integration of multi-purpose food and tree cropping with livestock rearing at the homestead can improve the fertility and organic matter content of soils and increase crop yields and household food security.

CSA interventions under RLLP will be implemented in micro-watersheds that have already been supported with landscape restoration during SLMP I and II. The following set of criteria was used to select eligible micro-watersheds: (i) at least 75 % of the watershed restoration plans completed; (ii) community agreement on controlled grazing enforced; (iii) forage development partly implemented; (iv) farmland covering more than 50 % of the micro-watershed area; (v) access to functional farmers training centers (FTCs); (vi) adjacent to SLMP-II CSA pilot watersheds; (vii) local knowledge or traditional practice of multi-cropping system; and (viii) commitment of community and kebele watershed teams.

Consistent with existing limitations, the operational unit for CSA interventions in eligible micro-watersheds will be groups of organized farmers and their corresponding contiguous farm plots. The number of groups and farm plots will be determined during the planning phase based on the budget allocated to the woreda for CSA. 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 the Common Interest Groups (CIGs) promoted by AGP, which will prepare results-oriented subproject proposals, integrating packages of goods, small works, services and/or operating costs) for RLLP financing. The project will provide required input to the CSA interest groups to improve efficiency of the farming practice. The operational procedures –including procurement methods--for the implementation of the CSA subcomponent of the project are included in the existing CSA Field Manual, developed by SLMP-II and to be updated for RLLP.

CSA is knowledge intensive and entails moving toward an agro-ecological approach, but these changes are necessary to increase resilience to climate change. Project practitioners will therefore need to extend their support to beneficiaries beyond the planning phase and provide technical assistance throughout the entire adoption cycle. The workload of the local technical unit will therefore include resources to: (i) conduct periodic visits to the plots of farmers implementing CSA practices, (ii) establish demonstration or testing plots, and (iii) organize and conduct dissemination activities such as field days and farmer exchange visits. Equally important, the regional structure should be capable of providing technical backstopping to DAs through periodic joint field visits, on-farm refresher training, as well as assistance in planning and conducting demonstration activities.

CSA technology testing and demonstration activities, as well as collaboration with research and academic institutions, will also be a part of CSA implementation. Farmer Training Centers (FTC) or similar structures will be identified and utilized at the watershed level for these activities, while contributions by research and academic institutions for the identification of appropriate technologies and practices will be implemented through the establishment of a CSA Innovation Platform.

The alternative technologies and practices selected are:

- Soil moisture management including drainage and cutoff drains in micro-watersheds
- Agroforestry
- Disease and drought resistant crops
- Improved farm machines/tools (handheld harvester, ripper, line planter, mechanical weed slasher)
- Compost making
- Organic/biofertilizer
- Improved livestock feeding troughs including feed treatment materials

The RLLP promotes Climate Smart Agriculture, including the use of mulch, cover crops and minimum tillage, which also seeks to minimize the application of agrochemicals. The combination of CSA activities and the implementation of the integrated pest management plan included in the ESMF will reduce vulnerability to pest and disease impacts. The resulting improved crop production together with the provision of high-yielding and disease tolerant seeds will support efforts to minimize the use of pesticides and agro-chemicals in the project area.

RLLP resources will not be used to purchase pesticides, herbicides, biocides, or GMO and Patented Hybrid Seeds.

Sub-component 1.3 Livelihood Diversification and Connections to Value Chains

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 6.1 million) and by GCF in watersheds identified for GCF funding (budget of USD 28 million). Activities for the promotion of high performing cookstoves will be funded only by IDA and MDTF in watersheds identified for IDA funding (budget of USD 0.5 million). No GCF funds will be requested for activities related to the promotion of high performing cookstoves.

This sub-component includes innovative activities that will enhance the sustainability of the resilient, improved livelihoods created as a result of the activities in sub-components 1.1 and 1.2. The generation of sustainable improved incomes for the vulnerable smallholder farmers targeted by the project will enable them to maintain the rehabilitated watersheds. Without the activities in this sub-component there is a risk that poverty will lead the beneficiaries to return to previous, unsustainable practices after the project ends, reversing the gains made through the introduction of sustainable land management and climate smart agriculture.

The activities include advisory services and investment to improve access to and implementation of climate resilient livelihood diversification. These activities will help address the issue of landless/jobless youth/women and the resulting increased stress on the natural resource base and its potential to reduce climate risks. A number of potential interventions have been identified. Examples include support to women-managed local enterprise development, vocational training, processing equipment and CSRPs, facilitation of access to markets, technology and trade and a suite of other initiatives to incentivize private-sector engagement. It will also finance activities that facilitate private sector engagement in RLLP-supported value chains directly or through primary cooperatives and/or coop unions, as well as direct investment in landscape restoration through PES, CSR or volunteer/good citizenship. In addition, this sub-component will provide small, seed-fund grants to SHGs, CIGs and/or WUAs to launch or expand productive, processing and storage activities, based on an analysis of what the markets will purchase, and therefore what will increase incomes of households and sustainability of the rehabilitated watersheds. Finally, the WB will support co-financed activities aimed at creating a market for improved cookstoves (funding from GCF is not being requested for this activity). Non-sustainable use of biomass for cooking is one of the main drivers of deforestation and degradation in Ethiopia. If cooking practices are unchanged then unsustainable harvesting of wood for fuel will continue, undermining progress in resilient land use made through the introduction of sustainable land management and agriculture. Reducing demand for fuelwood is critical to maintaining restored landscapes in

project communities. In addition, as heating and cooking efficiency improves, use of manure and crop residues for cooking and heating decreases, allowing these materials to be used on fields to enhance soil fertility.

MoA has drafted eligibility criteria for choosing watersheds and commodities eligible for value chain. For example, the followings are criteria for watershed selection: Sense of ownership of communities' watersheds managing team. i.e., Capacity, experience and commitment of (CWT, KWT, WTC &WSC,). - Watersheds aligned with GIZ-SURED support. - Existence of other private sector support programs. -Rehabilitation status of watersheds: coverage area of rehabilitated land in watersheds; soil fertility that is suitable for high value commodities; availability of alternative water sources. - Accessibility to all weathered roads and other infrastructure development. - Accessibility for Market linkages and reliability of commodity supply. - Accessibility to inputs providers, extension services deliveries and financial institutions. - Widely existence of proactive community and lead farmers (MHH and FHH) to accept for new innovations, technology, etc. – Whether RLLP is providing support for CSA. -Unemployment status of the community/ies within the watersheds.

RLLP is only (a) providing in-kind support such as warehouses and equipments and (b) organizing awareness, training and workshops for various groups. No sub-loans or sub-grants will be made to any groups or individual beneficiaries.

Innovation for climate resilient livelihood diversification and private sector development

These activities will focus on private sector development (PSD) in RLLP rehabilitated community watersheds. Product processing and bulking capacity will be developed that will enable sustainable, environmentally friendly livelihoods, thus increasing incomes, which in turn will lead to the maintenance of rehabilitated watersheds and improved food security in the face of climate change. Without appropriate infrastructure and facilitated linkage of the private sector, newly developed livelihood interventions will diminish and eventually fail, causing households to revert to previous harmful practices and removing the incentive for maintenance of rehabilitated climate-smart watersheds, leaving them exposed to risks driven by climate change. If watershed communities produce high-quality, semi-processed products for bulk purchase by the private sector, they will encourage the private sector to go the “last mile” to these watershed communities even though lower-quality, unprocessed and unbulked commodities might be closer at hand.

Processing Equipment and Training: Activities will support the shared purchase of and training on key agricultural processing equipment, which will increase the value of crops produced through climate smart agriculture (CSA) and livestock products produced through intensive, environmentally friendly methods by watershed communities/households. Such equipment may include the following: Forage processing mills, grain threshers, weighing scales, grain mills, processing sheds, dairy processing equipment, poultry and egg processing equipment, bamboo processing equipment and tools, and vegetable storage/transport containers.

Heavy equipment is not included in the list of eligible equipment. The use and maintenance of eligible equipment is delineated in the bylaws and governance structures of CIGs, cooperatives, self-help groups, female groups to which equipment may be made available.

Community Storage Receipts Programs: The project will foster the development of community storage receipts programs (CSRPs) in RLLP rehabilitated watersheds by building warehouses or other types of storage facilities and training community organizations to develop and maintain CSRPs. One of the major barriers to the implementation of resilience building measures by farmers is lack of cash. Once the project is completed and concessional finance

is no longer available, farmers will need cash in order to be able to continue practices introduced by the project such as the use of improved seeds, improved farm tools, fertilizer and other inputs. The CSRPs will provide immediate cash to poor farmers, improving their food security and ability to pay for other necessities as well as allowing them to improve productivity by investing in agricultural inputs such as seeds, fertilizer and other inputs through their available income. The CSRPs approach will be managed by organized CIGs/Watersheds Associations or cooperatives which have legal personality to sign contracts, access loans from MFIs or FIs and management capacity as compared to fragmented farmers with weak management capacity and difficulty of accessing loans from MFIs or FIs due to lack of confidence, weak financial management and difficulty of collection/repayment, could not present collateral. Such initiative has never been tested under SLMP-1 and SLMP-2. But WB financed initiative such as the AGP initiated such approach using CIGs.

These CSRPs will store commodities in demand by the private sector that will be weighed and valued according to expected market price at the proposed time of sale and labeled accordingly. The producer will then receive a receipt for the commodity and 50% of the expected purchase price from the CSRPs manager, and the commodities will be stored carefully and properly until the time of sale. After the commodities are sold, the producer will receive the other portion of the proceeds based on the actual sales price and a small deduction for the cost of the service.

Crop and other value chain commodities will vary according to watershed conditions with primary commodities integrated in the Ethiopian Commodity Exchange Trading System such as coffee, sesame, red-kidney beans, white pea bean, green mung bean, chickpeas, soybeans, wheat, maize. The watersheds identified for interventions have agro-ecologies that are suitable for most of the commodities mentioned above. Additionally, domestic demand for teff, barely, fava beans, honey, and spices will inform the selection of value chains to be supported.

CLIMATE INDUCED RISK: The CSRPs will support the establishment of stores sufficient to mitigate temperature/moisture, frost due to climate change and related pests/insects, which might adversely impact the quality and value of the crops. CSRPs: These stakeholder groups will be overseen by the respective cooperative, union, or watershed user association which have legal standing in Ethiopia to sign contracts and access financing. CSRPs Management: Based on their legal standing and capacity, cooperatives, unions, or watershed user associations will manage the CSRPs. CIGs and SHGs will subscribe as members to participate in CSRPs schemes.

SLMP-I and SLMP-II EXPERIENCE: The CSRPs-related initiative was not tested during the SLMP-1 and SLMP-2. However, the Ethiopia Agricultural Growth Program (AGP) provides lessons and experience regarding CSRPs that have been integrated in the RLLP. Other programs such as the Ethiopian Commodity Exchange (<http://www.ecx.com.et>) have also generated relevant experience and capacity in SLMP-I and SLMP-II-supported watersheds

The cooperatives/watershed user associations and the CIGs will be responsible for developing the management and business structure of the CSRPs. Primary management responsibilities will be held by cooperatives or watershed user associations. The coops/watershed associations would set price that accommodates such price risks when designing their bylaws and marketing strategy. The CSRPs supports farmers to overcome their immediate problems, among others. The CSRPs is chiefly applicable to agricultural products which are subject to fluctuating price within the harvest and lean seasons. The System is an important and effective tool for creating liquidity and easing access to credit. It also offers additional benefits such as smoothing the supply and prices in the market, improving smallholder farmers' incomes, and reducing food losses. The system can play dominant role in the development of the overall agricultural sector, by permitting smallholder farmers to hold food back to the lean season, allowing them to access markets on more equitable terms, and enhancing the efficiency of the entire commodity chain. The CSRPs has legal personality and can enter into agreement with the farmers.

There will be a strong emphasis on the formation, strengthening of and support to activities of the CIGs under this sub-component because these semi-formal groups, which may transition to either primary cooperatives or enterprises, are currently the main community-level organizational unit used for AGP-2 activities, and they are governed by MoA-approved guidelines, including requirements for organization, planning and financing. This sub-component will provide resources for local expertise to be contracted to provide technical assistance to support beneficiary communities in forming CIGs, and in planning and implementing income-generating activities and investments to strengthen connections to local value chains.

In the co-financed support of livelihood diversification, emphasis will be given to the establishment of CIGs/SHGs for the production and marketing of improved cook stoves. These groups not only provide an alternative source of income, but they also deliver multiple co-benefits, including time savings for women and girls in fuelwood collection, health improvements through reduced household air pollution, and reduced pressure on local biomass resources through improved household energy efficiency. As heating and cooking efficiency improves, use of manure and crop residues for cooking and heating decreases, allowing these materials to be used on fields to enhance soil fertility.

Initial support for livelihood diversification and connections to value chains will target beneficiaries in watersheds that have already begun or completed implementation of their MYDPs, where support for CSA is being provided and support from AGP and/or other PS-oriented development activities will complement RLLP efforts. This will facilitate success at this pilot level and allow for any needed adjustments before scaling up these activities in later years of the project. In addition to SHGs and CIGs at the watershed and/or woreda level, stakeholders involved in this sub-component include primary cooperatives and their unions, Cooperative Agencies at various administrative levels, the Rural Saving and Credit Associations (RuSACos), private sector enterprises and their sectoral associations, and Woreda Offices of Agriculture, Water, Mineral and Energy. For the production of improved cookstoves, the Woreda office of Cooperative Promotion will: (i) support organization of CIGs/SHGs to produce energy efficient cook stoves and promote improved cook stoves (ICS) host demonstrations at local markets and other local level gatherings; (ii) through the Bureau of Energy, Water and Mineral, provide technical experts to conduct training for the producer groups; and (iii) provide beneficiaries/consumers support in establishing local channels of finance (such as traditional savings groups - *ekub*).

Potential maladaptation risks with initial commodity processing are mitigated through the design of the project. The project promotes sustainable land management on all land belonging to the target watersheds. Hence, even if agricultural production expands as a result of the development of markets for commodities, the expanded production will also use the climate smart agriculture measures that have been introduced. In addition, agricultural production on lands already in use will increase substantially, leading to a decrease in the need for new agricultural land. Land mapping (the cadaster will have information on agricultural land) as well as issuing land certificates will prevent uncontrolled expansion of agricultural land, as only those with land certificates will be eligible to participate in the market. Sustainable land management will ensure that there is no further deforestation in the targeted areas (which are already highly deforested and degraded). Furthermore, the establishment of green corridors and elimination of free grazing will contribute to the preservation of the non-agricultural land, while at the same time enhancing forest cover and preventing deforestation. RLLP will support SLM practices to limit free grazing in project areas including activity packages that address sustainable livestock production, through feed development and integrated agro-silvo-pastoral practices. The creation of information platforms and provision of technical assistance will also reduce the risk of maladaptation, as information and outreach will result in increased awareness and improvements in local livelihoods.

High-performing cookstove technologies

The activities supported were identified and selected based on the results of the study “Assessment of Household Energy Options in RLLP Intervention Areas” that is included as Annex A.4 to this proposal. The WB will support a

set of activities aimed at reducing the use of fuelwood, which is one of the major drivers of deforestation and degradation. Reducing demand for fuelwood is critical to maintaining restored landscapes in project communities. Activities include the establishment of improved cookstove production enterprises, provision of technical and business training to the enterprises, introduction of alternative fuels production including efficient charcoal production, and the creation of consumer awareness of the advantages of using improved cookstoves and new fuels. Details on the technologies that will be promoted and on awareness raising activities planned are provided in the assessment report of household renewable and energy efficient technologies options. The project will lead to the creation of viable businesses producing efficient cookstoves and consumer awareness of the benefits of using them, as well as encouraging rural saving groups to support improved cookstove purchases. The activities will be supported by the Regional Energy Bureaus, who will subsequently introduce similar activities to areas under their remit that are not covered by RLLP.

The alternative practices selected under sub-component 1.3 include support to:

- Common Interest Groups (CIGs)
- Climate resilient livelihood diversification including promotion of improved cookstoves, cultivating fruit trees, bamboo handicrafts, beekeeping, etc
- Self-Help Groups (SHGs)
- Cooperatives
- Unions
- Watershed User Associations (WUA)
- community storage receipts programs (CSRPs)
- Enterprises to manufacture, promote and sale fuel saving cookstove and alternative cooking fuels
- Formal and traditional saving groups for the purchase of RE/EE products

Component 2. Investing in Institutions and Information for Resilience

The objective of this component is to enhance institutional capacity and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the project area, both for the duration of the project and after project completion.

This component will build capacity at the local government level (woreda and kebele) for (i) planning and managing SLWM interventions, and (ii) managing the land certification process. This will include piloting of new technologies for information modernization at the local level, including the use of electronic tablets for gathering geospatial information, and the use of Unmanned Aerial Vehicles (UAVs – or drones) for land certification mapping. Tablets and UAVs will be the property of the project (i.e. MoA) and would be provided to development agents and the woreda focal persons in the project watersheds for mapping and monitoring. The device setup, training, and support provided will be tailored to meet the conditions and realities faced in field environment (i.e. off-line data collection, accessories (protective case, solar charger, etc.), guidance materials, technical and trouble-shooting support).

RLLP intends to monitor all watersheds using UAV. The current capacity within the PCU is classified as low to moderate and is improving. For example, under RLLP the addition of a database manager as key personnel to support data management. The use of UAV's is currently limited in Ethiopia due to GoE security concerns and the lack of a policy governing their use in general. The PCU with assistance from WB is currently supporting efforts to develop guidelines on the use of UAVs that would ultimately support monitoring efforts more broadly and with fewer restrictions. Despite the restrictions, to date the PCU has been a leader in the use of UAVs to support project activities as demonstrated by receiving permission to use UAVs to collect imagery for parcel demarcation under the land administration component. The PCU will need to further improve the quality and efficiency with which M&E data are collected and analyzed with additional expertise to manage the UAV monitoring component.

Support for policy development under this component will focus on the regulatory framework for Watershed User Associations (WUAs), community bylaws guiding land-use practices, and strengthening the Land Administration System. This regulatory framework, once established, will continue to support resilient land use after project completion. To strengthen the evidence base for sustainable land management decision-making, this component will include a bio-physical impact evaluation of SLWM interventions, to be conducted through a partnership arrangement between the MoA, the Water and Land Resource Centre of Addis Ababa University, and the Ethiopia Development Research Institute's Environment and Climate Research Center. This will complement a livelihoods impact evaluation of SLWM interventions to be conducted in parallel led by the Gender Innovation Lab of the World Bank's Africa Region. When completed, these evaluations will be available to interested parties in Ethiopia and the region wishing to institute or improve SLWM. This component will also provide resources to manage the knowledge generated through these and other assessments of SLWM, and to communicate the lessons learnt to a broad audience, including local governments and communities, relevant research institutions and Government agencies, as well as Development Partners.

This component's objectives will be achieved through the implementation of the following sub-components: (i) capacity building, information modernization and policy development, and (ii) impact evaluation, knowledge management and communication.

Sub-component 2.1. Capacity Building, Information Modernization and Policy Development

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 7.9 million) and by GCF in watersheds identified for GCF funding (budget of USD 16.15 million).

This sub-component will build capacity at local government level to implement RLLP, and to sustain SLWM interventions after watershed graduation from project-based support. To achieve this, the sub-component will finance accountants to support the head of the Woreda office of Agriculture (WoA) and a focal person in each participating woreda, and part-time community facilitators at the kebele level (5 community facilitators for in each major watershed). To help build the capacity necessary for an effective land administration system, this sub-component will also provide technical assistance for training in this field.

This sub-component will support information modernization to coordinate data collection and information sharing at all levels and under all components of the project so that this information is well organized, properly documented and accessible. As part of this effort, a data management plan will be developed that specifies how all data used or created during the course of RLLP will be documented, stored and otherwise managed. The use of electronic tablets to collect information on project activities and results, combined with appropriate survey and mapping software, will improve the quality and timeliness of data collection and reduce the effort needed to compile, review, and generate the necessary reports. This framework will facilitate access to information and support timely feedback to the local level.

This sub-component further supports the use of aerial vehicles (UAVs)/drones to generate high-quality and timely aerial imagery data to support planning, monitoring, and land certification. Under this initiative, the drones will be operated by several teams of trained operators who will travel to the project sites. During the course of RLLP each micro-watershed will be re-visited twice each year at appropriate intervals to generate visual and multi-spectral images of the program areas. At each stage the processed imagery will be shared with the woreda and local field staff for the purpose of assisting in planning, monitoring progress and updating implementation plans. The data and materials produced will also be used to support M&E and will serve as a source of information and data for subsequent analysis. Detailed technological specifications and budget have been elaborated including the technical requirements for the drones, all associated equipment and spare parts, operating costs for the duration of the project. The use of the drones is intended for the collection of information and data that will be available for long-

term use and for project planning and monitoring. The project will work with the Information Network Security Agency (INSA) and the Ethiopian Aviation Authority to ensure all necessary permits are obtained.

Policy development under this sub-component will focus on the regulatory framework required for the establishment of Watershed User Associations (WUAs), crucial for sustainability of SLWM interventions, frameworks for reward and incentive schemes such as Payments for Environmental Services (PES), as well as community byelaws guiding land-use practices, and strengthening of the Land Administration System.

In developing the framework for WUAs, the Project will work closely with regional governments for its application in establishing WUAs. This work will commence with reviewing of the environmental legislation that relates to the use and management of Ethiopia's natural resources (soils, forestry, grassland, water, wildlife, etc.). The manual for CSA will be used to proceed and enhance this activity. RLLP will give high attention to the opportunities of engagement of private sector (PS) in all development activities of the project. The first objective of PS engagement in RLLP is, to attract the PS to invest in RLLP interventions. The second objective is to create and increase income streams & diversified livelihoods for the communities in a sustainable manner through the promotion of inclusive business and value chain/partnership relationship based on profitability principles.

Sub-component 2.2 Impact Evaluation, Knowledge Management and Communication

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 5.1 million). No GCF funding is requested for this sub-component.

Impact evaluations (IEs) will use rigorous research methods to look at specific interventions under RLLP, assess the contribution of these to development goals and provide robust evidence of SLM impact. Project funding will focus on the evaluation of bio-physical impacts, which will be conducted in coordination with a livelihoods impact evaluation to be led by the Gender Innovation Lab of the World Bank's Africa Region, financed separately. The bio-physical impact evaluation will examine the response of the environment to SLWM interventions, considering parameters such as peak and base surface water flows, groundwater levels and recharge rates, sediment loads, and remotely sensed information on vegetation cover and soil moisture. For the purposes of this evaluation, the project will extend the existing partnership between MoA, the Water and Land Resource Center of Addis Ababa University, and the Environment and Climate Research Centre of EDRI, and will aim to build new partnerships with relevant international research organizations. IEs are expected to be completed within the Implementation Period (five-years) and the MOA will procure service providers for such purposes. The IE's disclosure will be subject to WB's access to information policies.

In addition to the bio-physical IE and the livelihoods IE an evaluation of climate-smart agriculture will also be conducted. Due to the complexity of the evaluations the details of their implementation are still under development and will be further elaborated in the terms of reference, acceptable to the World Bank. Basic design of the IEs is expected to be as follows: the livelihoods IE is expected to involve random assignment. The biophysical IE will involve a 2-stage sampling where in the first stage a stratified selection of watersheds to be treated will be performed and in the second stage watersheds will be paired with a suitable comparison watershed (outside project watersheds). This is being done to increase the explanatory power of the evaluation given the large cost associated with each watershed monitored. The CSA evaluation is expected to follow a treatment-control comparison methodology and the potential for randomized assignment within the CSA micro-watersheds is being explored. In any case, the sampling of treatment and control will be randomized.

To build a solid and effective knowledge management system both for the project and the SLM program in Ethiopia, this sub-component will establish a geospatial knowledge platform that combines information from a variety of project and other sources and packages it in a format that is accessible to planners and stakeholders at the national, regional, and local levels. This activity will build upon the work being done by WLRC under SLMP II to

develop a web-based knowledge management system. By enabling farmers to improve their planning the platform will decrease their exposure to climate change related risks.

