

## Building climate-resilient livelihoods and food systems

### Part I: Project Information

**GEF ID**  
10793

**Project Type**  
FSP

**Type of Trust Fund**  
LDCF

**CBIT/NGI**  
CBIT No  
NGI No

**Project Title**  
Building climate-resilient livelihoods and food systems

**Countries**  
Lesotho

**Agency(ies)**  
FAO

**Other Executing Partner(s)**  
Ministry of Agriculture and Food Security (MAFS)

**Executing Partner Type**  
Government

**GEF Focal Area**

Climate Change

**Taxonomy**

Indigenous Peoples, Stakeholders, Focal Areas, Climate Change, Climate Change Adaptation, Adaptation Tech Transfer, Innovation, Climate resilience, National Adaptation Programme of Action, Mainstreaming adaptation, Private sector, Community-based adaptation, Least Developed Countries, Livelihoods, United Nations Framework Convention on Climate Change, Influencing models, Demonstrate innovative approaches, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Civil Society, Community Based Organization, Academia, Non-Governmental Organization, Communications, Strategic Communications, Behavior change, Education, Beneficiaries, Local Communities, Type of Engagement, Partnership, Information Dissemination, Participation, Consultation, Private Sector, SMEs, Individuals/Entrepreneurs, Gender Equality, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Capacity Development, Awareness Raising, Knowledge Generation and Exchange, Access to benefits and services, Access and control over natural resources, Participation and leadership, Capacity, Knowledge and Research, Learning, Theory of change, Indicators to measure change, Knowledge Exchange, Peer-to-Peer, Field Visit, South-South, Knowledge Generation, Course, Seminar, Professional Development, Master Classes, Training, Workshop

**Rio Markers****Climate Change Mitigation**

Climate Change Mitigation 1

**Climate Change Adaptation**

Climate Change Adaptation 2

**Duration**

72 In Months

**Agency Fee(\$)**

848,580.00

**Submission Date**

3/23/2021

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCA-1	LDCF	6,000,000.00	25,000,000.00
CCA-2	LDCF	2,932,420.00	15,000,000.00
Total Project Cost (\$)		8,932,420.00	40,000,000.00

## B. Indicative Project description summary

### Project Objective

To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Strengthening policy and institutional capacities	Technical Assistance	<p><u>Outcome 1.1.</u> Strengthened policies, planning and investment frameworks to enable sustainable climate-resilient water management in production landscapes.</p> <p><u>Targets:</u></p> <p># policies, guidelines, and investment and planning frameworks updated and aligned with CC resilience objectives, and with women and youth empowerment incorporated (at least 6)</p> <p># sub-catchments integrating agro-ecological zoning and climate resilience measures into local plans (at least 5)</p> <p><u>Outcome 1.2.</u> National and local/district level capacities strengthened to plan and i</p>	<p>1.1.1. Review and update of policies and financial instruments for leveraging investments for climate change resilient water management in production landscapes, with women and youth empowerment incorporated.</p> <p>1.1.2. Agro-ecological zoning and climate resilience actions integrated into local planning processes (community, catchment, district levels).</p> <p>1.1.3. Dynamic decision-support systems (DSS) strengthened for policy-makers and practitioners to assist with the formulation and evaluation of policies and measures for climate-resilient food systems transformations.</p> <p>1.1.4 A gender-sensitive microfinance mechanism for adoption of climate-resilient technologies piloted.</p> <p>1.2.1. Capacity building programs on climate-resilient agriculture for farmers (including women and youth), aggregators, agro-processors, agro-dealers, and national and district level institutions and extension staff with special focus on drought and sustainable water management (to include also In</p>	LDC F	1,000,000.00	1,000,000.00

implement climate-resilient agriculture

**Targets:**

# institutions and stakeholder groups engaged in capacity building programs (at least 10)

# of institutional partnerships strengthened for adaptation (at least 12)

# people whose capacity has been built (at least 50% women) (20,000)

# people implementing climate-resilient agriculture (20,000)

water management (to include also integrated Pest Management and soil fertility management components).

1.2.2. Capacity building program targeted at local private sector – engineers and technicians to support innovative technologies (particularly water management) introduced (youth and women inclusive).

1.2.3. Inter-institutional multi-sector and multi-scale coordination for mainstreaming CC adaptation into management of land, water (incl. irrigation and infrastructure development) strengthened.

2. Promoting innovative, sustainable and climate resilient agricultural water management	Investment	<p><u>Outcome 2.1</u> Resilience of landscapes and livelihoods strengthened with improved agricultural water management and infrastructure, addressing droughts and floods.</p> <p><u>Targets:</u></p> <p>Increased resilience of:</p> <p># ha of agricultural land under sustainable water management a</p>	LDC F	5,000,000.00	28,000,000.00
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and climate-resilient measures (at least 15,000 ha)

# of irrigation infrastructure and other climate-resilient technologies (at least 6)

# km riverbanks (buffer/tree line strips for flood control) (at least 3)

% yield increase and diversity of crops.

# of villages and households adopting green practices in rural and peri-urban landscapes (Green Villages<sup>[1]</sup>)

# people directly benefiting from resilient livelihoods as a result of project interventions (50% women) (40,000)

<sup>[1]</sup> Green villages concept entails village /community landscapes with productive backyard gardens, green hedge lines, keyhole gardens, fruit trees and renewable energy technologies.

2.1.1 Participatory selection of innovative water management and drought management tools and technologies through a feasibility study (use of FAO Drought Portal)

2.1.2. Capacity building program for farmers (at least 50% women) on Participatory Integrated Climate Services for Agriculture (PICSA) tools to analyse weather and climate information (historical and forecast) for water management for crops to support decision making for climate resilience.

2.1.3. Climate resilient, sustainable, and inclusive water management systems and techniques introduced to increase availability and access to water for agriculture and domestic use (alternate wetting, mulching, deficit irrigation, drip irrigation, improved crop varieties, trash-lines, pitting, contour bonding, water retaining, soil fertility management and integrated pest management etc.)

2.1.4. Livelihood diversification strategies and plans with the special focus on sustainable management and use of water developed and implemented.

Borrowed from the FAO  
urban-peri-urban  
initiative.

3. Strengtheni ng resilience of agricultural value chains	Technical Assistan ce	<p><u>Outcome 3.1.</u> Agricul ture and food-value c hains strengthened t o enhance resilience to climate and other shocks</p> <p><u>Targets:</u></p> <p>Increased resilience of:</p> <p># farmers and innov ation enablers</p> <p># and type of profita ble and sustainable b usiness models supp orted (contract farmi ng, cooperatives, et c.)</p>	<p>3.1.1. Target agriculture and food val ue chains mapped to analyze barriers and market potential to initiate transf ormation for gender-sensitive resilien t green value chains.</p> <p>3.1.2. Aggregation of smallholder pro duce into upgraded value chains pro moted and facilitated.</p> <p>3.1.3. Agriculture Clusters and Market Hub Service Enterprises developed as drivers of agricultural and food syste m resilience</p> <p>3.1.4. Climate-resilient and sustainabl e agribusinesses and cooperatives ta rgeting women and youth entreprene urs linked to green value chains</p> <p>3.1.5. Youth capacity development thr ough incubation and mentorship prog rams to leverage commercialization p otential for resilient agriculture and fo od value chains</p> <p>3.1.6. Access to finance facilitated thr ough partnership with new and/or exi sting financing mechanism – support provided to development of bankable business plans for climate-resilient in vestments</p>	LDC F	2,000,000.00	7,000,000.00
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4. Communication, knowledge management, and M&E	Technical Assistance	<p><u>Outcome 4.1.</u> Monitoring and evaluation under a results-based approach, good practices and lessons learned, systematized and disseminated</p> <p><b>Targets:</b></p> <p>M&amp;E system</p> <p>Innovative communication strategy</p> <p>A national platform</p> <p># of learning visits that result in learning</p>	<p>4.1.1. A national platform to facilitate access to climate smart agriculture information and knowledge established</p> <p>4.1.2. Exchange learning visits with similar bio-physical and socio-economic contexts conducted</p> <p>4.1.3. Exchange within the farm community with farmer extension (FFS)</p> <p>4.1.4. A sound results based Monitoring and Evaluation system (with sex-disaggregated indicators) developed</p> <p>4.1.5. Midterm and final evaluations successfully conducted</p> <p>4.1.6. Project communication strategy (for behavior change communication) developed and implemented (to include women empowerment objectives and key messages).</p>	LDCF	507,067.00	2,000,000.00
Sub Total (\$)					8,507,067.00	38,000,000.00
Project Management Cost (PMC)						
LDCF					425,353.00	2,000,000.00
Sub Total(\$)					425,353.00	2,000,000.00
Total Project Cost(\$)					8,932,420.00	40,000,000.00



**C. Indicative sources of Co-financing for the Project by name and by type**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Ministry of Agriculture and Food Security (MAFS)	Public Investment	Investment mobilized	8,000,000.00
Recipient Country Government	Ministry of Agriculture and Food Security (MAFS)	In-kind	Recurrent expenditures	2,000,000.00
GEF Agency	FAO	Grant	Investment mobilized	2,000,000.00
Donor Agency	EU	Grant	Investment mobilized	28,000,000.00
			<b>Total Project Cost(\$)</b>	<b>40,000,000.00</b>

**Describe how any "Investment Mobilized" was identified**

Investment mobilized from the Government represent the Input Subsidy Program public investment - that the proposed project will improve. In addition, FAO will mobilize resources from its Technical Cooperation Program to support the objectives and activities of the project. Investment mobilized from the EU represents the ICM program described in detail under the baseline section.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	LDCF	Lesotho	Climate Change	NA	8,932,420	848,580	9,781,000.00
Total GEF Resources(\$)					8,932,420.00	848,580.00	9,781,000.00

E. Project Preparation Grant (PPG)  
PPG Required **true**

PPG Amount (\$)				PPG Agency Fee (\$)			
200,000				19,000			
Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	LDCF	Lesotho	Climate Change	NA	200,000	19,000	219,000.00
Total Project Costs(\$)					200,000.00	19,000.00	219,000.00

### 1a. Project Description

## Context: Brief overview of biophysical and socio-economic systems and challenges

**Lesotho**

Districts and Livelihood Zones

- Southern Lowlands
- Northern Lowlands
- Foothills
- Senqu River Valley
- Mountains
- Peri-Urban

The map shows the following districts labeled:

- Butha Buthe
- Leribe
- Maseru
- Moteng
- Molema's Hoek
- Aank Outloos
- Phiso Tsoka
- Makhotlong
- John Phe's Hoek

Figure 1: Lesotho districts and Livelihood zones (source: LVAC 2003).

