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

Sector
Climate Change Adaptation Sector

Taxonomy

River Basin, Freshwater, International Waters, Focal Areas, Learning, Community-Based Natural Resource Management, Sustainable Land Management, Land Degradation, Restoration and Rehabilitation of Degraded Lands, Sustainable Agriculture, Sustainable Livelihoods, Income Generating Activities, Improved Soil and Water Management Techniques, Innovation, Climate Change Adaptation, Climate Change, Mainstreaming adaptation, Climate information, Least Developed Countries, Livelihoods, Climate resilience, Ecosystem-based Adaptation, Adaptation Tech Transfer, Community-based adaptation, Sustainable Development Goals, Strengthen institutional capacity and decision-making, Influencing models, Participation, Type of Engagement, Stakeholders, Consultation, Local Communities, Beneficiaries, Awareness Raising, Communications, Education, Behavior change, Participation and leadership, Gender results areas, Gender Equality, Capacity Development, Knowledge Generation and Exchange, Women groups, Gender Mainstreaming, Sex-disaggregated indicators

Rio Markers

Climate Change Mitigation

Significant Objective 1

Climate Change Adaptation

Principal Objective 2

Biodiversity

No Contribution 0

Land Degradation

Significant Objective 1

Submission Date

11/18/2022

Expected Implementation Start

1/1/2023

Expected Completion Date

12/31/2028

Duration

72In Months

Agency Fee($)

848,580.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCA-1	Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation	LDCF	6,000,000.00	25,000,000.00
CCA-2	Mainstream climate change adaptation and resilience for systemic impact	LDCF	2,932,420.00	15,195,000.00
		Total Project Cost($)	**8,932,420.00**	**40,195,000.00**

B. 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	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
1. Strengthening policy and institutional capacities	Technical Assistance	Outcome 1.1. Strengthened gender-sensitive policies and planning frameworks enable investments in climate change adaptation leading to resilience of landscapes and communities for food and nutrition security. Indicator(s): - *8 micro-watershed management plans with climate change adaptation actions;* *- 4 agreed public-private partnership frameworks for climate adaptation investments at district level.*	1.1.1. Inclusive, multi-stakeholder platforms (MSPs) facilitating public-private partnership (PPP), gender-sensitive enabling policies and coordination. 1.1.2. Participatory integrated catchment management plans (micro-watershed management plans) incorporating climate adaptation. 1.1.3. Tailored weather and climate advisory services and products.	LDCF	1,290,150.00	2,591,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
2. Promoting innovative, sustainable land and climate resilient agricultural water management	Investment	Outcome 2.1. Resilience of landscapes and livelihoods strengthened with sustainable land and agricultural water management and infrastructure, addressing droughts, floods and other hazards. Indicator(s): *- 15,000 ha of landscapes under SLM and AWM.* *- 10,000 smallholder farmers (at least 50% women) have benefited from capacity development program.*	2.1.1. Sustainable land and agricultural water management (AWM) options developed for climate change adaptation. 2.1.2. Capacity building and promotion of sustainable land and agricultural water management for climate change adaptation implemented. 2.1.3. Multi-community investments in support of resilient landscapes and livelihoods.	LDCF	2,763,150.00	28,000,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
3. Strengthening resilience of agricultural and food value chains	Investment	Outcome 3.1. Agriculture and food value chains strengthened to enhance resilience to climate and other shocks. Indicator(s): *- At least 6 agri-food chains strengthened for resilience.* *- 120 common interest groups (CiGs) established and trained including women, and youth-led CiGs* *- # local financing models established and/or strengthened.* *- 60% Producers and SMEs participating in the project report profitable activities with the project?s contribution.*	3.1.1. Gender-sensitive agri-food value chains strengthened to enhance resilience to climate and other shocks. 3.1.2. Inclusive farmer organizations built. 3.1.3. Project matching-grant mechanism operationalized. 3.1.4. Linkages and inclusive networks for micro-finance strengthened.	LDCF	3,488,216.00	5,604,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
4. Communication, knowledge management, and M&E	Technical Assistance	Outcome 4.1. Effective knowledge management and M&E supporting adaptive management, impact and scale-up at district and national level. Indicator(s): - *# Communication and knowledge products disseminated (at least 3 annually)*; - *# of networks, and stakeholders connected to and accessing project knowledge management platform.*	4.1.1. Project Monitoring and Evaluation plan implemented. 4.1.2. Independent mid-term evaluation and final evaluation conducted. 4.1.3. Knowledge management and communication strategies implemented.	LDCF	965,551.00	2,000,000.00
			Sub Total ($)		**8,507,067.00**	**38,195,000.00**

Project Management Cost (PMC)

LDCF	425,353.00	2,000,000.00
Sub Total($)	**425,353.00**	**2,000,000.00**

Project Management Cost (PMC)		
Total Project Cost($)	**8,932,420.00**	**40,195,000.00**

Please provide justification

C. 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($)
Recipient Country Government	Ministry of Agriculture and Food Security (MAFS)	Public Investment	Investment mobilized	9,000,000.00
Recipient Country Government	Ministry of Agriculture and Food Security (MAFS)	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Ministry of Water	Public Investment	Investment mobilized	28,000,000.00
GEF Agency	FAO	Grant	Investment mobilized	2,195,000.00
			Total Co-Financing($)	**40,195,000.00**

Describe how any "Investment Mobilized" was identified

Investment mobilized from the Ministry of Water (MoW) represents a new Integrated Catchment Management program funded by the EU through MoW. Investment mobilized from the Ministry of Agriculture and Food Security. Investment mobilized from FAO represents new funding from the Technical Cooperation Program towards sustainable agrifood systems in Lesotho.

D. 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($)
FAO	LDCF	Lesotho	Climate Change	NA	8,932,420	848,580	9,781,000.00
			Total Grant Resources($)		**8,932,420.00**	**848,580.00**	**9,781,000.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

200,000

PPG Agency Fee ($)

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**

Meta Information - LDCF

LDCF true
SCCF-B (Window B) on technology transfer false
SCCF-A (Window-A) on climate Change adaptation false

Is this project LDCF SCCF challenge program?
false

This Project involves at least one small island developing State(SIDS). false

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This Project involves at least one fragile and conflict affected state. false

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This Project will provide direct adaptation benefits to the private sector. true

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This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs). true

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This Project has an urban focus. false

This Project covers the following sector(s)[the total should be 100%]:*

Agriculture	**60.00%**
Natural resources management	**20.00%**
Climate information services	**0.00%**
Coastal zone management	**0.00%**
Water resources management	**20.00%**
Disaster risk management	**0.00%**
Other infrastructure	**0.00%**
Health	**0.00%**
Other (Please specify:)	**0.00%**
Total	**100%**

This Project targets the following Climate change Exacerbated/introduced challenges:*
Sea level rise false
Change in mean temperature true
Increased climatic variability true
Natural hazards true
Land degradation true
Coastal and/or Coral reef degradation false
Groundwater quality/quantity false

To calculate the core indicators, please refer to Results Guidance

Core Indicators - LDCF

CORE INDICATOR 1	Total	Male	Female	% for Women
Total number of direct beneficiaries	40,000	20,000	20,000	50.00%

CORE INDICATOR 2	
Area of land managed for climate resilience (ha)	15,000.00

CORE INDICATOR 3	
Total no. of policies/plans that will mainstream climate resilience	8

CORE INDICATOR 4		Male	Female	% for Women
Total number of people trained	20,000	10,000	10,000	50.00%

OUTPUT 1.1.1

Physical and natural assets made more resilient to climate variability and change

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		Male	Female
Total number of direct beneficiaries from more resilient physical assets	**10,000**	**5,000**	**5,000**

Ha of agriculture land	Ha of urban landscape	Ha of rural landscape	No. of residential houses
15,000.00			**0**

No. of public buildings	No. of irrigation or water structures	No. of fishery or aquaculture ponds	No. of ports or landing sites
0	**10**	**0**	**0**

Km of road	Km of riverban	Km of coast	Km of storm water drainage

Other	Other(unit)	Comments
0		

OUTPUT 1.1.2

Livelihoods and sources of income of vulnerable populations diversified and strengthened

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		Male	Female
Total number of direct beneficiaries with diversified and strengthened livelihoods and sources of income	**20,000**	**10,000**	**10,000**

Livelihoods and sources of incomes strengthened / introduced			
Agriculture	Agro-Processing	Pastoralism/diary	Enhanced access to markets
true	**true**	**true**	**true**
Fisheries /aquaculture	Tourism /ecotourism	Cottage industry	Reduced vulnerability of supply chain
false	**false**	**false**	**false**
Beekeeping	Enhanced opportunity for employment	Other	Comments
false	**true**	**false**	

OUTPUT 1.1.3

New/improved climate information systems deployed to reduce vulnerability to climatic hazards/variability

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		Male	Female
Total number of direct beneficiaries from the new/improved climatic information systems	**10,000**	**5,000**	**5,000**

Climate hazards addressed

Flood	Storm	Heatwave	Drought
true	**true**	**false**	**true**

Other	Comments
false	

Climate information system developed/strengthened

Downscaled Climate model	Weather/Hydromet station	Early warning system	Other
false	**false**	**true**	**false**

Comments

Climate related information collected

Temperature	Rainfall	Crop pest or disease	Human disease vectors
true	**true**	**true**	**false**

Other	Comments
false	

Mode of climate information disemination

Mobile phone apps	Community radio	Extension services	Televisions
true	**true**	**true**	**true**

Leaflets	Other	Comments
true	**false**	

OUTPUT 1.1.4

Vulnerable natural ecosystems strengthened in response to climate change impacts

Types of natural ecosystem

Desert	Coastal	Mountainous	Grassland
false	**false**	**true**	**true**

Forest	Inland water	Other	Comments
false	**false**	**false**	

OUTPUT 1.2.1

Incubators and accelerators introduced

		Male	Female
Total no. of entrepreneurs supported	**0**	**0**	**0**

		Comments
No. of incubators and accelerators supported	**0**	

		Comments
No. of adaptation technologies supported	**0**	

OUTPUT 1.2.2

Financial instruments or models to enhance climate resilienced developed

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Financial instruments or models

PPP models	Cooperatives	Microfinance	Risk insurance
false	**true**	**true**	**false**

Equity	Loan	Other	Comments
false	**false**	**false**	

OUTPUT 2.1.1

Cross-sectoral policies and plans incorporate adaptation considerations

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Will mainstream climate resilience	Of which no. of regional policies/plans	Of which no. of national policies/plan
0	**0**	**0**

Sectors

Agriculture	Fishery	Industry	Urban
true	**false**	**false**	**false**

Rural	Health	Water	Other
false	**false**	**true**	**false**

Comments

OUTPUT 2.1.2

Cross sectoral institutional partnerships established or expanded

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No. of institutional partnerships established or strengthened	**4**

Comments

OUTPUT 2.1.3

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

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No. of systems and frameworks	**4**

Comments

OUTPUT 2.1.4

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

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No. of systems and frameworks	**4**

Comments

OUTPUT 2.2.1

No. of institutions with increased ability to access and/or manage climate finance

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No. of institution(s)

Comments

OUTPUT 2.2.2

Institutional coordination mechanism created or strengthened to access and/or manage climate finance

No. of mechanism(s)

Comments

OUTPUT 2.2.3

Global/regional/national initiatives demonstrated and tested early concepts with high adaptation potential

No. of initiatives or technologies

Comments

OUTPUT 2.2.4

Public investment mobilized

Amount of investment
(US$)

Comments

OUTPUT 2.2.5

Private investment mobilized

Amount of investment
(US$)

Comments

OUTPUT 2.3.1

No. of people trained regarding climate change impacts and appropriate adaptation responses

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		Male	Female
Total no. of people trained	**20,000**	**10,000**	**10,000**
Of which total no. of people at line ministries	**300**	Male **150**	Female **150**
Of which total no. of community/association	**12,680**	Male **6,340**	Female **6,340**
Of which total no. of extension service officers	**1,000**	Male **500**	Female **500**
Of which total no. of hydromet and disaster risk management agency staff	**20**	Male **10**	Female **10**
Of which total no. of small private business owners	**6,000**	Male **3,000**	Female **3,000**
Of which total no. school children, university students or teachers	**0**	Male **0**	Female **0**
Other	Comments		

OUTPUT 2.3.2

No. of people made aware of climate change impacts and appropriate adaptation responses

		Male	Female
No. of people with raised awareness	**0**	**0**	**0**

Please describe how their awareness was raised

OUTPUT 3.1.1

National climate policies and plans enabled including NAP processes by stronger climate information decision-support services

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No. of national climate policies and plans

Comments

OUTPUT 3.1.2

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

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No. of systems and frameworks

Comments

OUTPUT 3.1.3

Vulnerability assessments conducted

No. of assessments conducted

Comments

OUTPUT 3.2.1

No. of institutions with increased ability to access and/or manage climate finance

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No. of institution(s)

Comments

OUTPUT 3.2.2

Institutional coordination mechanism(s) created or strengthened to access and/or manage climate finance

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No. of mechanism(s)

Comments

OUTPUT 3.2.3

Global/regional/national initiative(s) demonstrated and tested early concepts with high adaptation potential

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No. of initiative(s) or technology(ies)

Comments

OUTPUT 3.3.1

No. of people trained regarding climate change impacts and appropriate adaptation responses

		Male	Female
Total no. of people trained	**0**	**0**	**0**
Of which total no. of people at line ministries	**0**	Male	Female
Of which total no. of community/association	**0**	Male	Female
Of which total no. of extension service officers	**0**	Male	Female
Of which total no. of hydromet and disaster risk management agency staff	**0**	Male	Female
Of which total no. of small private business owners	**0**	Male	Female

Of which total no. school children, university students or teachers	**0**

Other	Comments

OUTPUT 3.3.2

No. of people made aware of climate change impacts and appropriate adaptation responses

---

		Male	Female
No. of people with raised awareness	**0**		
Please describe how their awareness was raised			

Part II. Project Justification

1a. Project Description

1.1 Adaptation problems, root causes and barriers that need to be addressed

Overview

1. Lesotho is a small landlocked mountainous kingdom, entirely surrounded by the Republic of South Africa. The country covers 30,588 km2 (3 million hectares) with the population estimated at 2 million Basotho ? 40 percent of which are youth and 6 percent aged 65 and above. Lesotho?s main features are the Maloti Mountains which are part of the greater Drakensberg range. Lesotho is the only country in the world with the entire land surface situated more than 1000 metres above sea level. The country has four agro-ecological zones (Figure 1): Lowlands, Foothills, Mountains and Senqu River Valley.

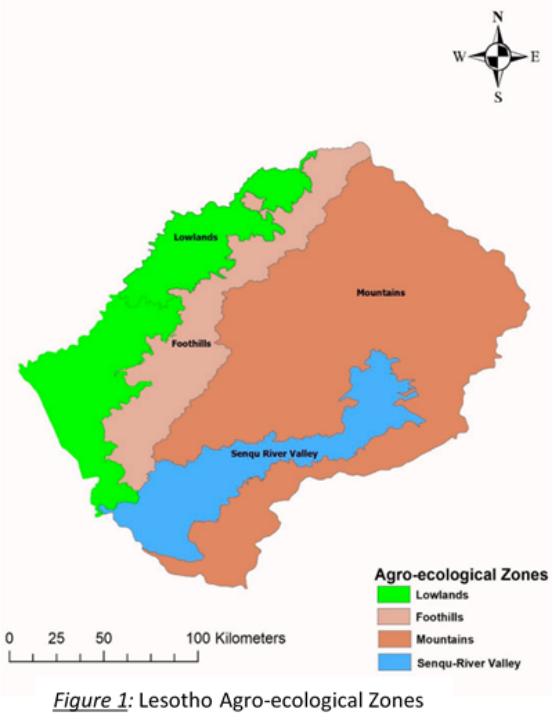


Figure 1: Lesotho Agro-ecological Zones

2. 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 metres 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)[1][1]. 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.

3. 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 basin[2][2], it contributes 40 percent of the annual run-off in the whole basin.

4. Land-use patterns in Lesotho have largely been determined by historical circumstances and agro-ecological conditions. During territorial wars of the 19th century, hilltops and mountain sides were used as fortresses hence many settlements were confined to these strategic locations while flat plains and fertile valleys were used for crop farming and the remote mountains for grazing. This has largely remained the pattern of land-use in the country although population pressure and urbanisation have forced widespread encroachment of settlements onto areas that were traditionally reserved for agriculture. The shortage of arable agricultural land has also tended to concentrate cultivation on mountain slopes (marginal lands) with devastating results for slope and soil stability, a decrease in the quality of rangelands and reduced agricultural productivity.

Socio-economic context

5. With 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 the Southern African Customs Union (SACU) revenue[3][3]. SACU tariff revenue currently finances 40 percent of the public sector budget[4][4]. The public sector contribution to GDP is estimated at 60 percent. The Government of Lesotho (GoL) has become the main formal employer with very limited private sector job opportunities in the country.

6. 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. Even so, 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[5][5]. Overall, Lesotho?s main exports are textiles, water and diamonds.

7. Lesotho is facing a number of development challenges including persistent poverty and growing inequality, unemployment, and malnutrition and food insecurity. An estimated 49.8 percent of the population lives below the national poverty line, with 61 percent of the rural population living in poverty[6][6]. The country?s unemployment rate is estimated at 22.5 percent of the labour force (22.6% among men; 22.4% among women; and 70% among youth). The Integrated Food Security Phase

Classification (IPC) analysis covering the period July 2020 ? March 2021, revealed that 26 percent of the population was facing high food insecurity requiring urgent humanitarian action, and 40 percent of the population was projected to be in crisis[7][7].

The agricultural sector

8. Currently agriculture contributes less than 10 percent of the country?s GDP, a significant decline from its contribution of about 20 percent in the 1980s. In 2019 the sectoral contribution to GDP was 4.7 percent with a slight increase to 6.3 percent in 2020. Yet, the sector remains important for food security and livelihoods, particularly of the rural population, 70 percent of which depends on subsistence farming.

9. The sector consists of three key sub-sectors: livestock; crop; and fisheries and aquaculture. The livestock sub-sector accounts for 62 percent of the total agricultural output[8][8] and is characterized by extensive animal grazing, cattle (~330,000 in 2019/20), sheep, goats and poultry. Cattle are in general raised for subsistence, draught power, milk, fuel and meat. Beef is the main source of protein in the country. The approximately 2 million sheep and goats are mainly raised for the production of wool and mohair.