A strategic communication program will be developed and implemented under this sub-component to inform and mobilize communities, enhance project visibility and transparency among all actors, support efforts to scale-up SLM and CSA practices, and build support for the land certification program. Strategic guidelines for the implementation of the Knowledge Management and Communication (KMC) program have been developed following a rapid KMC needs assessment. The guidelines include viable options of knowledge management, knowledge sharing and communication with effective channels, techniques, tools and key messages that address the communication and knowledge management needs of beneficiaries, stakeholders, partners and actors at various level. While following those guidelines, implementers will have room to elaborate, modify and adapt additional communication and knowledge management interventions to meet the overarching goals and specific objectives outlined in this sub-component. The identified overarching goals are: 1) to build and coordinate a strong knowledge base contributing to the effective promotion, reporting and scaling up of SLM within Ethiopia; and 2) to inform and mobilize local communities, strengthen consultation/ participatory development models, and enhance transparency in program-supported activities. The specific objectives of the KMC program are to: a) Support scaling up efforts and adoption of SLM and CSA practices; b) Help evidence based planning and reporting through enhanced information flow among institutions and coordination of monitoring and evaluation; c) Enhance the program visibility among all actors thereby attract new development partners and insure the buy-in of the government; d) Sustain the outcomes of SLM practices through awareness raising campaigns. This includes relevant activities in components 1 and 3 such as land certification. The guidelines include means of verification to evaluate the effectiveness of the activities implemented within the KMC program.

Possible activities include:

- i. knowledge identification, capturing, validation and packaging annually to support scaling up efforts, build capacity of user groups, youth groups, DAs and FTCs (experiential knowledge, best practice and synthesis of explicit knowledge products from various sources such as the geo-spatial knowledge platform, the CSA Innovation Platform, model watershed, etc.);
- ii. strengthening and enhancing functionality of existing FTCs and SLM information centers at woreda level and establishing info centers in new woredas;
- iii. outreach activities (i.e. production of printed, audio and video materials to be used as supporting tools during workshops and events, and media tours for journalists and PR officers of relevant regional bureaus to show project results);
- iv. knowledge sharing/networking events (i.e. annual SLMP Knowledge fair); and
- v. advocacy activities to support private sector engagement, policy development and other key initiatives for RLLP effective implementation (i.e. organization of Stakeholders Workshops).
- vi. grassroots level behavioral change campaign targeted to major/critical watersheds, based on preliminary research to define appropriate media (drama, storytelling, etc.) and effective messengers (i.e. community/religious leaders) and gauged throughout the duration of the program through a mix of qualitative/quantitative research methods (FGDs, community level meetings, survey);
- vii. public information awareness activities on land registration and cadastral surveys, land laws and procedures and conflict resolution mechanism, and to explain the benefits of (formalized) rentals and unlock the blockage set by cultural norms, emphasizing that temporary land renting does not imply abandonment and formalized rental contracts do not result in land being expropriated.

Component 3. Rural Land Administration and Use

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 26.0 million). No GCF funding is requested for this component.

As indicated under the root causes section above, land tenure insecurity caused by frequent land redistribution in the past has encouraged farmers in Ethiopia to favor short-term exploitation of land resources over long-term conservation, contributing to land degradation and declining productivity. The objective of this component will be to strengthen the land administration system that secures tenure rights, optimizes land use, and empowers land-users to invest sustainably in productive landscapes. This component will be funded entirely by co-finance. No funding from GCF is being requested for this component. Refer to detailed budget (Annex K.1.).

Component 3 will provide security of tenure to smallholder farmers through Second Level Landholding Certification (SLLC) as an incentive to increase the adoption of SLWM technologies and practices. The on-going SLLC exercise at kebele level will be extended to all kebeles within the watersheds targeted by RLLP, with resources provided for orthophoto production and para-surveyors for field level data acquisition, and data encoders for office level data management. It will support the use of low-cost, fit-for-purpose surveying and mapping technologies including drone aerial mapping and mobile mapping using tablets as appropriate. Activities to be supported will include (i) orthophoto base map preparation, (ii) adjudication of land rights and demarcation of parcel boundaries on the field map, (iii) scanning, geo-referencing and digitization of parcel boundaries and attributing information, (iv) public display for validating parcel (shape and size) and landholders' information, (v) parcel map and Landholding Certificate preparation, production, authentication and issuance, and (vi) procurement of equipment, materials and consumables for cadaster and land registration activities. Matching funds to complete woreda level coverage of SLLC will be sought from State governments and development partners.

This component will also extend the on-going local-level participatory land-use planning exercise at the kebele level within the major watersheds in the RLLP. Technical assistance will be provided to support consultation workshops for land-use plan development at the kebele level and to connect these consultations to the larger land-use planning exercises underway at the regional and national levels.

This component will also support the rollout of the NRLAIS in RLLP woredas that do not overlap with other land administration support projects. In Gambella, the project will support the installation and roll out of the NRLAIS both at the regional and woreda levels, as none of the development partners have interventions in Gambella. NRLAIS will provide security, transparency, maintenance of the land information with enhanced data management functionality and usability at woreda level in an efficient, effective, spatially integrated and sustainable manner. It will also equip the regional and federal authorities with an adequate tool to produce and avail statistical data on rural land tenure and land use that facilitate evidence based monitoring and ensure a coordinated and consistent approach to the development of policies, legislations, standards, models and research to enhance sound land governance across the country.

At the woreda and kebele levels, implementation of this component will be undertaken jointly by the Woreda Office of Land Administration and Use (WoLAU) through the Kebele Administration Offices, the Kebele Land Administration and Use Committee (KLAUC), the Land Administration and Use DAs, and the communities. Field teams will be contracted, trained and deployed, each comprising a team leader, a para surveyor, a data recorder, a digitizer, and a Woreda GIS expert and a supervisor, to facilitate and undertake the field and office level land certification activities. Woreda and kebele land use teams will anchor the preparation of Participatory Local Land Use Plans. At the Regional and Zonal levels, the Bureau of Land Administration and Use (BoLAU) and related agencies will lead the implementation of this component of the project with support from the Regional RLLP PCU. At Federal level, the Land Administration and Use Department (LAUD) in the MoA will be the main focal point for

policy, planning, and implementation guidance to RLLP Regions and Woredas. A NRLAIS rollout support unit established at regional and federal levels will provide technical assistance for this activity.

Synergies with interventions on land administration support from other development partners have been identified. These include the Responsible and Innovative Land Administration in Ethiopia Project (REILA)¹⁶ being implemented by Finland and the Land Investment for Transformation Project (LIFT)¹⁷ being implemented by the UK Department for International Development (DFID). These two projects together with RLLP will spatially synergize efforts on the national roll-out of the NRLAIS and distribution of SLLCs. Further discussions with DFID will identify possible support to the Rural Land Administration and Use Department (RLAUD) to: (i) expend their economic empowerment interventions to adjacent RLLP woredas to maximize benefits of land certification; and, (ii) complete SLLC in kebeles outside of watershed boundaries in RLLP woredas. Close coordination with other development partners (e.g. GIZ, USAID) will build on experience from SLMP-II and will be ensured through the G7 Donor Working Group on Land.¹⁸

Component 4. Project Management and Reporting

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 11.5 million) and by GCF in watersheds identified for GCF funding (budget of USD 6.09 million).

The objective of this component is to effectively consolidate plans and budget, implement and report on project activities with due diligence and integrity.

This component will finance the operational costs of Regional Project Coordination Units (RPCUs) in MoA and Regional State Bureaus of Agriculture. In total, there will be 7 RPCUs – one in MoA and one in each of the regions in which the project will be implemented (Amhara, Oromia, Tigray, SNNP, Beneshangul/Gumuz, and Gambella). These RPCUs will carry out all fiduciary aspects of project implementation including financial management, procurement, environmental and social safeguards, Monitoring & Evaluation (M&E), sector coordination of investment targeting and policy harmonization, and donor coordination structures. The project will support a modernized M&E system for collecting, managing and analyzing activity data and achievements. A tablet-based system of data collection that incorporates tools for capturing spatially explicit activities and area treated will be integrated into the project-wide strategy for the modernization of information management outlined under sub-component 2.1. The enhancements and functionality incorporated into the M&E system will improve the quality and accuracy of data while at the same time serving as a platform for providing feedback to the local level on progress, which will support improved decision-making.

¹⁶ REILA II is a 4.5-year project with a total budget of € 7.81 million. The project aims to: 1) Improved regional LA and increased and certified land tenure security for land users (in 6 woredas in Benishangul Gumuz and 11 Woredas in Amhara region) and NRLAIS rollout; 2) Improved capacity for federal and regional LA for planning, management and coordination, and for accurate and efficient land surveying; and 3) Improved supply of skilled manpower to the LA sector.

¹⁷ LIFT operates in four regions (Oromia, Amhara, SNNR, and Tigray) with a total funding of £ 63 million. LIFT aims to support the Government of Ethiopia in the provision of map based land certificates to farmers and assist them to fully benefit from increased investment and productivity through the development of the rural land market and its supporting operations.

¹⁸ In 2013, the Governments of Ethiopia, the United Kingdom, the United States of America, and the Federal Republic of Germany announced an agreement to enter a **land country partnership** to work together to improve rural land governance for economic growth and to protect the land rights of Ethiopians. The partnership was envisioned to build on existing programs and serve as a vehicle for increased coordination and collaboration among the Government of Ethiopia and its development partners. Since then the WBG has been an active member of the G7 **Land Partnership** through its active operations managed under ENR portfolio such as SLMP, OFLP, and CRGE TA.

Reporting at the federal, regional, woreda and community levels will aim to ensure sound tracking of progress information (activity/output level results), to evaluate information from a variety of sources relevant to outcome-level results, and to promote learning and adaptive management. The outputs under this activity include: (i) implementation of a new Results Based M&E Plan based on clear guidance on what to collect and how to collect it (indicator protocols); (ii) a well-functioning MIS system; (iii) improved capacity of stakeholders in M&E; and (iv) improved quality of information collected.

Scale of the project, identification of targeted project area and beneficiaries

In terms of the scale of the project, the World Bank is confident that the benefits of implementing the interventions included in the project at the relatively large scale proposed outweigh the risks. A number of factors mitigate these risks, key among them being the fact that the project builds on experience gained by the World Bank and the Federal Democratic Republic of Ethiopia, acting through MoA, during previous and ongoing projects. The proposed project benefits from the lessons learned over many years of projects aimed at sustainable land management, poverty alleviation and increasing the sustainability of agriculture in Ethiopia, and in particular the SLMP projects. These lessons led to the creation of the institutions that RLLP will build upon such as bottom-up watershed planning and self-help groups as well as the approach to CSA described in Annex A.3 in which a number of packages of activities are combined to achieve the triple goals of adaptation, mitigation and livelihood development.

For the Executing Entity, RLLP activities will come on top of activities with a budget of \$316 million that are already spent or committed for SLMP, which are managed or coordinated by MoA. For both the sums already spent or committed and for the co-financing the World Bank provides to RLLP, the World Bank has conducted risk analysis and identified mitigation actions that resulted in the decision by the World Bank to commit its own funds to the project. The valuable experience gained during implementation of SLMP-II, as well as the significant Recipient-executed and Bank-executed resources allocated in the past five years for coordination and capacity building efforts are expected to be instrumental to improve or identify viable measures to address all the risks.

Total needs were a major consideration in deciding on the scale of the proposed project. Soil degradation is an ongoing problem that is becoming more severe with every passing year. There are significant costs related to inaction – the longer we wait to address the problem, the worse it will get, and the more expensive it will be. To achieve sufficient momentum for scaling up and replication, countrywide implementation is essential. The targeted watersheds for this project were selected with inter-regional equity in mind. A total of 210 major watersheds are included in RLLP, averaging approximately 10,000 hectares each. Out of these, 135 watersheds are those already targeted by SLMP-I and II. In these watersheds RLLP will implement only innovative climate resilient activities that were not included in SLMP. 57 watersheds included in RLLP are new to the implementation of (SLM) measures. For GCF financing, 40 watersheds out of 192 were identified based on their vulnerability to climate change¹⁹. The process for the selection of these new watersheds is described in full in Annex A.1.

In order to achieve the aims of the project – achieving restored, productive and low emission landscapes, the project will work with the communities that are using these landscapes. Hence, beneficiaries are selected at the community level and the direct beneficiaries are individuals who are living within a project watershed. The members of these communities are vulnerable smallholder farmers, who are very sensitive and highly exposed to climate change impacts. The total population within the project area is 4.2 million people or 834,000 households (with an average of 5 persons per household). Evidence based data driven implementation and planning will ensure that

¹⁹ Details of Co-financing from Government of Canada were not available during this analysis, hence 18 Watersheds supported by it were not considered

interventions benefit smallholder farmers. Detailed bio-physical information for the 57 new watersheds, including individual landholdings, will be collected during the Multi-Year Plan (MYP) preparation of each watershed. Local level participatory land use planning teams at woreda and kebele levels would ensure that interventions benefit the smallholder farmers. The baseline study report for 90 watersheds of SLMP II found that the average land holding was only 1.338 ha. Agro-ecologically, watersheds above the altitude of 2300 meters and lowland areas between 500 and 1500 meters, have an average land holding of only 0.83 ha and 2.082 ha respectively. Furthermore, about 4.2% of the households have no land at all (3.5% of male and 6.5% of female headed households), 10.6% have less than a quarter of a hectare and 21.9% less than a hectare.

Beneficiaries are categorized as direct and indirect. The direct beneficiaries are individuals who are living within a project watershed. The members of these communities are vulnerable smallholder farmers, who are very sensitive and highly exposed to climate change impacts. The primary beneficiaries of the project will be the rural households on degraded land, facing land tenure and water insecurity in selected watersheds. Indirect beneficiaries include: (i) communities adjacent to Project intervention areas adopting SLM and 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; (iv) recipients of capacity building at all levels of government, as well as in national partner organizations; and (v) communities outside Project areas benefiting from groundwater recharge, reduced flooding, and lower sediment loads, as a result of SLM interventions. Women will be specifically targeted to ensure that they fully participate in Project benefits through a variety of mechanisms, including: (i) required participation of women in Community Watershed Teams (CWTs), Kebele Watershed Teams (KWTs), Kebele Land Administration and Use Committees (KLAUCs), and Watershed User Associations (WUAs); (ii) provision of joint land certificates to married couples, and individual land titles for women in Female-Headed Households; (iii) promotion of women's participation in Common-Interest Groups (CIGs) for income-generating activities; and (iv) targeted support for the production and marketing of improved cook-stoves, bringing health gains and time-savings that benefit women in particular. Make note that beneficiaries for Income generating activities are selected by the community watershed teams. The team has criteria for selecting such as the beneficiary should be the poorest of the poor, able to contribute to the project, refrain from doing negative harm to environment for example degradation of forest through charcoal making.

The experience of previous phases of the project has shown that there is a high willingness to participate by populations of the proposed intervention areas. The World Bank has tracked community contributions during the second phase of SLMP implementation. Translated into monetary terms, the cumulative community contribution in the four budget years from 2014/15 until 2018/19 was 23.5% of the total financial utilization of the project, equal to about USD 27 million. The most important contributions by the population were in the implementation of soil and water conservation measures on both communal land and farmland and community forest management.

The project components and activities are described below. Implementation will be guided by the recommendations and supporting studies that comprise the feasibility study. These documents provide guidance on which technology alternatives should be selected depending on local circumstances. Quantitative information on numbers of beneficiaries and areas benefiting from each activity, as well as a breakdown of funding between GCF and co-finance is provided in the detailed budget in Annex K.1.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

Provide a description of the project/programme implementation structure, outlining legal, contractual, institutional and financial arrangements from and between the GCF, the Accredited Entity (AE) and/or the Executing Entity(ies) (EE) or any third parties (if applicable) and beneficiaries.

- Provide information on governance arrangements (supervisory boards, consultative groups among others) set to oversee and guide project implementation. Provide a composition of the decision-making body and oversight function, particularly for Enhanced Direct Access (EDA) proposals.
- Provide information on the financial flows and implementation arrangements (legal and contractual) between the AE and the EE, between the EE or any third party and beneficiaries. For EEs that will administer GCF funds, indicate if a Capacity Assessment has been carried out. Where applicable, summarize the results of the assessment.
- Describe the experience and track record of the AE and EEs with respect to the activities (sector and country/region) that they are expected to undertake in the proposed project/programme.

Provide a diagram(s) or organogram(s) that maps such arrangements including the governance structure, legal arrangements, and the flow and reflow of funds between entities.

Detailed Project Institutional and Implementation Arrangements

The organizational structure and arrangements acceptable to the World Bank for the implementation of the recently completed SLMP-II will be maintained and strengthened for the execution of RLLP. Implementation will be carried out at four levels: Federal, Regional (including Zonal), Woreda (district) and Kebele (sub-district). and decisions in the meetings are subject to MoA concurrence.

The National SLM Steering Committee, chaired by the State Minister responsible for Natural Resources Management in MoA, comprises high level representation from MoF, MoWIE, MEFCC and DPs. The Steering Committee is responsible for the following tasks in the SLM project: (a) providing policy guidance, oversight and overall supervision for project implementation; (b) reviewing and approving the consolidated annual work plan, budget and procurement plan; (c) reviewing and approving the annual implementation performance report, and overseeing the execution of any corrective actions that may be designed.

The National SLM Technical Committee is also chaired by the State Minister responsible for Natural Resource Management in MoA. It is made up of senior technical staff from institutions such as MoA, MoWIE, MoF, MEFCC, MoWCA (Ministry of Women and Children Affairs, the Ethiopian Institute for Agricultural Research (EIAR), Cooperative Promotion Agency, development partners supporting SLM projects or initiatives, and civil society organizations (non-governmental organizations) actively engaged in SLM activities. Generally, this body is responsible for providing technical advice to MoA on SLM. Specific to RLLP, this Committee will provide technical advice on the quality of implementation performance reports and special studies such as policy and legislative drafts, financial and audit reports, documentation of best practices, and M&E reports.

The SLMP Project Coordination Unit (PCU) at MoA, which is staffed by 33 technical and fiduciary staff, will continue to play the role of managing and facilitating the day-to-day implementation of the project. Specific tasks will include: (a) consolidating regional annual work plans, budgets and procurement plans; (b) facilitating and supervising implementation of work plans and corrective actions, safeguards instruments including management/mitigation plans; (c) processing and procuring works, goods and services; (d) monitoring overall implementation progress, safeguards instruments (and management/mitigation plans) and evaluating project impacts; and (e) preparing progress reports. The Unit will maintain a team of experts including a National Project Coordinator, procurement and financial management specialists, M&E expert and technical experts in diverse disciplines (including watershed management, agronomy, forestry/agroforestry, land administration/land use planning, knowledge management & communication, livelihoods, private sector development).

Regional and Zonal level

Implementation of activities on the ground is supported by, among others, Regional steering and technical committees. The Regional Steering Committees will be accountable and responsible for the execution of the annual work plans developed by the local level implementers in the regions. At the Regional level, the Bureau of Agriculture (BoA) and the Bureau of Land and Environmental Protection (BoLEP) will lead implementation of the project in close collaboration with relevant public institutions. Serving as the link between the Federal, Zonal and Woreda implementation entities, the BoA will review and consolidate annual work plans, budgets, procurement plans submitted by the woredas. It will also review and approve implementation progress reports (including M&E, financial, audits, safeguards, etc.) originating from the woredas. The project will finance a project coordinator, M&E expert, accountant and procurement officer per region to assist the BoA and Woreda Office of Agriculture (WoA) to implement the project on a day-to-day basis. Together, these will form a regional Project Coordination Unit for each of the six Regions in which the project will be implemented (including Amhara, Oromia, Tigray, SNNP, Beneshangul/Gumuz, and Gambella). At the Zonal level, the Zonal Agriculture Office (ZAO) will provide technical support, extension services and M&E to a group of Woredas under its jurisdiction. The ZAOs will coordinate with the WoAs to discharge their responsibilities. Moreover, RLLP shall provide opportunities to zonal implementing entities to participate in the implementation of activities, draw lessons from the project and support scaling up of SLM practices to wider landscapes. In addition to the existing government staff, RLLP will contract technical advisors for specific outputs (such as preparation of MYDPs and WMUPs, establishment of WUAs, and preparation of business plans for IGAs and value chain linkages) in 29 zones where RLLP will be implemented.

Woreda and Kebele levels

On-the-ground planning and execution of activities under the project will be undertaken jointly by WOA, the Kebele Watershed Development Committee (KWDC), Development Agents (DAs) and communities. Accountants will be recruited at woreda level to improve financial management capacities and reduce implementation risk. Thus, WoAs, KWDCs and DAs will be assisting communities in: (a) developing annual work plans and budgets as well as procurement plans for submissions to the BoAs for review and endorsement and integration into a Region's annual work/development plans and budgets; (b) facilitating and mobilizing community participation in watershed planning and rehabilitation; (c) undertaking awareness campaigns and training; (d) participatory monitoring and evaluation; (e) extension service delivery and dissemination of best-fit technologies and innovations, etc. Implementation of Component 3, Rural Land Administration and Use, will be undertaken jointly by the WoLAU through the Kebele Administration Offices, the Kebele Land Administration and Use Committee (KLAUC), the land administration and use DAs and the communities.

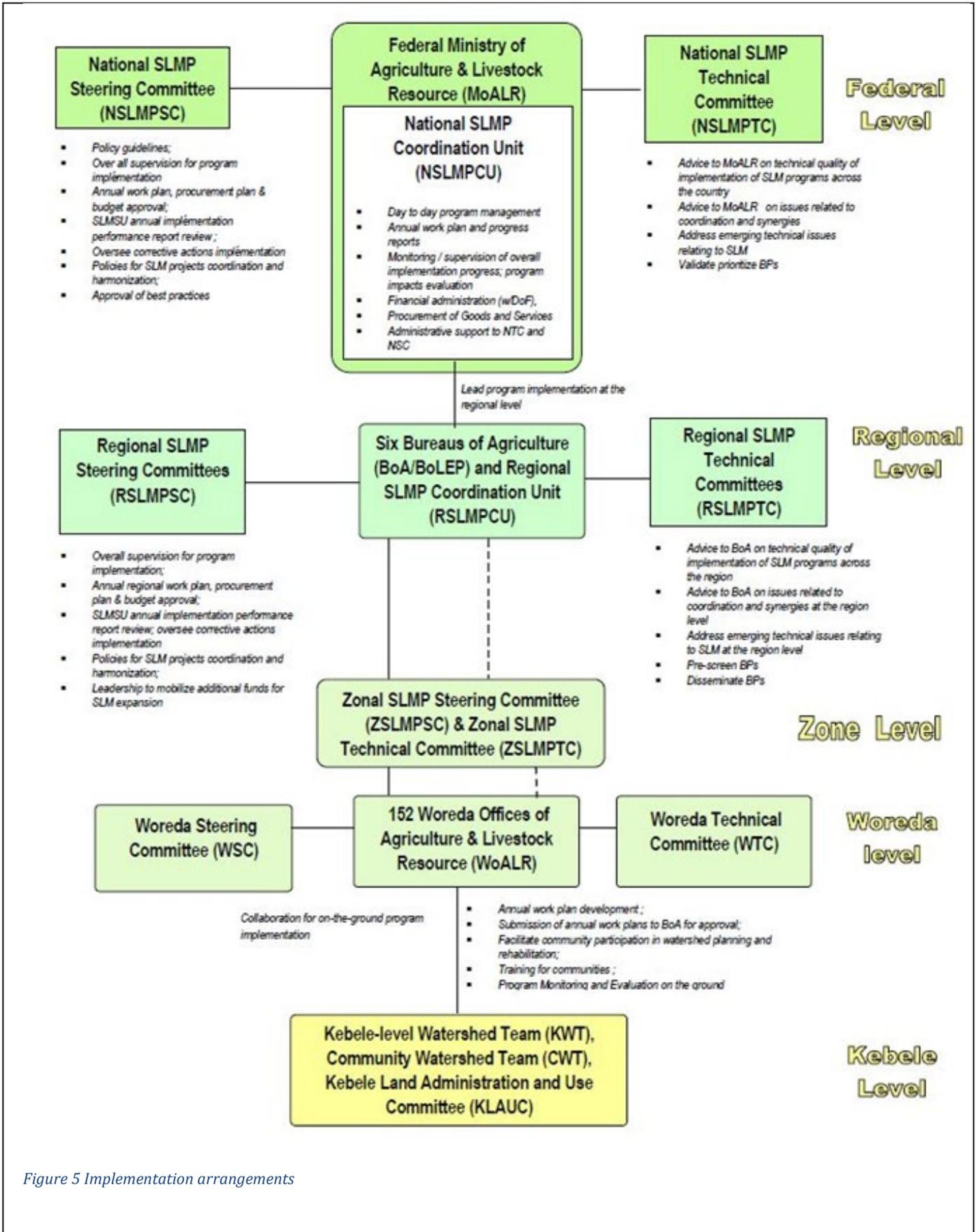


Figure 5 Implementation arrangements

The Project Implementation Manual (PIM) will set forth fiduciary requirements as well as project implementation arrangements. Importantly, the PIM will clarify the implementation support and supervision roles and responsibilities of the Regional Bureau of Agriculture (RBA), Woreda Office of Agriculture (WOA) and MoA. To enhance the accountability and quality of deliverables and the functionality of the program coordination platform at regional and woreda levels, project implementation arrangements acceptable to the WB and agreed by the MoA and regional governments will be established to clarify accountability and targets at all levels of project implementation. . This text is now added in FP in this section after Figure 5.