The Lowlands region covers 17 percent of the total surface area of the country. The southern Lowlands are characterized by poor soils and low rainfall, while the northern and central Lowlands have large deposits of volcanic soils. The Foothills, a strip of land that lies between 1 800 and 2 000 m above sea level, covers 15 percent of the total land area. The Foothills consist of relatively fertile land that supports high population densities subsistent on mixed crop and livestock systems. The Senqu River Valley region is a major grassland area covering about nine (9) percent of the land, dominated by livestock and mixed farming. The largest ecological region, the Mountains (approximately two thirds of the country) host some unique African alpine and sub-alpine habitats of the Drakensburg range (Marake, 1999)<sup>[2]</sup>. It comprises high altitude plateau, bare rock outcrops, deep river valleys and wetlands. It is the source of many rivers which empty towards the Indian and Atlantic Oceans. The region is mostly used for summer grazing transhumance practices.

Lesotho's cultivable land is largely confined to the lowlands and foothills on the Western border and the Senqu River valley in the south. It is estimated that **no more than nine (9) percent (270,000 hectares) of the total land area is arable, and gradually shrinking due to severe land degradation and climate change**. At the same time, Lesotho is endowed with abundant water resources. Although the country has only five (5) percent of the area of the Senqu-Orange River catchment, it contributes 40 percent of the annual run-off in the whole basin.

**Socio-economic context.** With the Gross Domestic Product (GDP) estimated at about USD 2.2 billion, Lesotho's economic growth model has been driven by public spending, which is highly dependent on unstable Southern African Customs Union (SACU) revenues<sup>[3]</sup>. These make up 40 percent of the Government of Lesotho (GoL) revenues. The public sector contribution to GDP is estimated at 60 percent. GoL has become the main formal employer with very limited private sector job opportunities in the country.

Among sectors that have also been key components of the current economic model are manufacturing and mining. Manufacturing of textiles and apparel became a dominant sector in the 1990s. Its contribution to GDP increased from 8.2 percent in 1984 to 23 percent in 2004. The expansion in the textile industry was boosted by the African Growth and Opportunity Act (AGOA) in 2000, which entitled Lesotho and other Sub-Saharan Africa countries to duty- and quota-free access to the United States market. With increasing competition in the US market, the manufacturing sector's contribution to growth has fallen to about 14 percent in 2019. Yet the sector is still the second largest formal employer in the country, after the Government. The mining industry, primarily diamond, contributes 14 percent to GDP and accounts for 12 percent of all formal jobs<sup>[4]</sup>. Overall, Lesotho's main exports are textiles, water and diamonds.

**The agriculture sector** is recognized as critical for food security and employment. Agriculture is the main source of livelihoods for rural communities, where 65.8 percent of the population resides<sup>[6]</sup>. Lesotho's agriculture production has been declining and this has been at the detriment of at least 70 percent of the country's rural population which depend on it for their livelihoods. The country continues to be a net importer of food to meet the needs of its people and the food deficit has worsened in recent years. In good harvest years, Lesotho is only able to meet roughly 30 percent of its annual cereal requirement of approximately 360,000 tonnes.

The sector is dominated by traditional low-input, low-output rain-fed farming systems. The main crops include maize, sorghum, and wheat, which occupy about 90 percent of agricultural land. Production of fruits and vegetables is very limited. Over 90 percent of farmers are subsistence smallholders operating on less than 1 hectare of land, rarely producing enough food to meet their household needs. Production levels and yields are low and erratic, with cereal yields below 1 ton per hectare – less than a quarter of the average Southern African yield. Consequently, at least 70 percent of food consumed in the country is imported from South Africa.

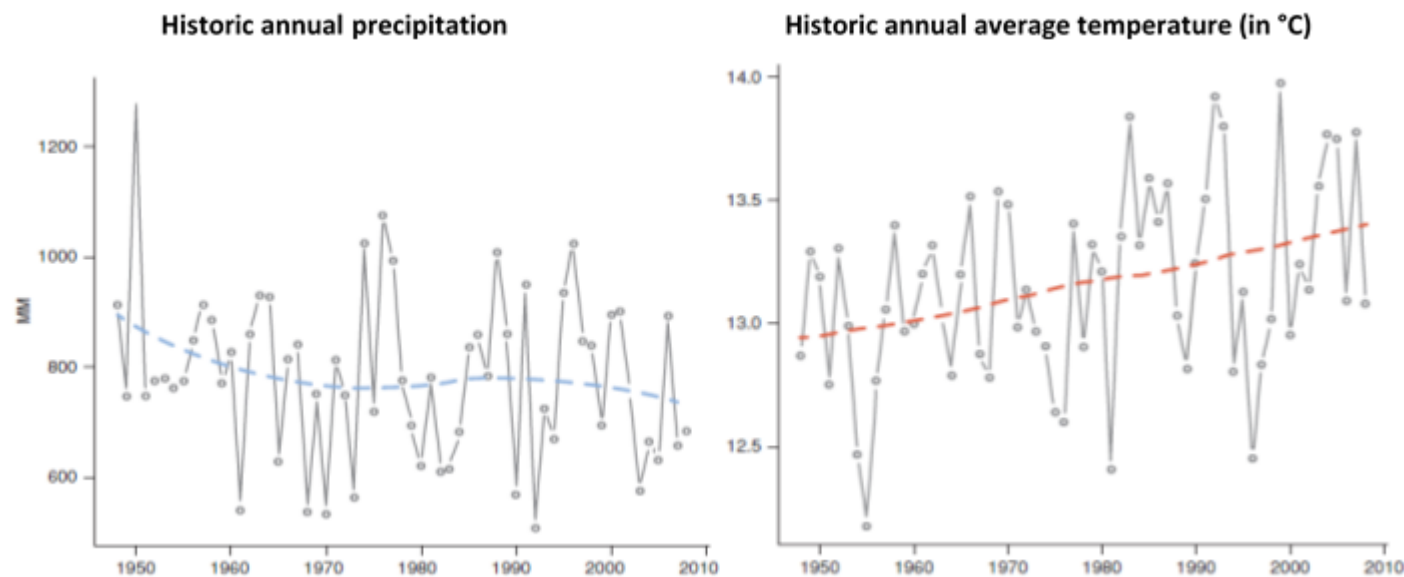
Due to the low levels of productivity and crop failures, Lesotho is plagued by chronic food insecurity, malnutrition and poverty. The National Strategic Development Plan II (2018 – 2023) estimates that **39 percent of Lesotho's households are vulnerable to food insecurity and that nearly 70 percent of the population in the rural areas are affected. This situation is driven primarily by the highly variable climate, with increasingly frequent and severe droughts, and associated factors: land degradation and poorly managed and underutilized water resources for agriculture**. With the most recent droughts, notably in 2015/16 and 2019/20, more than a third of the population faced high levels of acute food insecurity.

**Land tenure.** In Lesotho, constitutionally, land belongs to the people of Lesotho and is held in trust by the King. Thus all land use takes place under a common property regime, although in croplands ownership titles are fundamentally secure even though there are no legal frameworks facilitating use of agricultural land for credit or investment collateral with financial institutions. There are ongoing efforts to address this gap.

#### Climate change and environmental degradation problem

**Climate variability and change.** Lesotho's climate is characterized by four distinct seasons, spring, summer, autumn and winter, with average temperatures ranging between -10°C in winter and 30°C in summer, and 700mm average annual rainfall most of which is received between the months of October and April. The country experiences high intra and inter-annual rainfall variability, frequent droughts and other extreme events including flash floods, frost, snow, hailstorms and tornadoes. Severe droughts have become more frequent in recent years. All these have had significant negative impacts on agriculture and food security as outlined above.

As reflected in the below trend analysis, annual average temperatures are increasing while precipitation is decreasing.<sup>[1][2]</sup>



[1] Lesotho's Nationally Determined Contribution Report 2017.

[2] Lesotho Climate Smart Agriculture Investment Plan. World Bank, 2019.

Climate change projections suggest that temperatures would increase by about 1°C by 2030 and by 1.5-2.0°C by 2050<sup>[1]</sup>. There is divergence in projections with regard to precipitation – with some showing a strong decrease in winter, no change in summer and autumn and gradual increase in spring. From a comprehensive analysis of Southern African agriculture and climate change carried out by the International Food Policy Research and Institute (IFPRI) in 2013, various Global Climate Models (GCMs)<sup>[2]</sup> show Lesotho becoming warmer, and drier by 2050, with significant decrease in rainfall ranging between 50 and 200 mm across the country.

In addition to the regional-national level climate assessments, a vulnerability assessment and mapping exercise has been undertaken for selected landscapes in the Lowlands, Senqu River Valley and Mountains agro-ecological zones. This exercise was part of activities under the LDCF-funded “Improvement of Early Warning Systems to Reduce Impacts of Climate Change”. The table below presents a summary of key climate change hazards identified and their implications, particularly for agriculture.

The projected changes in temperature and precipitation will have severe impacts on agriculture and Basotho’s livelihoods. According to the IFPRI analysis, maize yields are projected to decrease by 5 to 25 percent, in the absence of effective adaptation. There could be positive impacts on some crops with yield gains for sorghum, potatoes and vegetables (IFPRI 2013, CSAIP 2019). Climate change will have detrimental impacts on wetland resources in the alpine watersheds which sustain the perennial flow of rivers that supply water to the Lesotho water development projects both in the highlands and lowlands. Moreover, high temperatures, reduced precipitation and climate variability could exacerbate soil erosion, land degradation and loss of other valuable natural resources.

**Key climate change hazards**

<u>Hazards</u>	<u>Description</u>	<u>Implications</u>
Droughts and Floods	<p>Prolonged droughts are projected to increase, as rainfall becomes more intermittent and an overall decrease is experienced. Projected mean temperature increase combined with prolonged dry spells will increase the severity of drought events.</p> <p>Short-term drought events are expected to increase.</p> <p>Projected increase in flooding events is likely to stem from the combination of drought conditions and intermittent, yet intense rainfall.</p>	<p>Negatively affect agricultural production – poor crop harvest and loss of livestock.</p> <p>Decrease the functionality of wetlands, and rivers and other water systems. Prolonged water shortages.</p> <p>Soil erosion.</p> <p>Damage to crops.</p> <p>Possibility of introduction of unknown plant pests which will take time to put under control.</p> <p>Moreover, need to increase use of pesticides to control pests, which will pose a threat to water bodies and aquatic life forms.</p>

Frost	<p>Frost events are typically experienced in winter months. However, with the projected shifts of season, early onset or extended occurrence of frost into the cropping seasons is likely.</p> <p>It is also projected that frost in winter may decrease which could have both positive and negative implications.</p>	<p>Negatively impact crop production and the quality of grasslands due to the shift of frost occurrence into the cropping season.</p> <p>Wilting of crops and poor harvest.</p> <p>Decrease of frost in winter could enable the encroachment of shrub vegetation and alien species into grasslands.</p> <p>With increase temperatures, there could be an increase in plant pests, an increase in use of pesticides, some of which will be highly hazardous, posing a threat to human and environment.</p>
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[1] Lesotho's Nationally Determined Contribution, 2017.