10. The crop production sub-sector is dominated by cereal (maize, sorghum, wheat ? which occupy about 90 percent of agricultural land) mono-cropping system with occasional rotation with legumes (field beans and peas). Production of fruits and vegetables is 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[9][9].

11. Agricultural growth and food and nutrition security are undermined by several factors including: highly variable climate with frequent and severe droughts; poor land management contributing to low soil fertility, and high levels of land degradation and soil erosion; underutilized water resources for agriculture; fragmented and under-developed value chains; and limited access to finance, to harvest and post-harvest infrastructure, and to knowledge on climate smart agricultural innovations and practices[10][10]. These combine to drive the vulnerability of food systems and Basotho?s livelihoods to climate change.

Climate variability and change

12. 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. Spatial variations in annual precipitation are observed throughout the country. While the Senqu River Valley records on average less than 700mm/yr., precipitation along the northern Foothills and Mountains exceeds 900mm/yr. The lowest mean annual minimum and maximum temperatures (Tmin and Tmax) are recorded in the Mountain areas (2-5?C and 17-20?C, respectively), while the highest Tmin and Tmax are observed along the Lowlands and the Senqu River Valley (7-12?C and 22-24?C, respectively).

13. Historical annual precipitation has declined[11][11]. Although there has been an increase in winter precipitation (June, July, August), the latter has been counteracted by a strong decrease in summer precipitation (December, January, February ? the major cropping season)). In addition, the data derived from the Earthmap tool highlights a significant precipitation decline in Maseru, Mohale?s Hoek, Leribe, Quthing, and Butha Buthe (Figure 2).

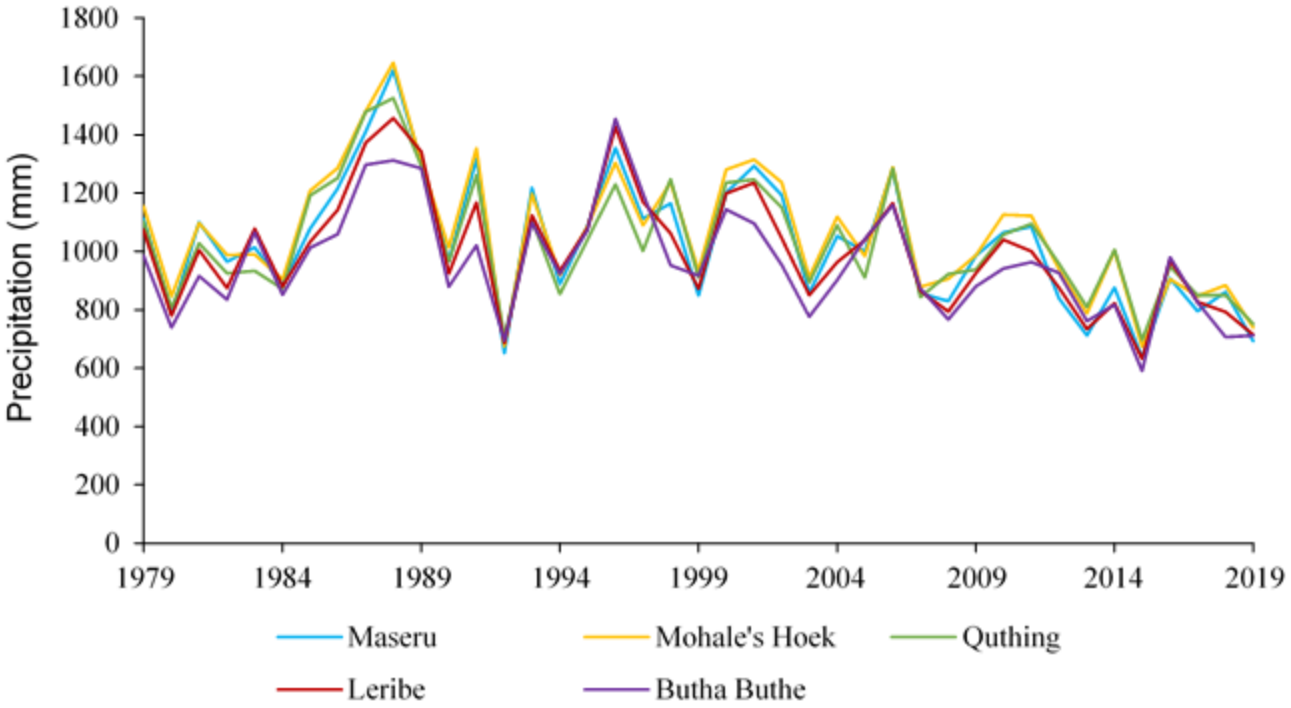


Figure 2: Yearly change in precipitation over the 1979-2019 period using the ECMWF ERA-5 dataset

14. At the same time, the historical mean temperature has increased by 0.76?C since 1960, equivalent to a 0.20?C increase per decade[12][12]. However, the rate of increase has heightened over the past decades, with mean temperatures rising by 0.50?C/decade between 1990 and 2020. Seasonality differences are also observed on mean temperature increase. For example, the largest mean temperature increase (1.0?C) is observed between May-June and September-October, coinciding with the dry-season months.

15. Figure 3 below shows a greater increase (0.37-0.42?C/decade) in mean annual maximum temperature (Tmax) along the Senqu River Valley than in the Mountain zone (0.25?C/decade) over the 1980-2005 period. Along the Lowlands, average Tmax has increased at a rate of 0.30?C/decade over the 1980-2005 period. Overall, the mean annual Tmax has increased by 0.56 to 1.06?C since 1980.

16. Figure 4 displays the yearly change in mean minimum temperature (Tmin) observed over the 1980-2005 period. The rate of Tmin increase is generally lower than Tmax increase, but with significant spatial variations. While central parts of Lesotho (Mountain areas) have experienced a lower rate of Tmin increase (0.12?C/decade), the areas bordering South Africa have reported a higher rate of Tmin increase (0.16-0.20?C/decade). Overall, since 1980, mean annual Tmin has increased by 0.30 to 0.50?C depending on the region.

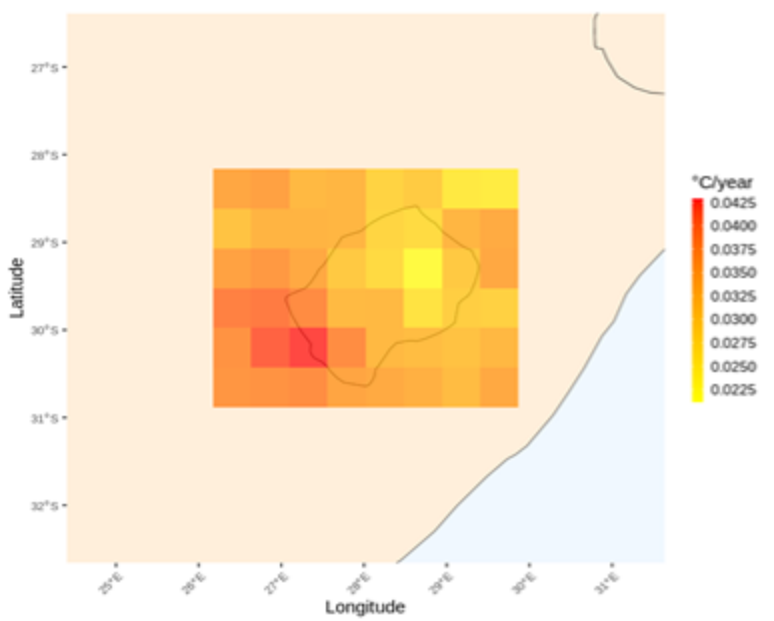


Figure 3: Yearly change in mean Tmax over the 1980-2005 period using the W5E5 reanalysis dataset.

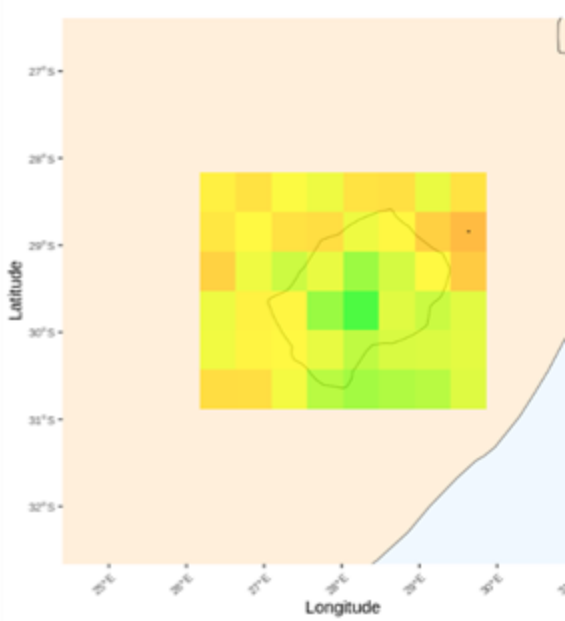


Figure 4: Yearly change in mean Tmin the 1980-2005 period.

17. According to the EM-DAT International Disaster Database, since 1980 Lesotho has experienced 21 hydrological (e.g., flood), meteorological (e.g., storm) and climatological (e.g., drought) hazards[13][13]. The number of disasters has increased over the past decades with 8 droughts and 8 floods over the 1980-2020 period, though the extent of impact highly varies between the two hazards. Overall, drought is the hazard having the most detrimental consequences in Lesotho, affecting on average 555,000 people every time it strikes.

18. Future climate projections derived from the CMIP5 data ensemble show a 1.6?C increase in annual mean temperature in the short-term and 2.1?C in the mid-term under RCP 8.5. The increase in temperature becomes more intense in the long-term (2071-2100) along the Lowlands compared to the Mountain zone and some parts of the Senqu River Valley[14][14][15][15]. Regarding projections for precipitation, along the Foothills extending to the Senqu River Valley, the signal of change is mixed and weak. In the Lowlands, there is no a change in the total annual precipitation over time. In the longer-term (2041-2070), model projections show the highest degree of precipitation uncertainty. A decrease in precipitation (20mm) may occur in the long-run (2070-2099), while there could be an increase (20-40mm) in the short-term (2010-2039), mostly along the southern parts of the country.

Climate change impacts

19. The projected climate change is anticipated to have negative impacts on agri-food systems, in particular on crop production. Assessments conducted by the Lesotho Meteorological Services in the preparation of the Third National Communication (TNC, 2021) reveal the following:

? Increasing temperatures will shift planting dates and accelerate growing period of most crops by one week in the short-term, two weeks in the mid-term, and three to four weeks in the long-term;

? Maize, beans, and wheat yields are projected to decline by 11%, 9%, and 50% respectively, with higher decreases under RCP 8.5 compared to RCP 4.5 scenario due to temperature increase and changes in precipitation patterns.

? Positive impacts are projected on some crops with yield gains for sorghum (9%), potatoes and vegetables.

20. For livestock production, changes in temperature combined with changes in precipitation patterns and extreme weather events including droughts and floods are expected to affect rangelands and their grazing potential, delay the start of the breeding season, animal infertility, low livestock mobility and food-energy intake. Heavy rains and water-borne diseases and pathogens will also contribute to increasing animal mortality. [16][16]

21. In addition, assessment of impacts on water resources (under both RCP 4.5 and RCP 8.5) indicate an overall reduction in streamflow in Lesotho?s major catchments.

22. As stated in the TNC, although climate change affects the entire population, the effects are not experienced equally. The poorest and most vulnerable bear the brunt of the impacts. In Lesotho, women experience higher vulnerability to climate change due to social and cultural roles they play in providing water and food to the household and reliance on climate-sensitive natural resources for their livelihoods. Increasing temperatures and more variable precipitation are likely to exacerbate food insecurity within households, and increase youth unemployment especially in the agricultural sector.

Summary of climate hazards and impacts

Observed climate	Projected climate	Impacts
Precipitation • Reduction in total annual rainfall; decrease in inter-annual rainfall variability. • -78mm/decade in Maseru from 1979 to 2019. Coefficient of variation (%) between 1980-1989 and 2010-2019: • from 23.5 to 13.7 in Maseru; • from 23.1 to 13.5 in Mohale's Hoek; • from 23.5 to 12.2 in Quthing; • from 21.9 to 12.5 in Leribe. **Temperature** Tmean: • +0.76°C since 1960 (+0.50°C per decade in 1990 and 2020, and particularly during the dry seasons of May-June and September-October) Tmax: • +0.56°C to 1.06°C/decade compared to 1980-2005 • +0.40°C/decade in Senqu River Valley; • +0.25°C/decade in Mountain zone; • +0.30°C/decade in Lowlands. Tmin: • +0.30°C to 0.50°C per decade compared to 1980-2005 • +0.12ºC/decade in Mountain areas; • +0.16-0.20ºC/decade in	**Precipitation** Total annual precipitation: • +20-40mm by 2010-2039 under RCP2.6; • -20mm by 2070-2099 under RCP2.6. • +60 to 100mm in Lowlands and Senqu River Valley by 2040-2069 under RCP8.5. Seasonal precipitation: • 0.0 to -1.0mm/year in January-March by end-century under RCP2.6; • +0.5 to 1.0mm/year in October-December by 2010-2039 under RCP8.5 Number of rainy days (pr>1mm): • -5days/year under RCP2.6; • -15days/year under RCP8.5. **Temperature** Tmax: • +1.0°C to +2.0°C under RCP2.6; +2.5°C to 4.0°C under RCP8.5 by 2070-2099 • +3.5 to 4.0°C in continental areas; • +2.5°C to 3.0°C in southeastern areas. Tmin: • +1.5°C to 2.0°C under RCP2.6; • +2.0°C to 3.0°C under RCP8.5 by 2040-2069. • +3.5°C in the Lowlands; • +2.5°C in the southern areas by 2070-2099. **Extreme weather events** Temperature: • 0 to +3 days/year with Tmax>35°C in Lowlands	**Observed impacts:** Increased frequency of drough events, soil erosion, desertifica soil fertility, biodiversity losses related disasters since 1980. E increase in food insecurity, you unemployment in the agricultu and potential tensions within h Crop systems: • Decreased productivit degradation. • Projected reduction i areas suitable to agric production. Livestock systems: • Decreased productivit degradation. Water systems: • Scarcity of water reso absence of permanen water and dry dams, r water maintenance, b and infiltration. **Projected impacts:** Crop systems: • Shifting planting date accelerated growing p crops; • decreased water use grains and legumes; d biomass yields for ma and beans; • decreased maize (5 to (9%) and wheat (10 to under RCP4.5 and RCI soy yields by 5% in 20 • Increased sorghum (9 yields (+14% in Leribe Livestock systems: • Delayed start of the b season; • reduced water availab • animal infertility;

Land degradation

23. Lesotho suffers from severe and extensive land degradation. It is estimated that the country loses at least 2 percent of its topsoil annually due to erosion, an annual cost equivalent to 3.6 percent of the country?s GDP[17][17]. Land degradation has led to the reduction in the provision of various ecosystem services, including loss of biodiversity, soil fertility, crop and livestock productivity, carbon sequestration capacity, groundwater recharge, etc. The degradation is driven primarily by unsustainable land management practices, including overstocking and overgrazing, and high-intensity rainfall and run-off rates[18][18].

24. The combination and interactions between land degradation, drought and climate change are expected to have significant negative consequences on food security and livelihoods of vulnerable Basotho, in the absence of concerted efforts to address these problems.

COVID-19 impacts

25. The pandemic has had 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 were 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 estimated that from April to September 2020, about 900,000 Basotho (almost half of the population) faced food insecurity[19][19]. Supply chains of food and farm inputs were disrupted due to lockdowns and closure of borders between South Africa and Lesotho. The pandemic affected all other key sectors, health, manufacturing and mining, tourism, wholesale and retail, education, water and sanitation, all corners of the economy and society.

26. Strategies to Build Back Better place agri-food systems development at the centre of economic recovery from COVID-19. 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, and support to major investments in irrigation ? to counter the challenges posed by erratic rainfall and prolonged droughts.

27. Reducing food systems? vulnerability and enhancing livelihood resilience to climate change requires solutions that incorporate technological (e.g. suitable demand-driven irrigation infrastructure etc) and non-technological solutions (e.g. sustainable land and water management governance structures, improved catchment planning and practices to secure long-term availability of water resources for agriculture, value-chain development and diversification, etc). The proposed project will promote a holistic food systems and livelihoods adaptation model centred on integrated catchment management for improved land use and sustainable agricultural water management, and greater resilience to climate change.

Barriers to be addressed:

28. To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management, the following barriers have to be addressed:

1) Limited capacity for integrated planning and implementation for adaptation at local level. Lesotho has made progress in the development of national strategies and plans on climate change adaptation and mitigation (e.g. NAPA, NDC, Climate Change Policy, Climate Smart Agriculture Investment Plan), and in mainstreaming adaptation objectives and priorities into development and sectoral plans (e.g. National Strategic Development Plan (NSDP II), the Comprehensive National Agriculture Policy (2022-2026), and the National Agriculture Investment Plan (2022-2026). The main challenge in

translating these national plans into action is the limited capacity (governance structures and technical knowledge) and experience at all levels on integrated, participatory planning and management at local level.

The country has in a place a decentralization policy (2014) that aimed to strengthen participatory local governance, fully engaging communities in the preparation and implementation of local development plans. Appreciating the fact that the unplanned and unsustainable use of scarce land resources is a major obstacle to Lesotho?s efforts to eradicate poverty and ensure food security, the policy prioritized the promotion of integrated land use planning. This has not been achieved. Government institutions responsible for providing support to communities and local institutions are poorly coordinated, in the absence of operational District Planning Units, and lack capacity and experience in integrated land use and adaptation planning.

2) Limited private sector engagement in the formulation of food systems and adaptation policies and solutions. There is clear recognition in the various national plans and strategies that sustainable and resilient agri-food systems need to be led by the private-sector, with the government putting in place enabling measures. As such, engagement and participation of the private sector in the formulation of appropriate enabling policies is critical. There are currently no multi-stakeholder public-private platforms for policy dialogue, particularly at local level (district and catchment). As a result, there is disconnect between policies formulated at national level and real constraints impeding actions and investments on the ground.