Roles and responsibilities of the World Bank

The World Bank as the Accredited Entity of the project will play an important role in programme supervision and implementation. The WB will ensure that the RLLP is executed in line with the WB policies and procedures. The WB's roles and responsibilities regarding financial management and procurement are described below. More detail, including a disbursement plan, is provided in section F.4. Financial Management and Procurement.

Financial management

Payments will be based upon an approved annual work plan and budget. To ensure transparency as well as to enhance the level of disbursement under the RLLP, quarterly Interim Financial Reports (IFRs) follow international reporting standards and are submitted promptly at the end of each quarter.

An external audit of the project will be conducted annually by the Supreme Audit Institution or an accredited private audit firm. The audit will be conducted in accordance with Terms of Reference prepared by the EE and the objective of the audit will be to ascertain whether project funds have been used for the intended purpose. The WB, as the AE, is responsible for reviewing and providing a no objection for the recruitment of the auditor including no objection of the ToR. The WB will verify that the audit is conducted in accordance with the International Standards on Auditing and that appropriate actions based on the findings ensue. If necessary, the WB will issue corrective actions throughout the execution of the RLLP.

The GCF Proceeds will be channeled through the World Bank and will be made available to the Federal Democratic Republic of Ethiopia. The World Bank will enter into a grant agreement and a loan agreement with Ethiopia, represented by MoF and acting through MoA for the implementation of the GCF Funded Activity. MoA is responsible for overall Project implementation and accountable for the Funded Activity's outcome indicators.

MoA will be working closely with MoF, the Ministry of Environment, Forest and Climate Change (MEFCC), the Ministry of Water, Irrigation and Energy (MoWIE) and other relevant public sector agencies. Project implementation is according to signed financing agreement(s) (Subsidiary Agreement(s)), procurement procedures, environmental & social management framework and other applicable WB procedures. The WB's project supervision covers monitoring, evaluative review, reporting, and technical assistance activities.

Procurement

As the AE, the World Bank is responsible for ensuring that MoA has the necessary procurement capacity required for the RLLP. To this end, The WB has conducted a procurement capacity and risk assessment of MoA (see Annex L.1). The WB will be responsible for ensuring that procurement under the project will be carried out in accordance with the WB's Procurement Procedures.

Communities and individuals receive cash payments as an incentive to contribute labor in support of rehabilitation works under sub-component 1.1 and 1.2. 41 ETB per Person Day (PD) is provided as labor incentive for participation in rehabilitation work. RLLP will pay 20% of this labor incentive for rehabilitation work on private land and 50% for rehabilitation work on communal land. The distribution of rehabilitation work needed across both types of land cannot be determined Ex-Ante. However, if we consider an equal distribution for estimation purposes, it means that RLLP will pay for 35% of the labor incentive. Based on this, we estimate that **RLLP will pay in total USD 40.4 million as labor incentive**. The total number of beneficiaries in watersheds where rehabilitation work will be undertaken is 3.27 million. Based on previous SLMP experience, typically 3 members out of 5 from each household participate in rehabilitation work. This translates to **1.96 million beneficiaries receiving labor incentive**

under RLLP. Thus, the estimated amount of labor incentive paid per beneficiary by RLLP will be USD 20.61. Please note that these are indicative estimates and may vary during implementation due to inflation and operational factors such as participation of beneficiaries and change in intensity of rehabilitation work due to extent of land degradation. We confirm that the activities under which labor incentive is provided are sub-components 1.1 and 1.2.

B.5. Justification for GCF funding request (max. 1000 words, approximately 2 pages)

Explain why the project/programme requires GCF funding, i.e. Why is the project/programme not currently being financed by public and/or private sector? Which market failure is being addressed with GCF funding? Are there any other domestic or international sources of financing?

Explain why the proposed financial instruments were selected in light of the proposed activities and the overall financing package. i.e. What is the coherence between activities financed by grants and those financed by reimbursable funds? How were co-financing amounts and prices determined? How does the concessionality of the GCF financing compare to that of the co-financing? If applicable, provide a short market read on the prevailing of the pricing and/or financial markets for similar projects/programmes.

Justify why the level of concessionality of the GCF financial instrument(s) is the minimum required to make the investment viable. Additionally, how does the financial structure and the proposed pricing fit with the concept of minimum concessionality? Who benefits from concessionality?

In your answer, please consider the risk sharing structure between the public and private sectors, the barriers to investment and the indebtedness of the recipient. Please reference relevant annexes, such as the feasibility study, economic analysis or financial analysis when appropriate.

In terms of the requirement for GCF funding, there are two types of interventions in this project.

The first type of intervention involves scaling up demonstrated measures for SLM. In past activities, WB and the GoE have laid the foundations for sustainable agricultural production and improvement of livelihoods. SLMP-I and SLMP-II program activities have proved to be successful in restoring degraded lands and significant lessons have been learned for further improvement of activities in the future.

With over 95% of agriculture output generated by smallholder farmers with average farm sizes between 0.5 and 2 hectares, the agricultural sector does not yet have the means to fund the introduction of SLM in all degraded watersheds without concessional funding. The Ethiopian government is investing heavily in climate change adaptation. Between 2007 and 2013, the government's total investment in agriculture was around \$1.1 billion, of which around 40% (\$0.4 billion) was from within the federal budget of the Ministry of Agriculture. 60% of the federal budget (\$0.3 bn) was spent on resilience activities related to addressing key climate risks. Around 80% of current resilience spending (\$0.2 bn) is on protecting the most vulnerable people in society through a program of safety nets that provide income support and social assistance. However, due to the significant impacts of climate change expected in Ethiopia and the vulnerability of most of the population, this investment will not be sufficient and GCF funding is required to fully finance the incremental costs of climate change adaptation.

The government of Ethiopia has been investing successfully in the development of SLM. SLM practices address both the short-term (erosion control, flood control) and the long-term goals of the government, which are part of efforts to rehabilitate degraded areas through soil and water conservation measures. However, national resources are insufficient to fund the remaining SLM investments required and additional funding is needed to finance the required interventions in degraded watersheds. To date, the World Bank has supported these interventions through concessional IDA credit. The loans requested from GCF for these investments are of a similar level of concessionality as the IDA Credit. Highly concessional funding is appropriate due to Ethiopia's status as a Least Developed Country with a GDP per capita of \$707 in 2017. In addition to SLM investments, GCF funding will also be used to mitigate the risk and overcome the barrier of limited capacity to scale up the current coverage of SLM activities. This risk includes the limited human resources to support beneficiaries in the planning and

implementation of complex interventions, the challenge of implementing a cost-effective M&E system, and the need to strengthen coordination among institutions, sectors, programs and projects.

The GCF highly concessional funding, along with additional financing from IDA, MDTF and GoE, would build upon previous SLM practices, taking into account lessons learned and introducing new activities in order to achieve landscape restoration and establish green corridors. Activities would include land use rationalization, intercropping, low tillage, gully reclamation, establishing grazing corridors, watering points and wells, and sylvo-pastoral strategies. Large-scale landscape restoration is only achievable through GCF co-financing due to the nature and scale of the needed investments. Land restoration lays the foundations for increased resilience to climate change and mitigation capacity while it enables agricultural production.

The second type of intervention for which GCF funding is requested is that of measures intended to encourage the adoption of Climate Smart Agriculture (CSA) practices and the development of strong value chains associated with livelihoods based on SLM and CSA. By strengthening value chains linking livelihoods based on SLM and CSA practices with the private sector, activities funded by GCF will contribute to the development of sustainable livelihoods, providing incentives for maintaining SLM and CSA practices.

If correctly implemented, CSA helps increase yields while building farmer resilience and contributing to the achievement of the NDC and several SDGs. Thus, CSA jointly addresses food security and climate change adaptation and mitigation. The determining factors for effective CSA outcomes are the combination of practices such as minimum tillage, crop residue management and crop rotation and intercropping. Challenges remain in the implementation of this combination of practices, such as the need for a change of mindset of farmers, extension workers and policy makers, competition for crop residue, lack of cover crops and lack of suitable technologies. Concessional funding is needed in order to remove these barriers and create a culture and knowledge base within which CSA can continue to be promoted by the extension services and implemented by farmers in future.

Without GCF involvement, Ethiopia cannot finance the proposed interventions. The national Climate Resilient Green Economy strategy has called for annual spending of \$7.5 billion to respond to climate change. With national budgetary resources for climate-change relevant actions estimated to be in the order of \$440 million per year and international sources contributing tens of millions of dollars per year, there is a major financing gap. Poor access to credit, high lending rates and an insufficient budget are not conducive to the investments required for handling local climate change impacts. In addition, Ethiopia's Debt Sustainability Assessment recently changed the risk of debt distress to high. Thus, GCF concessional financing, including a high degree of concessionality, is needed to ensure improved resilience to climate change impacts and food security in Ethiopia.

Public goods include: management of communal land; externalities from soil erosion; and water-insecurity (risk of droughts and floods). Market failures are found in the incomplete markets associated with: land-insecurity (lack of defined land ownership); water-insecurity; and soil loss.

Improving management of non-cropland areas under communal use requires a public good approach. Livestock grazing and firewood collection leads to deforestation and soil erosion on these communal lands (e.g. non-crop land). Using private investments to improve resource management on communal lands is not possible unless all costs and benefits can be internalized to a well-defined and functioning group of beneficiaries. Watershed management is one approach to this, but it requires long-term public investments and capacity building beyond what the private sector can do in the short term.

Soil erosion may lead to impacts outside the watershed management area (externalities). This means that costs and benefits from the investment will be accrued by people outside the project area. There is no functioning market for internalizing downstream negative effects and solving them with private sector investments or loans. Public sector investment is required.

Water-insecurity (risk of droughts and floods) are exacerbated by poor water/land management as well as climate change. There are no functioning markets for pricing water and impacts of disasters especially if the future holds greater risks. This is a market failure that requires public investments due also to the long-term solutions required to improve resource management.

The impact of poor soil management is felt by farmers and downstream beneficiaries, but there is no market value put on soil or the loss of soil. The solutions to reducing soil erosion require investments as well as short-term loss of income and food production while benefits accrue in the long term. Some benefits will also accrue externally to the project area. This is a market failure. In addition, the lack of land security prevents private sector investments from being realized due to increased risk from unclear property rights. Providing land security is a public responsibility.

Without land-, water- and soil-security no amount of private investment can ensure sustainable resource management in the future. This fits neatly with GCF's stated innovation is to use public investment to stimulate private finance. The incremental net benefits in the 40 watersheds at most risk from climate change target already poor and vulnerable populations. The grant proportion is justified compared to a loan because the net benefits are not expected to improve the fiscal position of the GoE including no additional tax revenue from these populations.

Without the Project intervention, beneficiaries both in the area and downstream will continue to struggle to establish or maintain their livelihoods and it is expected that without the Project, land use will continue on its current path. Continued soil erosion, water insecurity, and land insecurity leads to land degradation with direct losses to those that rely on crop and livestock production and related industries for their livelihood. Production yields will go down or farmers will have to increase their input costs, on e.g. fertilizer, to maintain current yields. In the absence of storage facilities, farmers will continue to experience post-harvest losses. They will also be unable to capture higher crop prices that are only obtainable a few months after harvest and in larger markets. Non-agricultural land in the watershed will also continue to deteriorate without the Project due to soil erosion and overuse of common land through grazing livestock and firewood collection. This will put a further strain on the population who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will also affect areas and households through increased flood risk and sedimentation of irrigation dams.

Figure 6 illustrates how this analysis assumes a declining production without Project interventions due to soil erosion. With Project interventions the yield loss is avoided and, for some production systems (crops, livestock, and grassland), with-project yields increase over time. This yield increase is attributed to adoption of improved cultivars, improved seeds, better animal breeds, land restoration, water management, and implementing climate smart agricultural techniques. The sum of the two shaded areas in the Figure constitute the incremental benefit

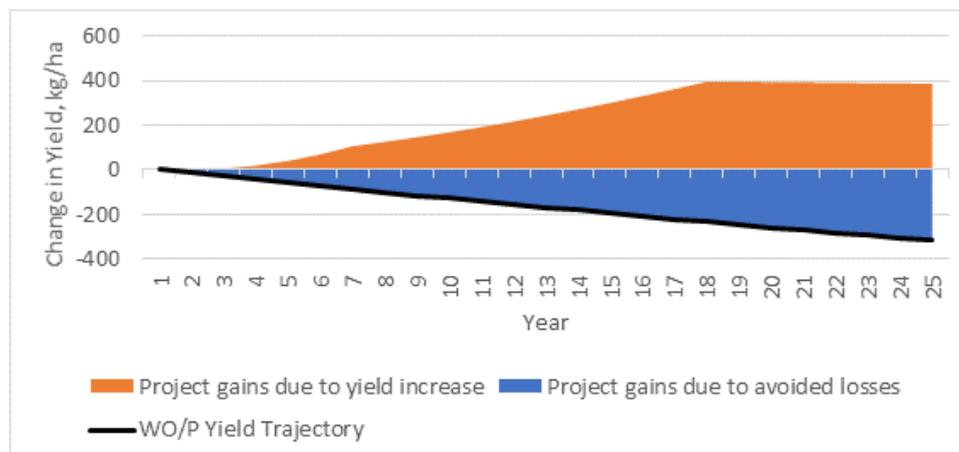


Figure 6 Illustration of incremental benefits

B.6. Exit strategy and sustainability (max. 500 words, approximately 1 page)

Explain how the project/programme sustainability (financial, institutional, social, gender equality, environmental) will be ensured in the long run after project closure, including how the project's results and benefits will be sustained.

Include information pertaining to the longer-term ownership, project/programme exit strategy, operations and maintenance of investments (e.g. key infrastructure, assets, contractual arrangements). In case of private sector, please describe the GCF's financial exit strategy through IPOs, trade sales, etc.

Provide information on additional actions to be undertaken by public and private sector or civil society as a consequence of the project/programme implementation for scaling up and continuing best practices.

The project will seek to ensure the long-term maintenance of restored landscapes through (i) an emphasis on strengthening the value chains associated with sustainable agricultural practices in restored watersheds, designed to build incentives for local communities to continue SLM practices, (ii) a focus on the provision of land-holding certificates, to encourage investment in long-term landscape productivity, and (iii) policy an implementation support for the establishment of watershed associations, combined with capacity building of local governments, to provide a durable institutional framework SLM. For value chain connections including CSRPs – these investments will be made through CIGs and cooperatives based on business plans that will include the identification O&M costs and the revenues necessary to cover them, that will be generated through the connections to value chains

GCF funding will be used to enhance the climate resilience of and add innovative elements to the government's ongoing SLM program. Strong government ownership ensures long-term commitment to the promotion of SLM and CSA practices, as part of the broader national goals of enhancing agricultural productivity, building resilience to climate change, and achieving a carbon neutral economy. Specifically, MoF and MoA are committed to scaling up and enhancing the success of the Government's proven flagship SLM Program. Beyond this national commitment, a particular focus of the RLLP is providing support for watersheds to graduate from development partner assistance for SLM, such that maintenance of restored landscapes and CSA will become mainstreamed into local community practices and local government functions. Component 2 of the proposed project will create institutions and build capacity that will enable the CSA interventions to be sustainably implemented in watersheds that graduate from project-based support. Spillover effects of successful SLM interventions have already been observed under the ongoing program. For example, CSA pilot watersheds have been visited by farmers and extension workers from adjacent areas and replicated through the government extension system. In addition to this spillover effect, the RLLP will provide four specific forms of support for the graduation of watersheds:

- First, the principal emphasis of policy development under RLLP will be the establishment of a regulatory framework for the creation of watershed associations, bringing together all stakeholders in restored watersheds. This initiative will build on a pioneering effort in the Regional State of Amhara and will draw on international best practice in this regard. In addition to providing the institutional framework required for maintenance and further investment in SLM, the establishment of watershed associations is also designed to leverage possible new sources of funding for SLM. This includes funding through Payment for

Ecosystem Services (PES), such as payments for sustainable watershed management to deliver downstream benefits, for example by reducing flooding and sediment loads affecting hydrological infrastructure (such as reservoirs for hydro-electric power generation), as well as payments for groundwater recharge from private sector entities dependent on reliable water supply;

- Second, support for capacity building and information modernization under RLLP will emphasize building permanent capacity in local governments to plan, implement and manage investments in SLM and CSA;
- Third, the focus of RLLP on strengthening value chains associated with livelihoods based on SLM and CSA practices is designed to strengthen incentives for communities and local governments to maintain and expand these initiatives;
- Fourth, in Component 3 support for land-holding certification will help secure land tenure for smallholders, enhancing income opportunities and promoting resilient livelihoods in the long term. Land tenure provides incentives to maintain restored landscapes, to abandon destructive practices such as free grazing, and to persevere with CSA practices.

Measures that will be taken to enhance institutional capacity for implementation and sustainability are: (i) continual training on project management and monitoring at all levels, in coordination with the GIZ SURED project; (ii) project implementation arrangements acceptable to the World Bank and agreed by the MoA and regional governments clarifying accountability and targets at all levels; and (iii) coordination between development partners Technical Committee on SLM.

Sustainability will be ensured through the creation of exit strategies for each participating watershed, based on the guideline *Exit Strategy and Performance Assessment for Watershed Management (ESPAWM)* (see Annex L.3.), which also covers operation and maintenance (O&M). Annex 1 of the ESPAWM provides a sample framework for a watershed-specific exit strategy, including activities and milestones specifically for highland water and land management projects in Ethiopia. This framework includes the development of an O&M plan for all infrastructure financed by the project. Annex 1 of the ESPAWM includes pointers on ensuring the O&M of community service facilities, which have not been considered as a part of watershed development plans in the past, and consequently not covered in O&M plans. Annex 1 also indicates the importance of establishing utilization arrangements for springs/shallow wells, guarding, user fees, community-level trainings for O&M and O&M of introduced improved farm machinery.

By the end of the project period, all watersheds included in the project are expected to have completed a Multi-Year Development Plan (MYDP) and those already supported under SLMP will receive assistance to graduate from project-based support for SLM. To help ensure the sustainability of the SLM interventions, the Project will provide support for the creation of Watershed User Associations (WUAs) in each graduating watershed to replace the project-based Community Watershed Teams (CWTs) and Kebele Watershed Development Committees (KWDCs) with a legally recognized institution for the ongoing planning and management of the watershed.

Watershed Management and Use Plans (WMUPs) adopted by WUAs will detail management and use for graduating watersheds, outlining agreements to conserve and utilize the resources and establishing bylaws for managing and implementing conservation activities and the distribution of benefits. The development of these WMUPs is critical to ensure land resources are used and managed in a way that enhances absorptive and adaptive capacity to climate change, promoting resilience broadly at the landscape level.

Ongoing monitoring of the success of SLM and CSA will be ensured at the local level through the RLLP's support for information modernization as part of local government capacity building. At the national level, the involvement of MoA and national research organizations in the impact evaluation, knowledge management and communication

sub-component will help ensure long-term commitment to monitoring, evaluating and improving the performance of these initiatives.

The loan component of the GCF financing will be provided on similar concessional terms as IDA financing, and repayments will be managed by the Government of Ethiopia through similar mechanisms.

C. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount	Currency
	165.24	million USD (\$)

GCF financial instrument	Amount	Tenor	Grace period	Pricing
(i) Senior loans	107,174,255	40 years	10 years	0 %
(ii) Subordinated loans	Enter amount	Enter years	Enter years	Enter %
(iii) Equity	Enter amount			Enter % equity return
(iv) Guarantees	Enter amount	Enter years		
(v) Reimbursable grants	Enter amount			
(vi) Grants	58,063,337			
(vii) Results-based payments	Enter amount			

(b) Co-financing information	Total amount	Currency
	131	million USD (\$)

Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
IDA	Senior Loans	100	million USD (\$)	36 years 5 years	0%	senior
Ethiopia Resilient Landscapes and Livelihoods multi-donor trust fund ("MDTF"), administered by the World Bank as Trustee	Grant	31	million USD (\$)	Enter years Enter years	Enter%	Options
Click here to enter text.	Options	Enter amount	Options	Enter years Enter years	Enter%	Options

(c) Total financing (c) = (a)+(b)	Amount	Currency
	296.24	million USD (\$)

(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)	<p>Please explain if any of the financing parties including the AE would benefit from any type of guarantee (e.g. sovereign guarantee, MIGA guarantee).</p> <p>Please also explain other contributions such as in-kind contributions including tax exemptions and contributions of assets.</p> <p>Please also include parallel financing associated with this project or programme.</p>
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C.2. Financing by component

Please provide an estimate of the total cost per component and output as outlined in section B.3. above and disaggregate by source of financing. More than one co-financing institution can fund a single component or output. Provide the summarised cost estimates in the table below and the detailed budget plan as annex 4.

Component	GCF financing	Co-financing	Co-financing
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	Indicative cost million USD (\$)	Amount million USD (\$)	Financial Instrument	Amount million USD (\$)	Financial Instrument	Name of Institutions	Amount million USD (\$)	Financial Instrument	Name of Institutions	
Component 1. Green Infrastructure and Resilient Livelihoods	222.5	57.51	Grants	65	Senior Loans	IDA	15.5	Grants	MDTF	
		85.49	Senior Loans							
Component 2. Investing in Institutions and Information for Resilience	29.65	16.15	Senior Loans	6						7.0
Component 3. Rural Land Administration and Use	26	0		20						6
Component 4. Project Management and Reporting	18.09	0.49	Grants	9	2.5					
		5.60	Senior Loans							
Indicative total cost (USD)	296.24	165.24		100		31				

This table should match the one presented in the term sheet and be consistent with information presented in other annexes including the detailed budget plan and implementation timetable.

In case of a multi-country/region programme, specify indicative requested GCF funding amount for each country in annex 17, if available.

Component	Sub-component	GCF funding (USD)	IDA (USD)	MDTF (USD)
Component 1. Green Infrastructure and Resilient Livelihoods	Sub-component 1.1. Land Restoration and Watershed Management	100,000,000	49,000,000	6,941,189
	Sub-component 1.2. Climate Smart Agriculture	15,000,000	10,000,000	8,462,561
	Sub-component 1.3. Livelihood Diversification and Connection to Value Chain	28,000,000	6,000,000	96,250
Component 2. Investing in Institutions and Information for Resilience	Sub-component 2.1. Capacity building, information modernization and policy development	16,149,572	3,000,000	4,879,380
	Sub-component 2.2. Impact Evaluation, Knowledge Management and Communication	0	3,000,000	2,120,620
Component 3. Rural Land Administration and Use		0	20,000,000	6,000,009

Component 4. Project Management and Reporting		6,088,020	9,000,000	2,500,001
Total (excluding Accredited Entity Fee)		165,237,592	100,000,000	31,000,010

Total project financing includes the following sources of co-financing:

- International Development Association (IDA) loan: \$100,000,000 concessional loan from IDA.
- Multi-donor trust fund (MDTF) grant: \$19,000,000 from Norway and \$12,000,000 from Canada. Donor contributions to the MDTF are in the respective currencies of the donor and are expected in tranches over the life of the RLLP. Donor contributions to the MDTF are translated to United States dollars when the World Bank receives the funds.