[2] CNRM-CM3, a National Meteorological Research Center–Climate Model 3. CSIRO Mark 3, a climate model developed at the Australia Commonwealth Scientific and Industrial Research Organization. ECHAM 5, a fifth-generation climate model developed at the Max Planck Institute for Meteorology in Hamburg. MIROC 3.2 is the Model for Interdisciplinary Research on Climate, developed at the University of Tokyo Center for Climate System Research.

[3] Second National Communication, 2013.

**Lesotho suffers from severe land degradation** leading to reduction in the provision of ecosystem services that takes different forms - deterioration in food availability, soil fertility, carbon sequestration capacity, wood production, groundwater recharge. It is estimated that the country loses at least 2 percent of its topsoil annually due to erosion, an annual cost of USD million equivalent to 3.6 percent of the country's GDP <sup>[13]</sup>. Land degradation leads to reduction in the provision of various ecosystem services - deterioration in food availability, soil fertility, carbon sequestration capacity, wood production, groundwater recharge, etc. The degradation is driven by water run-off, unsustainable farming practices and overgrazing.



The combination of and interactions between land degradation, drought and climate change are expected to have devastating consequences on food security and livelihoods of vulnerable Basotho, in the absence of concerted efforts to address these problems. Recent strategic documents (CSA Investment Plan, Irrigation Master Plan) have underscored the potential for responsible and inclusive irrigation development to improve productivity and economically reposition Lesotho and achieve prosperity in the short- to long-term – key part of strategies to adapt to climate change.

#### COVID-19 impacts

The pandemic is having devastating impacts on the country, including sharp increases in unemployment, poverty and food insecurity. The already high vulnerability of Basotho to climate change and other shocks has been amplified by COVID-19. The arrival of the pandemic in Lesotho coincided with the 2019/20 drought conditions (two consecutive years of drought). In May 2020, a quarter of the population was at risk of food insecurity due to drought. It was projected that from April to September 2020, about 900,000 Basotho (almost half of the population) would face food insecurity. Supply chains of food and farm inputs were disrupted due to lockdowns and closure of borders between South Africa and Lesotho. The pandemic has affected all other key sectors, health, manufacturing and mining, tourism, wholesale and retail, education, water and sanitation, all corners of the economy and society.

Poverty is expected to rise across the whole country, with the poverty rate increasing to about 50%, most significantly in the rural areas and disproportionately affect already vulnerable groups, youth and women. The already high unemployment (highest among women and youth) is expected to increase as well.

The COVID-19 Socio-Economic Impact Assessment (2020) has recommended a number of strategies to Build Back Better. These include moving the country from being a net importer of food by supporting smallholder farmers to enhance their productivity and promoting inclusive local agribusiness models and diversifying local food production.

These strategies would need to incorporate and address climate change risks as well and this is one of the entry points for the proposed LDCF project.

In fact, pre-COVID, it was already acknowledged that the country needed to move away from the current unsustainable economic growth model, a narrow model heavily dependent on global trade (SACU revenues, textiles, diamond mining, food imports) towards one that is sustainable, climate-resilient and inclusive – with climate smart agriculture as one of the four key pillars of the new model. This vision and commitment are reflected in the National Strategic Development Plan II (NSDP II, 2018 – 2023).

Strategic goals of NSDP II include “Enhancing inclusive and sustainable economic growth and private sector job creation”, growth that is anchored first and foremost on sustainable commercial agriculture and food security, and on three other sectors: manufacturing; tourism and creative industries; and technology and innovation. The strategy has placed emphasis on private sector development and engagement.

There is recognition in NSDP II, that in order to achieve the ambitious goal, climate change and environmental degradation are critical issues, and that there are certain barriers to adaptation and resilience building that must be addressed.

#### Barriers to be addressed:

Barriers to climate-resilient agriculture and food systems in Lesotho have been identified and clearly articulated in several key strategies and plans, notably in NSDP II and the Climate Smart Agriculture Investment Plan for Lesotho (CSAIP, 2019) developed with the support of the World Bank.

**Misaligned policies and inadequate capacities of institutions, smallholder farmers, private sector and other actors.** Implementation and achievement of climate-resilient agriculture and food security goals is going to require well aligned policies that promote and incentivize adoption of climate-resilient practices and technologies, and catalyze private sector engagement and investments.

Major policies that have guided the sector over the past fifteen years are the Agriculture Sector Strategy and the Food Security Policy. These important policy frameworks have been in existence for more than fifteen years but to date no meaningful review has been made to determine their effectiveness in delivering key developmental objectives. So, they are basically out of date, have not integrated key climate change adaptation and resilience, and are definitely out of alignment with NSDP II, the National Climate Change Policy Implementation Strategy (2017) and CSAIP. The need to review and reorient the Agricultural Subsidy Program, which with its focus on maize has disincentivized adaptation through crop diversification, is among priority interventions identified by NSDP II.

The National Irrigation Master Plan and Investment Framework, which guides the development of irrigation in the country, is being finalized. Implementation of the master plan is going to require an irrigation policy that ensures sustainable and equitable use of water resources and takes into account climate impacts and integrity of local ecosystems.

With regard capacities, experience and lessons from past and ongoing programs and projects suggest that we really need to rethink how we develop capacities and how we sustain them. Promotion and adoption of climate-resilient innovative water management practices, technologies, and systems is a key component of the project. There is going to be need for well-designed and delivered capacity development programs that address capacity needs of farmers and support institutions from local to national level – with strong inclusion of the local private sector, youth and women.

Although there have been efforts through various programs and projects to improve institutional coordination, still there is big room for improvement. In particular, with regard to ensuring representation of key institutions and stakeholder, including the private sector in coordination mechanisms. Also missing is an overall framework for monitoring the impact of policies and programs, to support learning and necessary reorientations.

**Limited experience with sustainable climate-resilient water resources management and irrigation technologies.** Sustainable use of Lesotho's water resources for agriculture, including the development of efficient irrigation systems, has been identified as central to building the resilience of agriculture and food and nutrition security and livelihoods of Basotho.

Although 36,000 hectares of agricultural land is considered suitable for irrigation, it is estimated that only 3 percent of this is currently under irrigation with less than 1% of overall annual water use. In addition to institutional and technical capacity constraints, this has been due to the approach used to introduce irrigation in the past - top-down Government and donor-driven approach with little consultation with, or participation by farmers. Therefore is an understanding and opportunity to now demonstrate innovative, inclusive small-scale farmer-led water management systems for climate-resilient food production.

**Weak capacities for the development of sustainable agri-food value chains.** Commercialization and development of local agri-food value chains is at the heart of Lesotho's development and CSA goals. There are ongoing investments supported by the World Bank and IFAD and others that promote the commercialization of agriculture. These initiatives have opened up opportunities and possibilities for engaging in market-oriented agriculture. Farmers have seized this opportunity and productivity gains are noticeable in a few agri-food value chains. However, a lot still need to be done to ensure that local producers claim a fair share of the domestic food market including proper integration of smallholder farmers into improved value chains. To date the share of local produce into the mainstream food market is considerably low. Capacity constraints include: weak farmer organization, absence of aggregators, low technical, financial and business skills; limited access to market information; and weak linkages within value chains, etc..

**Limited access to finance is an important barrier for smallholder farmers and micro, small and medium agro-enterprises (MSMEs)** to invest in climate-smart innovations and infrastructure (including post-harvest storage). A survey of commercial farmers carried out in 2018 showed that only 7 percent had accessed loans, 68 percent of which borrowed from banks (World Bank 2018 study "Unlocking the potential of Lesotho's Private Sector: A focus on Apparel, Horticulture & ICT"). Local banks attributed this to the lack of quality investment proposals. The Government has introduced Partial Credit Guarantee Schemes managed

by the Lesotho National Development Cooperation and the Ministry of Small Business Development, Cooperatives and Marketing. These, according the WB study, are not functioning well, with the process for obtaining guarantees deemed tedious by entrepreneurs. Micro-finance institutions are not yet well developed.

**Inadequate knowledge management systems.** Related to the first barrier stated above, while there have been successful projects and programs in Lesotho targeting climate change and environmental degradation and specifically land degradation, interventions have not always been accompanied by strong approaches to knowledge management and awareness raising on the successes of the interventions. This is exacerbated by weak capacities to monitor the effect these have on livelihoods and socio-economic conditions. Inadequate monitoring and knowledge management systems also limit Lesotho's ability to evaluate the effectiveness of programs and policies – to inform policy making.

The proposed project is designed to address these barriers to climate-resilient agriculture and food systems. In doing so, it will build on and collaborate with the baseline, co-financing, and GEF-funded initiatives described in the next section.

***b) the baseline scenario or any associated baseline projects***

FAO-Lesotho Technical Cooperation Program

FAO is currently supporting the country to set the foundation and enabling environment for the implementation of the National Strategic Development Plan and the National Agriculture Investment Plan. A number of important Technical Cooperation Program (TCP) projects are ongoing. These include:

- **TCP/LES/3701 “Establishment of a Lesotho National Farmer Registry and Electronic Voucher Management System”** to enable proper targeting and allocation of resources within the agricultural sector.

The project will build a database of all farmers in Lesotho with a unique household identifier and help the Ministry of Agriculture and Food Security (MAFS) and other stakeholders with improved planning, targeting and monitoring of all agriculture interventions. The system will harmonise programmes within MAFS as well as strengthen complementarity with social protection programmes of which the National Integrated System for Social Assistance (NISSA) and Lesotho National Farmers Union will provide the initial database on which the National Farmer Register will be built upon. The registry will also categorise farmers according to their poverty status according to the NISSA to enable proper targeting of beneficiaries for programmes such as the Input Subsidy Programme among others.