3) Weak systems for the transfer of knowledge and adaptation innovations to smallholder farmers, communities and other food systems actors. While there have been projects and programs in Lesotho demonstrating climate change adaptation and sustainable land management practices, these interventions have not always been accompanied by strong and sustainable innovation and knowledge transfer systems. The extension system in Lesotho has not evolved to sufficiently transfer knowledge and to innovate. The Ministry of Agriculture and Food Security has established extension offices and resource centres across the country. There are about on average 15 extension officers at district level. Extension service delivery is mostly through traditional farm and home visits, which has been largely ineffective.

Focus Group Discussions (FGD) with farming communities in the proposed priority catchments during project formulation revealed that limited extension services restricted their ability to implement more effective and advanced climate change adaptation techniques. Most respondents mentioned that their production decisions are not informed by agricultural and agro-climatic related information because of lack of access and/or delay in transmission of this information.

Development and strengthening of a pluralistic agricultural advisory system has emerged as a priority area the government will invest in within the next 5 years. This will include the resuscitation and institutionalization of Farmer Field Schools (FFS), engaging the private sector in extension delivery, and establishing and promoting e-extension services. Capitalizing on this commitment, the proposed project will provide technical assistance to set-up an integrated knowledge and innovation system to support the delivery and uptake of technologies and practices for agri-food systems adaptation.

4) Fragmented and under-developed agri-food value chains, minimizing contribution to resilient and diversified livelihoods, and in turn investments in adaptation practices and technology. Development of local agri-food value chains is at the heart of Lesotho?s development and Climate-Smart Agriculture (CSA) goals[20][20]. 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 needs 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 in the mainstream food market is considerably low.

Agri-food value chain actors are not organized thus making it difficult for them to collaborate and coordinate for making their respective value chains to be more productive, resilient, competitive and mutually beneficial. Farmers are unable to supply local and distant markets because of missing links along the value chain, especially market information and aggregation. This barrier is further elaborated in Annex O.

5) Limited access to finance is an important barrier for smallholder farmers and micro, small and medium agro-enterprises (MSMEs) to invest in adaptation innovations and infrastructure. A survey carried out in 2018 showed that only 7 percent of smallholder producers had accessed loans[21][21]. Most banks do not have financial products for agriculture ? formal agri-businesses who manage to access typical loans are subjected to high interest rates. Although micro-finance institutions are a growing part of Lesotho?s financial ecosystem, they also do not offer suitable products for smallholder farmers and small agri-businesses ? they mostly cater for individuals and businesses with demonstrated credit and/or stable income.

Access to finance is particularly challenging for youth because they are underemployed and considered not credit worthy. Women continue to rely more on informal sources of finance such as village savings and credit groups.

Through the National Agriculture Investment Plan (NAIP, 2022-2026), the Government has made a commitment to addressing this barrier by: 1) designing measures for providing financial support for transformation of agricultural enterprises to socially responsible and environmentally sustainable and resilient agriculture; 2) providing subsidies for interest rates on loans provided through rural banking system to support and incentivize sustainable practices; and 3) establishing a special fund within the Agricultural Fund mechanism to provide loans and grants.

At the same time, there are new agri-financing options emerging. Dialogue with mobile money service providers was initiated during PPG and these institutions expressed interest in developing financing instruments better tailored to the profiles and needs of smallholder farmers and SMEs.

29. In addressing the stated barriers, the project will build on strong baseline described in section 1.2.

Project intervention areas

30. The project includes four physical sub-catchments. As the project is introducing a relatively new integrated natural resources management adaptation planning at local level, the intention is to focus on the four sub-catchments in the first 3 years of project implementation (first phase), and plan for replication or scale-up to at least 1 more sub-catchment during the second phase of implementation.

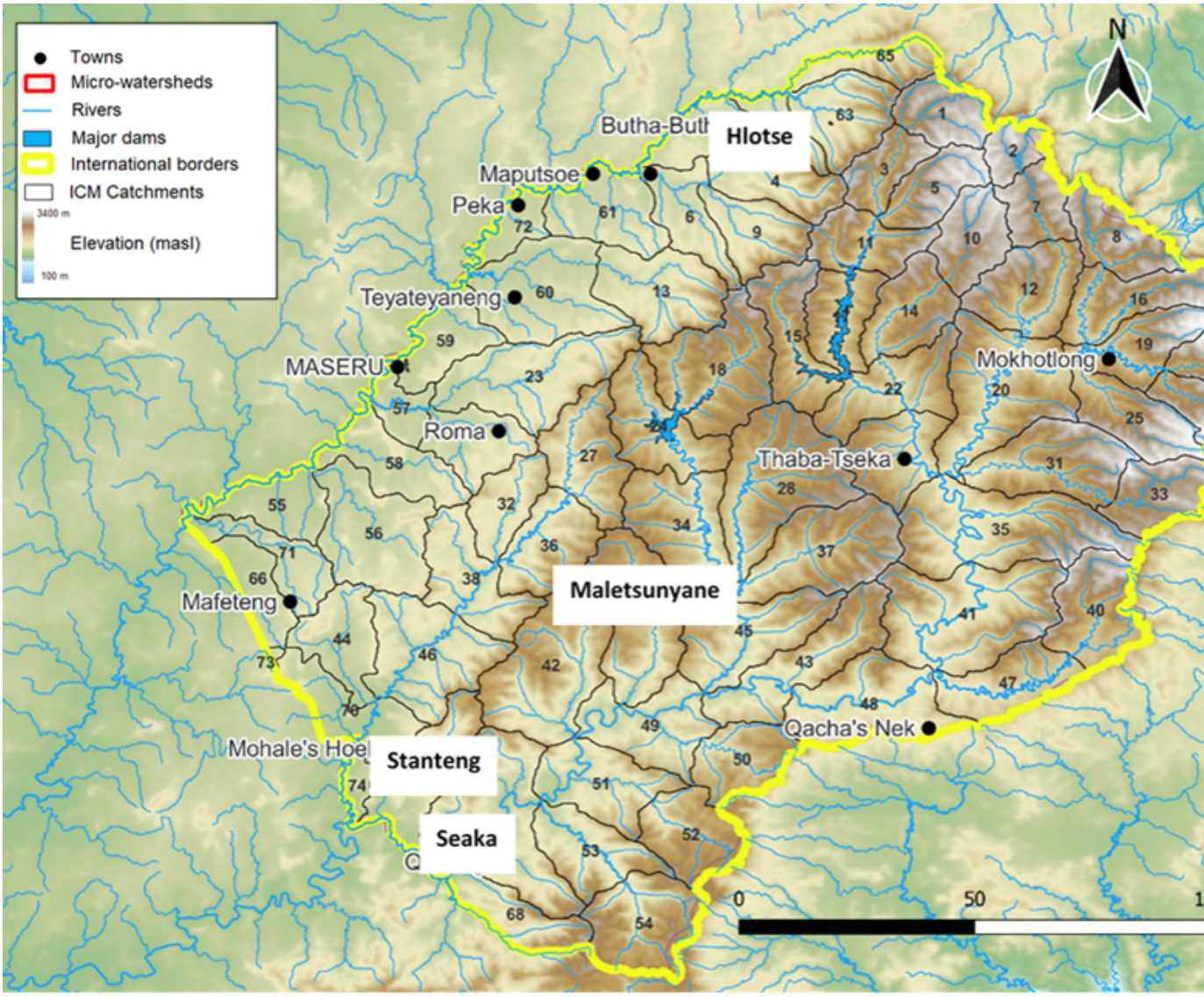


Figure 5: Project priority sub-catchments locations

31. The distribution of the priority invention areas, in addition to vulnerability of agricultural-based livelihoods to climate change impacts, reflects major agro-ecological zones i.e. southern lowlands, northern lowlands, and central mountains. This will ultimately support national scale-up of the proposed resilient food systems and livelihoods model.

32. The sub-catchments were selected based on the following criteria:

? *Current and projected climate change threats;*

? *Ecosystem fragility - land degradation/land use change trends;*

? *High dependency of local populations on climate-sensitive agricultural livelihoods; and*

? *Diversity in agro-ecological zones for scale-up.*

Table 1. Project Intervention Areas

	Sub-catchment	Population	Size (ha)	Coordinates
1.	Hlotse (Leribe)	23,000	35,821	28? 55? 3.45? S; 28? 19? 25.22? E

	Sub-catchment	Population	Size (ha)	Coordinates
2.	Maletsunyane (Maseru)	6,637	59,873	29? 50? 42.77? S; 28? 3? 0.07? E
3.	Seaka ? Lower Senqu (Quthing)	69,273	85,798	30? 19? 28.10? S; 27? 41? 52.09? E
4.	Stanteng ? Maphutseng (Mohale?s Hoek)	35,911	46,103	30? 13? 9.64? S; 27? 32? 13.23? E
Total		**134,821**	**227,595**	

33. A detailed description of the intervention areas is provided in Annex E. A climate risk assessment that includes climate trends, projections and impacts that guided the selection of the prioritized districts ? sub-catchments and proposed climate change adaptation measures is presented in Annex I.

1.2 Baseline scenario and associated baseline projects

34. The key baseline upon which the proposed LDCF project builds consists of national and sectoral policies and planning frameworks, and ongoing investments (baseline projects).

Policies and planning frameworks

35. The following relevant frameworks are in place: the second National Strategic Development Plan (NSDP II, 2019-2023); the National Climate Change Policy (2017-2027); Lesotho?s Nationally Determined Contributions (NDC, 2017); the National Agriculture Investment Plan (NAIP, 2022-2026); the Climate Smart Agriculture Investment Plan (CSAIP, 2019); and the National Irrigation Master Plan (NIMP, 2020).

36. 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. Climate change is recognized as an important threat to the achievement of NSDP?s goals and interventions incl. ?improve integrated catchment management and institutional capacities; and strengthen water resources and environment management for national resilience and adaptation to climate change? are among priority interventions identified. Gender equality and women and youth empowerment are identified as cross-cutting priorities in NSDP II (and in NAIP).

37. Informed by NSDP II, the overarching objective of NAIP is ?to ensure sustainable agriculture sector growth, decent jobs, and food and nutrition security for the Basotho people? to be achieved through seven strategic axes with distinct investment areas: 1) Enhancing the enabling capacity of the public sector; (2) Promoting the development of private sector-led agri-food-systems; 3) Enhancing the business environment for smallholder-inclusive and private sector led agri-food systems and value chains; 4) Sustainable management of land, natural resources and the environment; 5) Developing technology, innovation and infrastructure for agriculture; 6) Targeted state support to value chain players; and 7) Emergency preparedness, nutrition, and social protection. Investment areas under axis 4 include: land administration and management; conservation and sustainable use of natural resources; sustainable agriculture practices; climate change mitigation, adaptation and resilience; protection and sustainable use of water resources; and renewable energy and efficiency.

38. The above demonstrate that: 1) climate change impacts are considered and adaption has been incorporated into Lesotho?s development and agriculture sector frameworks; 2) direct alignment of the proposed LDCF project with national priorities. The concrete additional value of the LDCF project is the translation of these well-developed national plans into adaptation action at local level ? implementation on the ground.

Institutions

39. A full list of relevant institutions, including farmer associations and women and youth groups, that will play a key role in advancing the objectives of the project and support implementation is provided in section 2 ? Stakeholders. The focus here is on relevant institutional structures at district and local (community) level.

40. Under Lesotho?s decentralization framework, the district level structures consist of the District Administration Office (DAO) with representatives of national line ministries. Coordination between the national and the local entities at district level on natural resources management, integrated catchment management etc., is envisioned to happen through District Planning Units (DPUs) chaired by a District Administrator.

41. At the community level, there are Community Councils (CC) consisting of representatives for Chiefs (Traditional Leaderships) and councillors (elected leadership). Each CC has a Community Council Secretary (CCS). In operation, the district and community level structures are linked and share information through the CCS. DPUs are supposed to support the preparation of district development plans, working with Community Councils. Unfortunately many of the DPUs are not currently operational.

42. In terms of delivery of technical support to farmers, the Ministry of Agriculture and Food Security (MAFS) has extension offices in each district ? Resource Centres and Sub-Centres - with on average 15 extension officers at district level and 10 at community level, who specialize in livestock, crops, nutrition and irrigation. These resources are not sufficient to provide needed support to farming communities in the districts.

43. The EU-ICM program is piloting new institutional structures (in six catchments): from village level (Village Watershed Teams), which feed information into a Catchment Planning Unit (CPU) through aggregation of village plans into catchment management plans.

44. The LDCF project will adopt the EU-ICM model, adapt it to anchor it strongly in the decentralized structures i.e. resuscitate the District Planning Units (co-financing), and strengthen the structures by incorporating Farmer Field Schools (FFS), Common Interest Groups (CiGs), and digital networks to enhance local level planning and transfer of adaptation knowledge and technologies related to sustainable land and water management and agri-food values chains.

Ongoing investments

45. Millennium Challenge Cooperation ? Lesotho Millennium Development Agency (MCC-LMDA) ?**Market Driven Irrigation Horticulture (MDIH)**? Project. MDIH aims to invest in climate-smart irrigation infrastructure and attract commercial farmers to collaborate with local, smallholder farmers to produce high-value crops and build strong value chains.

46. Essentially, MDIH is centred on major pumped irrigation schemes (in 4 sites, 3 in the north of the country and 1 in the south) with large infrastructure investment. These would be operated by a strategic agricultural partner who would use part of the scheme for their own production, and then the Basotho smallholder farmers would be supported in agronomy, irrigation practices, and marketing through an out-grower type arrangement. The schemes are large, expensive and complex to operate with potentially major land-reallocation processes involving extensive time, risk and cost.

47. The proposed LDCF project offers a different and holistic model informed by participatory resource and climate assessments and watershed planning at community level, key elements in adapting agri-food systems to climate change. In the LDCF project, the irrigation element is aligned to the Farmer-led Irrigation Development (FLID) phenomena widely documented across Africa (FLID)[22][22]. The potential synergies, due to the different technical approaches, would be linked mostly to knowledge sharing, and horticulture market channels that are opened by the MDIH supported schemes.

48. EU-funded "**Support to Integrated Catchment Management in Lesotho**" (EU-ICM program) is the main baseline co-financing initiative for the LDCF 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. EU-ICM is introducing a much needed approach to decentralize the management of water resources, placing communities at the centre of natural resources management, defining and implementing their priorities with support of local and national institutions.

49. What the LDCF project adds to the EU-ICM program baseline (besides strengthening institutional structures as described above) is the climate-resilient agri-food systems component that will inform the expansion of the program to other catchments across Lesotho (EU-ICM program is currently operating in 6 catchments, with a planned expanded second phase).

50. WB-IFAD ?**Smallholder Agriculture Development Project II**? (SADP II). SADP II promotes climate smart agriculture (CSA) technologies in Lesotho?s agriculture (component 1), enhanced commercialization and improved dietary diversity among targeted beneficiaries (component 2). 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.

51. The proposed LDCF project complements very well SADP II in that it will demonstrate an inclusive and holistic model of adapting agri-food systems and livelihoods to climate change utilizing and expanding the ICM approach. SADP II knowledge, tools and innovations, will be incorporated in the implementation of the LDCF project ? and vice-versa.

52. 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 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. 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.
- 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.

1.3 The proposed alternative scenario and description of components

53. The current agricultural production pathway in Lesotho focuses on extensive animal grazing and expansion of cropland to keep pace with food demand for the population. The pathway is characterized by agricultural support for a monoculture cropping system dominated by maize. This pathway is largely unsustainable and depletes the land resources on which production relies over time.

54. The alternative pathway the project is proposing combines agro-ecological landscape resilience to climate change shocks leveraging a farming system that combines land and agricultural

water management practices. These practices include, for example, crop rotation, relay cropping, intercropping weeds and pest management; and soil management; and small-scale irrigation and infield water harvesting and management. The pathway primarily focuses on investing in sustainable landscape and integrated catchment management to enhance landscape resilience, livelihoods and food and nutrition security.

55. The project comprises integrated watershed planning, capacity and knowledge development, and value-chain activities that strengthen the climate resilience and productivity of landscapes and establishes and supports small agribusiness ventures. The project will work within 10 village clusters (comprising 30 to 50 villages and approximately 6,000 households) located in four physical sub-catchments, as well as a ?Virtual Village? that will involve geographically diverse participants with common interests.

56. Common Interest Groups (CiGs) centered around value-chains will be setup as nodes for group training, demonstration and farm-level knowledge exchange activities. The CiGs will be the entry point to catalyze and support agribusiness expansion for individual members in their own enterprises. An estimated 100 CiGs comprising 1,500 individual farmers will be supported to establish agribusinesses. The project investments will include agricultural water management infrastructure and agricultural infrastructure, start-up inputs for crop and animal enterprises, organization building, and related knowledge exchange, digital agriculture technology climate advisories, and micro-finance and marketing support interventions.