Grant vs Loan

The GCF loan will be applied across all sub-components funded by GCF except for some specific activities in Sub-component 1.1 and Component 4 where GCF grant will be applied. Based on GCF's feedback emailed on November 18th, GCF stated that the grant portion should be in support of activities directly linked to the climate benefits. Accordingly, considering the direct carbon sequestration associated with the set of activities and the need to build gender-responsive resilience, following activities, listed below with their indicative estimates in brackets (actual request is rounded off to \$58 million), were selected for GCF grant funding:

Sub-component 1.1

- Construction of physical soil and water conservation measures on communal lands including degraded hillside, shrub land and pastureland (\$26,080,515)
- Pitting and planting of multi-purpose trees on degraded lands (\$12,922,858)
- Establishment of model plantation blocks with native tree species (\$2,268,510)
- Post plantation management of planted trees on communal lands (\$ 15,856,773)
- Grass seeds for pastureland development (\$ 450,313)

Component 4

- Gender mainstreaming (\$ 484,368)

GCF loans are treated like IBRD/IDA loans and will be repaid in parallel following a repayment schedule to be negotiated with GCF at Term Sheet and FAA stage. GCF loan is senior and not sub-ordinated.

C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
C.3.2. Does GCF funding finance technology development/transfer?	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>

If the project/programme is expected to support capacity building and technology development/transfer, please provide a brief description of these activities and quantify the total requested GCF funding amount for these activities, to the extent possible.

Component 2. Investing in Institutions and Information for Resilience

Activities will be funded by IDA and MDTF in watersheds identified for IDA funding (budget of USD 13.0 million) and by GCF in watersheds identified for GCF funding (budget of USD 16.15 million).

The objective of this component is to enhance institutional capacity and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the project area, both for the duration of the project and after project completion.

This component will build capacity at the local government level (woreda and kebele) for (i) planning and managing SLWM interventions, and (ii) managing the land certification process. This will include piloting of new technologies for information modernization at the local level, including the use of electronic tablets for gathering geospatial information, and the use of Unmanned Aerial Vehicles (UAVs – or drones) for land certification mapping. Tablets and UAVs will be the property of the project (i.e. MoA) and would be provided to development agents and the woreda focal persons in the project watersheds for mapping and monitoring. The device setup, training, and support provided will be tailored to meet the conditions and realities faced in field environment (i.e. off-line data collection, accessories (protective case, solar charger, etc.), guidance materials, technical and trouble-shooting support).

Support for policy development under this component will focus on the regulatory framework for Watershed User Associations (WUAs), community bylaws guiding land-use practices, and strengthening the Land Administration System. This regulatory framework, once established, will continue to support resilient land use after project completion. To strengthen the evidence base for sustainable land management decision-making, this component will include a bio-physical impact evaluation of SLWM interventions, to be conducted through a partnership arrangement between the MoA, the Water and Land Resource Centre of Addis Ababa University, and the Ethiopia Development Research Institute’s Environment and Climate Research Center. This will complement a livelihoods impact evaluation of SLWM interventions to be conducted in parallel led by the Gender Innovation Lab of the World Bank’s Africa Region. When completed, these evaluations will be available to interested parties in Ethiopia and the region wishing to institute or improve SLWM. This component will also provide resources to manage the knowledge generated through these and other assessments of SLWM, and to communicate the lessons learnt to a broad audience, including local governments and communities, relevant research institutions and Government agencies, as well as Development Partners.

This component’s objectives will be achieved through the implementation of the following sub-components: (i) capacity building, information modernization and policy development, and (ii) impact evaluation, knowledge management and communication.

Sub-component 2.1. Capacity Building, Information Modernization and Policy Development

This sub-component will build capacity at local government level to implement RLLP, and to sustain SLWM interventions after watershed graduation from project-based support. To achieve this, the sub-component will finance accountants to support the head of the Woreda office of Agriculture (WoA) and a focal person in each participating woreda, and part-time community facilitators at the kebele level (5 community facilitators for in each major watershed). To help build the capacity necessary for an effective land administration system, this sub-component will also provide technical assistance for training in this field.

This sub-component will support information modernization to coordinate data collection and information sharing at all levels and under all components of the project so that this information is well organized, properly documented and accessible. As part of this effort, a data management plan will be developed that specifies how all data used or created during the course of RLLP will be documented, stored and otherwise managed. The use of electronic tablets to collect information on project activities and results, combined with appropriate survey and mapping software, will

improve the quality and timeliness of data collection and reduce the effort needed to compile, review, and generate the necessary reports. This framework will facilitate access to information and support timely feedback to the local level.

This sub-component further supports the use of aerial vehicles (UAVs)/drones to generate high-quality and timely aerial imagery data to support planning, monitoring, and land certification. Under this initiative, the drones will be operated by several teams of trained operators who will travel to the project sites. During the course of RLLP each micro-watershed will be re-visited twice each year at appropriate intervals to generate visual and multi-spectral images of the program areas. At each stage the processed imagery will be shared with the woreda and local field staff for the purpose of assisting in planning, monitoring progress and updating implementation plans. The data and materials produced will also be used to support M&E and will serve as a source of information and data for subsequent analysis. Detailed technological specifications and budget have been elaborated including the technical requirements for the drones, all associated equipment and spare parts, operating costs for the duration of the project. The use of the drones is intended for the collection of information and data that will be available for long-term use and for project planning and monitoring. The project will work with the Information Network Security Agency (INSA) and the Ethiopian Aviation Authority to ensure all necessary permits are obtained.

Policy development under this sub-component will focus on the regulatory framework required for the establishment of Watershed User Associations (WUAs), crucial for sustainability of SLWM interventions, frameworks for reward and incentive schemes such as Payments for Environmental Services (PES), as well as community byelaws guiding land-use practices, and strengthening of the Land Administration System.

In developing the framework for WUAs, the Project will work closely with regional governments for its application in establishing WUAs. This work will commence with reviewing of the environmental legislation that relates to the use and management of Ethiopia's natural resources (soils, forestry, grassland, water, wildlife, etc.). The manual for CSA will be used to proceed and enhance this activity. RLLP will give high attention to the opportunities of engagement of private sector (PS) in all development activities of the project. The first objective of PS engagement in RLLP is, to attract the PS to invest in RLLP interventions. The second objective is to create and increase income streams & diversified livelihoods for the communities in a sustainable manner through the promotion of inclusive business and value chain/partnership relationship based on profitability principles.

Sub-component 2.2 Impact Evaluation, Knowledge Management and Communication

Impact evaluations (IEs) will use rigorous research methods to look at specific interventions under RLLP, assess the contribution of these to development goals and provide robust evidence of SLM impact. Project funding will focus on the evaluation of bio-physical impacts, which will be conducted in coordination with a livelihoods impact evaluation to be led by the Gender Innovation Lab of the World Bank's Africa Region, financed separately. The bio-physical impact evaluation will examine the response of the environment to SLWM interventions, considering parameters such as peak and base surface water flows, groundwater levels and recharge rates, sediment loads, and remotely sensed information on vegetation cover and soil moisture. For the purposes of this evaluation, the project will extend the existing partnership between MoA, the Water and Land Resource Center of Addis Ababa University, and the Environment and Climate Research Centre of EDRI, and will aim to build new partnerships with relevant international research organizations.

In addition to the bio-physical IE and the livelihoods IE an evaluation of climate-smart agriculture will also be conducted. Due to the complexity of the evaluations the details of their implementation are still under development. Basic design of the IEs is expected to be as follows: the livelihoods IE is expected to involve random assignment. The biophysical IE will involve a 2-stage sampling where in the first stage a stratified selection of watersheds to be treated will be performed and in the second stage watersheds will be paired with a suitable comparison watershed (outside project watersheds). This is being done to increase the explanatory power of the evaluation given the large cost associated with each watershed monitored. The CSA evaluation is expected to follow a treatment-control comparison methodology and the potential for randomized assignment within the CSA micro-watersheds is being explored. In any case, the sampling of treatment and control will be randomized.

To build a solid and effective knowledge management system both for the project and the SLM program in Ethiopia, this sub-component will establish a geospatial knowledge platform that combines information from a variety of project and other sources and packages it in a format that is accessible to planners and stakeholders at the national, regional, and local levels. This activity will build upon the work being done by WLRC under SLMP II to develop a web-

based knowledge management system. By enabling farmers to improve their planning the platform will decrease their exposure to climate change related risks.

A strategic communication program will be developed and implemented under this sub-component to inform and mobilize communities, enhance project visibility and transparency among all actors, support efforts to scale-up SLM and CSA practices, and build support for the land certification program. Strategic guidelines for the implementation of the Knowledge Management and Communication (KMC) program have been developed following a rapid KMC needs assessment. The guidelines include viable options of knowledge management, knowledge sharing and communication with effective channels, techniques, tools and key messages that address the communication and knowledge management needs of beneficiaries, stakeholders, partners and actors at various level. While following those guidelines, implementers will have room to elaborate, modify and adapt additional communication and knowledge management interventions to meet the overarching goals and specific objectives outlined in this sub-component. The identified overarching goals are: 1) to build and coordinate a strong knowledge base contributing to the effective promotion, reporting and scaling up of SLM within Ethiopia; and 2) to inform and mobilize local communities, strengthen consultation/ participatory development models, and enhance transparency in program-supported activities. The specific objectives of the KMC program are to: a) Support scaling up efforts and adoption of SLM and CSA practices; b) Help evidence based planning and reporting through enhanced information flow among institutions and coordination of monitoring and evaluation; c) Enhance the program visibility among all actors thereby attract new development partners and insure the buy-in of the government; d) Sustain the outcomes of SLM practices through awareness raising campaigns. This includes relevant activities in components 1 and 3 such as land certification. The guidelines include means of verification to evaluate the effectiveness of the activities implemented within the KMC program.

Possible activities include:

- i. knowledge identification, capturing, validation and packaging annually to support scaling up efforts, build capacity of user groups, youth groups, DAs and FTCs (experiential knowledge, best practice and synthesis of explicit knowledge products from various sources such as the geo-spatial knowledge platform, the CSA Innovation Platform, model watershed, etc.);
- ii. strengthening and enhancing functionality of existing FTCs and SLM information centers at woreda level and establishing info centers in new woredas;
- iii. outreach activities (i.e. production of printed, audio and video materials to be used as supporting tools during workshops and events, and media tours for journalists and PR officers of relevant regional bureaus to show project results);
- iv. knowledge sharing/networking events (i.e. annual SLMP Knowledge fair); and
- v. advocacy activities to support private sector engagement, policy development and other key initiatives for RLLP effective implementation (i.e. organization of Stakeholders Workshops).
- vi. grassroots level behavioral change campaign targeted to major/critical watersheds, based on preliminary research to define appropriate media (drama, storytelling, etc.) and effective messengers (i.e. community/religious leaders) and gauged throughout the duration of the program through a mix of qualitative/quantitative research methods (FGDs, community level meetings, survey);
- vii. public information awareness activities on land registration and cadastral surveys, land laws and procedures and conflict resolution mechanism, and to explain the benefits of (formalized) rentals and unlock the blockage set by cultural norms, emphasizing that temporary land renting does not imply abandonment and formalized rental contracts do not result in land being expropriated.

D.EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF's [Initial Investment Framework](#).

D.1. Impact potential (max. 500 words, approximately 1 page)

Describe the potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas. As applicable, describe the envisaged project/programme impact for mitigation and/or adaptation. Provide the impact for mitigation by elaborating on how the project/programme contributes to low-emission sustainable development pathways. Provide the impact for adaptation by elaborating on how the project/programme contributes to increased climate-resilient sustainable development. Calculations should be provided as an annex. This should be consistent with section E.2 reporting GCF's core indicators.

In terms of the requirement for GCF funding, there are two types of interventions in this project. The first type of intervention involves scaling up demonstrated measures for SLM. In past activities, WB and the GoE have laid the foundations for sustainable agricultural production and improvement of livelihoods. SLMP-I and SLMP-II program activities have proved to be successful in restoring degraded lands and significant lessons have been learned for further improvement of activities in the future.

With over 95% of agriculture output generated by smallholder farmers with average farm sizes between 0.5 and 2 hectares, the agricultural sector does not yet have the means to fund the introduction of SLM in all degraded watersheds without concessional funding. The Ethiopian government is investing heavily in climate change adaptation. Between 2007 and 2013, the government's total investment in agriculture was around \$1.1 billion, of which around 40% (\$0.4 billion) was from within the federal budget of the Ministry of Agriculture. 60% of the federal budget (\$0.3 bn) was spent on resilience activities related to addressing key climate risks. Around 80% of current resilience spending (\$0.2 bn) is on protecting the most vulnerable people in society through a program of safety nets that provide income support and social assistance. However, due to the significant impacts of climate change expected in Ethiopia and the vulnerability of most of the population, this investment will not be sufficient and GCF funding is required to fully finance the incremental costs of climate change adaptation.

The government of Ethiopia has been investing successfully in the development of SLM. SLM practices address both the short-term (erosion control, flood control) and the long-term goals of the government, which are part of efforts to rehabilitate degraded areas through soil and water conservation measures. However, national resources are insufficient to fund the remaining SLM investments required and additional funding is needed to finance the required interventions in degraded watersheds. To date, the World Bank has supported these interventions through concessional IDA credit. The loans requested from GCF for these investments are of a similar level of concessionality as the IDA Credit. Highly concessional funding is appropriate due to Ethiopia's status as a Least Developed Country with a GDP per capita of \$707 in 2017. In addition to SLM investments, GCF funding will also be used to mitigate the risk and overcome the barrier of limited capacity to scale up the current coverage of SLM activities. This risk includes the limited human resources to support beneficiaries in the planning and implementation of complex interventions, the challenge of implementing a cost-effective M&E system, and the need to strengthen coordination among institutions, sectors, programs and projects.

The GCF highly concessional funding, along with additional financing from IDA, MDTF and GoE, would build upon previous SLM practices, taking into account lessons learned and introducing new activities in order to achieve landscape restoration and establish green corridors. Activities would include land use rationalization, intercropping, low tillage, gully reclamation, establishing grazing corridors, watering points and wells, and sylvo-pastoral strategies. Large-scale landscape restoration is only achievable through GCF co-financing due to the nature and scale of the needed investments. Land restoration lays the foundations for increased resilience to climate change and mitigation capacity while it enables agricultural production.

The second type of intervention for which GCF funding is requested is that of measures intended to encourage the adoption of Climate Smart Agriculture (CSA) practices and the development of strong value chains associated with livelihoods based on SLM and CSA. By strengthening value chains linking livelihoods based on SLM and CSA practices with the private sector, activities funded by GCF will contribute to the development of sustainable livelihoods, providing incentives for maintaining SLM and CSA practices.

If correctly implemented, CSA helps increase yields while building farmer resilience and contributing to the achievement of the NDC and several SDGs. Thus, CSA jointly addresses food security and climate change adaptation and mitigation. The determining factors for effective CSA outcomes are the combination of practices such as minimum tillage, crop residue management and crop rotation and intercropping. Challenges remain in the implementation of this combination of practices, such as the need for a change of mindset of farmers, extension workers and policy makers, competition for crop residue, lack of cover crops and lack of suitable technologies. Concessional funding is needed in order to remove these barriers and create a culture and knowledge base within which CSA can continue to be promoted by the extension services and implemented by farmers in future.

Without GCF involvement, Ethiopia cannot finance the proposed interventions. The national Climate Resilient Green Economy strategy has called for annual spending of \$7.5 billion to respond to climate change. With national budgetary resources for climate-change relevant actions estimated to be in the order of \$440 million per year and international sources contributing tens of millions of dollars per year, there is a major financing gap. Poor access to credit, high lending rates and an insufficient budget are not conducive to the investments required for handling local climate change impacts. In addition, Ethiopia's Debt Sustainability Assessment recently changed the risk of debt distress to high. Thus, GCF concessional financing, including a high degree of concessionality, is needed to ensure improved resilience to climate change impacts and food security in Ethiopia.

Without the Project intervention, beneficiaries both in the area and downstream will continue to struggle to establish or maintain their livelihoods and it is expected that without the Project, land use will continue on its current path. Continued soil erosion, water insecurity, and land insecurity leads to land degradation with direct losses to those that rely on crop and livestock production and related industries for their livelihood. Production yields will go down or farmers will have to increase their input costs, on e.g. fertilizer, to maintain current yields. In the absence of storage facilities, farmers will continue to experience post-harvest losses. They will also be unable to capture higher crop prices that are only obtainable a few months after harvest and in larger markets. Non-agricultural land in the watershed will also continue to deteriorate without the Project due to soil erosion and overuse of common land through grazing livestock and firewood collection. This will put a further strain on the population who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will also affect areas and households through increased flood risk and sedimentation of irrigation dams.

Figure 6 illustrates how this analysis assumes a declining production without Project interventions due to soil erosion. With Project interventions the yield loss is avoided and, for some production systems (crops, livestock, and grassland), with-project yields increase over time. This yield increase is attributed to adoption of improved cultivars, improved seeds, better animal breeds, land restoration, water management, and implementing climate smart agricultural techniques. The sum of the two shaded areas in the Figure constitute the incremental benefit

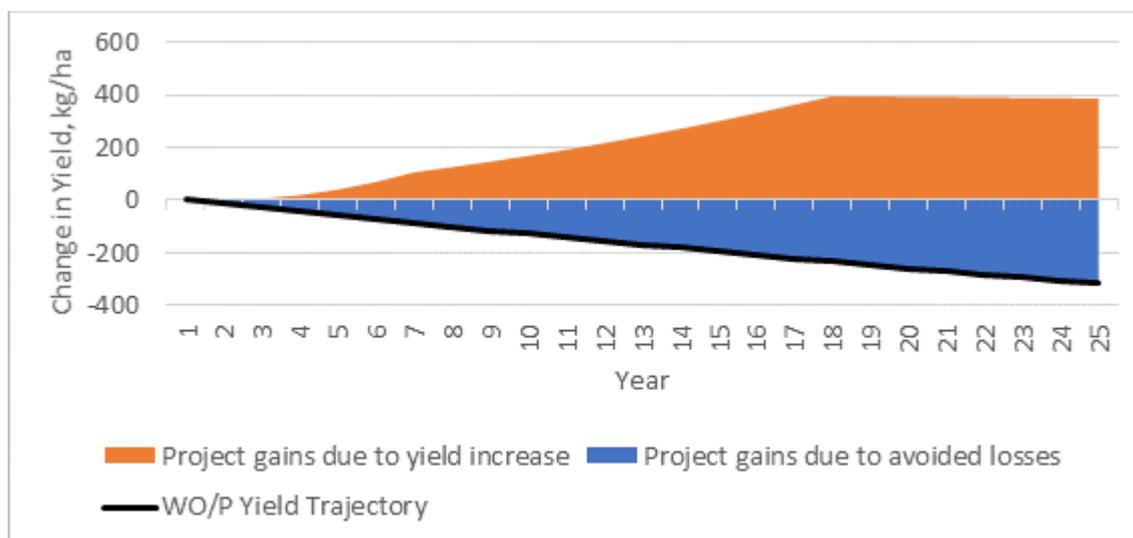


Figure 6 Illustration of incremental benefits

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

Describe the degree to which the proposed activity can catalyze impact beyond a one-off project or programme investment. Describe the following, if applicable:

- *Potential for scaling up and replication*
- *Potential for knowledge sharing and learning*
- *Contribution to the creation of an enabling environment*
- *Contribution to the regulatory framework and policies*
- *Overall contribution to climate-resilient development pathways consistent with relevant national climate change adaptation strategies and plans*

The RLLP will scale up, transform and innovate through the government of Ethiopia's ongoing SLM program. Following the success of earlier SLM interventions, the RLLP represents a paradigm shift by focusing on building the institutions and incentives necessary for long-term investment in, and maintenance of, restored landscapes that are both resilient to climate change and sequester carbon. Transformative elements of the RLLP include (i) an emphasis on strengthening the value chains associated with sustainable agricultural practices in restored watersheds, designed to build incentives for local communities to maintain restored landscapes over the long term, (ii) a focus on the provision of land-holding certificates, to encourage investment in long-term landscape productivity, and (iii) policy support for the establishment of watershed associations, combined with capacity building of local governments, to provide an institutional framework for long-term maintenance of restored landscapes.

The theory of change behind this package of interventions (as shown in the illustration below) is that by delivering more productive, secure and resilient livelihoods to local communities and by establishing the institutional framework needed to support maintenance of restored landscapes over the long term through watershed associations and local governments, the RLLP will lead to a durable shift towards SLM in the degraded watersheds of the Ethiopian highlands.

Such dissemination will be encouraged through awareness generating initiatives and training programs undertaken under Component 2.1, including farmer to farmer experience exchange visits, field schools, and awareness raising workshops (refer to Annex K.1. RLLP Detailed Budget). These activities will mobilize traditional self-help institutions of the communities in the project woredas, which have already contributed immensely to effective Project implementation and sustainability. For example, in all implementing regions and woredas, there are indigenous institutions (such as "Idir", "Yehager Shimaglewoch", (Elders), religious fathers, "Maheber", etc.), which have been established by the community for different purposes and are also working for the successful implementation and dissemination of SLM practices (refer to Annex D.1. RLLP Social Assessment). In addition, Ethiopian communities are used to financing investments through rotating savings and credit associations (ROSCA) called ekub rather than through the underdeveloped formal financial sector.

RLLP will be implemented by MoA, the ministry responsible for agriculture in the entire country. The ministry, working together with WB and other donors, already has a clear history of scaling up – SLMP-II expanded the area included in SLMP-I and RLLP will expand the project area further (see Figure 2). The Government of Ethiopia aims to introduce sustainable land use practices for all agricultural land in the country and if RLLP is as successful as the preceding SLM programs, there is every intention to continue the process of scaling up in the coming years. MoF and MoA are committed to scaling-up and ensuring the long-term sustainability of the Government's proven flagship SLM Program.

RLLP will also seek to identify innovative sources of SLM financing, including Payment for Ecosystem Services (PES) from either (i) private sources with an interest in restored watersheds, as exemplified by the recent agreement with Raya Brewery-BGI Ethiopia in the Tigray Region, or (ii) public sources such as municipalities and River Basin Authorities with an interest in improved catchment management to extend the lifetime and productivity of hydrological infrastructure, including for hydropower, irrigation and water supply. Further information on the project's engagement with the private sector is provided in Section E.5.3 and Annex B.1.

The knowledge generated and experience gained through implementation and evaluation of RLLP will also be disseminated more broadly to inform the design of SLM interventions internationally.

D.3. Sustainable development (max. 500 words, approximately 1 page)

Describe the wider benefits and priorities of the project/programme in relation to the Sustainable Development Goals and provide an estimation of the impact potential in terms of:

- *Environmental co-benefits*
- *Social co-benefits including health impacts*
- *Economic co-benefits*
- *Gender-sensitive development impact*

The proposed interventions are designed to support climate change adaptation and mitigation, enhancing long-term resource productivity while generating multiple social, environmental and economic co-benefits.

Environmental Benefits

Benefits from improved water management include increased soil moisture and reduced variability in response to flood/drought conditions. Soil retention provides benefits both on-site in terms of soil quality and off-site in terms of reduced erosion; it can be measured in terms of land savings or erosion prevention. Increased soil fertility is a determining factor for higher and less variable crop yields. Increased vegetation cover also helps to prevent erosion and improves downstream water quality, while simultaneously supporting biodiversity, which will be further enhanced through investment in green corridors.

An illustration of the benefits that sustainable land management can provide in Ethiopia is provided by the Productive Safety Net Program (PSNP). Under RLLP, a number of communities graduating from food-insecure status in newly identified watersheds will transition from support under PSNP to join the SLM Program. The PSNP implements land restoration and sustainable land management and mitigates nearly 3.4 million t CO₂e per year (+/-20%), achieved by sequestering carbon in biomass and soils.¹⁹ This equates to 1.5% of Ethiopia's Nationally Determined Contribution (NDC) to mitigation.²⁰

Social and Economic Benefits

The principal direct set of benefits from the RLLP will be improved incomes and more resilient livelihoods of vulnerable communities in degraded watersheds targeted by the project as a result of investments in SLM, climate resilient livelihood diversification (including grain-, meat-, dairy-, and bamboo-processing; tree seedling nurseries; manufacturing of improved cook stoves, production of improved environmental services; and private sector initiatives for PES or CSR), value chain strengthening, and land-holding certification. These interventions are also expected to deliver co-benefits, including: (i) health benefits of reduced exposure to household air pollution and of improved nutrition due to a more varied food production, (ii) reduced time spent on biomass fuel collection through the use of improved cookstoves, and (iii) enhanced infrastructure resilience as a result of reducing flooding and sediment loads. Benefits from improved administration and tenure rights include conservation of protected areas, biodiversity and tourism.