The system will bring about increased accountability and transparency, providing all stakeholders with clear information on beneficiaries, programme performance across the whole chain - thus reducing leakages and abuse of programmes. The proposed system will also have clear auditing and tracking functionality for critical activities. It will include a budget management and M&E modules to enable the Ministry to track its funding notably commitments and what the Ministry and other partners disburse towards various programmes thereby strengthening financial and budget management functions of the budget holder, and to track impact.

This work will be augmented through component 1, in particular output 1.1.3, to integrate climate vulnerability into the system – improve the targeting and inclusion of the most vulnerable farmers, and groups (women and youth) in agricultural programmes.

- **TCP/LES/3801 “Building capacities and facilitating enabling environment for contract farming in Lesotho”.** The project aims to formulate a comprehensive legislative framework for improved contract farming, including a model contract applicable to selected commodities. An important foundation for components 1 and 3 of the proposed LDCF project.

- **TCP/LES/3704 “Review of agricultural policies and legal frameworks”.** The aim of the review is to help clear policy inconsistencies within the sector and help improve policy-enabling environment. It will also help facilitate high-level policy dialogue and consensus building in support of the implementation of the National Agricultural Investment Plan. The project will also support the development of Lesotho’s irrigation policy.

The proposed LDCF project will ensure the incorporation of climate change adaptation into the policies and frameworks and importantly, strengthen the capacity of institutions to implement them.

In addition, there are two important ongoing projects for the reduction of COVID-19 impacts on food security and vulnerable communities. These are funded by the EU and the WB, through FAO.

#### EU-funded "Support to Integrated Catchment Management in Lesotho"

This project is the main baseline co-financing initiative for the proposed project. It aims to institutionalize and fully implement ICM, based on gender equality and climate change adaptation principles. This will be achieved through: the development of climate-resilient policy framework for ICM; establishment of effective and efficient institutions for ICM, with equitable representation of women and youth; and building the capacity, skills and knowledge of public, private sector and civil society for sustainable ICM; and implementation of ICM measures. The ICM project is introducing a much needed approach to decentralize the management of water resources, placing communities at the center of natural resources management, defining and implementing their priorities with support of local and national institutions. In fact, promoting ICM is one of the NSDP II objectives.

The proposed LDCF project will work with EU-ICM on the development of the policy framework, ensuring linkages and consistency with the climate-resilient agricultural policies and framework. The LDCF project will not create new structures, but instead work with EU-ICM in strengthening capacities of the new ICM institutional structures, particularly at local level (catchment and community level) – integration of climate-resilient agricultural water management and production practices component. The LDCF project will also support the scale-up of the ICM approach to catchment(s)/sub-catchment(s) not covered by EU-ICM, which is currently working in 6 pilot catchments.

#### WB-IFAD “Smallholder Agriculture Development Project II” (SADP II).

The objective of SADP II is to support the increased adoption of climate smart agriculture technologies in Lesotho’s agriculture, enhanced commercialization and improved dietary diversity among targeted beneficiaries. The project will promote climate smart agriculture (CSA) practices and advisory services (component 1), including rehabilitation and modernization of irrigation infrastructure, support for investments in soil fertility management, integrated climate, weather and market advisory services, and improve agricultural commercialization and nutrition (component 2) – support to horizontal alliances, support to vertical alliances, improved nutrition.

Among the issues SADP II addresses is farmers’ limited access to finance. SADP II will set-up a financing mechanism under which farmers will have access to grants to finance investments for increasing on-farm productivity. Aggregators, processors, and other agri-business enterprises will also have access to grants for investments in post-harvest infrastructure including processing facilities and cold storage equipment. This is a competitive grant program that requires sound business plans and many smallholder farmers and other stakeholders do not have experience and skills to develop such – commercial agriculture is still at nascent stage in Lesotho. This is one of the areas the proposed LDCF project will address (output 3.1.6).

The proposed LDCF project complements very well SADP II in that it will strengthen and develop relevant policy frameworks (Agriculture Sector Strategy and the Food Security Policy, Irrigation Policy, Input Subsidy Policy) to enable CSA and the achievement and sustainability of SADP II objectives. The LDCF project will be instrumental in demonstrating decentralized sustainable management of water resources for agriculture, utilizing the ICM approach, with a strong focus of building local level capacities for sustainability. SADP II knowledge, tools and innovations, will be incorporated in the design and implementation of the proposed project – for replication and enhancement of impact.

## Relevant ongoing GEF Program in Lesotho

GEF-7 Regeneration of Livelihoods and Landscapes (ROLL) Project, with IFAD. This project which is currently under development promotes sustainable land management through building the capacity for landscape management and restoration. The proposed LDCF project will complement ROLL by mainstreaming climate change adaptation into the landscape and local planning processes and actions, thereby contributing to the resilience of production landscapes. FAO is one of the co-financing partners in this project, and with participation in the project, will facilitate collaboration and knowledge exchange between the two projects.

GEF-6 Strengthening Climate Services in Lesotho for Climate Resilient Development and Adaptation to Climate Change (EWS II), UNEP. The project will: (i) establish infrastructure and capacity to enable functional early warning system (EWS); (ii) create institutional mechanisms for coordination and implementation of EWS and for use of climate information in policy and sector planning; and (iii) piloting packaging and dissemination of EWS messages to different stakeholders and end-users. The outputs of EWS II will be essential, particularly for the water management aspects of the proposed LDCF project, providing the early warning information critical for sustainable and responsible use of water for agriculture. Specifically, output 1.2.1 will include the translation and use of climate information for decision-making at farm and catchment levels, with feedback to the Lesotho Meteorological Services to help refine the system(s) as necessary.

### *c) the proposed alternative scenario with a brief description of expected outcomes and components of the project*

**Project Objective:** To enhance climate resilience of landscapes and communities for food security through sustainable water management.

The **project strategy** is to leverage all key stakeholders and initiatives **towards the goal of LDC graduation and building a sustainable, resilient inclusive economy and food secure society** - as envisioned in the second National Strategic Development Plan (NSDP II) 2019-2023 – where agricultural water management is the central pillar of climate resilience. The project will build on the “*Support to Integrated Catchment Management in Lesotho*” funded by the European Union, a flagship project that aims to institutionalize Integrated Catchment Management in Lesotho based on gender equality and climate change adaptation principles. The project is establishing the institutional structures for implementing ICM (capacity development) and carries out watershed improvement (whereas infrastructure can be one solution on-hand) to reinforce the sustainable use of natural resources.

### **Project technical principles:**

**1) Integrated Catchment Management.** Integrated Catchment Management (ICM) is a process that recognizes a catchment as the organizing unit for understanding and managing ecosystem processes through social, economic, and governance considerations, guiding communities towards an agreed vision of sustainable land and water resource management for their catchment[20]. The project recognizes lessons learned from ICM implementation elsewhere, including those of FAO[21].

**2) Building Back Better.** Building Back Better approach and principles are accepted as part of the national approach for disaster risk reduction as expressed in the Early Warning System Strategy 2020 and Disaster Risk Reduction Strategy 2021. As of today, Lesotho does not yet have a dedicated economic recovery package for agriculture. Capacity strengthening for building back better at national and sub-national levels will be conducted in close collaboration with local stakeholders and all key ministries, with the leadership of the Ministry of Agriculture and Food Security and the Ministry of Development Planning.

### **Project Theory of Change**

The ToC diagram (Annex 1) outlines the project influence pathway arising from the project activities and leading to impact. The ToC follows the STAP Primer on the Theory of Change[22]. It benefited from stakeholder consultations, and was presented at the final stakeholder consultation on March 18, 2021.

There are several assumptions adopted by the project that underline these causal influence pathway:

**A1:** There is willingness of key stakeholders to be involved, participate, and cooperate on building resilience.

**A2:** There is an interest of stakeholders in knowledge materials and capacity building.

**A3:** Local people are interested in and motivated to build resilience of the landscapes. Local government is willing to participate and identify their priorities in a participatory manner.

**A4:** Youth are interested in building innovative resilient and green value chains.

**A5:** Relevant data and information for evaluating climate information gaps from previous projects will be made available and will have sufficient resolution for field application.

#### A brief description of expected outcomes and components of the project

The project objective will be achieved through implementation of four interlinked components that will strengthen the enabling environment for sustainable climate-resilient water management in production landscapes, increase the drought and flood resilience of livelihoods in these landscapes, and strengthen overall resilience of key agriculture value chains. This will be underpinned by strengthened knowledge management that will facilitate further scaling up and out at the national level towards national social and economic resilience and sustainability.

#### ***Component 1. Strengthening policy and institutional capacities.***

Component 1 aims to achieve two closely linked and self-reinforcing outcomes on frameworks and target capacity building for behavioural change.

#### **Outcome 1.1. Strengthened policies, planning and investment frameworks to enable sustainable climate-resilient water management in production landscapes.**

This outcome aims to guarantee the effective articulation of the interventions of the social, economic, and environmental sectors for increased socio-economic benefits under a landscape approach. The review will incorporate the Building Back Better project vision of reducing poverty while increasing productivity and avoiding, reducing, and reversing environmental degradation. Agriculture Input Subsidy Program, food quality standards, export-import policies, access to credit and investment capital for small-holders, crop and livestock insurance schemes will be reviewed and climate resilience principles will be integrated into the national frameworks with the focus on water management in production landscapes. Mainstreaming climate change adaptation into and improving the efficiency and effectiveness of the Input Subsidy Program, especially, could be one of the game-changers in moving the country towards resilient livelihoods and food security – the Government invests millions of dollars in this program each year.

As management of water resources often overlooks feedback processes between key social and economic system components, a dynamic integrated decision support system for policy-makers will be developed to provide understanding of the long-term dynamic behavior of the catchments for exploring plausible policy scenarios necessary for integrated water resources management, agricultural development, climate change and socio-economic resilience. The DSS will help inform policy planning and its implementation investment decisions within the basin to enhance food security, livelihoods development, socio-economic growth, and sustainable management of natural resources to provide the maximum benefit to people living in the basin. The resulting decision support system will be user-friendly in a way that it can be updated as new data becomes available, making it a long-term decision support asset for agricultural water management. The participatory methods will be placed at the center of this process.

The outcome will be achieved through three outputs:

**1.1.1.** Review and update of policies and financial instruments for leveraging investments for climate change resilient water management in production landscapes, with women and youth empowerment incorporated.