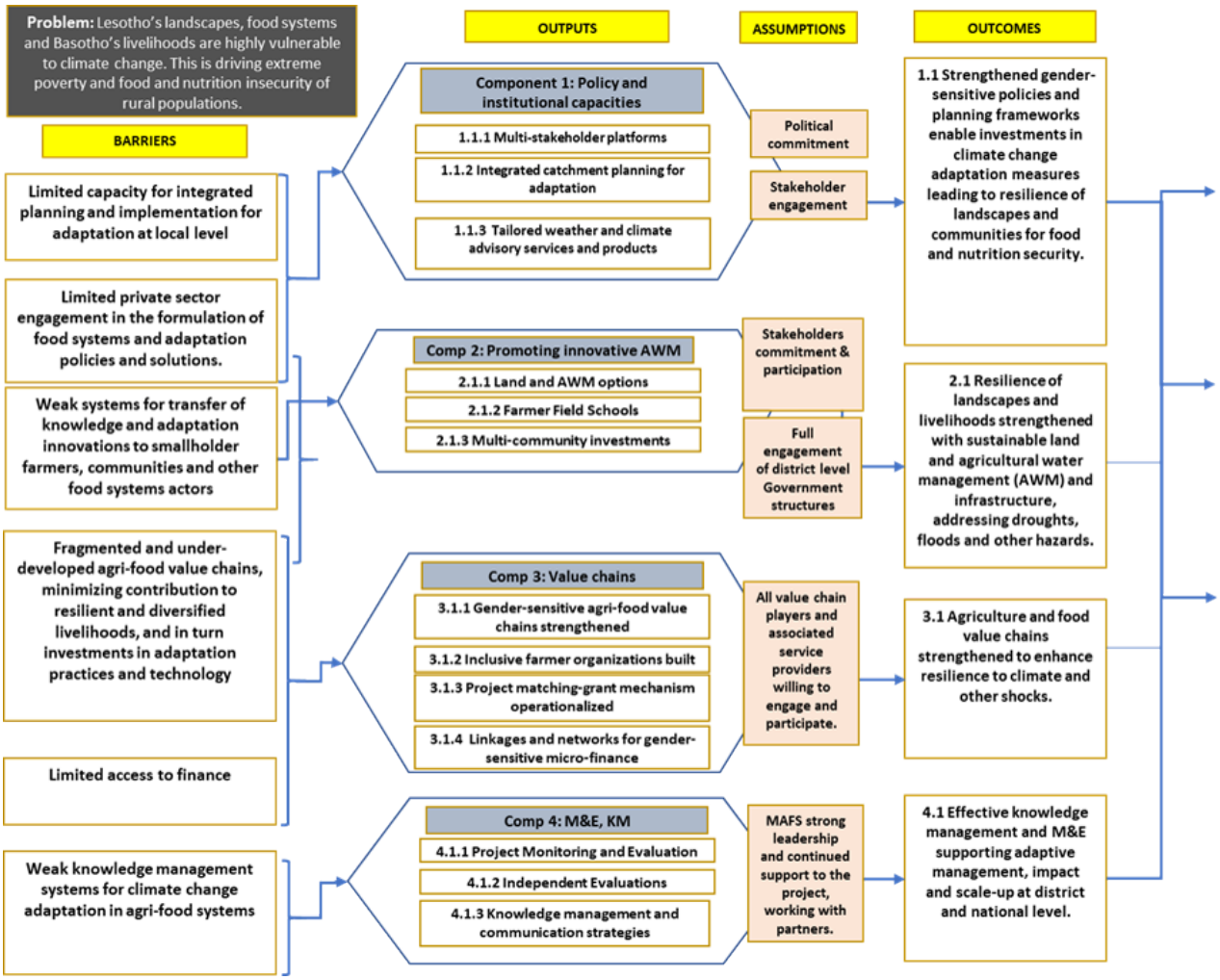


Figure 6: Theory of Change

57. The **project objective** is to enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.

58. The objective will be achieved through implementation of the following components.

Component 1: Strengthening policy and institutional capacities

59. As mentioned in the baseline section, Lesotho has made major strides in reviewing and updating its national plans and policy frameworks within the agricultural sector, taking into consideration current and future climate risks. Major policy frameworks that have guided the agriculture and food security sector for almost two decades are the National Food Security Policy (2005) and the Agriculture Sector Strategy (2003). Through the support of FAO, these policy frameworks and their subsidiary strategies and regulations were duly reviewed leading to the development of a Comprehensive National Agriculture Policy. The latter was presented to and endorsed by the Ministry of Agriculture in June 2022. In addition, the country has developed the National Agriculture Investment Plan (NAIP). This plan has since been submitted to African Union?s Development Agency (formerly known as NEPAD) for technical review. Finally, the Ministry of Agriculture through the support of partners (Millennium Challenge Corporation and FAO) is finalizing the National Irrigation Policy and the associated Irrigation Bill. These policy frameworks emphasize the need for private sector investment while recognizing and underscoring the enabling function of the state, particularly as it relates to de-risking the sector and creating enabling conditions that support access to finance and investment for micro, small and medium agro-enterprises. In addition, reversing environmental degradation and building resilience of agri-food systems are part of the strategic pillars of these frameworks.

60. Institutional reforms to support implementation of the policies at national level are ongoing under the EU-ICM program, the Millennium Challenge Cooperation - Lesotho Millennium Development Authority (MCC-LMDA) horticulture program and the FAO Technical Cooperation Programme (FAO-TCP).

61. The aim of component 1 then is to translate the recently developed policy frameworks into inclusive implementation plans. This will consist of: 1) inclusive district-level multi-stakeholder platforms facilitating public-private policy dialogue to enable action and private investments into climate-resilience and sustainable agri-food systems, knowledge exchange and innovation; and 2) participatory integrated catchment planning.

Outcome 1.1: Strengthened policies and planning frameworks enable investments in climate change adaptation measures leading to resilience of landscapes and communities for food and nutrition security.

Output 1.1.1: Inclusive, multi-stakeholder platforms (MSPs) facilitating public-private partnership (PPP), gender-sensitive enabling policies and coordination.

62. MSPs will be initiated at local level and supported to enable structured and broad-based engagement of communities and the private-sector in the policy-making process.

63. The establishment of MSPs will be informed by best-practice guidelines (Brouwer and Woodhill 2016) ? see the conceptual framework in Figure 7. Participants on MSPs will include those who are identified to be relevant to the selected agri-food chains supported by the project. They will include producer organizations, women and youth groups, input and equipment suppliers, government institutions, aggregators, agro-processors, agro-dealers, and retailers, microfinance institutions and development partners.

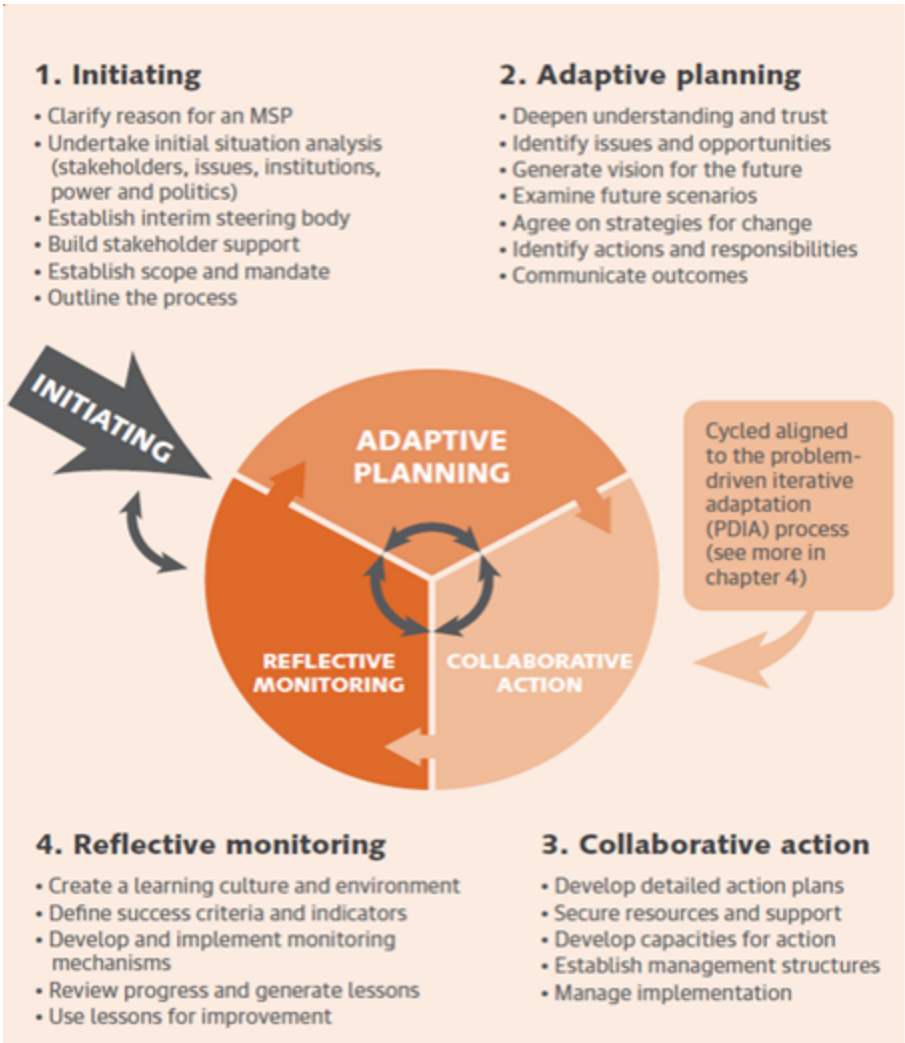


Figure 7: MSP process (Brouwer & Woodhill 2016)

64. MSP policy-dialogues will identify and articulate strategies and actions to address constraints and challenges that impede agri-food systems productivity, resilience and competitiveness ? including actions to be taken by the government to reduce risks that discourage private sector investments in resilient agri-food systems.

65. The main outcome will be the development and signing of PPP agreements (agri-food systems or product based sector development plan agreements) whose implementation will be mutually beneficial to all value chain actors. The agreements will show the level of investment expected from government as part of its enabling function and the private sector (farmers, aggregators, etc) as a collective.

66. The project recognizes that the development of sustainable, resilient and inclusive agri-food systems will not go far unless major and deliberate efforts are made in promoting gender equality. For instance, access to land for agricultural production is compounded by unequal gender and generational exclusion due to cultural constraints. Thus, the project implementation mechanisms must be sensitive to these constraints and seek to promote participation of women and youth pursuant to prescriptions of the Land Act of 2010 that is meant to address challenges of access to land, land allocation and land use. More specifically, the project will ensure empowerment and representation of women and youth in the MSPs and policy dialogues, and support advocacy campaigns to raise awareness and facilitate action to address land tenure and other constraints to women and youth participation in agri-food systems.

67. The MSPs will also serve as platforms for learning and knowledge exchange on technical and financial innovations. They will be linked to national level platforms such as the planned Public-Private High-Level Forum under the MCC-LMDA program.

Output 1.1.2: Participatory integrated catchment management plans incorporating climate adaptation.

68. There are different and interconnected challenges, including climate impacts, affecting landscapes in Lesotho generally and in the selected project locations specifically. An integrated and participatory catchment management approach, that fully incorporates adaptation objective and targets, is the main project implementation framework to ensure meaningful and responsive planning and action (Box 1).

Box 1 - Catchment planning terminology and scale

The use of 'catchment' and 'watershed' terminology are both common in reports and li
Lesotho.

Watershed: In some international literature, watershed means the ridgeline boundary be
catchments but in this document we use the term watershed as a *generic descriptor* of a h
catchment area, including all levels of 'catchments'.

Catchments: The term catchment is used to imply a scale difference, where:

- **Catchment** is the highest level scale and Lesotho is divided in five catchments (ICM proj
- **Sub-catchment** is a smaller hydrological unit of the catchment, similar to quaternary ca
  South Africa (30,000 to 60,000 ha in size). The ICM project has defined 74 sub-cat
  Lesotho.
- **Micro-watershed** is the more local unit (typically 2,000 to 5,000 ha in size comprising app
  10 to 25 villages).
- **Village cluster:** A village cluster is a smaller, more localised scale of planning, resour
  monitoring within the micro-watershed (approximately 500 to 1,500 ha). The villa
  comprises 3 to 5 villages **who are grouped on the basis that they collectively share gra**
  and other natural resources within a part of the micro-watershed. A village cluster is b
  not necessarily perfectly, aligned to hydrological boundaries. Boundary and resource
  the Village Clusters within the micro-watershed is thus a key starting point of engager
  project.

69. The development of the integrated sub-catchment or micro-watershed management plans for the LDCF project will be informed by the model promoted by the EU-funded ?Support to Integrated Catchment Management in Lesotho?. The LDCF project will link and build on the institutions and plans developed by the EU-ICM project. More emphasis will be placed on financing local level activities to achieve both resilient landscape and livelihoods.

70. At least 90 technical staff within the three participating districts will be trained on community mobilization including enhancing consultation and involvement of users at grass-roots level and participatory watershed planning and implementation. Representatives of NGOs, village councils, women groups, will participate in the training. This is to build their capacity to accompany and engage in the planning process.

Participatory watershed planning process

71. Two scales of planning are considered for the LDCF project ? sub-catchment plans (30,000 to 50,000 ha in size) and micro-watershed plans of approximately 1,600 ? 6,500 ha each. For greater impact, this project aims to develop at least eight (8) integrated micro-watershed management plans in four (4) sub-catchments narrowing down to a set of village level cluster plans across the different agro-ecological zones, to support and promote climate resilient agricultural and water management (component 2) and agri-food value chain investments (component 3).

72. Table 2 describes the watershed or catchment nomenclature, sizes and associated planning units for the LDCF project.

Table 2. Proposed Watershed Nomenclature, Sizes and Implications for Lesotho

Watershed Unit	Indicative Size Ha	Influence of Land Use on Hydrology	Primary Stakeholders	Typical Management Focus/Instruments
Catchment (Landscape Level)	50,000-100,000	Strong to Moderate	Local or multiple local governments w/principal local and regional stakeholders	Watershed-based zoning; land use & water resources planning; stakeholder management; policy, norms, regulations & incentives **Catchment Management and Development Plans/aggregation of Council ICM Plans**
Sub-catchment	30,000~50,000	Very Strong to Strong	Local government w/ principal local stakeholders (communities and land users)	Stream classification; land use planning/zoning; land, water resources & stakeholder management **Sub-catchment Management Plans (SCMP)/aggregation of Council ICM Plans**
Micro-watershed	1,500 -6,500	Very Strong	Communities, property owners (local), other users (including pastoralists)	Participatory planning; site design; village-level plans and mini-projects **Micro-watershed Management Plans as the aggregation of clustered Village Level Plans**

73. Planning stages will include:

1) Confirmation and demarcation of selected micro-watersheds and communities;

2) Strengthening and/or establishment of inclusive multi-stakeholder engagement and governance structures. This step of the process will allow for identification of key groups of stakeholders who will participate in the development of the micro-watershed management plans at district and local level (and national) as well as the preparation of stakeholder engagement plans (SEPs);

3) Participatory multi-disciplinary assessment (including climate scenarios and projected climate change related impacts) and knowledge base of micro-watersheds. The establishment of the knowledge-based and baseline for the micro-watersheds will include the biophysical features and resources in the watershed, socio-economic conditions that determine the livelihoods of the watershed population and the institutions that operate in the watershed. This will require a team of professionals from diverse technical disciplines and with varied but complementary experience, qualifications and skills. At the same time, participatory assessment and mapping tools at local level are fundamental for engaging the micro-watershed stakeholders and beneficiaries, depicting local knowledge and creating ownership;

4) Participatory analysis and prioritization of interventions aligned with the objective of the project i.e. enhancing climate resilience of landscapes and communities for food and nutrition security. The results from the assessments will be presented to and discussed with all stakeholders at micro-watershed level to reach an agreement on the findings and to develop a road map for future action. This will be done through stakeholder workshops held for the selection and action plans of most appropriate solutions and investments for implementation under component 2 and component 3;

5) Development of micro-watershed management plans (including at village cluster level). The management plans will include the strategies, interventions, implementation schedule, milestones to track implementation, monitoring components, capacity building actions, institutional and budgetary allocations to execute plan. Appraisal and validation of the plans will be conducted at Community

Council level. Representatives from local communities will also be involved in the validation of the watershed plans. Subsequently, Integrated Village-level Plans shall be appraised and validated by the Village Councils with representation from local community groups.

6) Promotion and socialization of plans. Once validated, the finalized watershed management plans should be communicated to all stakeholders involved in the process. Workshops should be organized where the watershed plan?s goals and objectives are shared with the broader community members and local stakeholders thereby allowing them access to make their inputs.

74. The planning efforts will be a continuous participatory process, constituting an adaptive management model. As these watersheds will involve multiple ministries at district level and national level, the project will facilitate an agreement across ministries with a shared agreed vision across sectors (especially water resources, environment and agriculture) to support implementation.

75. The Project Management Unit (PMU) will be involved in overall coordination and supervision of all project micro-watershed plans as well as, liaison and integration into planning processes at national and district level. Implementation of the plans will be overseen by District Project Units (DPU) and implemented at community level by selected service providers (state or non-state) working with Community Councils and Watershed Committees.

76. Planning and implementation in all the four sub-catchments will start at the same time over the 72 month period.

Table 3. Micro-watershed stages

4 Sub-catchments	**Micro-watershed stages**		
	Planning (6 months)	**Implementation** (60 months)	**Post-Implementation** (3-6 months)
Analytical Track	? Pre-planning (mapping, knowledge base) ? Planning (biophysical surveys, analysis, climate assessments, joint walkthroughs, detailed mapping) ? Investment design (activities, detailed cost, benefits, monitoring framework, institutional arrangements, schedule)	? Investment rollout ? Monitoring systems ? Adaptive management based on regular monitoring and discussions and potential for additional appropriate innovation	? Completion report for each micro-watershed ? Post-activity sustainability monitoring arrangements

Stakeholder Track	? Community sensitization/ mobilization ? Regular stakeholder meetings ? Joint walkthroughs ? Basic training/ field visits ? Determine community-implemented activities and demonstration locations ? Agreement on micro-watershed plan	? Project and Stakeholder agreement on activity milestone achievement for payments	? Stakeholder viewpoints recorded in completion reports (e.g. with photos, videos) ? Sustainability training ? Strengthen institutional linkages for sustainability

Output 1.1.3: Tailored weather and climate advisory services and products.

77. In addition to technological responses to climate variability and change, provision of need based localized weather and climate information to farmers can benefit pro-active risk and opportunity management. The need-based information will enhance opportunities during good seasons and reduce the risks of yield loss and crop failures during bad seasons. Working with Lesotho Meteorological Services (LMS), the project will support the identification of suitable climate and related production advisory apps and other digital services and through the FFS and MSP activities, ensure strong linkages with farmers and other stakeholders. In particular, the project will establish linkages and include outputs from the GEF-6 Strengthening Climate Services in Lesotho for Climate Resilient Development and Adaptation to Climate Change (EWS II; UNEP). The availability of forecasts to vulnerable farmers will contribute to improved management of climate variability in the short term and increase adaptive capacity in the long term.

78. LMS will also provide climate and agrometeorological technical inputs to the watershed planning process to ensure that actions and measures proposed are informed by sound climate information.