RLLP will support climate resilient food security of communities graduating from the PSNP and prevent a return to food insecurity of these communities as a result of climate shocks, resulting in social and economic benefits for vulnerable communities in the targeted watersheds. Through the PSNP, the immediate food needs of 8 million people were met by improving land restoration and infrastructure, and smallholder farmers increased maize yields by an average of 38%.²¹

Project-funded capacity building and institutional development at all levels have direct value in that they increase the skill level in public sector institutions and enable them to work more efficiently in providing essential and enhanced public goods and services. These institutional benefits are not quantified in the Economic and Financial Analysis (EFA), but they are seen as critical to ensuring that the other benefits can be realized when it comes to building productive alliances with access to agricultural financing, land, and other business enabling services.

According to a financial and economic analysis (EFA) of the RLLP, the estimated value of avoided soil erosion varies between US\$ 0.1 and US\$ 0.3/tonne of soil depending on the gross marginal value land use (US\$ 0.11/tonne of soil represents non-cropland, while US\$ 0.26/tonne is the value of avoided erosion for cropland). The Integrated Financial and Economic Analysis conducted during project preparation estimates a farm-level gross margins increase of more than USD 101/year/person, including the value of production used for home consumption, which is 1.2 times the Food Poverty Line. When assuming 5 persons per household farm, the gross margin can increase to at least USD 101 per household member per year. To associate this result with a measure of absolute poverty, we use the National Poverty Line for Ethiopia. The poverty line indicates the money required to afford the food covering the minimum required caloric intake (Food Poverty Line) and additional non-food items. The improvement in farm gross

margin is around 1.2 times the Food Poverty Line in 2018 terms (USD 85/person/year). This improvement is also about 63% of the total National Poverty Line (USD 162/person/year). Other representative farms are estimated to capture higher growth in gross margins of up to USD 135/person/year. This is a direct measure of increased resilience in the project area.

Gender Sensitive Development Impact

In addition to promoting women's participation in community watershed committees, the RLLP will extend experience under the ongoing SLM program to ensure women fully share in project benefits. In particular, women will continue to be specifically targeted in the issuance of land-holding certificates, and in the design of support for income-generating activities. Women and children will benefit disproportionately in the health and time-savings benefits of improved cookstoves. To ensure that gender-specific lessons are learnt during implementation of the RLLP, a socio-economic impact evaluation will be conducted by the World Bank's Africa Region Gender Innovation Lab. Specific gender-sensitive development impacts include:

- Strengthened implementation practices (planning, implementation and monitoring processes) for equitable and meaningful participation of females and males in sustainable land restoration and water conservation practices (50 % female representation in all stages)
- Integrated landscape management practices adopted by local communities based on practical and strategic gender needs and priorities.

The SLMP-II has produced several gender-related benefits. For example, it had a positive influence on gender norms and perceptions about women. Income generation through the SLMP-II was appreciated by women participants, who pointed out that they have gained more respect from community members because of their increased self-reliance. Another substantial impact was an increase in women's self-confidence. There have been changes in attitudes about women's roles and capacity, and women have started to feel more confident and motivated to engage in IGAs and climate smart agriculture. The land holding certification component also anticipates benefits by enhancing women's access to and control over one of the most important productive assets in a rural community: land. Land tenure will address the strategic needs of women, such as economic empowerment, enhanced decision-making power, and improved power relations in the household.

D.4. Needs of recipient (max. 500 words, approximately 1 page)

Describe the scale and intensity of vulnerability of the country and beneficiary groups and elaborate how the project/programme addresses the issue (e.g. the level of exposure to climate risks for beneficiary country and groups, overall income level, etc.). Describe how the project/programme addresses the following needs:

- *Vulnerability of the country and/or specific vulnerable groups, including gender aspects (for adaptation only)*
- *Economic and social development level of the country and the affected population*
- *Absence of alternative sources of financing (e.g. fiscal or balance of payments gap that prevents government from addressing the needs of the country; and lack of depth and history in the local capital market)*
- *Need for strengthening institutions and implementation capacity*

Ethiopia's Second National Communication identified the primary cause of vulnerability to climate variability and change as a high dependence on rain-fed agriculture, which is sensitive to climate variability and change. Other causes cited included under-development of water resources, low health service coverage, a high population growth rate, low economic development, low adaptive capacity, inadequate road infrastructure in drought prone areas, weak institutional structures, and lack of awareness.²²

According to the vulnerability assessment in the SNC based on existing information and assessments, the most vulnerable sectors to climate variability and change are agriculture, water and human health. In terms of livelihoods, smallholder rain-fed farmers and pastoralists are found to be the most vulnerable. Ethiopia's rural livelihoods are highly dependent on the performance of the agriculture and forestry sectors, which are highly sensitive to climate change. Over 80 % of the Ethiopian population lives in rural areas and are consequently highly dependent on the performance of productive landscapes for income, energy, food, building materials, and water. Furthermore, agriculture accounts for most jobs and about 40 % of output and exports, exacerbating exposure to the risks of climate change, which include increased soil erosion and more frequent droughts and floods. The arid, semi-arid and dry sub-humid parts of the country are affected most by drought.²³

Furthermore, the project regions exhibit low adaptive capacity, which increases vulnerability. Although it is not possible to have an exhaustive list of indicators that assess adaptive capacity of a region due availability of processed data for the proposed project regions, the indicators in Table 2 below relates directly to usage and quality of water, energy and settlement, and indirectly to the level and quality of education and health facilities. For example, the use of modern construction materials directly indicates the quality of settlements available to resist the physical impacts of climate variation. The under 5-mortality rate, however, may indirectly indicate that health facilities are of poorer quality, or that lower levels of supplementation and vaccinations are being provided.

Table 2 Adaptive capacity indicators in project regions²⁴

Adaptive capacity Indicators (share in %)	Country	Tigray	Gambella	Amhara	Oromia	Benishang SNNPR	
# watersheds		17	7	38	44	11	36
Literate population aged 10 and above (-)	56.28	53.54	58.95	41.14	45.39	47.28	46.79
HHs by Protected Well/Spring as a Source of Drinking Water in Dry Season (-)	18.77	27.81	24.46	22.65	16.83	49.28	18.23
HHs using collected firewood for cooking (+)	72.61	64.43	77.91	68.23	79.07	89.61	84.08
HHs with modern construction material* (-)	1.76	11.27	2.01	0.68	0.69	0.63	1.22
HHs suffered from Food Shortage for at least 1 month (+)	21.21	12.97	30.39	22.96	16.38	5.3	34.3
HHs suffered from Food Shortage in the last 12 months (+)	22	32.34	27.61	27.6	19.09	11.66	23.77
HHs Limiting their Meal Portions to cope with Food Shortage (+)	21	25.6	9.46	18.41	27.16	29.84	16.82
Under-5 mortality rate in deaths per 1000 live births (+)	67	59	88	85	79	98	88

The adaptive capacity indicators assessed above indicate that most of the targeted watersheds are situated in regions that have relatively low adaptive capacity. The regions of Afar, Somali, Oromia, and Tigray, which have relatively high poverty levels, are comparatively more vulnerable to climate change than other regions in the country.²⁵ Institutional capacity to respond to impacts in those areas is also low. One study assessed the flood risks and health-related issues in the Gambella region of the country. It identified three critically important weaknesses, including a lack of flood-specific policy, absence of risk assessment, and weak institutional capacity.²⁶

A recent World Bank book examines the potential impact of climate change and climate policies on poverty reduction²⁷. It suggests that as a result of differences in exposure and vulnerability, natural disasters increase inequality and may contribute to a decoupling of economic growth and poverty reduction. For instance, after Ethiopia's 1984–85 famine, it took a decade on average for asset-poor households to bring livestock holdings back to pre-famine levels. Poor people can become more resilient to shocks in agriculture thanks to trade and food reserves that can overcome local shortages in times of need, better access of poor farmers to markets, and improved technologies and climate-smart production techniques. Access to functioning markets, however, depends on better infrastructure and better institutions. For instance, in Ethiopia, the incidence of poverty decreased by 6.7 % following farmers' access to all-weather roads. Case studies from Ethiopia provided in the book further suggest that the cost of a drought to households can increase from zero to about \$50 per household if support is delayed by four months, and to about \$1,300 if support is delayed by six to nine months. This rapid increase, which is due to irreversible impacts on children and distress sales of assets (especially livestock), helps explain why most post-disaster responses have multiple stages. Typically, initial support is delivered quickly—even at the expense of targeting and accuracy—and larger recovery and reconstruction efforts are provided later with more emphasis on appropriate targeting. The authors conclude that providing resources for climate risk analysis and project preparation and ensuring that financial instruments and resources are available for development and poverty reduction investments can provide a window of opportunity before the impacts of climate change materialize.²⁸

Figure 6 shows the population density in Ethiopia as well as population density against all restored watersheds and those planned by RLLP. This map shows that most of the restored and planned watersheds are located in densely populated parts of the country.

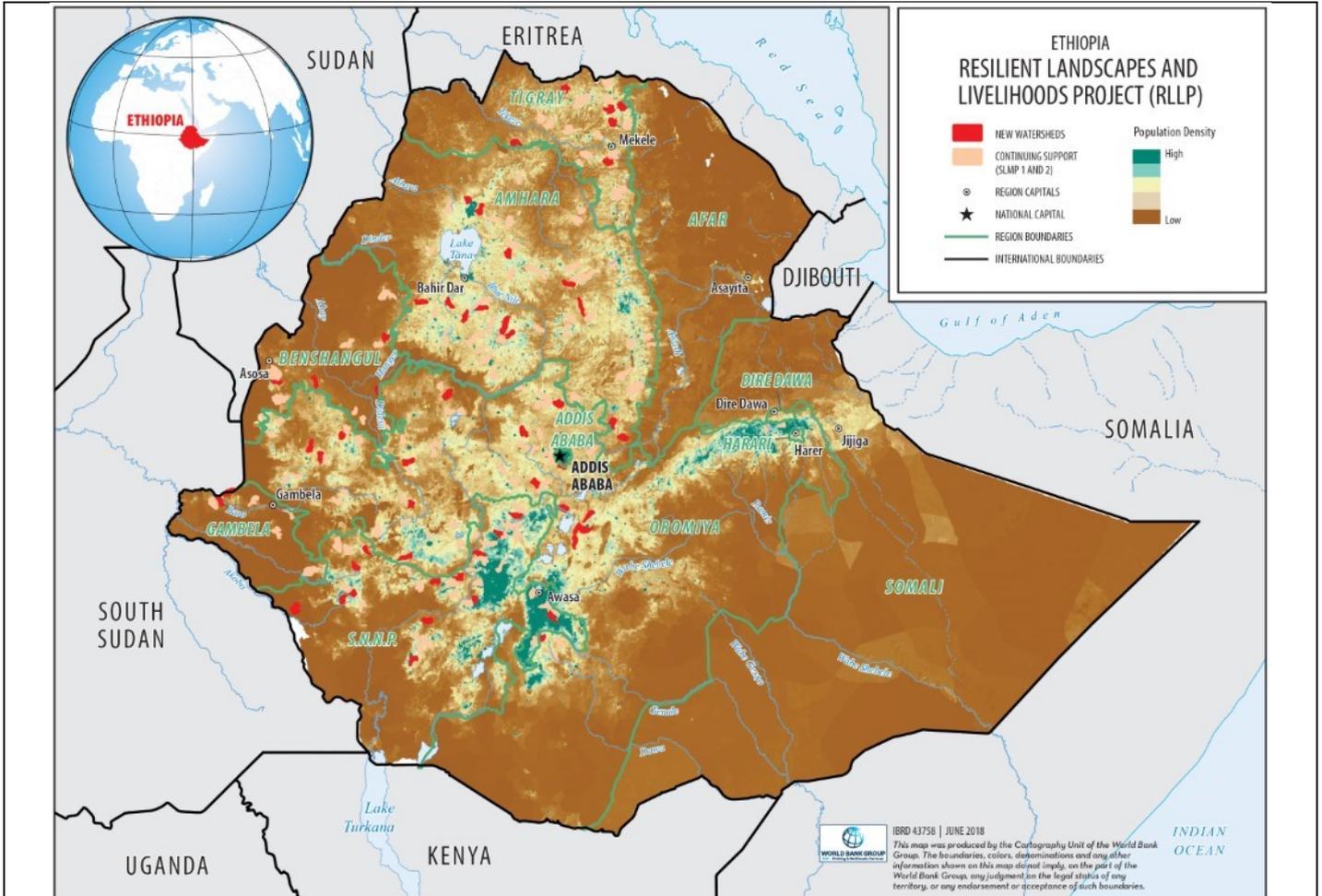


Figure 6 Population density in Ethiopia

By focusing on the most degraded watersheds in the Ethiopian highlands, the RLLP will target the communities most vulnerable to climate change impacts. Under Component 1, sustainable soil and water conservation practices will reduce exposure to climate-related impacts such as erosion and drought. Climate-smart agricultural practices will reduce the sensitivity of the sector to climate change and variability, and livelihood diversification will reduce the sensitivity of communities to impacts affecting the agricultural sector. Under Component 2, the capacity building and information modernization activities will increase adaptive capacity at the local government level. Under Component 3, activities to secure land tenure for small-holder farmers will increase household resources and encourage the adoption of SLMPs, which will reduce sensitivity to climate impacts and increase adaptive capacity through the dissemination of adaptive measures across highly vulnerable regions. In addition, the roll-out of the NRLAIS under this component will increase adaptive capacity at the regional and national level by introducing evidence-based monitoring and ensuring a coordinated and consistent approach to the development of policies, legislation, regulations, models and research to enhance sustainable land governance.

The project will work with the most vulnerable populations in the target areas. Detailed bio-physical information will be used to prepare MYDPs for new watersheds. Local-level participatory land use planning teams at the woreda and kebele level will ensure that interventions benefit smallholder farmers. The project also includes activities specifically targeting the particularly vulnerable group of landless and jobless youth and women. In these activities, landless youth will be provided with communal land certificates in exchange for land restoration. The project will also ensure that the provision of landholding certification will be implemented in such a way that half of the title-holders will be women. This will enable these groups to participate in agricultural production, as well as on the agricultural market, thus enhancing their income opportunities.

D.5. Country ownership (max. 500 words, approximately 1 page)

Please describe how the beneficiary country takes ownership of and implements the funded project/programme. Describe the following:

- Existing national climate strategy
- Existing GCF country programme
- Alignment with existing policies such as NDCs, NAMAs, and NAPs
- Capacity of Accredited Entities or Executing Entities to deliver
- Role of National Designated Authority
- Engagement with civil society organizations and other relevant stakeholders, including indigenous peoples, women and other vulnerable groups

The RLLP will build on and scale up the results of the two completed Sustainable Land Management Programs, SLMP-I and SLMP-II. RLLP is also designed to be complementary to and avoid overlap with related government programs such as the Productive Safety Net Program (PSNP), The Second Agricultural Growth Program (AGP 2), the Agricultural Transformation Agency (ATA) and others. The diagram below summarizes the relationship of the RLLP to the most important baseline projects, which are described further below.

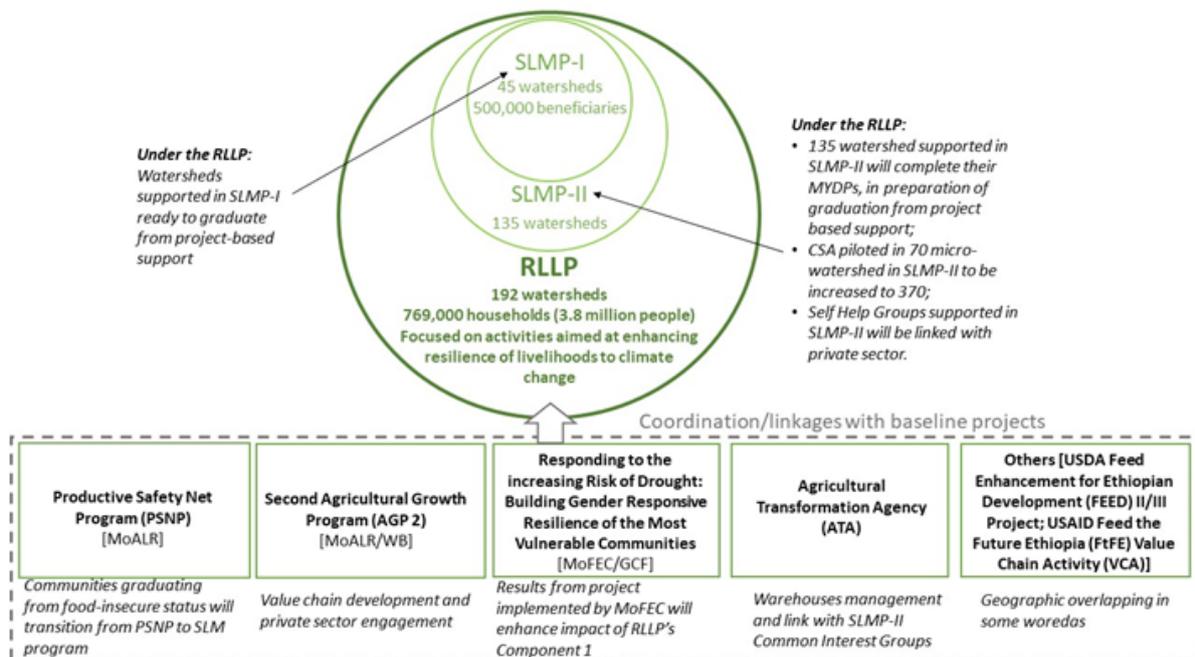


Figure 2 Baseline projects

Baseline projects

The proposed project has been requested by the government of Ethiopia to both scale up the success of the ongoing SLM program and introduce new, transformative and innovative elements. Ethiopia's problem of land degradation caused by erosion, drought, loss of vegetative cover, and unsustainable grazing and cultivation practices has led to the development of official government programs for better land management. These programs have evolved from an unsuccessful "top-down" approach to one that recognizes the importance of community participation in decision making, not simply as a source of labor.

The Government developed, with support from the TerrAfrica partnership, the *Ethiopia Strategic Investment Framework for SLM*. This investment plan anchored the establishment of the GoE's programmatic approach to scaling up SLM. Called the SLM Program, it provided the platform for convening and coordinating assistance from donors. When it was developed, the SLM Program targeted 177 "high potential, food secure" watersheds. Before this programmatic approach was undertaken by the GoE and partners, efforts to address land degradation were piecemeal and scattered throughout the country.

Sustainable Land Management Program-I (SLMP-I)

As part of the SLM Program, the World Bank/GEF-financed SLMP-I operation targeted 35 watersheds initially, later expanding to 45. The initial target group was an estimated 500,000 beneficiaries, representing rural households living in 35 large watersheds assisted by the project. These large watersheds, with an average size of about 8,500 ha, were located in six Regional States of Ethiopia (Amhara, Oromia, Tigray, SNNP, Beneshangul/Gumuz, and Gambella). In addition, through the capacity building activities of the project, technical staff at the central (Federal Ministry of Agriculture and Livestock Resource, MoA), regional (Woreda) and district (Kebele) levels benefited from training and improved working conditions. The project was declared effective in March 2009 and closed on schedule 4.5 years later (September 2013) with no extensions.

Key conclusions of the final evaluation of SLMP-I were that the project's objectives were substantially relevant to the country context and priorities. As part of the project, 45 participatory Watershed Management Plans and 613 community-based micro-watershed management plans were prepared. The area under sustainable land management in the targeted watersheds increased from 86,892 ha to 209,926 ha by project closure. The Normalized Difference Vegetation Index (NDVI), a measure of vegetation cover and a proxy measure for the reduction of land degradation, increased in the project areas by 0.543 (9%) over baseline of 0.498 and soil carbon increased by 31% during the period 2009-2013. At appraisal, the project team estimated an overall Economic Rate of Return (ERR) of 10-17% and a Financial Rate of Return (FRR) of 8-11%. The cost benefit analysis conducted at closure calculated an IRR that ranged from 10.41% to 22.60%.

SLMP-II

SLMP-I was considered successful by the GoE, which committed to a larger follow-on project, SLMP-II, that aimed to consolidate the SLM platform and expand the number of large watersheds assisted from 45 to 135. In SLMP-II MoA continued to develop and implement the innovative, integrated and inclusive SLM Program that supports (i) efforts to address land degradation and climate risks and productivity constraints through a landscape approach, and (ii) contributes to growth in the agricultural sector in general. SLMP-II aimed at (i) further scaling up and consolidating the pioneering efforts and achievements of the project, mainly through replicating the project's assistance to 90 additional watersheds; (ii) contributing to the consolidation and harmonization of MoA's multi-donor SLM program; and (iii) synergizing the project's achievements in terms of reduced soil degradation and improved water management by promoting a comprehensive livelihood improvement strategy anchored on "climate-smart" agricultural practices in beneficiary farmlands, households, and communities.

In SLMP-II, natural and economic wealth was built on over 1.3 million hectares of degraded communal and smallholder lands through an integrated package of activities in targeted watersheds that included: (i) management of natural resources (soil and water conservation structures, agroforestry, participatory forest management, enclosures to reduce free grazing and allow assisted natural regeneration, small-scale irrigation, water point development, climate-smart technologies on household farmland, and land use planning); (ii) improved land rights through issuance of legal landholding certificates to one million people, including women and landless youth; and, (iii) livelihoods support, including for promotion of improved cookstove adoption that reduces fuelwood demand, women's labour, and respiratory illnesses.

Results from SLMP-II financing are well documented. During a major drought in 2015-16 there is some evidence that water and food security in participating districts were strengthened compared to untreated areas. Degraded lands have been brought back into production for local farmers, dry season base flow of streams and depth to water table are improving, and protective vegetation cover was either maintained or expanded, as verified by remote sensing. In addition, approximately 9 million tons of additional CO₂eq have been accumulated in restored productive lands in SLMP-II areas, a proxy for system function as well as a contribution to climate change mitigation. Smallholder farmers regularly express how their identity and sense of place has also been restored through landscape restoration and improved legal land rights. Many community members who were ready to migrate remained in their birthplace and were able to afford to send their children to school. They were able to improve nutrition by producing vegetables and fruits using small-scale irrigation, by diversifying through poultry, apiculture and woodlot production, and by increasing livestock productivity through forage management.

Linkages with other government programs and projects

Flagship programs of the MoA include the Second Agricultural Growth Program (AGP) and the Productive Safety Net Program (PSNP). PSNP is aimed at enabling the rural poor facing chronic food insecurity to resist shocks, create assets and become food self-sufficient. It provides multi-annual predictable transfers, as food, cash or a combination of both,

to help chronically food insecure people survive food deficit periods and avoid depleting their productive assets while attempting to meet their basic food requirements. Under RLLP, a number of communities graduating from food-insecure status in newly identified watersheds will transition from support under PSNP to join the SLM Program, while at the other end of the SLM cycle a number of restored watersheds that benefitted from investments under SLMP-I and SLMP-II will graduate from project-based SLM support to continue investment in sustainable, productive landscape management through mainstream government programs.

With support from the Pilot Program for Climate Resilience and the BioCarbon Fund, the Bank is further supporting the government's Climate Resilient Green Economy (CRGE) Facility and four line ministries led by the Ministry of Finance and Economic Cooperation (MoF) to implement a Multi-Sector Investment Plan (MSIP) for climate resilience in key sectors, including agriculture, forestry, water resources, irrigation, and energy, in the context of resilient landscapes.

RLLP plans to work closely with the GCF financed project "Responding to the increasing risk of drought: building gender-responsive resilience of the most vulnerable communities" that is being implemented by MoF. Progress in the implementation of Component 1: *Improved access to water to build a resilient livelihood* and Component 2: *Management of Natural Resources for Sustained Water Availability* of the MoF project will enhance the impact of Component 1 of RLLP: *Investment on Green Infrastructure and Resilient Livelihoods*.