**1.1.2.** Agro-ecological zoning and climate resilience actions integrated into local planning processes (community, catchment, district levels)

**1.1.3.** Dynamic decision-support systems (DSS) developed for policy-makers and practitioners to assist with the formulation and evaluation of policies and measures for climate-resilient food systems transformations

**1.1.4.** A gender-sensitive microfinance mechanism for adoption of climate-resilient technologies piloted.

This output will be linked to an ongoing FAO-funded project on “Catalyzing investment for transformative agricultural value chain development in Lesotho”. The project aims to improve the policy enabling environment for investing in agriculture, including for introduction of de-risking, risk sharing measures and blended financing tools for value chain players, and micro-finance.

#### **Outcome 1.2. National and local/district level capacities strengthened to plan and implement climate-resilient agriculture.**

This outcome focuses on enhancing the capacity of smallholder farmers, technical staff of national and local/district institutions, as well as the private sector, NGOs and community-based organizations to achieve climate-resilient agriculture. This will raise participants' awareness of climate change, its effects and the need for active adaptation to climate change, which in turn will increase the stakeholders' commitment and willingness to cooperate. Inter-sectoral coordination mechanisms at horizontal (between line Ministries) as well as vertical (between communities and central agencies) levels will be strengthened to ensure long-term institutional sustainability.

The way capacity building programs will be designed will be such that they go beyond numbers of people participating in workshops, and be more about quality, depth, ownership at all levels and sustainability, calling for innovation in their design and implementation.

The outcome will be achieved through three outputs:

**1.2.1.** Capacity building programs on climate-resilient agriculture for farmers (including women and youth), aggregators, agro-processors, agro-dealers, and national and district level extension staff with special focus on drought and sustainable water management. The capacity building will include the translation and use of climate information for decision-making at farm and catchment levels, with feedback to the Lesotho Meteorological Services to help refine the early warning systems as necessary (link to GEF-6 EWS II project). It will also include components on soil fertility management and on integrated pest management in order to prevent and/or eliminate use of highly hazardous pesticides (HHPs).

**1.2.2.** Capacity building program targeted at local private sector – engineers and technicians to support innovative technologies (particularly water management) introduced (youth and women inclusive)

**1.2.3.** Strengthened inter-institutional multi-sector and multi-scale coordination for mainstreaming CC adaptation into management of land, water/irrigation and infrastructure development, building on existing structures.

## ***Component 2. Promoting innovative, sustainable and climate resilient agricultural water management.***

### **Outcome 2.1. Resilience of landscapes and livelihoods strengthened with improved agricultural water management and infrastructure, addressing droughts and floods.**

The outcome will assist the GoL in identifying water productivity gaps, proposing solutions to reduce these gaps and contributing to a sustainable increase of agricultural production. At the same time, it will take into account ecosystems and the equitable use of water resources, which should lead eventually to an overall reduction of water stress. Equilibrated management of the surface water resources will be sought to make better use of the water surplus during floods to be stored in view of drought events. Furthermore, at local scale, agricultural production will be tailored to these challenges with provision of knowledge and early warnings (through co-financing) that will enable farmers to adapt their production methods.

The response measures can be subdivided into long-term, medium-term or short-term options. While long-term measures are comprised in the development strategies of the concerned sectors and covered under Component 1, medium-term measures are timely implemented before, during and after drought, and will be targeted under Component 2. The project will deploy innovative technologies and approaches such as alternate wetting, mulching, deficit irrigation, drip irrigation, improved crop varieties, trash-lines, pitting, contour bonding, water retaining, and others. Short-term options include emergency response measures and thus not directly targeted through this project. Thus, the project will tackle drought and flood before it starts to cause land degradation.

To ensure deployment of these innovations and sustainable practices, the project will first conduct participatory selection of innovative water management and drought management tools and technologies through a feasibility study using FAO Drought Portal, which is currently being updated through global Drought Enabling Activity project (FAO). In parallel, a targeted capacity building program for farmers will be developed to ensure long-term sustainability. Community meetings will be held, involving consultations with vulnerable groups such as women, the poor, to develop detailed implementation plans in each target landscape and regularly assess progress. Lessons learned from the ongoing GoL-FAO LDCF project "Strengthening capacity for climate change adaptation through support to Integrated Watershed Management", as well as other relevant projects, have been, and will continue to be taken into account in the design of the project interventions. In working with the EU-ICM program, the idea is to facilitate the participatory selection and incorporation of specific agricultural water management and sustainable agricultural production practices into local plans to be developed under the program – where there is direct overlap in target catchments.

The outcome will aim to deploy sustainable agricultural production practices in line with the specific agro-ecological context of each area, with the aim to enhance ecosystems and biodiversity, reduce GHG emissions, improve land quality, and livelihoods. Understanding which part of the land resource is under water stress is vital for selecting and putting into practice the most efficient and affordable solutions. Thus, the project will build on ongoing efforts in the country to promote sustainable land management (SADP-II project) and integrate climate-resilience into agriculture water management.

Target landscapes will be selected during the PPG based on the following criteria:

- *Area with significant impacts of drought and floods on agriculture;*
- *Area with the highest proportion of poor people who depend on climate-sensitive livelihoods in agriculture;*

- *Linkages with baseline projects: agricultural or peri-urban areas on which collaborations are already established with communities and groups of citizen in the field of integrated catchment management, land planning, risk reduction, and other relevant initiatives;*
- *Diversity in agro-ecological zones for scaling out/up potential;*
- *Areas where Early Warning Systems have been set up and are being used;*
- *Areas where the effect of extreme events is known, or supposed, to effect agricultural development.*

A list and map of potential sites based on the criteria are presented in Annex 3.

The outcome will be achieved through four outputs:

**2.1.1.** Participatory selection of innovative water management and drought management tools and technologies through a feasibility study (use of FAO Drought Portal)

**2.1.2.** Capacity building program for farmers on Participatory Integrated Climate Services for Agriculture (PICSA) tools to analyse weather and climate information (historical and forecast) for water management for crops to support decision making for climate resilience

**2.1.3.** Climate resilient, sustainable, and inclusive water management systems and techniques introduced to increase availability and access to water for agriculture and domestic use (*alternate wetting, mulching, deficit irrigation, drip irrigation, improved crop varieties, trash-lines, pitting, contour bonding, water retaining, integrated pest management, soil fertility management etc.*)

**2.1.4.** Livelihood diversification strategies and plans with the special focus on sustainable management and use of water developed and implemented.

### ***Component 3. Strengthening resilience of agricultural and food value chains.***

#### **Outcome 3.1. Agriculture and food value chains strengthened to enhance resilience to climate and other shocks.**

While Component 1 will address the enabling environment, and Component 2 will target resiliency of ecosystems and livelihoods anchored on agricultural water management, Component 3 will foster a green socio-economic recovery in agriculture by promoting green value chains. Under Outcome 3.1, farmers, especially youth, across the target peri-urban and rural landscapes will benefit from improved access and more efficient organization of the agriculture value chain for post COVID-19 recovery. A detailed capacity and awareness program will be developed to increase the farmers' capacity, extension service providers, enterprises and cooperatives on sustainable climate-resilient production and agricultural value chains to enhance resilience to climate and other shocks. Mechanisms for farmer education and training will be established with close involvement of farmers, and youth and women in particular.

The market linkages will be developed with the aim to incentivize climate-resilient agricultural practices and enhance farmers' overall resilience to shocks, especially climate shocks. The project will ensure that local stakeholders, including women and youth, are consulted throughout the implementation, and that they have equal opportunities to benefit from the enhanced market linkages and access to finance. Thanks to the results of the policy update (Component 1), targeted enablers will have the means to identify, support and assess green and inclusive business development options and improved capacities to identify investment opportunities and access to banking in value chains and create green jobs (*RuralInvest* and others).

The outcome will be achieved through seven outputs:

**3.1.1.** Target agriculture value chain mapped to analyse barriers and market potential to initiate transformation for gender-sensitive resilient green value chains

**3.1.2.** Aggregation of smallholder produce into upgraded value chains promoted and facilitated

**3.1.3.** Agriculture Clusters and Market Hub Enterprises developed as drivers of agricultural and food system resilience

**3.1.4.** Climate-resilient and sustainable agribusinesses and cooperatives targeting women and youth entrepreneurs linked to green value chains

**3.1.5.** Youth capacity development through incubation and mentorship programs to leverage commercialization potential for resilient agriculture and food value chains

**3.1.6.** Access to finance facilitated through partnership with new and/or existing financing mechanism – support provided to development of bankable business plans for climate-resilient investments.

The WB/IFAD funded Smallholder Agriculture Development Project (SADP II, 2019-2026) includes a financing mechanism under which farmers will have access to grants to finance investments for increasing on-farm productivity. Aggregators, processors, and other agri-business enterprises will also have access to grants for investments in post-harvest infrastructure including processing facilities and cold storage equipment. This is a competitive grant program



that requires sound business plans and many smallholder farmers and other stakeholders do not have experience and skills to develop such – commercial agriculture is still at nascent stage in Lesotho. For this reason, output 3.1.6 has been proposed to address the issue of access to finance for climate-resilient production and post-harvest investments.

In addition, during PPG, opportunities to work with institutions such as the Lesotho Post Bank and the Lesotho National Development Cooperation (<http://www.lndc.org.ls/>) to develop specific lending products for climate resilience will be further explored.

#### ***Component 4. Communication, knowledge management, and M&E.***

##### **Outcome 4.1. Monitoring and evaluation under a results-based approach, good practices and lessons learned, systematized and disseminated.**

The outcome will support the setting up of an M&E system. This M&E system will be inter-sectoral and will engage with all project institutions. This output will support establishment of a national digital user-friendly platform, and whose main users will be national, sub-national, local decision-makers, technicians, organizations, institutions, and producers. It will support the monitoring of the ICM-EU program and other key initiatives and will gather and disseminate relevant data, information, tools, and best practices. It will be GIS-based and include biophysical and socio-economic indicators linked to overall national goals. The platform will be linked to the Decision-Support System (developed under Component 1) for sustainability and impact.

Project lessons learned and good practices will be systematized and linked using the knowledge management approach (see *Knowledge Management* section). At the global level, good practices will be shared through relevant FAO portals and platforms (Drought Portal, Pastoralist Hub) and other relevant initiatives (WOCAT SLM database and others). At the national level, the project manuals, developed under Component 2, will be used by extension specialists and producers for exchange within the farm community.

A project communication strategy will be developed to ensure participation, engagement and information sharing. It will follow *communication for development* <sup>[2]</sup> approach developed by FAO and serve project target stakeholders (see *Stakeholders* section). The strategy will be linked to the national platform for wider impact. The work will also include the study tours abroad on sustainable and climate-resilient water management to visit the successful examples of management in the similar environmental conditions (drought, floods).