Component 2: Promoting innovative, sustainable agricultural land and water management for climate resilience

79. This component will support the development and promotion of innovative climate-smart land and water management and agricultural production practices and technologies. Information and knowledge will be channelled through the participatory watershed planning process, MSPs, FFS and digital platforms ?virtual villages?. The practices and technology options that will be promoted include: contouring of fields, alternate wetting, mulching, deficit irrigation, drip irrigation, improved crop varieties, trash-lines, pitting, water retention, integrated pest management, soil fertility management etc.

Outcome 2.1: Resilience of landscapes and livelihoods strengthened with sustainable land and agricultural water management and infrastructure, addressing droughts, floods and other hazards.

Output 2.1.1: Sustainable land and agricultural water management (AWM) climate change adaptation options developed.

80. Key actions for realizing this output include participatory identification, selection and development of sustainable land and AWM options through specialist technical support. Sector specialists will facilitate the compilation and integration of the knowledge into usable field materials to

be used in FFS program and MSP platforms. The output will be delivered in conjunction with the watershed management planning process. Tested sustainable land and AWM options that will be considered are fully documented in the Lesotho Compendium of Soil and Water Management Measures (EU-ICM) and FAO climate-smart agriculture knowledge platforms (FAO CSA knowledge). Some of these are presented in Figure 8 below and in Annex N.

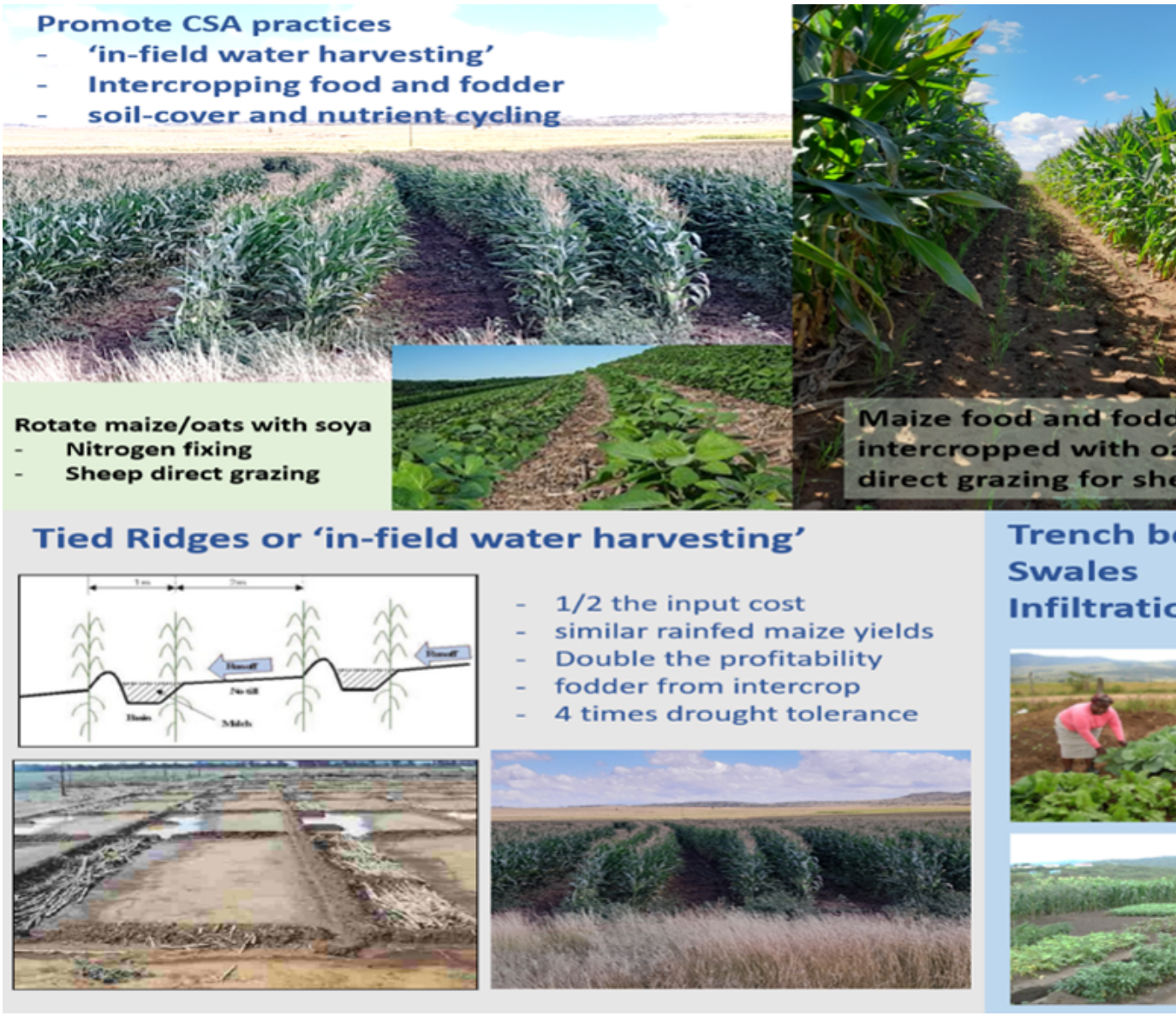


Figure 8. CSA practices

Output 2.1.2: Capacity building and promotion of sustainable land and agricultural water management for climate change adaptation implemented.

81. Under this output, the project will finance two core interventions to build the capacity of smallholder farmers including women and youth, agri-food value chain actors and support institutions for implementation of the integrated micro-watershed management plans (adoption of sustainable land and AWM) under component 2 and component 3.

Capacity building through Farmer Field Schools (FFS) Program

82. FFS will be the primary delivery mechanism for knowledge and innovation development at local level. The FFS program will primarily target the farmers themselves, ensuring equitable participation of women and youth, and will further include district extension officers, irrigation engineers and technicians, CBOs and private sector suppliers and advisory services.

83. The FFS will be implemented over at least two full growing seasons (in the case of crop value chains), or at least two production cycles (in the case of animal production value chains). The set of FFS activities are summarised below.

1) Development of FFS knowledge set and learning curricula. Locally appropriate bodies of knowledge for climate-smart sustainable land and water management interventions (component 2) and resilient agri-food value chains (Component 3) will be developed by qualified FFS Master Trainers (one international and one Lesotho national) recruited by the project. The master trainers will be identified through the established FAO FFS networks.

The FFS learning curricula will be developed by the FFS Master Trainers in collaboration with a range of recruited short-term sector specialists. Sector specialists (incl. women experts) would include academics from research institutions, recognised private sector experts and consultants. The curricula will be developed and finalized in an intensive workshop(s). Learning topics will cover themes in components 2 and 3, and will be informed by priorities identified in the micro-watershed management plans. They will also include production planning and use of climate information, farm-organization, agri-business basics, record-keeping, financial management, food handling, packaging, small-scale agri-processing and marketing with gender as a cross-cutting theme, etc.

2) Training of FFS Facilitators. FFS facilitators will be recruited on the basis of their formal educational qualifications and their experience in facilitating farmer learning. The number of FFS facilitators required will be defined during implementation. FFS Facilitators will be trained in a 1 month training program (with refreshers during project implementation), hosted at a suitable Lesotho-based training centre. The training of FFS facilitators will include both subject matter specific material, and skill development in the FFS approach.

3) Rollout of Farmer Field Schools.

84. Capacity building on water technologies and management practices, will be included in the FFS curricula and rolled out as part of the FFS program. As mentioned under output 1.1.1, the MSPs will be used as capacity delivery and knowledge exchange channels for a wider range of stakeholders supporting implementation of components 2 and 3.

Capacity building through ?virtual village? networks

85. To enhance and scale-up capacity development and knowledge exchange, the project will adopt FAO?s ?virtual village? concept. This will consist of the establishment of digital knowledge networks using easily accessible media forms (eg. Whatsapp, Facebook or similar platforms) as appropriate. Over the past three years there has been an increase in the formation of informal groups especially among women and youth farmers across the country. Success of these groups mainly depended on group cohesion and common goals. These informal networks would form a ?virtual village? of information sharing around sustainable climate-smart production practices, farm financing, market access, ordering inputs in bulk, production planning etc.

86. The project will actively promote, establish and support the ?virtual village? networks, for selected agri-food value chains, including platform monitoring and mediation, and information support. An exit strategy and handover will be structured and facilitated in the final 2 years of the project to ensure ongoing sustainability of the ?virtual village? networks. Further the project will actively identify and link participating common interest groups (CiGs) with existing digital information networks such the ?Amanzi for Food? network for horticultural production; Africa Women Agribusiness Network(AWAN) a network that provides women-owned and youth-owned agribusinesses with an E-Hub, which is a repository of information on agriculture along value chains and supply chains; among others.

Output 2.1.3: Multi-community investments in support of resilient landscapes and livelihoods.

87. To deliver this output, direct financing will be provided for watershed scale adaptation investments at community level in support of resilient development initiatives. These will include community-level soil-conservation and restoration of wetlands and grazing lands to increase the resilience and productivity of the landscapes. Sub-projects by definition cut across and benefit most or all of the community directly or indirectly. These investments will be financed when included in the micro-watershed action plan, and subject to a proposal developed in a participatory and inclusive manner (with women and youth) by the local organization driving the watershed intervention and approved by the Watershed Committee. The investments supported by the program (examples in Table 4; Figure 9), must make a direct contribution to increasing the resilience (in terms of ecosystem services and productivity) of the landscape within the micro-watershed, and be in compliance with environmental and social safeguard standards. The selection criteria will be finalized in year 1 of project implementation.

Table 4. Examples of multi-community adaptation investments supported by the project

Eligible investments	**Planning and approval**	**Financing Conditions**
? Wetland restoration ? Sand-dams ? Stone and vegetation strips ? Gulley remediation ? Flood embankments ? Agroforestry blocks ? Cattle watering troughs ? Mechanical field contouring	? Micro-watershed plan approved by the village cluster. ? Technical Proposal with Costs for implementation (preparation supported by the executing partner or service provider). ? 8 micro-watershed plans in 4 sub-catchments	? Max USD 200K in total per micro-watershed ? Grant financing 100%

Figure 9. Examples of multi-community investments

Component 3: Strengthening resilience of agricultural and food value chains

88. Component 3 will support start-up enterprises through grant financing for small-scale agricultural infrastructure and inputs in selected agri-food value chains. Participants and localities will be identified through the participatory micro-watershed planning in Component 1. Potential value chains identified during PPG consultations include beef, field crops and fodder crops, horticulture, and small livestock production (pigs and poultry). Definitive priority value chains will be confirmed in project year 1 and selection will be based on criteria that will include climate resilience, sustainability (including opportunities to enhance environmental sustainability) and inclusiveness ? in line with FAO Guidelines on selecting value chains for sustainable food value chain development (2021)[23][23].

89. The project will adopt a socio-economic approach to agri-food value chain analysis and development. The approach centralizes the importance of environmental resources and social capital:

- **Environmental resources**: In the context of a watershed, environmental resources underpin all productive capacities and the finite limitations of the environment to sustain agricultural activity are recognised. Value chain interventions are therefore aimed at the intensification of beneficial ecological services towards optimised levels of sustainability. Improved ecosystem services allow farmers to reduce their reliance on external inputs while in parallel improving productivity and nutritional and monetary outputs;
- **Social capital:** Social capital captures the capability to realise the productive capacity of the environment through agricultural activities that are aligned to market demands. It furthermore forms the core to resilience through the shared knowledge of actors enabling the anticipation and response to change. A heightened appreciation of social capital within value chain analysis allows for interventions aimed at improving the accumulation, custodianship and distribution of knowledge as a crucial intangible asset. Additionally, social capital encompasses issues of gender and youth and offers a platform to addressing equality and inclusion;
- **Incremental development**: The undeveloped nature of Lesotho?s agricultural value chains necessitates interventions that are both incremental and developmental. Incremental initiatives aim to exploit unutilised value chain efficiencies and in so doing empower lesser-resourced actors and contribute to overall competitive advantage. Developmental initiatives respond to identified productive and market opportunities that existing value chain activities do not yet incorporate. These initiatives

aim to unlock new opportunities and may include the development of infrastructure, diverse crops and livestock or processing activities required to access attractive markets.

- **Balancing resilience with economic gain**: Whereas economic benefit is the targeted outcome of typical value chain analysis, resilience including the nutritional security of the community is viewed as fundamental under a socio-ecological approach; nutritional outcomes are therefore considered equal to economic outcomes. The integration of agricultural activities into monetised value chains is complemented with activities that promote nutritional security at the community level and that are insulated from economic shocks by limited dependence on external inputs or offtakes.

90. Detailed descriptions of potential priority value chains identified during PPG are presented in Annex O.

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

Output 3.1.1: Gender-sensitive **a**gri-food value chains strengthened to enhance resilience to climate and other shocks.

91. This subcomponent will provide matching grant financing for agricultural infrastructure and agricultural starter-packs for micro-projects (for Common Interest Groups (CiGs)) and for individual farmers. Eligible projects will be funded with matching grants based on approved proposals and subject to project ceiling amounts.

Common Interest Group micro-project investments in water and agricultural infrastructure for climate adaptation

92. Investments in agricultural water infrastructure and management techniques will be integrally linked to supporting the development of agricultural enterprises of a value chain, through collective learning and action enabled by Common Interest Groups (CiGs). Micro-projects by definition support the activities of the common-interest groups, both learning and for seeding their own individual initiatives.

93. The project, initiated by information shared and developed in the micro-watershed planning process, will support the establishment of 120 CiGs in the four selected sub-catchments (including women and youth led CiGs). The CiGs will comprise 10 to 25 individuals with shared interest to drive enterprise development of a selected value-chain. The investments in water and agricultural infrastructure supported by the project will enable the CiG to establish a site of learning in relation to the value chain to serve as a focal point for FFS learning activities, and a seeding hub for individual enterprise activities (group-sourced inputs, hatchlings, seedlings etc.). Further, agricultural infrastructure investments that enable aggregation or similar collective benefits will be supported.

94. The site of learning will be located on an allocated portion of communal land or on a lead members homestead or fields as may be appropriate. The investments required by each CiG will be defined in a simple proposal outlining the objectives, selected value-chain, describing the site of learning, and will include technical and agricultural elements that require financial support for the enterprise establishment. Proposed eligible investments are listed in Table 5 and some examples illustrated below.

Table 5: Common Interest Group (CiG) micro-project infrastructure investments examples

Eligible investments	**Planning and approval**	**Financing Conditions**

? Field contours (mechanically prepared for in-field RWH) ? Cattle pens with water supply ? Slaughter slabs with water supply ? Small irrigation schemes as demo sites (<2 ha) ? Pig and chicken houses, with roofwater harvesting and tanks ? Small Storage Sheds (with RWH and tanks) ? Inputs and starter packs (seedlings, chicks etc.)	? Technical and Financial Proposal with Costs for implementation (preparation supported by the implementing agent). ? Approval by the Project Steering Committee	? Max USD 20K per CiG ? Grant financing 95% ? Group contribution 5%

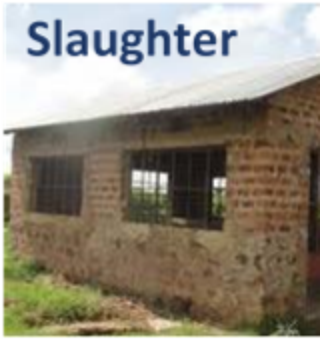


Figure 10. Selected examples of eligible micro-project investments for CiGs

Support to individual agricultural enterprises for climate resilience

95. Individual investments in agricultural water management will include matching grant support to selected individual farmers (ensuring women and youth inclusion and equity) to use and demonstrate small irrigation systems, rainwater harvesting and storage tanks for animal production, and for other value-adding agricultural infrastructure on individual farms (Table 6, Figure 11). These will be financed through a matching grant mechanism detailed in the financial sub-component.

Table 6: Examples individual investments for agricultural water and related infrastructure supported

Eligible investments	**Planning and approval**	**Financing Conditions**
? Small irrigation systems (<2 Ha) ? Rainwater harvesting systems including water tanks for productive use (animal watering) ? Small on-farm production infrastructure ? Post processing machinery ? Piggery and Chicken houses	? Development of a business plan with a description of the enterprise, anticipated production costs and sales, and a breakdown of establishment costs (preparation supported by the project) ? Approval by the Project Steering Committee	? Max Grant of USD 5K per individual ? Grant financing 50% ? Loan financing 25% ? Farmer financing 25%

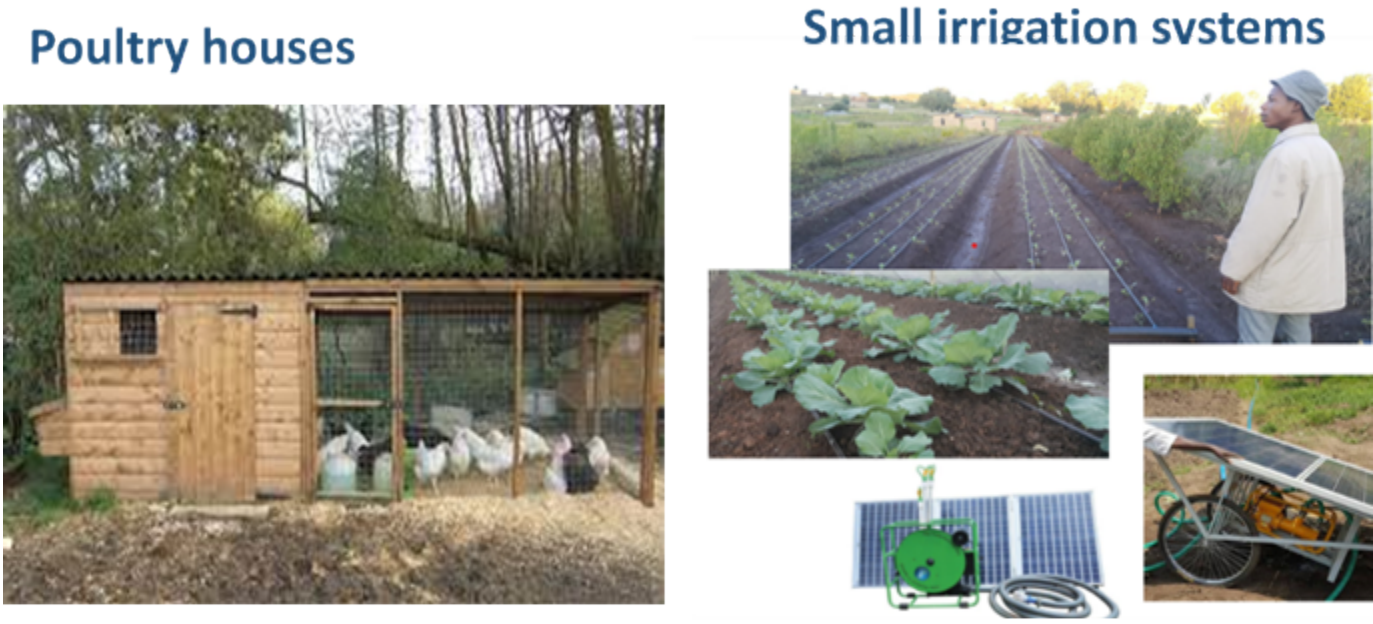


Figure 11: Examples of agricultural water and related investments

Output 3.1.2: Inclusive farmer organizations built.