The link between the SLMP I and II, RLLP and the MoF project is quite close. As Section C.2, Paragraph 36 of the MoF project proposal explains, "Project results will feed into other on-going national initiatives such as the IWRM projects being implemented in the various watersheds, SLMP, AGP and REDD+ programs being implemented in the adjacent Kebeles. This project could be considered as one of the few initiatives in Ethiopia that has put climate change in to building the resilience of the communities. Whilst there are various ongoing national development programs and projects, climate change has not been captured at the core of it. This program has been strategically designed to address current and future water supply issues to the community as well as integrate initiatives and structural adjustments to efficiently manage this resource."

The creation of resilient landscapes and livelihoods as a result of RLLP will work synergistically with the improvement in drought resilience of communities that will emerge from the MoF project to enhance resilience of the rural population in Ethiopia to a degree that the participating projects could not achieve on their own.

National strategies

Ethiopia's long-term goal is to ensure that climate change adaptation and mitigation are fully mainstreamed into development activities. The proposed project is designed to be transformative, contributing to a number of key national strategies, including Growth and Transformation Plan 2 (GTP-2), the Climate Resilient Green Economy (CRGE) Strategy, and accompanying 2015 Climate Resilience Strategy for Agriculture and Forest, Ethiopia's Nationally Determined Contribution (NDC), the 2017 National Adaptation Plan to Address Climate Change, the Ethiopia SLM Investment Framework, the emerging National Forest Sector Strategy and National REDD+ Strategy, as well as sector strategies for energy, water, and agriculture.

The CRGE Strategy aims at developing a green economy and promoting greater resilience to climate change into a single policy framework in support of its national development objectives. Some of the key objectives of the CRGE, which this project supports, include improving crop and livestock production practices to improve food security and increase farmers' incomes while reducing emissions; and protecting and re-establishing forests for their economic and ecosystem services, including as carbon stocks. This project will address crucial issues for the resilience of the agricultural sector identified in the CRGE. It will also contribute to the National Adaptation Plan (NAP-ETH) launched in September 2017. NAP-ETH aims to bring about transformational change in the country's capacity to address the adverse consequence of climate change, focusing in particular on agriculture and forestry.

The project will also contribute to the climate, forest, water, energy, and land tenure targets in the Growth and Transformation Plan 2 (GTP-2) as well as the forthcoming GTP-3. The institutions strengthened as a result of the project will also contribute to the implementation of Ethiopia's Strategic Investment Framework for Sustainable Land Management (ESIF).

The proposed project is also in line with the intention of Ethiopia to limit its net greenhouse gas (GHG) emissions in 2030 to 145 Mt CO₂e or lower. Achieving this goal would mean a 255 MtCO₂e (64%) reduction from 'business-as usual' (BAU) emission projections by 2030. The agriculture sector and REDD+ are targeted to reduce 88% of the volume of GHGs.

Finally, the Policy Implementation Principles of the National Policy and Strategy on Disaster Risk Management (July 2013) include 'decentralized and community-centered' approach towards disasters and points out the importance to 'forecast the hazard, analyze, and take early action'. The goal of the Environment Policy is to enhance the health and quality of life of citizens and to promote sustainable social and economic development through the sound management and use of natural, human made and cultural resources and the environment.

Alignment with NDC and NAPA

As a result of the development of the Climate Change National Adaptation Program of Action (NAPA) in 2007, Ethiopia has made significant advances towards integrating climate change into national planning processes. The NAPA was replaced in 2010 by the Ethiopian Program of Adaptation to Climate Change (EPACC), which calls for mainstreaming climate change into decision-making at the national level. In September 2017 Ethiopia launched a 15-year National Adaptation Plan which focuses on a number of vulnerable sectors including agriculture and forestry. This project is in line with these documents and other government policy.

Ethiopia's NDC states that adaptation initiatives to reduce vulnerability will be based on the country's Climate Resilient Green Economy Strategy (CRGE). The CRGE has informed the design of adaptation activities of the RLLP (see above). Given that 80% of the population depends on agriculture for their livelihoods, increasing the resilience of agriculture is a priority for Ethiopia. The SLMP is mentioned in the NDC as one of the adaptation actions that has already been undertaken and that will contribute to building resilience to climate change. RLLP will contribute towards many of the adaptation interventions identified in the NDC, which concentrate strongly on increasing the resilience of agriculture. The adaptation intervention strategy identified in the NDC towards which RLLP contributes most strongly is "*Enhancing ecosystem health through ecological farming, sustainable land management practices and improved livestock production practices to reverse soil erosion, restore water balance, and increase vegetation cover, including drought tolerant vegetation.*". The project will also strongly contribute towards the actions "*Improve and diversity economic opportunities from agroforestry and sustainable afforestation of degraded forest areas*" and "*Enhance the adaptive capacity of ecosystems, communities and infrastructure through an ecosystem rehabilitation approach in the highlands of Ethiopia. Rehabilitation of degraded lands/forests will also increase resilience of communities, infrastructures and ecosystems to droughts and floods.*". Ethiopia seeks to maximize the synergies between adaptation and mitigation, especially involving agriculture and forests. RLLP will contribute towards two of the pillars for mitigation of GHG emissions: "*Improving crop and livestock production practices for greater food security and higher farmer incomes while reducing emissions;*" and "*Protecting and re-establishing forests for their economic and ecosystem services, while sequestering significant amounts of carbon dioxide and increasing the carbon stocks in landscapes;*".

Capacity of Accredited Entities and Executing Entities

Project financing will flow through MoF, which is mandated to mobilize both domestic and external resources for the implementation of the Climate Resilient Green Economy (CRGE) Strategy. The Project will be implemented by Federal Ministry of Agriculture (MoA).

Significant progress in remediation of degraded lands has been achieved in recent years by the Government of Ethiopia and thousands of local communities largely through investment and technical assistance under MoA's SLM Program. MoA has been implementing the SLMP with World Bank support in six regional states by coordinating investments from major donors and partners (IDA, Norway, Canada, Germany, GEF, LDCF) into a holistic and coordinated landscape management framework. With financing from IDA through the SLMP-II, over 1.3 million hectares of degraded communal and smallholder lands in selected watersheds is being converted into a sustainable source of natural and economic wealth through an integrated package of activities. Working through Regional Bureaus of Agriculture (BoAs) and woreda (equivalent to district) administrations over the last ten years, the SLM Program has restored productivity in more than two million hectares of degraded watersheds in six regional states

of the Ethiopian highlands. Up to now, the SLM Program has supported interventions in a total of 223 major watersheds, out of an estimated 700 that would benefit from SLM interventions.

The project is featured in the World Bank's Country Partnership Framework (CPF) for FY 17-21 as a flagship operation addressing the CPF's resilience pillar, with a funding commitment from IDA-18 for US\$100 million.

IDA financing has helped restore productive capacity and build resilient livelihoods in 135 highland watersheds through an integrated package of activities that includes management of natural resources on more than half a million hectares of degraded communal and smallholder lands. Through soil and water conservation structures, enclosures to limit free grazing, and afforestation or reforestation of more than 80,000 hectares, these activities have led to an average 9 % increase in vegetation cover in treated watersheds. Complementing these physical interventions, IDA financing for the SLM Program has strengthened MoA's support for land rights through the issuance of landholding certificates to over 300,000 households, including more than 200,000 women who have received titles either individually or jointly with their husbands, and more than 7,000 landless youth who have received titles to communal holdings in exchange for restoring land. To further ensure that local communities derive livelihood benefits from these investments, more than 130,000 smallholders in the targeted watersheds have participated in income-generating activities under the SLM Program, including for improved cookstove adoption that reduces fuelwood demand, women's labor and respiratory illnesses.

SLMP-II benefitted from parallel financing from GIZ for Cluster Advisors who supported extension, technical planning, and results reporting at woreda and kebele levels. The new GIZ program launched in 2018, Sustainable Use of Resources for Economic Development (SURED), will play an important role in providing training for technical assistance to be contracted under RLLP, as well as quality control of these services.

D.6. Efficiency and effectiveness (max. 500 words, approximately 1 page)

Describe how the financial structure is adequate and reasonable in order to achieve the proposal's objectives, including addressing existing bottlenecks and/or barriers, and providing the minimum concessionality to ensure the project is viable without crowding out private and other public investments. Refer to section B.5 on the justification of GCF funding requested as necessary.

Please describe the efficiency and effectiveness of the proposed project/programme, taking into account the total financing and mitigation/ adaptation impact the project/programme aims to achieve, and explain how this compares to an appropriate benchmark.

Please specify the expected economic rate of return based on a comparison of the scenarios with and without the project/programme.

Please specify the expected financial rate of return with and without the Fund's support to illustrate the need for GCF funding to illustrate overall cost effectiveness.

Please explain how best available technologies and practices have been considered and applied. If applicable, specify the innovations/modifications/adjustments that are made based on industry best practices.

Project co-financing is USD 131 million, bringing the co-financing ratio (total amount of co-financing divided by the Fund's investment in the project) to 0.79. In addition to this co-financing, parallel financing is provided by the Government of Ethiopia, who will provide USD 10 million in kind, and by GIZ, which is providing USD 13 million in the form of technical assistance. The project will leverage private sector and beneficiary contributions through activities aimed at providing household energy solutions and strengthening value chains associated with SLM interventions.

A detailed framework for private sector engagement under RLLP is presented in Annex B.1. This framework identifies three major categories of partners. The first are partners with activities currently being supported by other funders. RLLP will collaborate with existing private sector engagement activities in order to best utilize available funding and avoid unnecessary duplication. The figure below shows the relationships between players in this category who can support private sector engagement in the project. RLLP will facilitate these existing activities to extend their activities to rehabilitated watersheds. The second category is made up of private enterprises who have the potential to buy RLLP products or sell products that watershed households need. RLLP will engage with enterprises that already have a base in or plan to focus on the geographical areas of rehabilitated watersheds. A strong example of this type of opportunity is the MOU signed with Raya Brewery-BGI Ethiopia in Enda-Mohoni Woreda of South Tigray Zone. In the final category are long-term opportunities for the private sector to begin to implement activities in the targeted watersheds. RLLP will identify gaps and potential partners and suggest pilot collaborations, for example with enterprises who may be interested in specific crop varieties that can be grown in the targeted watersheds.

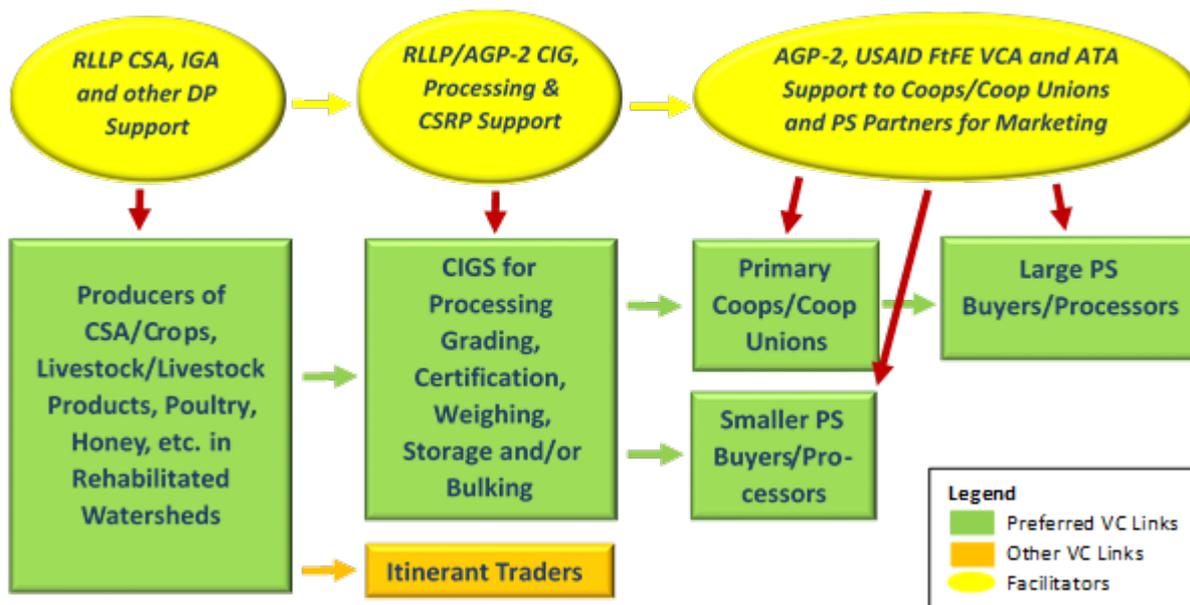


Figure 7 RLLP Linkages from Diversified Livelihoods to Value Chains and Markets

Narrative and rationale for the detailed economic and financial analysis

To assess the ex-ante efficiency of the project investment, a cost benefit model is used. Annual cost and benefit flows are estimated as the difference between without-project and with-project net benefits for direct beneficiaries (See Annex E.1: Economic and Financial Analysis for more details). Efficiency indicators include the Economic Net Present Value (ENPV) and the Economic Internal Rate of Return (EIRR), as well as impact on farm productivity, household incomes, soil erosion, and GHG emissions. Based on available information compiled during preparation, gross margins and representative farm models have been developed for selected cropland, non-cropland, and livestock production in the project area. Additional net benefits are analyzed from establishing Community Storage Receipts Program (CRSP) facilities.

In the counterfactual scenario without the Project, land use will continue on its current path. Continued soil erosion, water insecurity, and land insecurity will result in land degradation. It is expected that climate change will exacerbate soil erosion and water insecurity leading to direct losses to those who rely on crop and livestock production and related industries for their energy use and livelihood. Production yields will go down or farmers will have to increase their input costs, such as fertilizer use, to maintain current yields. In the absence of CSRP facilities, farmers will continue to experience post-harvest losses. They will also be unable to capture higher crop prizes that are obtainable a few months after harvest and in larger markets. Non-agricultural land in the watershed will also continue to deteriorate without the Project due to climate change and soil erosion as well as overuse of common land through livestock grazing and firewood collection. This will put a further strain on the population who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will

also affect areas and households through increased flood risk and sediment build-up in irrigation and hydroelectric dams.

Incremental benefits are estimated for investments in green infrastructure and resilient livelihoods (Component 1). It is assumed that these benefits will only accrue if the outcomes in the remaining three components are also achieved: 2. Strengthening institutions, information and monitoring for resilience; 3. Land administration and use; and 4. Project management and reporting. Investment costs include USD 165.24 million from GCF, USD 100 million from IDA, USD 19 million from MDTF, and USD 12 million from expected MDTF Contribution from the Government of Canada for a total of USD 296.24 million.

Following World Bank guidelines, the economic analysis considers anticipated costs and benefits with and without the project, including social costs and benefits. This necessitates the consideration of funding sources and labor costs outside the GCF project. In this project, the following are included as additional costs for capacity building and project management totaling USD 23 million (USD 13 million from GIZ and USD 10 million from the GoE). In addition, the analysis includes an estimated USD 99.1 million in in-kind contributions from project beneficiaries minus USD 3.8 million in price contingencies. With all costs included, the total budget included in the analysis is USD 319.2 million. As part of the exit strategy, recurrent costs in the years after the project has ended are estimated to be 2.5% of initial costs, including beneficiary in-kind contributions of USD 10.4 million per year.

The Project will increase climate resilience in 210 major watersheds covering an area of 2.1 million ha. Based on 2007 census numbers, the Project has an estimated 4.2 million beneficiaries (or 834,000 households) in the selected watersheds. Since population growth since 2007 census is estimated to be 15% or more, for the present day this is a conservative estimate.

Project interventions are assumed to lead to direct net benefits to crop and livestock producers as well as forests and other non-croplands through watershed management plans. These activities will reduce soil erosion and yield losses that are expected to result from climate change in the absence of Project intervention. Activities will also improve productivity and increase resilience against the negative impacts of climate change. To further increase resilience against future climate change, the Project will encourage climate resilient livelihood diversification through community groups including CSRPs. Project activities will also constitute a net carbon sink when analyzing impact on GHG emissions. While not included quantitatively in this EFA, benefits will also accrue from strengthening institutions and improving information and monitoring systems. Improved administration and secure tenure rights will create incentives for beneficiaries to adopt sustainable management practices. The Project is also expected to have positive impact on indirect beneficiaries in neighboring areas through informal dissemination of new management practices as well as downstream improvements from reduced floor risk and sediment build-up.

In the current 25-year net benefit analysis using a 5 percent discount rate, the project yields an Economic NPV of USD 3,312 million (ETB 92.7 billion) and has a benefit cost ratio of 3.8. The Economic IRR is 47%. The payback period is 5.3 years. In economic investment analyses, the Project therefore meets the requirement by yielding a rate of return higher than the economic discount rate of 5%. Note that, a 25-year model is used to account for the long-term gradual build-up of benefits from SLM interventions combined with a 5-year implementation phase followed by 20-year capitalization phase for forest plantations and green corridors.

World Bank guidelines recommend using a 5% economic discount rate.²⁰ Increasing the discount rate from 5% to 10% reduces project returns by 51% to USD 1,617 million. Project returns are still considerable at a 10% discount rate with a BCR of 3.2.

If the Project only reaches half of the targeted area for example due to unexpected cost increases, estimated project returns fall by 53% to USD 1,560 million and the rate of return drops from 47% to 26%.

If base case assumptions are too conservative or climate change leads to accelerated soil erosion in the future, the estimated net benefit of Project interventions would be higher. When assuming a 50% increase in annual soil loss by year 25 the estimated economic return is USD 3,462 million with a 47% rate of return. Under this accelerated soil erosion scenario, the estimated Project net benefit of avoiding this larger soil erosion is therefore USD 150 million across the 25-year period. In the base case, estimated value of soil erosion varies between USD 0.11 and 0.26/tonne soil per year depending on the gross margin value of different land uses. In the scenario with accelerated soil loss, this estimated value ranges between USD 0.17 and 0.38/tonne soil per year.

²⁰ World Bank (2015). Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects. Washington, DC.

When excluding the social value of reduced GHG emissions, the net economic project return is USD 2,238 million (ETB 62.7 billion) with a benefit cost ratio of 2.9, an EIRR of 29% and a payback period of 7.3 years. This is 3.1% of Ethiopia's GDP in 2016 terms.

When excluding the GHG emissions, 49% of incremental net benefits are generated through activities on non-cropland areas, particularly due to the transformation of 41,000 ha from bush and grassland to forest plantation but also due to avoided soil erosion. This constitutes an ENPV of USD 108 per year per treated hectare and an EIRR of 43%. A substantial part of Project returns is also generated by cropland and livestock production at USD 49/ha/year and USD 39/ha/year, respectively. Much of the incremental benefit estimated from cropland comes from transforming 30,000 ha of unproductive land to green corridor plantations and some is from avoided soil erosion. With exacerbated problems from climate change, forest plantations and green corridors will enhance watershed restoration and ecological connectivity as well as extend the lifespan and resilience of drainage, irrigation, and road infrastructure.

In financial terms the NPV is USD 696 million (ETB 19.5 billion) with a Financial IRR of 28%, a benefit cost ratio of 2 and a payback period of 7.5 years. This estimated net return constitutes 1% of Ethiopia's GDP in 2016. In the financial analysis a 12% discount rate is used to reflect the opportunity cost of capital in Ethiopia.

By supporting the establishment of financially viable enterprises in the area, the Project helps build resilience and future self-sufficiency. Without Project support for initial investments and working capital, CSRPs may be financially viable to also cover future capital maintenance costs, but only if available commercial loan interest rate is below their FIRR of 18-21% and a payback period of over 5 years. Initial information indicates that commercial loans for investments may be available at this rate but not the size of loans required. It can be expected that demonstrated implementation of CSRPs can reduce commercial banks' future risk perception. CSRPs can improve their financial viability to an FIRR over 24% for example by using more of their available storage capacity, obtaining a matching investment grant and reducing their initial working capital requirements. To be financially viable, the CSRPs will require project support to cover their initial investment costs in the absence of commercial loans at favorable rates. As part of an exit strategy, this increased level of return would also enable them to cover assumed future capital maintenance costs.

The National Poverty Line for Ethiopia is a measure of absolute poverty. The poverty line indicates the money required for food to provide the minimum required caloric intake (Food Poverty Line) and additional non-food items. In the financial analysis, estimated farm-level gross margins can increase by over USD 101/year/person (including the value of production used for home consumption), which is 1.2 times the Food Poverty Line (USD 85/person/year in 2018 terms), or 63% of the National Poverty Line (USD 162/person/year). This is a direct measure of increased resilience in the Project area.

The planned investment Project is expected to yield high returns even when considering key risk factors such as: yield and price changes; adoption rates; and project delays. As part of a risk management plan, it is particularly important to ensure that farmers can negotiate and obtain fair output prices and achieve target yields going forward. Part of the risk management plan could also be to ensure that planned CSRPs are used to their full capacity and that they receive sufficient financial support toward initial investment and working capital costs to ensure their financial viability. Close monitoring and support for target farmers and communities to implement water management plans could help increase the adoption rate. While not always avoidable, project delays can be minimized with close monitoring and by ensuring implementation does not lose momentum.

The full economic and financial analysis is provided in Annex E.1.

Economic and financial justification for the concessionality that GCF provides

Despite Ethiopia's Debt Sustainability Assessment having rated the risk of debt distress as high, the Ethiopian Government has agreed to take on significant debt for this project, with \$100 million in loans to be provided by IDA and a request of an additional \$107 million in loans from GCF. In addition to the \$100 million in loans, \$31 million in grants is provided as co-financing, bringing the percentage of grant funding in the co-finance to 24%. \$58 million in grant finance is also requested from GCF, bringing the percentage of grant funding in the GCF financing to 35%. GCF funding will be used for the introduction at scale of climate smart agriculture. While some of the individual activities included in the package of measures for CSA may be business as usual in other parts of the world, they are new to the target population of smallholder farmers in Ethiopia. In particular, the implementation of such measures in a coordinated way as part of a larger package faces multiple barriers. RLLP has been designed to mitigate these barriers to a degree sufficient that upon project end it is expected that the measures will continue to be implemented without concessional finance. However, for their introduction at scale highly concessional funding is essential. The

initial validation of the package of measures is being conducted as part of SLMP2. GCF financing is required to scale up implementation in all watersheds covered by RLLP subsequent to the pilot phase, in which the package is being validated in 30 watersheds as part of SLMP2.

While beneficiaries will derive some private benefits as a result of the implementation of this package of measures, these beneficiaries are vulnerable rural smallholder farmers facing food, land tenure and water insecurity. Any benefits derived will be used to increase food and water security and cover other basic needs. Due to the high risk aversion of such a population and the fact that it is overwhelmingly unbanked, it would not be feasible to pass on the cost of any loans to the beneficiaries.

Activities for the expansion of SLM, the development of income opportunities and resilient livelihoods as well as those improving the enabling environment will also be funded by GCF finance.

The Economic Net Present Value (ENPV) is USD 3,312 million discounted at 5% over a 25-year period (ETB 92.7 billion). This generates a benefit cost ratio (EBCR) of 3.8 and an Economic Internal Rate of Return (EIRR) of 47% with a payback period of 5.3 years. In economic investment analyses, the project therefore meets the World Bank requirement by yielding a rate of return higher than the economic discount rate of 5%.

Financial viability for this investment in the long run is ensured, because once the barriers to implementation of sustainable land management and climate smart agriculture practices promoted by the project have been removed and the project has established mechanisms to encourage their implementation, individual farmers will see their incomes rise. Those practices that are implemented at the farm level will have short payback times that will motivate farmers to continue with these practices in the long run beyond the project's intervention. Furthermore, institutions will be established to ensure that communities continue to maintain collective infrastructure that has been established. The resilient livelihood interventions that are also part of the project will strengthen the project's impact and further ensure long-term maintenance. Private sector development will mean households will see a sustainable increase in income, which will in turn provide an incentive for them to continue maintaining the green infrastructure and climate resilient agricultural practices introduced by the project.

By supporting the establishment of financially viable enterprises in the area, the Project helps build resilience and future self-sufficiency. Without the support of the project for initial investment and working capital, CSRPs might be able to cover future capital maintenance costs, but only if the commercial interest rate is below their FIRR of 18-21% and if the payback period is greater than five years. Initial information indicates that commercial loans for smaller investments may be available at this rate, but not the size of loans required. CSRPs can, however, improve their ability to afford an FIRR over 24% by using more of their available storage capacity, obtaining a matching investment grant, or reducing their initial working capital requirements. To be financially viable, the CSRPs will require project support to cover the initial investment costs in the absence of commercial loans at favorable rates. As part of an exit strategy, this increased level of return would also enable them to cover estimated future capital maintenance costs.