The outcome will be achieved through six outputs:

- 4.1.1. A national platform to facilitate access to climate resilient agriculture information and knowledge established
- 4.1.2. Exchange learning visits with similar biophysical and socio-economic contexts conducted
- 4.1.3. Exchange within the farm community with farmer extension (FFS)
- 4.1.4. A sound results based Monitoring and Evaluation system (with sex-disaggregated indicators) developed
- 4.1.5. Midterm and final evaluations successfully conducted
- 4.1.6. Project communication strategy (behaviour change communication) developed.

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[1] <http://www.fao.org/in-action/rural-invest/en/>

[2] <http://www.fao.org/communication-for-development/en/>

#### ***d) alignment with GEF focal area and/or Impact Program strategies***

The overall aim of the project falls within the overarching goal of the GEF Programming strategy on adaptation to climate change for the LDCF and the SCCF for the period of 2018-2022. The LDCF project in particular addresses the key priority sectors, focusing on the resilience of natural assets in the face of climate change for vulnerable communities, their livelihoods and reducing vulnerability of fragile ecosystems. In particular, the proposed LDCF project concentrates on the first two objectives of the LDCF/SCCF strategy:

Objective 1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation.

Objective 2: Mainstream Climate Change Adaptation and Resilience for Systemic Impact.

#### ***e) additional cost reasoning and expected contributions from the baseline, the LDCF and co-financing***

### Without LDCF

Without the proposed intervention, Lesotho's fragile socio-economic-environmental system will continue being vulnerable as a result of climate change impacts, in particular drought and floods. Lesotho's growth model will continue being driven by public spending, which is highly dependent on unstable Southern African Customs Union (SACU) revenues. Poverty is expected to rise across the entire country increasing to about 50 percent. Youth - being 40 percent of the population and with a high unemployment rate - are already disproportionately affected by poverty.

Smallholder farmers will continue gaining low and erratic yields of mainly maize, sorghum, and wheat on limited quantity and diminishing quality of land. Lesotho's households, in particular in rural areas, will continue being vulnerable to food insecurity driven by highly variable climate and poorly managed and underutilized water resources for agriculture.

Without unlocking the potential of Lesotho's water resources to build the resilience of local food systems and livelihoods to climate change and other shocks, and without mainstreaming climate change adaptation and improving the effectiveness of public and private investments in agriculture, the country will not fully achieve its development goals.

### With LDCF

While the country is implementing a series of important interventions addressing the challenges outlined above, they are fragmented spatially, thematically, and institutionally, thus unable to generate the transformation needed to put forward a new inclusive holistic model for socio-economic-environmental system resilience of catchments of Lesotho. There is therefore a need for an innovative intervention to enhance climate resilience of landscapes and communities for food security through sustainable water management. The proposed LDCF project will influence and assist the country in reaching its goal of building a sustainable, resilient inclusive economy and food secure society and eventual LDC graduation, while leveraging strategic synergies with SDG 1, 2, 6, 8, and 15. It will thus mainstream CCA and resilience for systemic impact.

These include moving the country from being a net importer of food by supporting smallholder farmers to enhance their productivity and promoting inclusive local agribusiness models and diversifying local food production. These strategies would need to incorporate and address climate change risks as well and this is one of the entry points for the proposed LDCF project.

The project will take a spatially concentrated approach to building climate change resilience, in particular to drought and floods, where ICM is a distinct bio-physical boundary organizing unit for understanding and managing ecosystem and socio-economic processes and objectives. The project is uniquely positioned to bring together key initiatives and develop and implement a vision for national agricultural water management.

With the intervention, the benefits described below will be generated, complementing and reinforcing the impact of the several baseline programs and projects.

#### ***f) Adaptation benefits***

As outlined in the project framework key benefits will include:

- *At least 6 policies, guidelines, and investment and planning frameworks updated and aligned with CC resilience objectives;*
- *At least 10 institutions and stakeholder groups engaged in capacity building programs;*
- *At least 15,000 ha of agricultural land under sustainable water management and climate-resilient measures. (Total arable land in the country is ~270,000 hectares)[1][2];*

[1] <https://knowledge.unccd.int/sites/default/files/naps/Lesotho.pdf>

[2] <http://www.fao.org/family-farming/countries/lso/en/>

- *At least 6 irrigation infrastructure and other climate-resilient technologies;*
- *% yield increase and diversity of crops;*
- *# and type of profitable and sustainable business models supported (contract farming, cooperatives, etc.).*
- *Number of people directly benefiting from resilient livelihoods as a result of project interventions (50% women) (40,000)[1]*

[1] There will be indirect beneficiaries who will benefit through dissemination of best practices through the knowledge management component and partnerships with ongoing and pipeline investments. Initially estimated at 180,000 indirect beneficiaries.

Precise adaption benefits and corresponding targets will be developed during PPG.

The project will also directly contribute to SDG 13, which in turn will serve as a catalyst leveraging contribution to several other SDGs, as shown in Annex 2.

#### **g) Innovation, sustainability and potential for scaling up**

##### Innovation

Agricultural water management is high on the political agenda in Lesotho, as evidenced by the current policies, frameworks, and international commitments in support of climate change adaptation in agriculture. Hence, the project focuses on climate-resilient and sustainable agricultural water management. An innovative feature of component 1, will be in the system dynamics analysis approach that will be used to inform policy reviews and planning at catchment and national levels. As management of water resources often overlooks feedback processes between key social and economic system components, a dynamic integrated decision support system (DSS) for policy-makers will be developed and updated as new data and information becomes available, thus serving as a long-term planning tool for risk informed decision-making.

The system dynamics approach will be based on a coupled simulation of the biophysical and socio-economic processes that are taking place within the catchments. The approach will provide the necessary understanding of the management and behavioral dynamics of the individual elements of the complex socio-economic-environmental system. In doing so, plausible scenarios for long-term sustainable management of catchments will be analyzed and will be fed into the policy-making process. This in turn will enable meaningful for cross-sectoral management and building synergies between baseline initiatives and co-benefits. The resulting DSS will become a policy management tool for the sound long-term management of catchments. While the approach is innovative for Lesotho, it has proven to be successful and is widely practiced around the world. Experience with such systems around the world shows that development of such systems is an intensive setting up process requiring data, information, and consultaion. Once the core of the DSS is developed, however, maintenance of the such models is inexpensive. The DSS will be institutionalized for consistent use and to ensure sustainability of results after the project closure.

The project will also introduce innovative technologies related to climate-resilient irrigation and on-farm water management. While the selection of these technologies will be based on success stories elsewhere, some will be new to Lesotho. A bottom-up approach to the selection of cost-effective technologies will be central to the project strategy. Component 3 includes “Green Villages” concept, inspired by the FAO flagship urban-peri-urban initiative. The concept envisages village/community landscapes with productive backyard gardens, green hedge lines, keyhole gardens, fruit trees and renewable energy technologies.

## Sustainability

This is a challenging period for the country, with combined impacts of frequent and recent droughts and the COVID-19 pandemic. This has made the transformation of agriculture and food systems and adapting to climate change an urgent priority. There is renewed political will and commitment.

There are several aspects that will contribute to the sustainability of project results. The first aspect is mainstreaming climate change adaptation and effectiveness into key agricultural policies and public investment programs, in particular the Input Subsidy Program. The Input Subsidy Program has been running now for several years. As noted in the National Strategic Development Plan (NSDP, 2018-2023) its focus at the moment does not really support sustainable production and food security – it is currently a maize-centered program. Maize is one of the crops most sensitive to drought, and projections indicate significantly reduced yields under climate change conditions. One way of building CCA into the program is diversifying crops supported – to include those identified as more resilient under current and future climate conditions (part of the proposed project). Another opportunity is improving program targeting to ensure that the most vulnerable smallholder farmers do have access to the program, and equitable access for women and youth.

The second is expanding and deepening the capacity base, by incorporating capacity development programs targeting the private sector and youth. Strategic collaboration with new programs introducing new sustainable ways of managing natural resources centred on full engagement and empowerment of communities and support institutions (e.g. EU ICM program) is the third aspect.

## Potential for scaling up

The project will cover a few target catchment landscapes (2-3) and facilitate scale-up to other landscapes through the baseline programs including Government-funded programs.

A national platform (digital-based) will be developed to consolidate and facilitate 1) access to climate resilient agriculture information and knowledge, and 2) dialogue between different stakeholders engaged and interested in the water, land, agriculture, and related sectors for overall national resilience building. The platform will be linked with the Decision-Support System (developed under Component 1) and other knowledge platforms for sustainability and impact. All these will be important for scale-up of successful models from the proposed project.

[1] FAO-GEF Lesotho LDCF Project 5124.

[2] Marake M.V. 1999. Arable Agriculture in Lesotho. In First State of the Environment Report (ed.) K.Q. Chakela. 1999.

[3] SACU consists of Botswana, Eswatini, Lesotho, Namibia and South Africa. All trade taxes collected in the SACU Common Customs Area are paid into a common pool and shared among member states based on an agreed revenue sharing formula.

[4] Socio-economic impact assessment of COVID-19, 2020.

[5] National Strategic Development Plan, 2018.

[6] Bureau of Statistics, 2016.

[7] Zero Hunger Strategic Review, 2018.