96. Group mobilisation and organizational building investments for watershed planning activities are defined in Component 1 and 2. The watershed planning processes will identify management and agricultural production opportunities for enterprise development support from the project, involving groups and individuals. For this output, the project will support the establishment and training Common Interest Groups (CiGs), women and youth participation and gender-wise business planning and entrepreneurial development.

Formation and training of Common Interest Groups

97. The project will provide technical support to CiGs (whether formal or informal (registered or unregistered)), CiGs membership will be voluntary and will bring together the smallholder farmers to share and pull resources and exchange knowledge and skill for successful operation of their farm enterprises.

98. In order to encourage women and youth participation and to improve the quality of leadership and strengthen collective decision-making, a recommendation is made for minimum representation in community and civic organizations. Organizations should endeavour to reach 50%

women representation in their decision-making structures. The project will further take steps to encourage and support women and youth to stand for election in relevant farmer organisation committees. The executing partner will stress on the importance of the participation of women, men and youth in the project activities for broader socio-economic benefits.

99. The CiGs are expected to enhance members? access to markets, agricultural production, knowledge sharing and information, peer learning, productivity and profitability of members. Thus, CiGs will support and advocate for access to information, inputs/outputs marketing activities, credit and information provision, advocacy and providing other services to the members. The executing partner will facilitate and provide an enabling environment for the CiGs in this regard.

100. The CiGs will be responsible for their operations, planning (proposals) and implementation with guidance from the executing partner. Each group will open and operate a mobile money account for all transactions, for ease of record keeping and transparency. The executing partner will facilitate and support the opening of these mobile money accounts and training in necessary financial management skills and accountability mechanisms.

101. Active linkages with existing farmer producer organizations in selected value chains will be developed. The executing partner will collaborate with already existing CiGs, producer groups, farmers? cooperatives, and producer organisation (POs) and farmer groups both formal and informal, registered and unregistered to facilitate membership for all interested CiGs. This will be done to avoid duplication of effort and to build synergies. The project will not invest in the development of producer organizations themselves, but rather link CiGs and farmers to existing POs ? essential for achieving better economy of scale of inputs and market access. CiGs will operate as micro-POs, but need to link to larger organizations with membership >> 1000, necessary for POs to generate sufficient funds for own operations through a % taken from the member benefits of the participating farmers.

102. The executing partner will play a critical role in facilitating this process as some POs have strict entry requirements for their membership such as the minimum acreage, livestock numbers required for membership. These requirements often favour men and discriminate women and youth due to their limited access or possession of these assets. Special considerations and efforts will therefore be made to ease membership into these groups and to encourage women and youth beneficiaries to join these cooperatives and farmer groups. These CiGs/cooperatives through the power of association are expected to help smallholders (especially women and youth) to overcome barriers and gain better access to resources, thereby enabling them to increase their crop yields and will offer networks of mutual support and solidarity that allows women?s social capital to grow, improving their self-esteem and self-reliance. The executing partner will develop a mentorship program for women and youth beneficiaries working closely with the POs and LENAFU and provide non-monetary incentives and recognition for mentors. This is expected to enhance skills, production, quality, consistency and facilitate inputs and market access through the POs for project beneficiaries.

Women and youth participation in digital networks

103. The project will finance women and youth participation in knowledge exchange events ? and facilitate and encourage membership of women and youth in formal and informal networks (including virtual) at national and international such as LENAFU?s Basali Khoebong, Farmers on heels, Farm Girls, #Farmspaces, Value4Her, etc, as these organizations play a critical role in improving value chain activities. The project will strengthen women and youth?s networking, advocacy and negotiation skills, and representation in decision making spaces concerning land, financial and market access issues.

104. With regard to digital networks, the project will harness the advantage presented by the broad cellular coverage across the country, and explore the use mobile phones as a platform for sharing and delivery of extension services. Currently, there are interactive farmer radio programs in a number of community radio stations, informal WhatsApp/ Twitter/ Facebook groups (mainly youth and women groups) for horticultural, small livestock agribusinesses. The few women and youth that operate these businesses at a commercial scale are typically connected with other youth/women across the country and beyond. Though these groups are not formal, they have been able to solicit resources and facilitate

trainings and crowd funding for procurement of inputs outside the country. These have resulted in improved quality of produce, better packaging, branding and marketing, increasing revenue.

Gender-wise business planning and entrepreneurial development for climate-resilience and adaptation

105. The project will support technical skills development and enhance entrepreneurial capabilities of beneficiaries with special emphasis on youth and women through incubation, coaching and mentorship programs to leverage commercialization potential for resilient agriculture and food value chains. The project will further develop and implement an inclusive coaching program for aspiring women commercial farmers.

106. The project will support capacity within the project team, MSPs and among stakeholders to ensure gender-responsive planning and implementation and the continued integration of a gender perspective in value chains. The executing partner will ensure that women, youth and men can equally access project resources and services, equally participate in project activities and decision-making processes, and equally benefit from training and capacity building activities offered by the project.

Output 3.1.3: Project matching-grant mechanism operationalized.

107. The project will engage a micro-finance specialist to support the development of the matching grant system for micro-project and individual agricultural enterprise investments for the project. Clear guidance on the process and administrative details for grant applications including simple business plan structure, and approval processes will be prepared, along with the development of a transparent and verifiable administration system for the management of co-contributions by the executing partner.

108. The details and standard forms would include CiG micro-projects as well as individual-enterprise support grants, but with different scales.

- Micro-projects (matching grant 95%) Common Interest Group enterprise support: Define the grant facility for agricultural support infrastructure for groups including investment windows:

o Eligibility criteria;
o Funding application requirements
o Funding approval processes

- Individual enterprise support (matching grant 50%, co-contribution 50% with optional loan through facilitated linkages with micro-finance institutions): Define the matching grant for individual enterprises to pursue enterprise development infrastructure investment support. Matching grant rationale, infrastructure type eligibility, and matching grant modalities.

Output 3.1.4: Linkages and inclusive networks for micro-finance strengthened.

109. Basotho women have a history of stokvels - informal collateral free finance, similar to crowd funding, where self-selected group members contribute small equal amounts of money to a pool of funds every month from which members are allocated cash. These stokvels are created for different purposes, from buying groceries to building houses and buying cars.

110. Currently most women farmers have formed these groups for procurement of seeds, farm implements, irrigation equipment, breeding stock, animal feed and for sourcing equipment from as far as China through Alibaba.

111. The project will provide technical support for business planning (on financial management, recordkeeping and business management, conflict resolution etc) to the CiGs for agricultural finance building on the stokvel model. The project will promote these groups for investment in agriculture and funds collected through this could be used as collateral to access project grants and grants from other ongoing programs in the country for sustainability and ownership.

112. In addition, the project will facilitate dialogue with financial institutions especially mobile money service providers (e.g mpesa and ecocash) to develop financing instruments better tailored to

the cash-flow needs and other specific features of agricultural investments and SMEs especially women and youth.

Component 4: Communication, knowledge management, and M&E

113. The aim of the component is: (i) communication and outreach to stakeholders at community, local and national level to enhance their engagement, support and ownership of the project and its objectives; (ii) knowledge generation and dissemination; and (iii) effective monitoring and evaluation of results.

Outcome 4.1: Effective knowledge management and M&E supporting adaptive management, impact and scale-up at district and national level.

Output 4.1.1: Project Monitoring and Evaluation plan implemented.

114. Drawing on best practices from other related initiatives, this output will support the design of a project-level M&E system for climate change resilient livelihoods with sex disaggregated data during the first 6 months of the project based on Monitoring, Evaluation, Learning and Reflection (MERL) principles.

115. The M&E system will employ appropriate technology such as GIS to complement in-situ sampling, surveys, and measurements, as well as simple, locally appropriate, and participatory data collection measures where possible. It will be necessary to collect complementary data through impact evaluation-specific surveys and case studies. This is due to the need to collect detailed information on household and individual-level indicators, which cannot be done through the standard M&E system.

116. An important aspect of the M&E system will be the establishment of community-based monitoring which will entail the following activities:

a) Development of a community-based monitoring system and platform

In order to enact community monitoring, reporting and feedback at multiple levels, the project will establish a community-based monitoring management platform (including ?real-time? dashboards) which would be connected to the broader catchment-wide monitoring system established under the EU-ICM program with the aim of building evidence of cumulative impact of interventions in the targeted micro-watersheds over time. The community-based data management system shall follow the data cycle and data quality assurance (DQA), where data will need to be collected, aggregated, reported, analyzed, used and disseminated through feedback.

b) Appoint and build monitoring capacity of community monitor groups at village/micro-watershed level

Building on the participatory monitoring system, the project will appoint and capacitate local community-based monitors through the employment of Community Liaison and Communication Officers (CLCOs), the involvement of community-based organizations (CBO) and Common Interest Groups (CiGs). The CLCOs will provide a resource to the community monitors to support the community-based monitoring programs, which will be implemented at the start of the project so that community members can evaluate its success for themselves.

c) Design and deploy participatory monitoring tools, including digital tools such as mWater and Open Data Kit Collects

Lesotho has seen the widespread development of mobile networks and broad adoption of mobile technologies, even in the rural areas. The project will support the development of ICT monitoring tools for gathering local information on livelihoods and socio-economic, bio-physical and climate data. The system will be tailored to serve the information needs of communities, the project team and the government. The community generated data will be fed into the project data management platform and broader knowledge management system.

Applying mobile phone technology to community-based monitoring can be setup to capture both qualitative and quantitative information. The two possible Apps currently being used in similar projects include mWater and Open Data Kit (ODK). ODK Collect, for instance, is a smartphone and computer-based suite of tools and applications that support data collection via mobile phones from which monitoring results are sent directly to a central database for analysis. These tools can be adapted to suit the needs of the project. The use of mobile phone devises would also equip community groups and ?monitors? with GPS-enabled digital cameras for uploading regular photographs to the project?s on-line knowledge management system.

Other low-cost and robust monitoring equipment shall be deployed for the assessment of bio-physical conditions and changes of the landscape derived from the project interventions in, for instance, commonage areas. Examples include splash boards, runoff plots, erosion standards, donga profiling, plant basal cover quadrats, clarity tubes and rain gauges.

117. To ensure sustainability of the M&E system, the project will identify and link up with a national coordinating entity with secure long-term and strong partnerships ? an entity that can manage an open access ?data-hub? for all sustainable landscape management and climate resilient initiatives in Lesotho. It was suggested during PPG discussions that the EU-ICM program could serve this purpose, to be confirmed during implementation.

Output 4.1.2: Independent mid-term evaluation and final evaluation conducted.

118. A mid-term evaluation will be undertaken at project mid-term to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs. Findings and recommendations of this evaluation will be instrumental for bringing any necessary improvement in the overall project design and execution strategy for the remaining period of the project?s term.

119. A final evaluation will be launched 6 months before project closure to assess the extent to which the project achieved its stated objectives and outcomes and determine the likelihood of future impacts and sustainability ? and implications and lessons for similar projects and programs.

120. A detailed description of the evaluations and process is provided in section 9.

Output 4.1.3: Knowledge management and communication strategies implemented.

121. This output will support the development and implementation of innovative communication, knowledge management and information dissemination strategies and their implementation. These will be developed within the first 6 months of project implementation ? to be reviewed and refined periodically based on feedback from stakeholders and target audiences. See section 8 for details.

1.4 Alignment with GEF-7 Focal Areas Strategies

122. 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.

1.5 Additional cost reasoning and expected contributions from the baseline and co-financing

123. *Without the intervention* Lesotho?s agri-food systems, land and water resources, and livelihoods of rural communities will remain extremely vulnerable to climate variability and change impacts. As described in section 1.1., increases in temperatures and changes in precipitation patterns and extreme events will affect crop and livestock production.

124. Overall, 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.

125. 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.

126. 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.

127. *With the LDCF intervention*. 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, while leveraging strategic synergies with SDG 1, 2, 6, 8, and 15. It will thus mainstream CCA and resilience for systemic impact.

128. 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.

129. 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.

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

Table 7: Additional cost reasoning

Project component	Baseline scenario	With-project scenario
1. Strengthening policy and institutional capacities	As described in the baseline section 1.2, Lesotho?s relevant national policies and planning frameworks clearly prioritize sustainable and inclusive agri-food systems and actions to build resilience to climate change. The main gap is in the translation of these instruments into action at local level.	The project will facilitate an integrated and participatory catchment management approach that fully incorporates adaptation objectives and targets, for implementation by district and local community structures ? in partnership with the private sector. The project will support platforms for engaging producers and the private sector in policy formulation at local level ? policies that address experienced constraints impeding agri-food systems productivity, resilience, competitiveness and women and youth participation.
2. Promoting innovative, sustainable and climate resilient agricultural water management	With increasing frequency and intensity of droughts, the country has placed high priority on irrigation development. There are large planned investments in agricultural water management, mostly geared towards commercial-scale irrigation schemes.	Water supply for agriculture and other uses depends on the health of watersheds ? for sustainability and climate resilience, water management cannot be done in isolation from sustainable management of all watershed components. Therefore the additional value of the project is the holistic approach to agriculture water management, informed by sound climate information and promoting suitable climate change adaptation practices and technologies.
3. Strengthening resilience of agricultural and food value chains	Lesotho?s agri-food system is largely under-developed. Farmers are not well organized and lack support services, access to finance and coordinated information sharing. They are unable to supply markets because they are not aggregated into producer organizations while value addition is limited due to limited skills. All these contribute to the vulnerability of rural communities and households to climate and other shocks.	The project will support access to finance (grant and linkages to micro-finance loan institutions) for investments in climate-smart infrastructure and technologies; access to knowledge through digital networks and other platforms; and strengthen inclusive farmer organizations and their access to markets, with a specific focus on women and youth.

1.6 Adaptation benefits

131. As outlined in the project framework key benefits will include:

? Inclusive catchment management and adaptation plans. As outlined above, the project will facilitate an integrated and participatory catchment management approach that fully incorporates adaptation objectives and targets, for implementation by district and local community structures in partnership with the private sector. At least 8 integrated micro-watershed management plans, and enabling gender-sensitive policies, with climate change adaptation mainstreamed will be developed and implemented.

? 40,000 people (50% women), including smallholder farmers and agri-food SMEs have increased resilience through the adoption of innovative climate-smart land and water management and agricultural production practices and technologies and strengthened access to knowledge and technical support, finance and markets.
? 15,000 hectares of agricultural land managed for climate resilience through implementation of the catchment management and adaptation plans. In addition to farm-level climate smart practices and technologies, the project will support and catalyse watershed scale adaptation investments ? including community-level soil-conservation and restoration of wetlands and grazing lands to increase the resilience and productivity of the landscapes.

1.7 Innovativeness, sustainability and potential for scaling-up

132. The overall project design proposed is highly innovative, context specific and contains strong elements to ensure sustainability and scale-up. It is premised on two main fundamentals that combine innovatively into a strategic approach, drawing on well-established methods to achieve climate-resilient landscapes, agri-food systems and livelihoods in a unique context of catchment degradation, proximity to South Africa?s dominant agri-sector, and low-value agriculture in a poverty context.

- First, that sustainable, resilient livelihoods can only be achieved in Lesotho when the landscape that supports those livelihoods, notably the grazing resource, the soil-resource and the water-resource is stabilized; and is then managed to achieve production that strengthens, rather than undermines the ecosystem. The participatory watershed planning process builds on the momentum of existing initiatives (EU-ICM) in particular, but also prior FAO interventions. Explicit in the watershed resource assessment and exploration of possibilities and priorities, is an element of sustainable and resilient productive use. In the facilitation process, information is both drawn from the communities on their use and (deep) understanding of the resource, along with new information, including on climate impacts, that is injected in relation to productive use enterprises.

- The second premise is that transformation of the current farming model to a climate-resilient and sustainable model requires major investments in knowledge and Infrastructure. The design considered two avenues that could be pursued to achieve a shift to farming for markets (with food provisioning alongside) ? the ?direct route? would strive for high yields and high returns that would demand a quantum leap in sophistication, have high costs, high external dependency (inputs, knowledge, markets, finance). The ?direct route? was considered to have high and unacceptable risks of failure in the Lesotho context. South Africa?s imports dominate markets, the baseline of sophistication (mechanization, plant-protection etc.) is very low, and the prevailing poverty context makes such a massive quantum leap highly unlikely. The slower, but more sustainable route, is to strive for moderate to low external input agricultural methods, with a heavy emphasis on the knowledge component (through farmer-field schools ? FFS), and financial support to overcome the initial start-up-costs, with direct support to innovation development in the selected value-chains (feeding into the FFS, and value-chain development aspects).

133. Specific anchors for sustainability and scale-up include:

? Public-private partnership (PPP) agreements. These agreements will delineate medium to long-term responsibilities and commitments of the Government and of the private sector at local national level, vis-?-vis policies and investments in resilient agri-food systems ? strengthening the enabling environment for sustainability and scale-up;

? Establishment of a knowledge management system that will be linked to a national coordinating entity with secure long-term financing and partnerships. The ICM program under the Ministry of Water was identified during PPG, as an entity that could serve this purpose. The knowledge management system will be an open access information hub for all sustainable and resilient landscape management and agri-food systems in Lesotho ? as described in section 8 ?Knowledge management?.