Ongoing sustainable land management activities in Ethiopia have resulted in the development of a number of guidelines for the types of interventions included in RLLP. Additional guidelines covering issues not yet dealt with in the existing guidelines are under development.

The following guidelines will be used to ensure that best available technologies and practices are applied in the project:

Guidelines already developed and updated:

1. Climate Smart Agriculture (CSA) field manual
2. Income Generating Activities (IGA) guideline
3. HM&E Guideline
4. Gender Mainstreaming Guideline
5. Watersheds Performance Assessment and exit strategy guideline (PA&ES)
6. SLM Best Practice identification guideline
7. Below Woreda Level Data Collection Guideline
8. ESMF guideline (translated into three local languages - Amharic, Oromiffa and Tigrigna)
9. Value Chain Development in SLMP Context
10. Bamboo Development Training Manual
11. Training Manual for FTC Support (HIV)
12. LAU Implementation Strategy
13. Communication Strategy

14. Stakeholders Participation Strategy

Guidelines under development:

1. CBPWDG - Community Based Participatory Watershed Development Guidelines ESIF
2. Capacity Development Guideline
3. Rehabilitated communal Land, use and management
4. Small Scale Irrigation
5. Bamboo Development Strategy
6. Payment for ecosystem services (PES)

Quality assurance and sustainable delivery of training is ensured by the SLM Best Practices Task Force. The SLM Best Practices Task Force was established in August 2011 with a view to expediting the process of screening, documenting, dissemination and expanding SLM best practices across the country. The Task Force comprises members from government organizations and development partners whose expertise relates to sustainable land management. By 2015, it had already achieved impressive results, identifying 105 SLM technologies and 9 SLM approaches with best-practice potential. The screening criteria to help categorize and prioritize SLM practices are described in Annex A.2.

The SLM Best Practices Task Force has the following responsibilities:

- To provide initial training to national and regional experts who then train woreda experts and development agents;
- To pre-screen the list of existing SLM practices against the established criteria;
- To validate the list of pre-screened existing practices with SLM experts (in a validation workshop);
- To submit screened and approved SLM practices to the SLM TC for approval;
- To oversee the documentation of each screened SLM best practice as per the description form provided.

After the SLM Best Practices Task Force is eventually dissolved, the national-level structure (such as the case team or coordination unit of the Natural Resource Management Directorate) must take over the responsibility of both continuing an effective system of best-practice documentation and building capacity of staff and other stakeholders.

D. E. LOGICAL FRAMEWORK

This section refers to the project/programme's logical framework in accordance with the GCF's [Performance Measurement Frameworks](#) under the [Results Management Framework](#) to which the project/programme contributes as a whole, including in respect of any co-financing.

E.1. Paradigm shift objectives

Please select the appropriated expected result. For cross-cutting proposals, tick both.

- Shift to low-emission sustainable development pathways
- Increased climate resilient sustainable development

E.2. Core indicator targets

Provide specific numerical values for the GCF core indicators to be achieved by the project/programme. Methodologies for the calculations should be provided. This should be consistent with the information provided in section A.

E.2.1. Expected tonnes of carbon dioxide equivalent (t CO ₂ eq) to be reduced or avoided (mitigation and cross-cutting only)	Annual	1,752,000 CO ₂ eq
	Lifetime	43,800,000 t CO ₂ eq
E.2.2. Estimated cost per t CO ₂ eq, defined as total investment cost / expected lifetime emission reductions (mitigation and cross-cutting only)	(a) Total project financing	<u>296,237,602</u> USD
	(b) Requested GCF amount	<u>165,237,592</u> USD
	(c) Expected lifetime emission reductions	<u>43.9 mn</u> t CO ₂ eq
	(d) Estimated cost per t CO₂eq (d = a / c)	<u>6.75</u> Choose an item. / t CO ₂ eq
	(e) Estimated GCF cost per t CO₂eq removed (e = b / c)	<u>3.76</u> Choose an item. / t CO ₂ eq
E.2.3. Expected volume of finance to be leveraged by the proposed project/programme as a result of the Fund's financing, disaggregated by public and private sources (mitigation and cross-cutting only)	(f) Total finance leveraged	<u>131 mn</u> USD
	(g) Public source co-financed	<u>131 mn</u> USD
	(h) Private source finance leveraged	___ Choose an item.
	(i) Total Leverage ratio (i = f / b)	<u>0.79</u>
	(j) Public source co-financing ratio (j = g / b)	<u>0.79</u>
	(k) Private source leverage ratio (k = h / b)	___
E.2.4. Expected total number of direct and indirect beneficiaries, (disaggregated by sex)	Direct	4,168,000 Of which 50% are female
	Indirect	26,244,000 Of which 50% are female
	<i>For a multi-country proposal, indicate the aggregate amount here and provide the data per country in annex 17.</i>	
E.2.5. Number of beneficiaries relative to total population (disaggregated by sex)	Direct	4.0% (Expressed as %) of country(ies)
	Indirect	25.0% (Expressed as %) of country(ies)
	<i>For a multi-country proposal, leave blank and provide the data per country in annex 17.</i>	

E.3. Fund-level impacts²¹

Select the appropriate impact(s) to be reported for the project/programme. Select key result areas and corresponding indicators from GCF RMF and PMFs as appropriate. Note that more than one indicator may be selected per expected impact result. The result areas indicated in this section should match those selected in section A.4 above. Add rows as needed.

Expected Results	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
<i>M4.0 Reduced emissions from land use, reforestation, reduced deforestation, and through sustainable forest management and conservation and enhancement of forest carbon stocks</i>	<i>M4.1 Tonnes of carbon dioxide equivalent (t CO2 eq) reduced or avoided (including increased removals) - forest and land use</i>	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment areas to verify ²² .	0	2,948,153 t CO2 eq	5,621,615 t CO2 eq	Net change in CO2 emissions is calculated using the ExAct carbon balance estimation tool for a lifetime of 25 years is 43,800,000 t CO2 eq. Mid-term target is for 2.5 years while final target if for 5 years.
<i>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions</i>	<i>A1.2 Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)</i>	Covered as part of the beneficiary survey conducted by independent 3rd party.	0	Total: 238,560 Of which female: 130,760	Total: 596,400 Of which female: 326,900	Measured as the number of land users adopting SLM practices. Target is based on 40% of adults in project area adopting. Women are targeted at a higher rate of 45%.
<i>Choose appropriate expected results</i>	<i>Choose appropriate indicators</i>					

E.4. Fund-level outcomes

Select the appropriate outcome(s) to be reported for the project/programme. Select key expected outcomes and corresponding indicators from GCF RMF and PMFs as appropriate. Note that more than one indicator may be selected per expected outcome. Add rows as needed.

Expected Outcomes	Indicator		Baseline	Target	Assumptions
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²¹ Excludes impacts of 18 watersheds supported by Expected MDTF Government of Canada, which will be determined in later stages of funding appraisal

²² Specific company/firm has not been selected for 3rd party verification. A competitive request for proposals would be issued to select a suitable firm. If using EX-ACT as proposed here, the firm would be responsible for verifying the figures used (conduct a representative sample and collect the necessary data).

		Means of Verification (MoV)		Mid-term)	Final	
M9.0 Improved management of land or forest areas contributing to emissions reductions	<i>M9.1 Hectares of land or forests under improved and effective management that contributes to CO2 emission reductions</i>	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment areas to verify.	406,000 ha	1,003,200 ha	1,899,000 ha	The entire area of the (micro) watershed is considered treated when the multi-year development plan is complete.
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks	<i>A7.1 Use by vulnerable households, communities, businesses and public-sector services of Fund-supported tools instruments, strategies and activities to respond to climate change and variability</i>	Covered as part of the beneficiary survey conducted by independent 3rd party and project reporting.	0	Number of individuals: 180,240 Of which women: 100,120	Number of individuals: 450,600 Of which women: 250,300	Measures the number of individuals participating in income generating activities supported by the project. Target reflects adoption by 30% of adults. Women are targeted at a higher rate of 35%. This indicator will draw on a number of questions included as part of the beneficiary survey. A score card approach will be developed focusing on the adoption of tools and strategies including participation in income generating activities.

<p>A8.0 Strengthened awareness of climate threats and risk-reduction processes</p>	<p><i>A8.1 Number of males and females made aware of climate threats and related appropriate responses</i></p>	<p>Covered as part of the beneficiary survey conducted by independent 3rd party.</p>	<p>n/a</p>	<p>Number of individuals: 480,100 Of which women: 264,000</p>	<p>Number of individuals: 1,200,400 Of which women: 660,200</p>	<p>Awareness raising activities reach 80% of the land users in the area targeted (women targeted at a higher rate). This indicator will draw on a number of questions included as part of the beneficiary survey. A score card approach will be developed to assess awareness to climate threats and related issues.</p>
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E.5. Project/programme performance indicators²³

The performance indicators for progress reporting during implementation should seek to measure pre-existing conditions, progress and results at the most relevant level for ease of GCF monitoring and AE reporting. Add rows as needed.

Expected Results	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
Land Restoration and Watershed Management	Land area under sustainable landscape management practices	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment areas to verify.	406,000 ha	1,003,200 ha	1,899,000 ha	The entire area of the (micro) watershed is considered treated when the multi-year development plan is complete.
Land Restoration and Watershed Management	Land area restored or reforested/afforested	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment areas to verify.	113,000 ha	141,400 ha	184,000 ha	It is calculated as a subset of the total land area with sustainable land management practices (indicator 1) that is treated with measures to return the land to its natural, semi-natural, or forested state. It includes habitat restoration and other conservation measures to restore biodiversity, establishment of forest on land with and without recent tree cover, gully area stabilization, degraded area closures, degraded area woodlot establishment,

²³ Excludes impacts of 18 watersheds supported by Expected MDTF Government of Canada, which will be determined in later stages of funding appraisal

						area covered by bamboo plantation on degraded area. This indicator does not include areas, which have been cleared during or in anticipation of the project. Area re/afforested refers to “establishment of forest through planting, and/or deliberate seeding on land that, until then, was not classified as forest” or “re-establishment of forest through planting and/or deliberate seeding on land classified as forest” expressed in hectare (ha). This can include also assisted natural regeneration, coppicing or other locally appropriate methods.
Land Restoration and Watershed Management	Land area with productivity enhancing practices applied	Based on inputs from M&E reporting. Periodic surveying by independent 3rd party to sample treatment	6,000 ha	76,240 ha	181,600 ha	Covers land on which Climate Smart Agriculture (CSA) practices have been adopted under the project.

		areas to verify.				
Land Restoration and Watershed Management	Project area showing an increase in Normalized Difference Vegetation Index (NDVI) correcting for climate effects	3rd party analysis	0	20%	50%	The Normalized Difference Vegetation Index (NDVI) uses the visible and near-infrared bands of the electromagnetic spectrum to analyze remote sensing measurements to determine the extent to which a target contains live green vegetation
Land Restoration and Watershed Management	Project area showing an increase in the Land Surface Water Index (LSWI) correcting for climate effects	3rd party analysis	0	20%	50%	The Land Surface Water Index (LSWI) uses the shortwave infrared and near-infrared bands of the electromagnetic spectrum to analyze remote sensing measurements to determine the amount of water in vegetation and soil.
Adoption of climate resilient diversification activities	Land users adopting sustainable land management practices as a result of the project, disaggregated by gender	Based on information collected as part of stakeholder / beneficiary survey and project reporting.	0	238,560 Of which women: 130,760 Including female headed households: 22,280	596,400 Of which women: 326,900 Including female headed households: 55,700	

Adoption of climate resilient diversification activities	Households adopting diversified livelihood activities supported by the project, disaggregated by gender of head of household	Based on information collected as part of stakeholder / beneficiary survey and project reporting.	0	99,600 Of which female headed: 17,400	249,000 Of which female headed: 43,500	The target value reflects a household adoption rate of 30 percent. Female-headed households (approx. 15% of all households) are targeted at a higher rate of 35 percent.
Adoption of climate resilient diversification activities	People participating in income-generating activities supported by the project disaggregated by gender	Based on information collected as part of stakeholder / beneficiary survey and project reporting.	0	180,240 Of which women: 100,120	450,600 Of which women: 250,300	
Adoption of climate resilient diversification activities	Functional Common-Interest Groups established or supported	Based on information collected as part of stakeholder / beneficiary survey and project reporting.	0	1,259	3,148	
Strengthening resilience through Institutions and Information	Watershed User Associations established and strengthened	Project reporting.	0	75	188	Watershed Management and Use Plan that has been approved locally by the community user group, and either the Woreda or regional SLMP coordination platform. Micro watershed land management and use plans, established by farmers user associations, detail management and use for treated areas,

						outline agreements with the Kebele Watershed Team to conserve and utilize the resources, and outlines bylaws for managing and implementing conservation activities and the distribution/sharing of benefits. The development of these plans are a critical for ensuring land resources are used and managed in a way that enhances absorptive and adaptive capacity to climate change, promoting resilience broadly at the landscape level.
Strengthening resilience through Institutions and Information	Watershed User Associations with Watershed Management and Use Plan	Project reporting.	0	59	148	
Strengthening resilience through Institutions and Information	Woreda information centers being effectively used by project stakeholders	Functionality and effectiveness tracked as part of the stakeholder/beneficiary survey and project reporting.	0	66	166	The functionality and effectiveness of these information centers is expected to be tracked as part of the stakeholder/beneficiary survey using a scorecard

						approach to assess the quality of services.
Improved tenure security to Incentivize long-term investments in SLM	Parcels of land surveyed and mapped for certification	Processed centrally using information extracted from NRLAIS database.	2,034,000	3,296,400	5,190,000	This includes the number of individual and communal land parcels surveyed (using one or a combination of GPS, total stations, ortho-photo, or satellite imagery), mapped and registered with the woreda land administration office as part of second-level land certification activities. Interventions that increase tenure security and define the associated rights provides holders with an incentive to take a long-term term perspective when managing the land resources and undertaking investments, increasing productivity and enhancing resilience through adaptive and transformative means.
Improved tenure security to Incentivize long-term investments in SLM	Households who have received second level land holding certificates,	Processed centrally using information extracted	484,000 Of which women individually or	743,200 Of which women individual	1,132,000 Of which women	Second-level certification differs from the earlier first-level certification

	disaggregated by gender	from NRLAIS database.	jointly with a man: 328,000	lly or jointly with a man: 521,800	individually or jointly with a man: 812,500	program by providing additional spatial (i.e. location and boundary) data in the form of a parcel map. Interventions that increase tenure security and define the associated rights provides holders with an incentive to take a long-term perspective when managing the land resources and undertaking investments, increasing productivity and enhancing resilience through adaptive and transformative means.
Improved tenure security to Incentivize long-term investments in SLM	Second level land certificates issued as a result of the project	Processed centrally using information extracted from NRLAIS database.	0	1,060,800	2,652,000	
Improved tenure security to Incentivize long-term investments in SLM	Landless youth that received certificates in exchange for the work, disaggregated by gender	Project reporting.	14,000 Of which women: 4,200	22,260 Of which women: 6,748	34,650 Of which women: 10,570	

E.6. Activities

All project activities should be listed here with a description and sub-activities. Significant deliverables should be reflected in the implementation timetable. Add rows as needed.

Activity	Description	Sub-activities	Deliverables ²⁴
1.1.1: Sustainable Land Management	Promotes the restoration of degraded landscapes in selected watersheds and help build resilient livelihoods.	<ul style="list-style-type: none"> - Soil and water conservation measures -Gully rehabilitation -Area closure management and use -Enrichment of degraded pasture and rangeland 	<ul style="list-style-type: none"> Establish functional platform Establish Micro watershed Team Plan preparation by CWT and KWT, approval by General assembly Formulation and compilation of a Multi-Year Plan by Woreda Technical Committee

²⁴ Deliverables are indicative

			Construction of Soil and Water Conservation works
1.1.2 Aforestaion- Reforestation+Green Corrdior management at Zonal Level	Promotes the restoration of degraded landscapes in selected watersheds	-Establishment of green corridors -Establishment of plantation blocks	Site preparation for A/R or biological measures Approval of consolidated plan by Woreda Steering Committee & procurement of necessary inputs such as tree seed, tools and equipment Afforestation/reforestation & procurement of necessary inputs such as tree seed, tools and equipment Nursery establishment/seedling production
1.2.1: On-farm CSA 1.2.2 Training and awareness raising on CSA	Promotes resilient agriculture	-Farm water and soil moisture management -Integrated soil fertility and soil health management -Crop development and management -Environmentally-friendly livestock production through forage development and management	Organizing Common Interest Groups (20-30 farmers) Develop robust CSA plan and prepare to implement CSA practices Coach and provide support for the CIGs during implementation of CSA practices & procure necessary inputs, tools and equipment Nursery establishment/seedling production Land preparation for CSA implementation coach and provide support for the CIGs during implementation of CSA practices & procure necessary inputs such as seed Evaluation

<p>1.3.1 IGAs and Connection to Value Chain</p>	<p>Support resilient livelihoods.</p>	<p>-Processing Equipment and Training -Community Storage Receipts Programs</p>	<p>Identify and Establish CIGs support for development of business plans for different commodities</p> <p>Avail equipment and other inputs including construction and establishment of CSRPs</p> <p>Implement business plan; provide CRSP service to members</p> <p>Marketing including provision of CSRPs service</p>
<p>1.3.2 Energy Efficiency Cookstoves 1.3.3 Investment Planning for Economic Development</p>	<p>Strengthen supply chain for RE/EE products</p>	<ul style="list-style-type: none"> - Rural RE/EE Enterprise Establishment - Establish Fuel Saving Cookstove producer enterprises 	<p>Contract signing with cooperatives or/and cooperative unions and members</p> <p>Partner with other value chain actors</p>
<p>2.1.1 Kebele and Woreda Capacity Building 2.1.2 Information Modernization and Data Base Management/Policy Development 2.1.3 Technical training on cadaster and land registration 2.1.4 TA (Cluster Approach at Zonal level) 2.1.5 Policy Development 2.1.6 Capacity building at Regional level 2.1.7 TA at National level</p>	<p>Build capacity for the promotion and management of SLWM practices, and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the project area. Support information modernization to coordinate data collection and information sharing at all levels and under all components of the project so that this information is well organized, properly documented and accessible</p>	<p>Technical Assistance, operating of capacity building activities and Monitoring on local level</p>	<p>Recruitment of training for woreda and kebele level platforms</p> <p>Provide awareness creation to farmers</p> <p>Support different CIGs to develop and adopt bylaws; conduct training needs assessment, & Provide tailor-made TOTs to at Federal, Regional, woreda and community level</p> <p>Provide additional TOTs technical advisors for specific outputs linked to CIGs in sub-component 1.1, 1.2 & 1.3</p> <p>Provide technical support to on-the-ground operations/implementation</p> <p>Exposure visit of technical advisors for specific outputs linked to CIGs in</p>

			<p>sub-component 1.1, 1.2 & 1.3</p> <p>Provide refresher TOT technical advisors for specific outputs linked to CIGs in sub-component 1.1, 1.2 & 1.3</p>
<p>2.2.1 Impact Evaluation (IE)</p> <p>2.2.2 Knowledge Management and Communication</p>		<p>Monitoring and Evaluation</p>	<p>Initiate impact evaluation research/study</p> <p>Identify materials for woreda information center establishment</p> <p>Construction of woreda information center</p> <p>Develop communication material</p> <p>Consultation on communication material completed</p> <p>Impact evaluations; dissemination of knowledge products</p> <p>Knowledge sharing/networking events</p> <p>Support associations to develop Watershed Management and Use plans</p>
<p>3.1.1-Second Level Landholding Certification (SLLC)</p>	<p>Strengthens the rural land administration system that secures tenure rights, optimizes land use, and empowers land-users to sustainably invest in productive landscapes. Improves security of tenure to smallholder farmers in RLLP watersheds through SLLC as an incentive to increase the adoption of SLM technologies and practices.</p>	<p>Participatory Local Land Use Planning and Development Control</p>	<p>orthophoto base map preparation</p> <p>consultations on land rights using orthophoto</p> <p>base maps</p> <p>scanning and geo-referencing of adjudication maps, vectorization of parcel boundaries and</p> <p>keying-in of attribute information</p> <p>public display for validating parcels (shape and size) and landholders' Information</p>

			<p>parcel map and Landholding Certificate preparation, production, authentication and issuance</p> <p>support development, testing, and roll-out of National Rural Land Administration Information System</p>
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E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)

Besides the arrangements (e.g. annual performance reports) laid out in AMA, please give a summary of the project/programme specific arrangements for monitoring and evaluation. Please provide the types of interim and final evaluations. Describe Accredited Entity (AE) project reporting relationships, including to the NDA/Focal Point and between AE and Executing Entity (EE) as relevant, identifying reporting obligations from the EE to the AE. This should relate to the frequency of reporting on project indicators, implementation challenges and financial status.

The institutional arrangements for M&E will encompass four levels that are well aligned with the RLLP institutional and implementation arrangement.

Federal Level. The federal level sets the expectations for what is to be accomplished in M&E and oversees that capacity, ensuring skills and tools are available for staff in the regions and at field level. Federal level M&E staff ensure that data collected meet quality standards, review aggregated field data to analyze and pull out program level results and trends and identify best practices important for scale up. The federal level M&E staff prepare reports to the government and donors and provide feedback to stakeholders. The Federal M&E team will include: a Senior M&E/Evaluator, a Senior Data Analyst/ MIS Specialist, a Senior Communication/Knowledge Management Specialist, and a Documentation/Planning and Reporting Specialist. The team will also provide: technical assistance to develop a new Results-Based M&E (RBME) plan, manual and indicator protocols; TA support in M&E Training (various topics including advanced excel, data analysis and reporting, and evaluation practice); a functional web-based data management system (in English and local languages), which will help to aggregate mobile application data and collect geo spatial data.

Regional Level. The regional level leads the rollout of the M&E system to the field; builds skills and capacity in regional and field level stakeholders; ensures that data collected meet quality standards; aggregates field data to analyze and pull out regional levels results and trends and identify best practices important for scale up; prepares reports to the government and donors and provides feedback to stakeholders. The regional team will include a M&E Specialist and a Communication/Knowledge Manager/Spatial Analyst. The team will also support: special studies in the region, involve regional officers in Joint Monitoring Missions (JMM), improved data management system in English and local languages, and incentives for good regional performance, TA for training using TOT approach.

Zonal level. RLLP will strengthen the functionality of the zonal government structures/offices, mainly the Agriculture and Natural Resources Office. The project will provide a budget allocation at the zonal level to provide staff to support regional technical capacity and mentoring, conduct data quality assessments, provide clear guidance on which data to collect and how, and provide ongoing M&E training and capacity building in M&E.

Woreda Level. This level identifies watershed needs and completes annual workplans and budgets, making sure that activities get rolled out on time. The woreda team includes the NRM process owner and technical expert, who receive data from the DAs and aggregate results to determine whether activity implementation is occurring at the right scale. They prepare reports based on results achieved. Woreda officers are supported by regional and federal M&E staff (particularly in completing reports).

Kebele Level. Development Agents (DAs) play a significant role at kebele level. Clear guidance is needed for DAs on what and how to collect data (strengthen data collection methods), to strengthen ongoing M&E training and capacity building, and to provide educational opportunities/exchange visits to DAs assigned to follow-up project activities to help motivate them and reduce frequent turnover.

Community Level. There are several levels of community members who are involved in M&E, but the Community Facilitator (CF) is the main project interlocutor. Foremen/Forewomen, nursery operators and self-help group leaders collect data and pass it to the CF, who also collects additional household level data. The CF aggregates data and passes it to the Community Watershed Team (CWT). The CF is a member of the CWT and serves as a secretary. The CWT reviews and approve the data and informs the CF to send it to the concerned DA in the respective kebele. The DA presents the data to the Kebele Watershed Team (KWT) for review and approval, and finally sends the approved data to the woreda office.

The methodology for monitoring key outcomes of the project is as follows:

Land area under sustainable landscape management practices: this indicator counts as treated the total area of a micro watershed once all the prescribed soil and water conservation measures identified in the relevant Multi-Year Development Plan (MYDP) have been fully implemented.