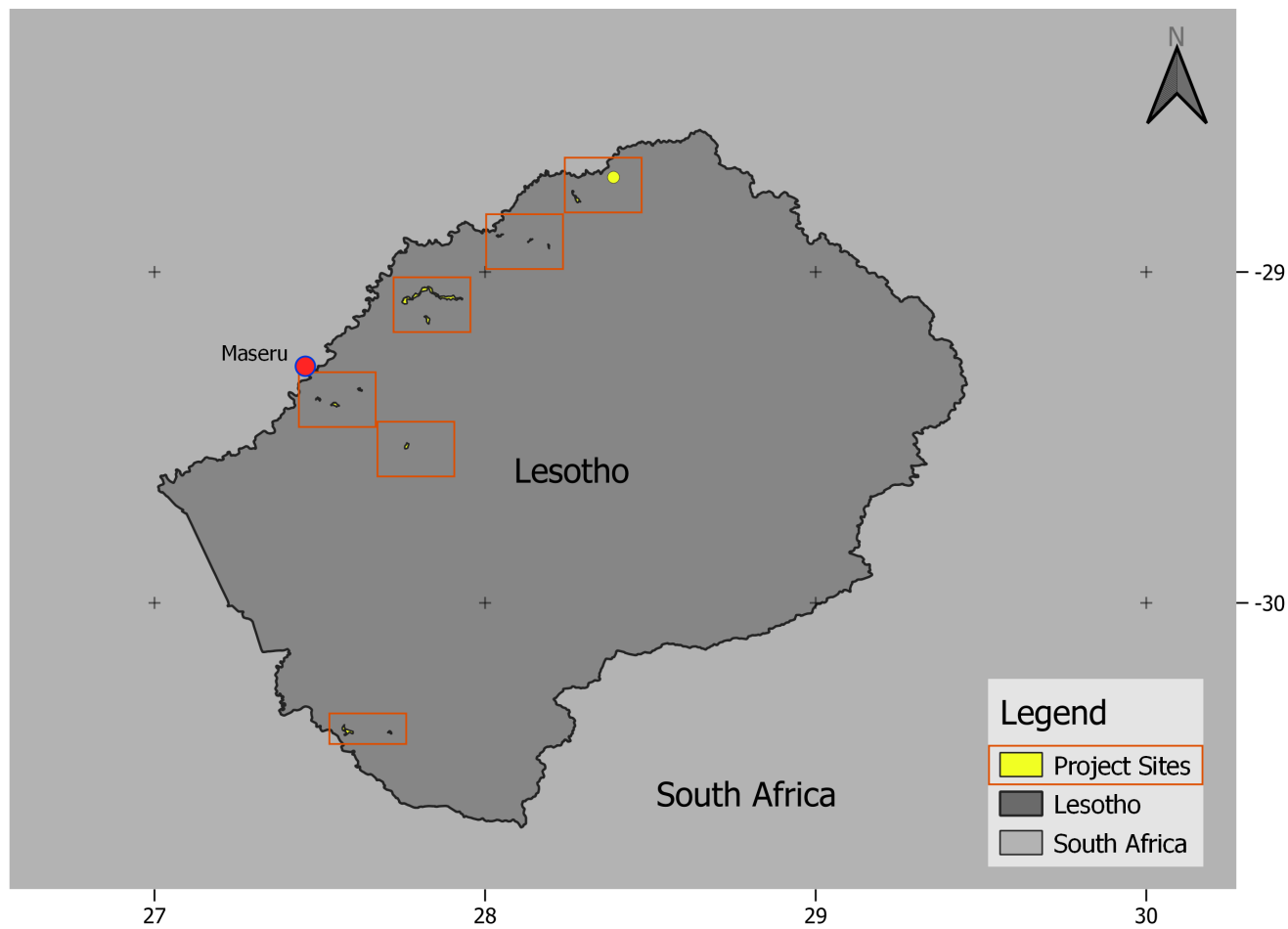
[8] National Strategic Development Plan, 2018.

[9] Lesotho Vulnerability Assessment Committee, 2020.

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- [23] <http://www.fao.org/in-action/rural-invest/en/>
- [24] <http://www.fao.org/communication-for-development/en/>

**1b. Project Map and Coordinates**

**Please provide geo-referenced information and map where the project interventions will take place.**



## 2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

Although consultations at community have been restricted due to COVID-19, the PIF design benefited from inputs from field missions carried out in June 2020 (early PIF conception) when it was possible to conduct community-level consultations. Representative of communities and CBOs and farmer association and retailers were consulted through virtual group discussion and physical meetings in the lowland districts from 11 to 27 June 2020, and in the mountain districts on 24-24 June 2020. Further, consultations with communities, extension and technical officers at district and national levels were conducted in the context of terminal evaluation of the FAO-led LDCF project on strengthening climate change adaptation – from early November to mid-December 2020.

The development of the PIF and its finalization between January and March 2021 was led by a multi-partner team consisting of Ministry of Agriculture and Food Security (MAFS) technical and planning sections, the Ministry of Water, Water Commission, Department of Environment (GEF OFP and team), Lesotho Meteorological Services (and UNFCCC Focal Point), the Ministry of Planning and the Ministry of Forestry, Range and Soil Conservation.

Consultations with ongoing investments led by MAFS i.e. SADP II and IFAD Wool and Mohair Promotion Project (WAMPP) were conducted in the context of multi-stakeholder meeting hosted by the Lesotho National Farmers' Union (LENAFU) on 4 November 2020 at Mojalefa Lephole Convention Center.

The direct beneficiaries of the project are smallholder farmers and communities, including their groups and associations, in selected project catchments, and rural and urban landscapes – of which at least 50% will be women and youth.

Stakeholders, and their foreseen roles in the project are outlined in the table below. To be further elaborated and expanded during PPG.

Stakeholder	Role in the project	Consultations pre and during PIF preparation
Smallholder farmers and communities and their associations, including women and youth groups	Main target beneficiaries of the project. Farmers and communities will be strongly engaged in articulating their specific needs and priorities and in defining project interventions, participatory planning and selection of climate-resilient practices and technologies to be promoted.  Engagement during PPG will be through community meetings with farmers, associations and local authorities. Existing local institutional structures and	As outlined above.



	<p>coordination mechanisms will be utilized wherever possible (e.g. ICM local structures etc).</p> <p>As we are still within the pandemic period, Government of Lesotho and WHO measures will be closely monitored and adhered to. To minimize the risk of exposure and infections, whenever possible, consultations will be conducted remotely and through local partners and experts.</p>	
Ministry of Agriculture and Food Security (MAFS)	<p>MAFS as the main executing partner will be responsible for overall coordination of the project preparation and implementation, ensuring effective coordination with partners and that the project delivers intended results in an efficient manner. MAFS will chair the multistakeholder PSC.</p> <p>In addition, MAFS's technical support will be instrumental in the implementation of all project components. In particular the review, revision and approval of policy and investment frameworks - including the Input Subsidy Program.</p> <p>The fiduciary capacity of MAFS for execution will be conducted during PPG.</p>	Member of the technical PIF preparation team.
Ministry of Development Planning	<p>Participation in Project Steering Committee.</p> <p>Will facilitate mainstreaming of climate-smart agriculture priorities into planning and public investment frameworks.</p>	Member of the technical PIF preparation team.
Ministry of Forestry, Range and Soil Conservation (MFRSC)	<p>Foreseen that MFRSC will be part of technical teams to provide technical support to implementation of components 1 and 2, and engagement in capacity development subcomponents.</p> <p>Member of the Project Steering Committee.</p>	Member of the technical PIF preparation team.
Ministry of Water (MoW)	<p>MoW will participate in project design, providing technical inputs and guidance, particularly in the design of components 1 and 2.</p> <p>MoW will be part of inter-ministerial technical teams that will be targeted by capacity development programs planned and deliver technical support to im</p>	Member of the technical PIF preparation team through the Department of Water Affairs and the Water Commission.

	<p>grants planned and deliver technical support to implement component 2.</p> <p>MoW will participate in the project steering committee.</p>	
Ministry of Local Government and Chieftainship Affairs (MoLGCA)	Member of technical implementation team (particularly for component 1 and 2) and PSC.	To be engaged during PPG.
Ministry of Tourism, Environment and Culture (MTEC)	<p>MTEC, as the GEF focal point, will support project oversight, and facilitate linkages with the overall GEF program in Lesotho.</p> <p>MTEC will supervise implementation of component 2, to ensure compliance with environmental regulations and standards.</p>	The GEF OFP and his team reviewed the draft PIF, provided specific inputs and comments which were addressed in the final endorsed PIF.
Ministry of Small Business, Cooperatives and Marketing	Will provide technical inputs to the design and implementation of component 3. Participation in capacity building programs.	To be engaged during PPG.
The Ministry of Gender, Youth and Sports through the Department of Gender	<p>The Department of Gender's mandate is to facilitate the integration of gender concerns into all national and sectoral policies, programs and budgets in order to achieve gender equality in the development process – ensuring full involvement and participation of women and girls in development.</p> <p>The Department of Gender will be part of the multi-agency technical team (together with the Ministry of Agriculture and Food Security, the Ministry of Water, Water Commission, Department of Environment, Lesotho Meteorological Services and others) to guide and provide inputs to the development of the project. It is foreseen that the Department of Gender will be represented in the Project Steering Committee.</p>	To be engaged during PPG through the multi-agency technical team.
Gender Links (GL)	GL is an NGO that promotes gender equality and justice across the Southern African region. In Lesotho, GL has been working with Local Government co	GL will be consulted through PPG stakeholder consultations at national and local levels (target project sites and communities).

	<p>uncils to ensure that gender equality is mainstreamed at community council level. GL will be consulted through PPG stakeholder consultations at national and local levels, to solicit their inputs to strengthen project design and identify specific activities GL could support.</p>	
Community based Organizations (CBOs) and Non-governmental Organizations (NGOs)	<p>Engagement in project design and technical support to local implementation of activities. Specific activities and outputs to be facilitated and delivered by CBOs and NGOs will be defined during PPG.</p>	Engaged as outlined above.
Private sector	<p>To be consulted during PPG. Engaged through capacity development programs and support to implementation of components 2 and 3.</p>	The private sector, especially retailers that sell produce from local farms, were part of the consultations in Leribe district during the June 2020 consultations.
National University of Lesotho	<p>Inputs to the design and implementation of capacity development programs and knowledge management.</p>	The Department of Geography and Environmental Science of the Faculty of Science and Technology as well as the Department of Soil Science of the Faculty of Agriculture are part of the concept think tank in terms of climate information and agriculture management respectively.

### 3. Gender Equality and Women's Empowerment

**Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).**

Customary practices have discriminated against women in Lesotho in the past, denying them access to productive assets compromising their economic freedom<sup>[1]</sup>. The issue of land ownership, in particular, was a challenge long into the post-independence era. The country has made significant progress within the past 10-20 years in addressing the gender gap and inequalities, through progressive laws and policies. These include the Legal Capacity of Married Persons Act (2006) and the Land Act (2010) under which women can own land, receive inheritance and make their own decisions. Still, there remains a lot to be done to remove structural biases against women. Women participation in local development processes and leadership remains limited. As such, the project will include gender response measures to address this issue. Already indicated in the PIF design is the intention to have equal participation of women in the project and inclusion of specific outputs specifically targeted at empowering and creating improved livelihood opportunities for women.