1.8 Summary of changes in alignment with the project design with the original PIF

134. Extensive consultations and data collection undertaken during the PPG phase enabled the refinement of the project design, with some restructuring and reformulation of project outputs.

PIF	CEO Endorsement	Comments
Objective: To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.	To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.	No change

Component 1: Strengthened policies, planning and investment frameworks to enable sustainable climate-resilient water management in production landscapes. 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) strengthened 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. 1.1.5. 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 Integrated Pest Management and soil fertility management components). 1.1.6. Capacity building program targeted at local private sector ? engineers and technicians to support innovative technologies (particularly water management) introduced (youth and women inclusive). 1.1.7. Inter-institutional multi-sector and multi-scale coordination for mainstreaming CC adaptation into management of land, water (incl.irrigation and infrastructure development) strengthened.	Strengthened gender-sensitive policies and planning frameworks enable investments in climate change adaptation leading to resilience of landscapes and communities for food and nutrition security. 1.1.1. Inclusive, multi-stakeholder platforms (MSPs) facilitating public-private partnership (PPP), gender-sensitive enabling policies and coordination. 1.1.2. Participatory integrated catchment management plans (micro-watershed management plans) incorporating climate adaptation. 1.1.3. Tailored weather and climate advisory services and products.	No change to the outcome, wording slightly refined to capture the climate change adaptation intention and essence of this component. Outputs were thoroughly assessed and improved based on PPG baseline studies and stakeholder studies. Output 1.1.1 has been revised and improved informed by PPG work. Based on consultations with stakeholders during PPG, the need to put in place a mechanism for inclusive policy review, revision and implementation at local level engaging all key stakeholders including civil society and private sector was identified as priority. The work of mainstreaming climate change adaptation into national plans and policies is relatively advanced (at national level) as reflected in the current National Strategic Development Plan (NSDP II), the Comprehensive National Agriculture Policy (2022-2026), and the National Agriculture Investment Plan (2022-2026). The barrier that needs to be addressed is translating this into implementable action at local level, as well as addressing gaps in supportive policies based on feedback from the ground. The output has been expanded to also include coordination, capacity development and knowledge exchange. 1.1.2. Output refined, but essentially remains the same. 1.1.3. Original output eliminated, although some elements of it have been incorporated into output 1.1.1. This is in agreement that it would be a quite complex output that would

Component 2: Resilience of landscapes and livelihoods strengthened with improved agricultural water management and infrastructure, addressing droughts and floods. 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 (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.	Resilience of landscapes and livelihoods strengthened with sustainable land and agricultural water management and infrastructure, addressing droughts, floods and other hazards. 2.1.1. Sustainable land and agricultural water management (AWM) options developed for climate change adaptation. 2.1.2. Capacity building and promotion of sustainable land and agricultural water management for climate change adaptation implemented. 2.1.3. Multi-community investments in support of resilient landscapes and livelihoods.	No change to the outcome. Component 2 outputs largely the same ? refined and expanded based on PPG baseline studies and consultations.

Component 3: Agriculture and food value chains strengthened to enhance resilience to climate and other shocks. Outputs: 3.1.1. Target agriculture and food value chains mapped to analyze 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 Service 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.	Agriculture and food value chains strengthened to enhance resilience to climate and other shocks. 3.1.1. Gender-sensitive agri-food value chains strengthened to enhance resilience to climate and other shocks. 3.1.2. Inclusive farmer organizations built. 3.1.3. Project matching-grant mechanism operationalized. 3.1.4. Linkages and inclusive networks for micro-finance strengthened.	No change to outcome. Output design logic has been simplified. PIF outputs 3.1.1 ? 3.1.3 streamlined in output 3.1.1. Outputs 3.1.4 and 3.1.5 streamlined in output 3.1.2.

Component 4: Monitoring and evaluation under a results-based approach, good practices and lessons learned, systematized and disseminated. Outputs: 4.1.1. A national platform to facilitate access to climate smart agriculture information and knowledge established 4.1.2. Exchange learning visits with similar bio-physical 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	Effective knowledge management and M&E supporting adaptive management, impact and scale-up at district and national level. 4.1.1. Project Monitoring and Evaluation plan implemented. 4.1.2. Independent mid-term evaluation and final evaluation conducted. 4.1.3. Knowledge management and communication strategies implemented.	No change ? minor wording refinement. PIF outputs 4.1.1-4.1.3 rationalized and revised under output 4.1.3. PIF output 4.1.4 now under output 4.1.1. PIF output 4.1.5 now 4.1.2.

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

[2] Total Orange-Senqu River basin extends over four countries, Botswana, Lesotho, Namibia, and South Africa.

[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] Lesotho National Agricultural Investment Plan (NAIP), 2022.

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

[6] Bureau of Statistics 2017 Household Survey.

[7] Households either: have food consumption gaps that are reflected by high or above-usual acute malnutrition; or are marginally able to meet minimum food needs but only by depleting essential livelihood assets or through crisis coping strategies.

[8] NAIP, 2022.

[9] National Strategic Development Plan, 2018.

[10] Comprehensive National Agriculture Policy, 2022.

[11] Lesotho Meteorological Services. (LMS). 2021. Third National Communication to the United Nations Framework Convention on Climate Change.

[12] Idem.

[13] EM-DAT. 2022. The International Disaster Database.

[14] Consultative Group for International Agricultural Research. (CGIAR). 2018. Climate-Smart Agriculture in Lesotho.

[15]Lesotho Meteorological Services. (LMS). 2021. Third National Communication to the United Nations Framework Convention on Climate Change.

[16] Idem.

[17] Lesotho Profile: Land Degradation Neutrality, 2018.

[18] Lesotho Land Degradation Neutrality Target Setting Report, 2019.

[19] COVID-19 Socio-economic assessment, 2020.

[20] Climate Smart Agriculture Investment Plan, 2019.

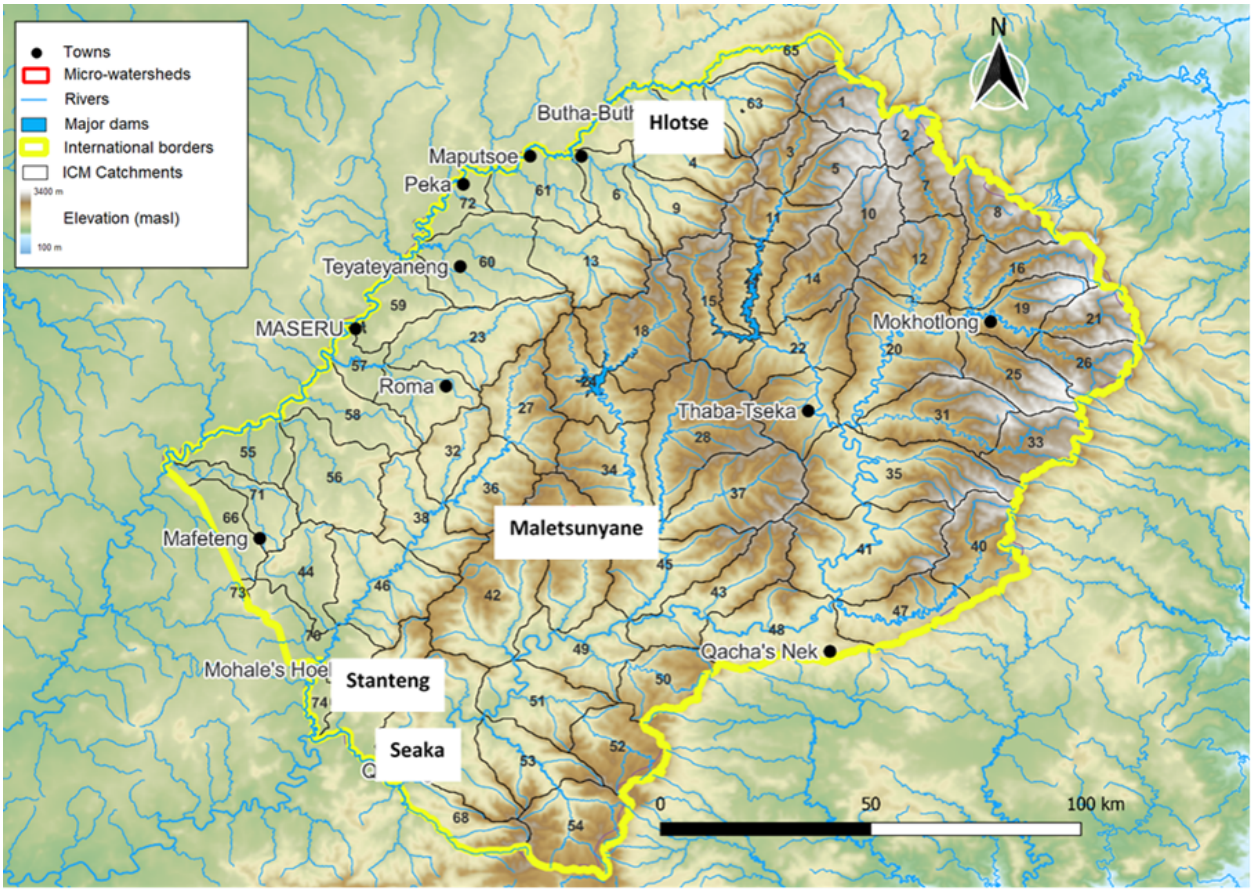
[21] World Bank 2018 study ?Unlocking the potential of Lesotho?s Private Sector: A focus on Apparel, Horticulture & ICT?.

[22] https://pubdocs.worldbank.org/en/751751616427201865/FLID-Guide-March-2021-Final.pdf

[23] https://www.fao.org/3/cb7623en/cb7623en.pdf

1b. Project Map and Coordinates

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



	Sub-catchment	Population	Size (ha)	Coordinates
1.	Hlotse (Leribe)	23,000	35,821	28? 55? 3.45? S; 28? 19? 25.22? E
2.	Maletsunyane (Maseru)	6,637	59,873	29? 50? 42.77? S; 28? 3? 0.07? E
3.	Seaka ? Lower Senqu (Quthing)	69,273	85,798	30? 19? 28.10? S; 27? 41? 52.09? E
4.	Stanteng ? Maphutseng (Mohale?s Hoek)	35,911	46,103	30? 13? 9.64? S; 27? 32? 13.23? E
Total		**134,821**	**227,595**	

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

2. Stakeholders

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

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities Yes

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

1. A wide range of stakeholders were consulted in bilateral meetings (physical and virtual), focus group discussions, field visits to communities and multi-stakeholder consultation workshops (inception and validation). The stakeholder process covered national, sub-national and community levels. The PPG team mapped out and consulted the following stakeholder groups: government agencies, development partners, private sector, financial services, women and youth groups involved in agriculture, NGOs, farmers and farmer associations, councillors and chiefs. This ensured a well-represented vertical and horizontal multi-stakeholder engagement process. The process was inclusive and attempted to leave no one behind.

2. In order to ensure early and meaningful stakeholder engagement during the project design, the project preparation team held several consultative meetings with the Director of field services and the district agricultural officers and district extension officers from the Ministry of Agriculture and Food Security (MAFS) as lead executing partner.

3. Targeted consultations with communities in the proposed project areas were conducted through focus group discussions arranged by the district agricultural officers and local authorities. These helped shape the project design to be relevant and responsive to the climate change related challenges as experienced by the farming communities.

4. The project document was validated by stakeholders in Maseru on 28 June 2022.

5. The table below presents key stakeholders and their role in project implementation. A full list of stakeholders consulted during project preparation is presented in Annex J.

Table 8. Project key stakeholders and roles

Category	Partners	Expected roles & mode of engagement
GEF Agency	Food and Agriculture Organization of the United Nations (FAO)	***GEF Implementing Agency***. To provide project cycle management services as established in the GEF Policy. Responsible for oversight, technical backstopping and supervision of project implementation to ensure compliance with the approved project document and GEF rules and requirements.

Category	Partners	Expected roles & mode of engagement
Government Institutions	Ministry of Agriculture and Food Security (MAFS)	***Lead Government Partner.*** To provide strategic leadership to the implementation of the project, working closely with other government ministries and partners. MAFS will nominate the Chair of the Project Steering Committee; facilitate multi-stakeholder dialogues at national level; and ensure delivery of technical and co-financing inputs to the project as well as its coordination and coherence with relevant ongoing programs. MAFS has been proposed to serve as operational partner (OP) in the implementation and management of the project. A fiduciary assessment of MAFS is underway. As OP, MAFS will host a project management unit (PMU) whose key roles will include: (i) Project planning, coordination, management; (ii) Project monitoring, evaluation, and reporting; (iii) Risk management; (iv) Procurement; and (v) Financial Management.
	Ministry of Development Planning (MDP)	***Government Partner.*** MDP will facilitate mainstreaming of climate-smart agriculture priorities into planning and public investment frameworks and will participate in the Project Steering Committee (PSC).
	Ministry of Forestry, Range and Soil Conservation (MFRSC)	***Government Partner.*** MFRSC will be part of technical teams to provide technical support to implementation of components 1 and 2, and engagement in capacity development subcomponents. Member of the PSC.
	Ministry of Water (MoW)	***Government Partner.*** MoW will provide technical inputs and guidance, particularly in the implementation of components 1 and 2. MoW will be part of inter-ministerial technical teams that will be targeted by capacity development programs planned and deliver technical support to implement component 2. MoW will participate in the PSC.
	Ministry of Local Government and Chieftainship Affairs (MoLGCA)	***Government Partner.*** Member of District Planning Units and PSC.

Category	Partners	Expected roles & mode of engagement
	Ministry of Small Business Development, Cooperatives and Marketing	***Government Partner.*** To provide guidance and technical support to the implementation of component 3.
	Ministry of Tourism, Environment and Culture	***Government Partner.*** MTEC, as the GEF focal point, will support project oversight, and facilitate linkages with the overall GEF program in Lesotho. In particular, MTEC will supervise implementation of component 2, to ensure compliance with environmental regulations and standards.
	Ministry of Energy, Meteorology and Water Affairs	***Government Partner.*** Support implementation of components 1 and 2, with participation in the District Planning Units and PSC. Link to the GEF-funded ?Strengthening Climate Services in Lesotho for Climate Resilient Development and Adaptation to Climate Change (EWS II)? ? climate advisory services.
	The Ministry of Gender, Youth and Sports through the Department of Gender	***Government Partner.*** 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. The Department of Gender will be part of technical teams providing support to the project, at national level (component 1) and through District Planning Units (components 2-4). The Department of Gender will also be represented in the Project Steering Committee.
NGOs and CBOs	Lesotho National Farmers Union (LENAFU)	LENAFU is a coalition of district farmer associations (10 districts), national commodity associations and cooperatives. LENAFU?s mission is to empower and organize farmers for profitable agriculture and effective policy engagement. LENAFU was consulted during project preparation and will be engaged in implementation through the Project Steering Committee, Multi-Stakeholder Platforms (MSPs) and Project Implementation Forums. Members of LENAFU will benefit as well from knowledge and capacity development through Common Interest Groups.

Category	Partners	Expected roles & mode of engagement
	Women and Youth Groups: Basali Khoebong, Farm Girls, Farmers in Heels, Private Hatchery, Lai-Thekhe Poultry.	To be engaged through MSPs and Common Interest Groups. The project will seek to improve women and youth?s networking skills, strengthen their advocacy and negotiation capacity for better representation decision making spaces concerning land, financial and market access issues.
	Lesotho National Council Of Women (LNCW)	LNCW is a coalition of local women?s groups seeking to combat poverty and to empower women, girls and vulnerable people. At the national level, LNCW engages in advocacy to promote women?s issues and to support legislation to increase opportunities and services for women and at the grassroots level, they work to provide education and training opportunities for women, children, and vulnerable youth. LNCW will be engaged in the project through the PSC, Project Implementation Forums and
	Care for Basotho Association	Care for Basotho Association aims to reduce hunger and improve the lives of rural Basotho by supporting sustainable agriculture, linkages to financial institutions and income generating activities. Care for Basotho will be engaged in the project through capacity building activities, MSPs and potentially as a service provider for delivery of specific outputs under components 2 and 3.
	Rural Self-Help Development Association (RSDA)	RSDA is an NGO that provides capacity building and advocacy support for sustainable climate smart agriculture, value addition and marketing of farmer?s products. RSDA will be engaged in the project through capacity building activities, MSPs and potentially as a service provider for delivery of specific outputs under components 2 and 3.
	World Vision ? Lesotho	World Vision Lesotho?s work consists of a number of programs ? one of which is Livelihoods and Resilience aiming to increase household income, improve food security and improving on-farm and off-farm management of natural resources. World Vision Lesotho will be engaged in the project through capacity building activities, MSPs and potentially as a service provider for delivery of specific outputs under components 2 and 3.

Category	Partners	Expected roles & mode of engagement
Private sector	MedCash Suppliers, Basotho Irrigation, Lesotho Seeds, Sefali Suppliers, Maluti Fresh Produce Market; Pick and Pay Maseru; Upper Qeme Fresh Produce Market;	The private sector engagement will be facilitated mainly through the structured Multi-stakeholder Platforms, linking common interest groups with input and output markets. The private sector will also participate in capacity building activities.
	Vodacom Lesotho (VCL) Financial Services	VCL to support the development of online marketing for agricultural products (Marakeng App); farmer registry databases and suitable financial services (e.g. pay-as-you-go; Mpesa Mobile Money).
	Smallholder farmers and communities in the proposed project sub-catchments: Upper Moroeroe, Ha Khabo, Maletsunyane, Stanteng, Seaka	Main target beneficiaries of the project. Smallholder farmers and communities were engaged in the project formulation process with field consultations conducted by the PPG team in all of the proposed project sites. The smallholder farmers and communities will be engaged in implementation through local institutional structures as described in section 6 - institutional arrangements.
Development partners	EU-Integrated Watershed Management Program (EU-ICM)	Collaboration with the EU-ICM program has been established, with several discussions during the PPG process. Collaboration with the program will be at various levels ? PSC to implementation.

Category	Partners	Expected roles & mode of engagement
	WB-IFAD ?Smallholder Agriculture Development Project II? (SADP II), IFAD-GEF-7 Regeneration of Livelihoods and Landscapes (ROLL) Project; UNEP- GEF-6 Strengthening Climate Services in Lesotho for Climate Resilient Development and Adaptation to Climate Change (EWS II).	Key knowledge partners, with collaboration through the PSC and project implementation units.