Net GHG greenhouse emissions: estimated using the ExAct carbon balance estimation tool, which calculates carbon accumulation and emissions based on project biophysical output data. The economic lifetime of the project is assumed to be 25 years (5 implementation and 20 post-project years, the same time horizon used in the Economic and Financial Analysis).

Households adopting diversified livelihood activities supported by the project: this is measured as the percent of households engaging in approved, non-traditional activities, relative to the total number of households in the project area. The definition of what constitutes the set of potential non-traditional activities will be set during implementation and applied to activities that are expected to reduce households' vulnerability to future shocks associated with extreme weather events and climate change by diversifying livelihood activities and increasing the resilience of natural (i.e. land) resources.

A beneficiary survey conducted by an independent 3rd party will be conducted in the first year, at mid-term and at completion of the project. Administered to households as well as at the woreda and kebele administrative levels, the beneficiary survey – a tool normally used to help improve the quality of development operations - will be enhanced and expanded to support monitoring and verification of key indicators including adoption of diversified livelihood activities and SLM practices as well as awareness of climate threats and appropriate responses.

An **M&E operational manual** will be developed that defines the function of the program level M&E system and its nested RLLP level M&E systems. The manual will embed the tracking of the main GCF indicators related to avoided emissions and number of beneficiaries of the project.

See Annex D.3 RLLP Gender Approach and Annex D.4 RLLP Gender Action Plan for further information on statements in terms of number of women involved in the activities. Baseline data for Gender are not available, however, the RF provides an alternative way to track progress (e.g., starting from baseline of N/A or "0,") the indicator measures incremental changes/values throughout project implementation to demonstrate progress.

E. RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures (max. 3 pages)

Please describe financial, technical, operational, macroeconomic/political, money laundering/terrorist financing (ML/TF), sanctions, prohibited practices, and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures. Insert additional rows if necessary.

For probability: High has significant probability, Medium has moderate probability, Low has negligible probability

For impact: High has significant impact, Medium has moderate impact, Low has negligible impact

Prohibited practices include abuse, conflict of interest, corruption, retaliation against whistleblowers or witnesses, as well as fraudulent, coercive, collusive, and obstructive practices

Key Financial and Operational Risks

In the identification of key risks and their rating, the size of the project was taken into account. While several risks to achievement of project objectives have been identified, the experience gained during implementation of SLMP-2, as well as the significant resources allocated in the past 5 years for coordination and capacity building efforts are expected to be instrumental in implementing measures to address the key financial and operational risks identified below:

- **Political and governance risk:** Although the state of emergency ended in June 2018, sporadic civil unrest in project areas continues to be a risk to implementation. Implementation of SLM activities continues in all highland regions, however, there remains a risk that preparation and/or implementation of the proposed operation could slow or be suspended due to a potential re-emergence of civil disturbances. Institutional capacity for implementation and sustainability risk: While considerable capacity for SLM interventions exists in current SLM project areas, limited institutional and human capacity in proposed new project areas contribute to this risk, which is mitigated through a project design including significant training and coordination at the national level.
- **Fiduciary risk:** Issues related to procurement and financial management have been observed in previous projects. However, implementation of the WB-supported SLMP2 has developed significant capacity for procurement and financial management, that are currently rated satisfactory and moderately satisfactory, respectively.
- **Stakeholder risk:** This includes (i) weak multi-sectoral coordination, and (ii) risk of potential elite capture of project benefits at the local level and exclusion of some stakeholders, particularly underserved members of targeted communities. These are addressed through intersectoral coordination mechanisms at the Federal, Regional and woreda levels, strong communication measures, and a grievance redress mechanism.

An Implementation Support Plan has been developed that describes how the World Bank will support the implementation of the risk mitigation measures identified in the risk matrix.

Selected Risk Factor 1

Category	Probability	Impact
Governance	High	Low
Description		

<p><i>Please describe the risk to the best of your knowledge at this point in time.</i></p> <p>Political and governance risk. The GoE declared a state of emergency from October 2016 to August 2017, which was re-instated in February 2018 but ended in June 2018. Although the situation has stabilized since the nomination of a new Prime Minister in April 2018, there remains a risk that implementation of the proposed operation could be negatively impacted should civil disturbances recur.</p>		
Mitigation Measure(s)		
<p>While the extent to which project-specific measures can mitigate this risk is limited, the RLLP will adopt the approach of other Bank-financed operations, including: (i) careful supervision mission planning that emphasizes security; (ii) strategic communication and outreach; (iii) sound safeguards monitoring building on SLMP-II experience and capacity; and (iv) enhanced transparency in project-supported activities. RLLP will also contribute to alleviating some of the drivers of civil unrest, including natural resource degradation and rural landlessness and joblessness.</p>		
Selected Risk Factor 2		
Category	Probability	Impact
Technical and operational	Medium	Medium
Description		
<p><i>Please describe the risk to the best of your knowledge at this point in time.</i></p> <p>Institutional capacity for implementation and sustainability risk due to a number of issues including: (i) the restructuring of the GIZ program in support of SLM; (ii) the limited human resources available at the field level; (iii) the challenge of implementing a reliable and cost-effective M&E system; and (v) weak coordination among institutions and programs, including between the NRM Directorate of MoA and the PCU.</p>		
Mitigation Measure(s)		
<p><i>Please describe how the identified risk will be mitigated or managed. Do the mitigation measures lower the probability of risk occurring? If so, to what level?</i></p> <p>This set of risks will be mitigated through: (i) continual training on project management and monitoring at all levels, in coordination with the GIZ SURED project; (ii) project implementation arrangements acceptable to the World Bank and agreed by the MoA and regional governments clarifying accountability and targets at all levels; and (iii) coordination between development partners and Technical Committee on SLM.</p>		
Selected Risk Factor 3		
Category	Probability	Impact
Other	Medium	Low
Description		
<p><i>Please describe the risk to the best of your knowledge at this point in time.</i></p> <p>Fiduciary risk due to persistent issues related to procurement and financial management. Although SLMP-II has only had “unqualified” audits to date, which is excellent, there has been high turnover of project fiduciary staff.</p>		
Mitigation Measure(s)		
<p><i>Please describe how the identified risk will be mitigated or managed. Do the mitigation measures lower the probability of risk occurring? If so, to what level?</i></p> <p>Mitigation of this risk centers on MoF’s recent increase and harmonization of salaries for project procurement and financial management staff.</p>		



G.GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

Provide the environmental and social risk category assigned to the proposal as a result of screening and the rationale for assigning such category. Present also the environmental and social assessment and management instruments developed for the proposal (for example, ESIA, ESMP, ESMF, ESMS, environmental and social audits, etc.). Provide a summary of the main outcomes of these instruments. Present the key environmental and social risks and impacts and the measures on how the project/programme will avoid, minimize and mitigate negative impacts at each stage (e.g. preparation, implementation and operation), in accordance with GCF's ESS standards. If the proposed project or programme involves investments through financial intermediations, describe the due diligence and management plans by the Executing Entities (EEs) and the oversight and supervision arrangements. Describe the capacity of the EEs to implement the ESMP and ESMF and arrangements for compliance monitoring, supervision and reporting. Include a description of the project/programme-level grievance redress mechanism, a summary of the extent of multi-stakeholder consultations undertaken for the project/programme, the plan of the Accredited Entity (AE) and EEs to continue to engage the stakeholders throughout project implementation, and the manner and timing of disclosure of the applicable safeguards reports following the requirements of the GCF [Information Disclosure Policy](#) and [Environmental and Social Policy](#).

Describe any potential impacts on indigenous peoples and the measures to address these impacts including the development of an Indigenous Peoples Plan and the process for meaningful consultation leading to free, prior and informed consent, pursuant to the GCF [Indigenous Peoples Policy](#).

Attach the appropriate assessment and management instruments or other applicable studies, depending on the environmental and social risk category as annex 6.

The RLLP has been assigned as an EA category of B, for the potential social and environmental impacts on humans and sensitive areas (wetlands, forests, natural habitats, etc...) are less adverse, site specific, few if any of them are irreversible. The ESMF was required to comply with not only the relevant national policy and legal frameworks but also with the applicable environmental and social safeguard policies of the World Bank. Based on the framework of SLMP-II, and considering its principal features and aspects, the RLLP social assessment was carried out and updated with the following major objectives in focus:

- Assess key socio-economic factors that require consideration;
- Identify vulnerable and historically underserved groups that may be excluded from the project and be adversely affected as a result, and the necessary impact mitigating measures.
- Assess any potential adverse social impacts of RLLP, and determine whether the project is likely to trigger the World Bank social safeguards policies;
- Recommend in the early stage of project preparation the appropriate measures towards addressing World Bank requirements on social safeguards triggered by the project (OP/BP 4.10 and OP/BP 4.12).

In line with the Ethiopian Government's decentralization policy, organizational structure and implementation arrangement and with due consideration to the implementation of project activities at the grassroots level, RLLP is designed to operate at federal, regional, zonal, *woreda kebele* levels as well as the beneficiary community level. The monitoring and evaluation (M&E) and reporting system of the project is in-built in the implementation arrangement to be executed at all levels of the organizational structure. The institutional arrangement includes RLLP related conflict/grievance redress mechanism/GRM, consisting of community watershed teams, indigenous local institutions, kebele watershed teams, and people from woreda agriculture and natural resources offices.

In RLLP the environmental and social management process starts with the sub-project planning process during the identification of sub-projects by local communities based on their needs and priorities through a participatory

watershed planning process guided by the Community Based Participatory Watershed Development Guidelines (CBPWDG), technical support from Development Agents (DAs) and Woreda experts. The DA will screen/design/plan subprojects applying a simple checklist as a format for fast track eligibility checking of identified sub-projects. This is done in consultation with the communities and kebele development committee at the early stages of subproject selection and prioritization phase. Once the checklist is approved at the kebele level, the project design/plan will then be sent to the Woreda Agriculture Office and/or the Woreda Technical Committee. The Technical Committee, depending on the scale, nature and type of subproject, will further screen the sub-projects. The Woreda Focal Person (WFP), woreda implementing office, and regional project support unit will ensure and document such procedures are properly followed. And a team led by experts from the Woreda Environmental regulatory body will review the screened subproject and the mitigation measures planned. If any design modifications are required, the environmental regulatory body passes recommendations and give clearance and/or certificate of subprojects. The Woreda council will then approve plans based on the recommendations of the team. After approval, the plan document is referred to the regional Bureau of Agriculture and Natural Resources (BoANR) with all the accompanying environmental and social screening documents/files.

Monitoring of environmental and social safeguard performance of the project will be conducted regularly. Performance monitoring will ensure that safeguards instruments are prepared and approved to the required standard and the proper implementation of ESMP, SA, RPF and GMGs. While the implementation of ESMP is done by the community at kebele level with the responsibility of the woreda implementing offices, performance monitoring will be done by the RLLP-PCU environmental and social safeguard specialists at national and regional level and other stakeholders. The results of the monitoring involve the monitoring compliance and effectiveness of the safeguards instruments, and the overall environmental, socio-economic and climate-related assessment of the Program's interventions. The monitoring will be done on an annual and quarter basis by the RPCU Specialists with support from the NPCU Environmental and Social Safeguards Specialists, M&E Specialist and WB's Environmental Safeguards, Social Safeguards and Social Development team.

Quarterly and annual reviews workshops will be held at regional and national level with a view to enhance the positive performances of ESMF, SA, RPF and the Gender Mainstreaming Guideline identifying bottlenecks and gaps in implementing the ESMF and proposing solutions in addressing the gaps. Environmental and social auditing will be done by the RLLP concerned specialists (both federal and regional) and field verification by independent consultants to be recruited. This auditing will be conducted twice in the program life, i.e. during MTR and completion period of the project.

The RLLP triggered OP 4.10 Indigenous People as it was determined that the physical and sociocultural characteristics of the proposed intervention areas and the people living in these sites meet the policy requirements. The decision to trigger the policy is also based on the Ethiopian Constitution, which recognizes the presence of different socio-cultural groups, including historically disadvantaged or

underserved peoples, as well as their rights to their identity, culture, language, customary livelihoods,

socio-economic equity, etc. The social safeguard issues relating to the policy are assessed through an SA and extensive consultation with potential project beneficiaries, including those identified as vulnerable

groups and underserved peoples.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

Provide a summary of the gender assessment and project/programme-level gender action plan that is aligned with the objectives of GCF's [Gender Policy](#). Confirm a gender assessment and action plan exists describing the process used to develop both documents. Provide information on the key findings (who is vulnerable and why) and key recommendations (how to address the vulnerability identified) of the gender assessment. Indicate if stakeholder

consultations have taken place and describe the key inputs integrated into the action plan, including: how addressing the vulnerability will ensure equal participation and benefits from funds investment; key gender-related results to be expected from the project/programme with targets; implementation arrangements that the AE has put in place to ensure activities are implemented and expected outcomes will be achieved, monitored and evaluated.

Provide the full gender assessment and project-level gender action plan as annex 8.

Gender Considerations

Land degradation has important gender dimensions. For example, UNDP finds that land degradation increases the pressures on women differentially from men in their effort to meet practical needs of supporting their families under increasingly difficult environmental, physical, social, and economic conditions. Women are also challenged by the consequences of land and environmental degradation induced fuel-wood and water shortage, making their work even more challenging.

Analysis also indicated the constraints to women's access to equitable roles in decision-making concerning land resources and their engagement in sustainable environmental and land management such as: (a) insecure land use rights, (b) the low value assigned to labor and subsistence farming, (c) lack of access to credit and (d) lack of opportunities to gain and share technical knowledge. Further, the United Nations Convention to Combat Desertification (UNCCD) illustrated that, often 'women's inequitable access to secure property rights forces them onto marginal, fragile, highly degradable lands.

The Sustainable Development Goals (SDGs) emphasize gender equality and empowering all women and girls as not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world. This is part of each of the SDGs as well as being reflected in the stand-alone goal (Goal 5), to achieve gender equality. Providing women and girls with equal access to the natural resource base and equal representation in decision-making processes will boost the returns of RLLP investment and benefit broader society. The design of RLLP will therefore create opportunities for women's equal rights to economic resources, as well as access to ownership and control over land and other forms of the natural capital, in accordance with GoE laws.

Gender Dimensions of Land Degradation in Ethiopia

Understanding gender aspects of natural resources management is an entry point for reversing environmental and land degradation in RLLP landscapes. Women manage natural resources daily in their roles as farmers and household providers; typically, they are responsible for growing homestead crops, collecting fuel wood and water. Climate change disproportionately affects rural women, as they are most reliant on natural resources for their livelihoods but have fewer resources (natural, physical and social capital) to adapt to climate change and cope with climate change impacts such as droughts, landslides, and food shortages. Climate vulnerabilities affect not only women's health, productivity, and development, but also contribute to the intensification of existing gender gaps, including gender-based violence. The Ethiopia Demographic and Health Survey (2016) shows that 33% of women ages 15-49 have experience physical or sexual violence; domestic violence is the most common form of violence towards women.

Gender gaps are amplified when adaptation measures fail to consider specific needs and preferences of women. Further, local cultural norms and practices have a major impact on access to natural resources and the level of engagement of women in the agriculture sector. Inequitable access and unequal playing fields have led women farmers to produce on average 23% less than their male counterparts in Ethiopia. For instance, women in rural Ethiopia have lower access to inputs such as training and technology that help increase resilience by improving agricultural knowledge. However, notwithstanding their reliance on natural resources, women have less access and control than men, despite their constitutional rights to equal land ownership, administration and use. Landless rural women often depend on common property resources for fuel wood, fodder and food. Lack of land and property ownership and control limits women's voice and agency, because assets are an important factor in bargaining power

and household decision-making, access to finance, and overall economic independence. Protection of the natural resource base is the centerpiece of the overall RLLP investment so that rural women and men will be empowered to participate in decisions that affect their needs and vulnerabilities, and in turn lend a hand in effective interventions for the conservation and sustainable use of these resources.

RLLP Gender Approach

The operational steps encompass resilience building through soil and water conservation works, enhanced tenure security, homestead and farmland development, livelihood improvements (access to improved, targeted livelihoods support in rehabilitated watersheds including creating jobs, organized cooperatives, women or girls only), climate smart agriculture, and affordable and innovative technology (household energy). For RLLP, facilitating the acquisition of improved cookstoves, will free up women's time, which could potentially enable them to engage in climate resilient livelihood diversification. Activities could include promotion of improved cookstoves, cultivating fruit trees, bamboo handicrafts, beekeeping, etc.

The RLLP components will take into account the different roles of men and women in advancing resilient livelihoods at multiple scales, and respond to the unique interests, priorities and needs of women and men in order to close gender gaps. Women and men at all levels of the RLLP decision-making should be involved as key actors in the assessment, design, monitoring, and evaluation of interventions starting from the community watershed committee. Both women and men need to benefit from a gender approach that reinforces their joint participation and equitable benefit in RLLP through participatory, inclusive approaches, including actions such as designing, implementing, and strengthening guidelines incorporating gender perspectives in the project. The RLLP program is well aligned with the WBG's Gender Strategy 2016-2023 – seeks to close gender gaps in human endowments, more and better jobs, and ownership and control of assets; and promote women's voice and agency, which constitute the four pillars of strategy.

An impact evaluation of gender innovations under RLLP is currently being carried out. The gender assessment of SLMP-II experiences helped to determine constraints and experiences that limited female and male project beneficiaries and whether women's abilities to realize equitable benefits from the natural and environmental resources were effectively improved by the project's activities/innovations.

A Gender Approach and Action Plan is included in Annex D.3. and Annex D.4., to address the gender aspects of land degradation and natural resource use. This will be further informed through an assessment of the SLMP-II gender mainstreaming strategy, which is currently underway.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

Describe the project/programme's financial management including the financial monitoring systems, financial accounting, auditing, and disbursement structure and methods. Refer to section B.4 on implementation arrangements as necessary.

Articulate any procurement issues that may require attention, e.g. procurement implementation arrangements and the role of the AE under the respective proposal, articulation of procurement risk assessment undertaken and how that will be managed by the AE or the implementing agency. Provide a detailed procurement plan as annex 10.

Financial Management

The financial management (FM) arrangements for the proposed project- RLLP will be based on the existing FM systems and structures established under SLMP-II. The FM arrangements for RLLP and SLMP II are in line with the World Bank (AE) policies and procedures. This includes the accounting capacity maintained by the implementing entity (Ministry of Agriculture and Natural Resources) at the Federal, Regional and Woreda (District) levels. SLMP II was audited in accordance with the International Standards on Auditing. The audit for the financial year ended July 7,

2017 expressed unqualified (clean) opinion but highlighted some internal control weaknesses in the management letter. This includes delays in funds flow between federal level and regional and woreda levels, weak control of advances to Woredas, weak accounting capacity in some Woredas and weak control of fixed assets in some Woredas. The project addressed these weaknesses progressively in line with an FM Action Plan agreed with the World Bank (AE). For RLLP, the Federal PCU based at the MoA will retain the overall fiduciary responsibility for the implementation of the project supported by other federal level PCU's, Regional Support Units in the six regional Bureaus of Agriculture (BoA's) and the administrations of all the implementing woredas. Project annual budgets will be prepared based on consolidated annual work plans initiated at the woreda and regional levels and compiled at the federal level. Disbursements are based on the approved budget and accounted for using quarterly interim financial reports submitted to the World Bank (AE) within 45 days after the end of each quarter. An external audit of the project will be conducted annually by the Supreme Audit Institution or an accredited private audit firm. The audit will be conducted in accordance with Terms of Reference prepared by the EE and the objective of the audit will be to ascertain whether project funds have been used for the intended purpose. The AE reviews and provides clearance for the recruitment of the auditor including clearance of the ToR. In each of the federal level-implementing entities, the six regions and all woredas will maintain segregated local currency bank accounts where project funds will be deposited and payments made. Proceeds of the IDA Credit and MDTF will initially flow into the DA before further disbursement into each of the local currency project accounts based on the approved annual work plan and budget. In addition to receiving advances through the DA, the project may use other disbursement methods such as reimbursements, direct payment and special commitment. To enhance the level of disbursements under the new project, the team will ensure prompt submission of quarterly IFRs immediately after the end of each quarter. Financial reporting for the proposed project will follow international financial reporting and auditing standards. The FM risk rating for the implementation of the RLLP is considered Substantial. An FM assessment of the implementing entities including sampled woredas has been completed and used to update the FM arrangements for the RLLP (see Annex D.5.). Procurement under the project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers - 'Procurement in Investment Project Financing, Goods, Works, Non-Consulting, and Consulting Services', dated July 2016, revised November 2017 and 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', revised as of July 1, 2016, and the provisions stipulated in the Legal Agreement. A Project Procurement Strategy Document (PPSD) has been prepared by the MoA, which forms the basis for a Procurement Plan that details procurement methods, estimated costs, post/prior review requirements, etc. for each contract to be financed by project proceeds. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. Procurement of RLLP will be carried out in a decentralized manner in each of the major watersheds participating in the project. At the federal level, the PCU is the focal organization for implementation of RLLP. The BoAs and the Woreda Agricultural Development Offices shall serve as the implementing organizations of RLLP in the respective regions. The land and watershed management activities will be carried out in the existing and new watersheds in the beneficiary woredas and may involve local community participation in procurement. The project procurement plan includes community level procurement activities and targets. The procurement at community level has a separate operational guideline. Training will be provided for the community level procurement committee to improve capacity and reduce risks. Based on the threshold and procurement plan target there will be regular monitoring by district (woreda) level procurement authorities to effect payments. Regional level procurement specialists regularly monitor the procurement plan and its implementation. Moreover, during regular Joint Implementation Support Missions from the federal level procurement is one of the fiduciary components monitored. There are also internal and external audits on a yearly basis and a comprehensive independent procurement audit will be conducted for the entire project period.

Taxation: Where goods and services are procured by the project, these will be subject to income tax, import duties, withholding tax and Value Added Tax. GCF proceeds can be used to pay taxes.

Taxation of farmland is low due to the use rights of farmers. Farmer cooperatives received a tax incentive, exempting them from paying profit tax. A proposal has been submitted to exempt irrigation pumps from import tax.

Authorizations needed for project implementation: The World Bank will sign a financing agreement with the Federal Democratic Republic of Ethiopia. Once this agreement is signed, authorization for project implementation will need to

be obtained from Ethiopia's House of Parliament. During project implementation, the Steering Committee will have oversight of the project. Steering committee members include various Ethiopian government bodies, as described in Section C.7.

G.4. Disclosure of funding proposal

Note: The Information Disclosure Policy (IDP) provides that the GCF will apply a presumption in favour of disclosure for all information and documents relating to the GCF and its funding activities. Under the IDP, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Information provided in confidence is one of the exceptions, but this exception should not be applied broadly to an entire document if the document contains specific, segregable portions that can be disclosed without prejudice or harm.

Indicate below whether or not the funding proposal includes confidential information.

- No confidential information:** The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.
- With confidential information:** The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:
- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
 - redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

F. ANNEXES

H.1. Mandatory annexes

- Annex 1 NDA no-objection letter(s) ([template provided](#))
- Annex 2 Feasibility study - and a market study, if applicable
- Annex 3 Economic and/or financial analyses in spreadsheet format
- Annex 4 Detailed budget plan ([template provided](#))
- Annex 5 Implementation timetable including key project/programme milestones ([template provided](#))
- Annex 6 E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3):
 - [\(ESS disclosure form provided\)](#)
 - Environmental and Social Impact Assessment (ESIA) or
 - Environmental and Social Management Plan (ESMP) or
 - Environmental and Social Management System (ESMS)
 - Resettlement Policy Framework, Social Assessment
- Annex 7 Summary of consultations and stakeholder engagement plan
- Annex 8 Gender assessment and project/programme-level action plan ([template provided](#))
- Annex 9 Legal due diligence (regulation, taxation and insurance)
- Annex 10 Procurement plan ([template provided](#))
- Annex 11 Monitoring and evaluation plan ([template provided](#))
- Annex 12 AE fee request ([template provided](#))
- Annex 13 Co-financing commitment letter, if applicable ([template provided](#))
- Annex 14 Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

- Annex 15 Evidence of internal approval ([template provided](#))
- Annex 16 Map(s) indicating the location of proposed interventions
- Annex 17 Multi-country project/programme information ([template provided](#))
- Annex 18 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- Annex 19 Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
- Annex 20 First level AML/CFT (KYC) assessment
- Annex 21 Operations manual (Operations and maintenance)
- Annex x Other references

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*