The project will ensure that women are represented at every level – from decision-making to activities in the field. Through component 1, women empowerment will be incorporated in the revision of policies, planning and investment frameworks to enable sustainable climate-resilient water management in production landscapes (reflected in the outcome and first output). Participation of women in the development of capacity-building programs will also be ensured, with at least 50 percent target participation. Women empowerment and participation is specifically reflected in outputs 1.1.1; 1.2.1; 1.2.2; 2.1.2; and 3.1.4. In addition, the communication strategy (4.1.6) will incorporate women empowerment objectives and key messages to help transform attitudes and biases against women – experience has shown that as important as it is to change laws and policies, these alone do not change entrenched bias.

A gender analysis will be conducted and an action plan will be developed during PPG.

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<sup>[1]</sup> FAO Lesotho Country Programming Framework, 2013-2018.

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes**

**closing gender gaps in access to and control over natural resources; Yes**

**improving women's participation and decision-making; and/or Yes**

**generating socio-economic benefits or services for women. Yes**

**Will the project's results framework or logical framework include gender-sensitive indicators?**

**Yes**

#### 4. Private sector engagement

**Will there be private sector engagement in the project?**

Yes

**Please briefly explain the rationale behind your answer.**

The project will address the national priority regarding development and engagement of the private sector, understanding that sustainable growth will not happen without the private sector. The private sector will be engaged across all components and various aspects of the project – capacity development specifically targeting private sector as providers of technical support to adoption of innovations and in the development/strengthening of ag value chains. The project will engage small-scale and medium-scale agribusiness enterprises (agri-SMEs) and buyers (supermarkets etc), building on the ongoing FAO-supported project on contract farming, and other agriculture commercialization initiatives in the country.

The project will partner with the SADP II Competitive Grants Program and other institutions, such as the Post Bank and the Lesotho National Development Cooperation to improve or develop specific lending products for climate-resilient investments (under output 3.1.6). Partnerships with the private sector will be further explored and established during PPG.

## 5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Risk	Risk Rating	Mitigation
Political Risk: Changes in political circumstances and government priorities	Low	Lesotho has had several changes in Government in the past few years. From experience, this has not had significant impact on national development priorities and implementation of programs. In any case, it is an important risk to be monitored. High-level and technical level Government and institutional support will be ensured through frequent and systematic communication with key decision-makers.
Capacity for implementation and sustainability: Low capacity at all levels hampers implementation and adoption of innovations and approaches promoted by the project	Medium	Some of the innovations that will be introduced by the project, in particularly related to water management for agriculture (irrigation systems etc), will be relatively new in Lesotho. There is limited experience with some of these areas. To mitigate this risk, the project will support the design and delivery of comprehensive (quality, depth) capacity development programs for local and national stakeholders, including the private sector.
Fragile environment for introducing agricultural water management structures and for intensification of crop production.	Medium	Mitigated through environment and social impact screening and assessments in line with FAO safeguards policy and guidelines during PPG and building the capacity of the execution team to monitor this risk(s).  FAO Guidelines for Irrigation Investment Projects to be applied during PPG and implementation.
Extreme events during project implementation period could undo benefits of climate-resilient ag. Innovations and practices.	Medium	The whole project is designed to address climate risks, including extreme events – drought and floods. Although these events are certainly not desirable, their occurrence during implementation would test the robustness and sustainability of the climate-resilient ag models promoted – offering an opportunity for necessary adjustments.

		Strong linkages with the Early Warning Systems being strengthened through GEF-funded EWS II project, will be established in order to monitor and address the risk,
<p>COVID-19:</p> <p>1. Risk to co-financing. There is a risk that with priorities of the Government changing, part of the co-financing may not materialize.</p> <p>2. Unavailability of technical expertise and capacity and engagement with project beneficiaries.</p>	Medium to high	<p>1. To monitor and mitigate the risk, the FAO Country Office will follow closely the evolving situation, with regular discussions with project partners. Other co-financing sources not dependent on Public Funding will be identified during PPG and implementation.</p> <p>2. To manage and mitigate this risk, the project will use adaptive action planning where work plans are frequently reviewed revised to adapt to changing circumstances. Meetings and workshops will be conducted virtually (when feasible – within internet limitations), local resource persons will be engaged for consultations with communities.</p>

## 6. Coordination

**Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.**

Project implementation will be coordinated through the following institutional arrangements which shall be further developed during project preparation:

Funding level coordination: The FAO is the GEF implementing agency responsible for coordination of the project in line with the funding requirements of the GEF under the Least Developed Countries Fund. FAO will bear the responsibility of ensuring that the project is designed to meet the donor criteria, is implemented according to the operational policies agreed upon with the GEF, and is monitored and evaluated periodically to ensure the project is on track to deliver its intended outcomes. The FAO will provide coordination support through leading the project design processes (including supervision of the PPG activities). During implementation, FAO will be responsible for monitoring project results, compliance with agreed work plans, monitoring of risks and compliance with the conditions set out in Agreements signed with partners.

Execution level coordination: **The Ministry of Agriculture and Food Security (MAFS) will be the primary executing partner of this project.** The fiduciary capacity of MAFS to execute (national execution modality) will be assessed during the PPG phase. The execution arrangements for the project will include a multi-agency, multi-stakeholder Project Steering Committee (PSC), comprising of relevant directorates of Ministry of Agriculture and Food Security, Ministry of Tourism, Environment and Culture through the Department of Environment which is the GEF Operational Focal Point, Ministry of Development Planning, Ministry of Forestry, Range and Soil Conservation, Ministry of Water, Ministry of Energy and Meteorology, Ministry of Local Government and Chieftenship, Ministry of Gender, Youth and Sports. The steering committee will also include FAO, UNDP, IFAD, academia (NUL) and NGO representative. Importantly, the PSC will include representatives of farmers, target catchment communities and private sector, ensuring participation of women and youth.

MAFS will host a project management unit (PMU). The role of the PMU will be to coordinate, monitor and report to MAFS, FAO and the PSC on project progress and execution of the budget and delivery of results, in accordance with the approved project document and annual work plans and budgets. Specifically the PMU will: (i) lead technical planning, coordination and monitoring of project activities – preparation of annual work plans and budgets (AWP/B); (ii) provide technical guidance to executing partners and experts, to ensure activities are implemented using relevant approaches, tools and methodologies and best practices; (iii) assess all technical outputs delivered by executing partners, consultants, and technical teams; and (iv) ensure a high level of collaboration among participating institutions and organizations at national and local levels.

Coordination with relevant GEF-funded projects (mentioned in previous sections – GEF-7 IFAD Regeneration of Livelihoods and Landscapes, and GEF-6 UNEP Strengthening Climate Services in Lesotho for Climate Resilient Development and Adaptation to Climate Change (EWS II)) will be through the PSC, as well as links that shall be established between implementation teams at subnational levels. The most practical and effective coordination mechanisms will be clearly defined during PPG.



## 7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions?

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

This proposal has been designed to respond directly to the National Strategic Development Plan II (NSDP II 2018/19 – 2022/23), and to priorities identified in Lesotho's National Adaptation Program of Action (NAPA, 2007), Climate Change Policy and Implementation Strategy (NCCPIS, 2017), and Lesotho Climate-Smart Agriculture Investment Plan (CSAIP, 2019).

To enhance inclusive and sustainable economic growth and private sector job creation, **NSDP II has identified climate-resilient sustainable commercial agriculture and food security, and several associated interventions, as key**. These interventions include: building the capacity of farmers, agricultural institutions and associations; improving technology and use in the sector; promotion of integrated catchment management; building infrastructure including environmentally-friendly and energy-saving irrigation and water harvesting systems; improving production of high-value crops. Similarly, NCCPIS has identified the promotion of climate-smart agriculture and food security systems as one of the key strategic actions to address climate change.

Among 11 priorities identified in the NAPA, the project will contribute to the following: Promoting sustainable crop-based livelihood systems; Capacity building and policy reform to integrate climate change in sectoral development plans; and Improvement of community food security. The **proposed design is informed by one of the NAPA project ideas "Improvement of crop production systems to reduce food insecurity in the lowlands of Lesotho"**.

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Knowledge management is critical for scaling-up and sustainaning climate-resilient food systems and livelihoods in Lesotho. There are quite a number of important ongoing programs and projects generating important knowledge and innovations, that are not being well captured and/or shared, indicating absence of and weaknesses in existing knowledge management systems.

The knowledge management strategy – to be developed during project preparation – will be anchored on: (i) people – an understanding that behavior change is key to driving the desired results; (ii) process – M&E system, with a strong focus on capturing best practices and innovations; (iii) tools and technologies to facilitate managing and sharing knowledge and information. The intention is to establish a digital platform for sharing and disseminating CSA innovations and practices that will be linked to knowledge management components of relevant programs and projects in Lesotho (e.g. WB-IFAD Smallholder Agriculture Development Project, GEF-7 IFAD Regeneration of Livelihoods and Landscapes). Exchange learning visits within the country and with other countries with similar bio-physical and socio-economic contexts (particular those who have made progress with regard to climate-resilient water resources management for agriculture), and farmer exchanges through farmer-field schools (FFS) will be part of the knowledge management component for the project.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification\*

PIF	CEO Endorsement/Approval	MTR	TE
Low			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

The project has been screened against Environmental and Social risks, in line with FAO's Environmental and Social Safeguards, and rated as low risk (see certification in Roadmap section). No FAO Safeguards were triggered in the preliminary screening, however the risk level will be further re-confirmed at PPG stage in line with FAO's safeguards and stakeholder engagement processes. The Agency will make sure that all mitigation measures vis a vis any potential adverse impact are duly considered in the CEO endorsement package.

#### Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
Environmental and Social Risk Identification – Screening Checklist	
Risk Certification Document_Lesotho	

### Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Mr. Stanley M. Damane	Director of Environment	MINISTRY OF TOURISM, ENVIRONMENT AND CULTURE	3/23/2021

## **ANNEX A: Project Map and Geographic Coordinates**

Please provide geo-referenced information and map where the project intervention takes place

These have been pre-identified based on the following:

- *Area with significant impacts of drought and floods on agriculture;*
- *Area with the highest proportion of poor people who depend on climate-sensitive livelihoods in agriculture;*
- *Linkages with baseline projects - to leverage the complementarity of this project with its baseline counterparts especially the ICM and EWS II.*
- *Diversity in agro-ecological zones for scaling out/up potential;*
- *Areas where Early Warning Systems have been set up and are being used;*
- *Areas where the effect of extreme events is known, or supposed, to effect agricultural development*

The selection is sensitive to the irrigation potential based on soils and availability of water. These sites have been mapped as suitable to moderately suitable for irrigation.