6. Additional stakeholders will be engaged during project implementation, as opportunities arise. The project management unit will provide periodic updates through project progress reports including the annual project implementation reviews (PIRs).

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Please see above and Annex J.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; No

Co-financier;

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

1. Lesotho?s history and contemporary reality of migrant labour (migration of men to work in South Africa) resulted in many women being de facto household heads, and playing a key role in agriculture. Nevertheless, gender gaps in economic participation and opportunities have persisted due to patriarchal norms that cut across all levels and areas of Basotho society, relegating women primarily to the household. Consequently, women?s capacity to participate in decision-making processes outside the household, their power in relationships, and their ability to participate economically are limited. In addition, the balance between customary and state law is unbalanced, and contradictions between the two legal frameworks often result in customary law taking primacy, with the application of customary laws generally more discriminatory against women in all spheres of life including resources management.

2. 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.

3. The second National Strategic Development Plan (NSDP II, 2018?2023) recognizes that maintaining momentum on gender equality and achieving inclusive development requires tackling the underlying challenges emanating from social norms and practices. The plan sets out strategic targets for women?s participation in government programs across all sectors, and emphasizes building the leadership skills of women and girls. Similarly, the Gender and Development Policy, 2018?2030, provides the overarching framework and guidelines for institutionalizing gender equality, with clear commitments across ministries and levels of government.

Gender and climate change

4. In Lesotho climate variability often result in water shortages (for livestock, human consumption, food production) fuel energy shortages, crop failure, scarcity of wild vegetables drudgery and household labour disparity. Scarcity of clean and safe water for domestic use in most areas in Lesotho is a serious climate impact. As a result, women and children are burdened with responsibilities of walking long distances in search of fuel wood, wild vegetables and water from unreliable water sources. Consequently, women lose their productive time and energy, which could have been invested in other more productive activities. Female farmers generally have limited land holdings with smaller productive capacities, and are often the first to feel the economic impacts of poor harvests (as food providers), and have greater difficulty coping with shocks to the agricultural economy caused by a changing climate.

Gender and access to productive resources

5. Women continue to face challenges to accessing land. While Lesotho has adopted several laws in the past 15 years to strengthen the ability of women to access land, strong customary practices in rural areas pose continuing challenges for women to access land.

6. Traditionally women and youth play a vital role in the use of water resources at households and homestead level, they are the ones responsible for collection of water for households and farming purposed in the homestead. Despite these roles women play a limited role in decision-making related to

water management and irrigation. Over decades through various water related projects and initiatives, men were often exclusively elected to village water committees and as water minders.

7. There is generally limited representation and empowerment of women in producer organizations unlike with men, especially in potato, grains, dairy, and wool and mohair producer groups. Very few women belong to agricultural cooperatives and when they do, very few hold leadership positions due to cultural norms and beliefs.

8. Gender gaps in women?s ownership and control of property and assets limits women?s ability to access credit to help them cope with shocks. Women continue to rely more on informal sources of finance for their economic activities, such as village savings and credit groups.

Youth in agriculture

9. Estimated at 32.8 percent[1], Lesotho has one of the highest youth unemployment rates, a situation that has worsened due to the COVID-19 pandemic.

10. Generally, youth are less represented in the agricultural sector in Lesotho. This is possibly due to youth seeking salaried employment outside of agriculture, in South Africa or urban areas in Lesotho, as agriculture is not seen as a viable business opportunity, but rather as a subsistence activity. During PPG focus group discussions (FGDs) with communities in proposed project areas, there was very low youth representation ? participants indicated that most were away in towns or in South Africa in search of employment opportunities. Participants said most youth were away from home in towns or in South Africa in search of employment opportunities. It was also reiterated that youth were not interested in agriculture. A few youth farmers represented in the FGDs indicated that they love farming and they are making reasonable income out of farming and they see potential in agriculture.

11. To address these inequalities and challenges, the following approaches will be adopted:

a) *Reinforce communication on access to land*. The proposed project will collaborate with the Lesotho Millennium Development Agency (LMDA) project and other ongoing projects and work with women?s advocacy organizations to raise the awareness of communities about the legal rights of women to land through outreach campaigns, and to encourage women to exercise those rights.

b) *Build on innovative initiatives in the country around gender sensitive livelihoods and food systems*. The project will employ the Gender in Action Learning System (GALS) (developed for Oxfam Novib) a participatory, community-driven method aimed at empowering men and women as economic, social and political actors in value chains. The LMDA project on horticultural value chains is employing a similar approach in Lesotho, it is therefore recommended that the LDCF project uses the same approach for collaboration and optimum use of resources. The project will further collaborate with other partners such as Rural Self-help Development Association (RSDA) a non-profit organization that works with farmer groups to build their marketing capacity. Recently, RSDA through one of its projects in Lesotho implemented GALS for inclusiveness agricultural food systems, to address some gender imbalance and inclusive decision-making in farming and household activities.

c) *Promote stakeholder platforms including virtual villages*. The project will harness the advantage presented by the broad cellular coverage across the country, and explore the use mobile phones as a platform for sharing and delivering of extension services. Currently, there are interactive farmer radio programs in a number of community radio stations, informal WhatsApp/Telegram/Twitter/Facebook groups (mainly youth and women groups) for horticultural, small livestock agribusinesses, and the few women and youth that operate these businesses at a commercial scale are typically connected with other youth/women across the country and beyond, it is imperative to facilitate a formal platform. Though these groups are not formal, they have been able to solicit resources and facilitate trainings, crowd funding for procurement of inputs. There is therefore need to facilitate establishment of formal

fora at local and national levels for agri- entrepreneurs (especially women and youth) in commercial agriculture to meet, network, and advocate for their interests.?

The project will strengthen existing platforms that could assist the local farming community and the extension service providers to collaborate and share information related to various facets of farming. This could include extension services such as weather-related information, farming tools and techniques, inputs, fertilizers, irrigation, market information, record keeping and farm financial management.

d) *Capacity building*. Provide training, coaching, and mentoring to beneficiaries involved in the target value chains, particularly women and youth. The technical assistance offered will enhance adaptive capacity ensuring that agribusiness enterprises consider current and future climate impacts. To address the gender gap in agricultural value chains, the project will support specific training for women and youth leaders of producer organizations to promote their increased participation in decision-making, as well as their economic and social empowerment.

e) *Access to financial services*. Facilitate dialogue with financial institutions especially, mobile money service providers (e.g mpesa and ecocash) to develop financing instruments better tailored to the cash-flow needs of smallholder farmers and SMEs especially women and youth who often have limited access to financial resources.

12. The project gender action plan is presented in Annex L.

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[1] Government of Lesotho, 2022.

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 Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

1. The project will address the national priority (and GEF requirement) regarding development and engagement of the private sector, understanding that resilient agri-food systems and livelihoods will not happen without significant private sector contributions. Various categories of the private sector were mapped and consulted during the project preparation phase[1]: producers and their

associations (Lesotho National Farmers Union (LENAFU), women farming entrepreneur groups (Women on Heels, Farm Girls); input dealers and service providers (MedCash Suppliers, Lehakoe Seed Company, Basotho Irrigation, Lesotho Seeds, Sefali Suppliers); fresh produce retailers (Pick n Pay); Aggregators (Maluti Fresh Produce Market[2]); and financial services institutions (Vodacom Lesotho (VCL) Financial Services, Lesotho Postbank).

2. Engagement of the financial services institutions is particularly crucial, given the importance of access to finance for smallholder investments in climate-smart agricultural practices and technologies. Lesotho Postbank recently launched an agricultural financing department to expand lending to formally registered agribusinesses. The Bank is developing agri-finance lending products that will include more flexible loan repayment terms and collateral requirements. Lesotho Postbank has been invited to participate in the project through the multi-stakeholder public-private partnership platform to be established at district level ? to disseminate information about agri-finance opportunities for smallholder farmers and SMEs and identify further issues to be addressed.

3. Similarly, Vodacom Lesotho (VCL) has launched in 2021 financial services aiming to expand financial inclusion through cascaded mobile money facility to rural and mostly unbanked communities. The technology enables person to person and person to business transactions, where customers safely and securely send, receive and save money virtually. In addition VCL is developing ?Marakeng App, an initiative to overcome market constraints and open up virtual markets for smallholder farmers.

4. In line with the GEF Private Sector Strategy[3], the private sector will be involved in the project through the following mechanisms and entry points:

a) Multi-stakeholder platforms for policy dialogue and public-private sector partnership (PPP) for investments, that will be established in the project districts and linked to the national level Public-Private Dialogue High-Level Forum supported under the Market Driven Irrigation Horticulture Program (MDIH).

b) Capacity development through Farmer Field Schools, Common Interest Groups and Digital Knowledge Platforms.

c) Finance ? promoting models such as the Savings and Internal Lending Communities (SILC) and facilitating access to other finance mechanisms e.g. Lesotho Post Bank, Vodacom Financial Services.

5. In addition, the project will partner with SADP II and MDIH, to leverage private sector networks established under these programs.

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[1] See Section 2: stakeholders and Annex J.

[2] Maluti Fresh Produce Market was launched in October 2021 by Lesotho National Development Corporation. Centrally located in the outskirts of Maseru as an aggregation fruits, vegetables and other horticultural products site, the market was established as a formal professionally run entity for marketing and product handling facility for farmers and distributors throughout the country. It accessible to an array of buyers, major stores, fruits and vegetable specialists, street vendors, hotels, restaurants, caterers and households.

[3] https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF_C.58_05_GEFs%20Private%20Sector%20Engagement%20Strategy_0.pdf

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

1. The risks and mitigation actions presented in the table below were identified during project preparation. These risks will need to be monitored, addressed, and mitigated by the Project Management Unit (PMU) on an ongoing basis, and critically, they need to be updated as new risks to and from the project unfold during project implementation. An environmental and social risk and climate risk identification was undertaken during PPG.

Risk	Risk Rating	Mitigation
Political Risk: Changes in political circumstances and government priorities	Moderate	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. Lesotho is characterized by an unstable political environment and Lesotho?s key governance indicators have been declining over time, particularly around political stability, and government effectiveness. The governing coalition remains fragile with considerable possibility of repeated political changes during project implementation. The country is also going for general election in October 2022, and there is a likelihood of another coalition government and a change at ministerial and permanent secretary levels resulting in low institutional memory about the project and political will to support the project by new decision makers. These risks may be partly mitigated by the consistent presence of technical staff within the Ministry of Agriculture and Food Security (MAFS) and the project management unit (PMU). The PMU will report to the Director of Planning within MAFS, where there are not as frequent changes. To address the high turnover of Ministers and Principal Secretaries, FAO and the PMU will support communication and feedback provided by the technical team to the new appointees to ensure the project stays on track. Additionally the project will have a steering committee at national level to ensure good governance (oversight) of the project from inception to completion.
Limited support from local authorities	Moderate	There is a moderate inherent risk around natural resources management especially in the rangelands in Lesotho, where there are no clear boundaries and distinction of roles between the roles of traditional local chiefs and the democratically elected local community councilors. This risk will continually be addressed through engagement of both parties throughout the project. The project will adopt the already existing local and ICM governance structures in the project areas. Having support and buy-in of these local authorities and collaborating with existing programs and projects in the project areas is critical.

Risk	Risk Rating	Mitigation
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 in 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. The proposed project will build ownership and institutional capacity among the technical staff from relevant government departments and with farmers in key areas of project activity as the basis for ensuring the sustainability of project investments. The capacity of technical officers to continue support for farmers and enterprises beyond project completion will be strengthened through training of extension officers, a strong emphasis on the farmer field schools approach, and the use of national organizations as service providers wherever feasible. Further, similar capacity building efforts of area technical officers coupled with grassroots support to existing and established community based groups will ensure a more localized approach to influencing behavioural change that is more acceptable and therefore, sustainable over the longer term. Mentoring and coaching will be critical for sustainability beyond the project?s duration.
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 and building the capacity of the execution team to monitor this risk(s). FAO Guidelines for Irrigation Investment Projects to be applied during implementation. The project will engage irrigation specialists from MAFS for designing and construction of irrigation infrastructure and will further prioritise the conservation and restoration of the rehabilitation of existing irrigation schemes; the development of several small-scale irrigation schemes rather than one large system; the use of sprinkler or drip irrigation; and the combined use of surface water and groundwater. All irrigation infrastructure will be in line with the national irrigation policy and with the ICW framework. Activities under the proposed project will be screened against the FAO?s Framework for Environmental and Social Management. The project will develop and implement an environmental and social management plan (ESMP) to ensure that interventions are environmentally and socially inclusive and sustainable ? with the development of the watershed management plan which will specify irrigation interventions proposed.

Risk	Risk Rating	Mitigation
Climate change and variability: 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. The proposed project will significantly contribute to climate co-benefits by promoting a range of integrated water management and agricultural technologies/agronomic practices that will: strengthen resilience and the adaptation capacity of farming systems in the project areas. The project will strengthen provision of agro-climatological information to farmers (output 1.1.3).
Social risks: Use of communal resources	Low	The project is expected to have significant positive effects on households, especially those engaged in smallholder farming, and more specifically on the marginalised groups (women, elderly and children in these households) who disproportionately bear the burden of food and nutritional insecurity. Generally, activities under this project will promote adaptive capacity and resilience of smallholder farmers to climate variability and extreme climatic events, improve productivity and improve household income. Though the proposed activities do not anticipate any land acquisition or physically displace people, however the proposed activities may require restriction of access and regulated use of natural resources due to communal land tenure system that allows for communal grazing on rangelands. Restricted use of communal resources might bring some social tensions and this will be mitigated through extensive and ongoing inclusive consultations with the primary resource from project formulation to completion. The project will also adopt the already existing traditional structures and those established under the ICM project.

Risk	Risk Rating	Mitigation
COVID-19: 1. Risk to co-financing. There is a risk that with priorities of the Government changing, part of the co-financing may not materialize. 2. Unavailability of technical expertise and capacity and engagement with project beneficiaries.	Medium	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 implementation. 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.

Section B: Environmental and Social risks <u>from the project</u>

An environmental and social risk screening and identification was conducted during PPG. The proposed project has been classified as of moderate risk. The table below presents key risks and proposed mitigation measures. The risk rating will be reviewed periodically throughout the project life cycle to ensure that it continues to accurately reflect the level of risk that the project presents.

Applicable standard	Identified risk	Risk classification	Mitigation measures	Responsibility
Biodiversity conservation and the sustainable management of natural resources	Poor natural resource management practices	Low	Proposed activities promote inclusive and sustainable use and management of ecosystems and responsible governance of resources.	PMU, farmers, local authorities

Applicable standard	Identified risk	Risk classification	Mitigation measures	Responsibility
Resource efficiency and pollution prevention & management	There is likelihood of use of highly hazardous pesticides and fertilizers by farmers and will potentially result in environmental pollution.	Moderate	The project will promote IPM through FFS (part of the component 2) and adopt the International Code of Conduct for the sustainable use and management of fertilizers (FAO, 2019d) to avoid adverse environmental impacts and economic losses to farmers. Refresher courses will be conducted for extension officers in MAFS who are already familiar with the World Bank?s and IFAD?s social and environmental safeguards policies and the social and environmental standards.	PMU, Farmers
Decent work	Poor working conditions	Low	The project will comply with the Lesotho code in terms of working conditions and prohibition of child and forced labour.	PMU
Community health, safety and security	Exclusion of marginalised groups	Low	The proposed activities contribute to economic growth, resilience and strengthening of value chains, towards a more sustainable and resilient communities. The potential risk of exclusion of vulnerable groups from fully participating/benefiting from the project will be addressed through the youth and gender action plan that incorporates specific measures to ensure inclusion these groups.	PMU, MAFS
Gender equality and prevention of gender-based violence	Inherent gender-based violence	Low	The gender action plan includes sensitivity and appropriate measures to address this risk. The project will further adopt GALS approach for gender transformation and empowerment.	PMU, FAO, Department of Gender, local authorities

Applicable standard	Identified risk	Risk classification	Mitigation measures	Responsibility
Land tenure, displacement and resettlement	The project will emphasise on increasing enforcement and protection of rangelands and improved land use management and these could result in temporary restricted access and use of rangelands for grazing.	Low	The project will not result in any physical displacement or resettlement.	PMU, FAO
Indigenous peoples	No indigenous communities in Lesotho.	Low	There are no groups in Lesotho meeting the criteria and definition of indigenous people.	PMU
Stakeholder engagement, information disclosure, and grievance, conflict resolution and accountability mechanisms	Lack of stakeholder engagement and participation	Moderate	A Stakeholder Engagement Plan was prepared during project preparation and the project team conducted several inclusive consultations with various stakeholders taking into account feedback from stakeholders to inform project design. During implementation the PMU will continue to engage in meaningful and inclusive consultations with all stakeholders paying particular attention to the marginalized, vulnerable and disadvantaged groups.	PMU, FAO, local authorities, common interest groups

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

1. At the funding level, the **Food and Agriculture Organization of the United Nations (FAO)** will be the GEF Implementing Agency, and as such, will provide project cycle management services as established in the GEF Policy. FAO will be responsible for providing oversight, technical backstopping and supervision of project implementation to ensure that the project is being carried out in accordance with agreed standards and requirements. Technical backstopping will be provided by FAO in coordination with the National Project Steering Committee. As GEF Implementing Agency, FAO will:

? Administer funds from GEF in accordance with the rules and procedures of FAO;

? Oversee project implementation in accordance with the project document, work plans, budgets, and the rules and procedures of FAO;

? Provide technical guidance to ensure that appropriate technical quality is applied to all activities;

? Conduct at least one supervision mission per year; and

? Report to the GEF Secretariat and the GEF Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

2. At national level, the **Ministry of Agriculture and Food Security (MAFS)** will be the key partner, providing strategic leadership to the implementation of the project. MAFS will ensure coordination with line ministries and departments, executing agencies, local non-governmental organizations (NGOs) and civil society groups, the private sector and co-financing partners.

3. The implementation set-up depicted in Figure 12 below builds on the institutional arrangements established under the ongoing EU-funded Integrated Catchment Management programme (EU-ICM). It shows the main organizations at the three levels of the project: national, district and community. In the middle column is the project implementation setup, leading to the watershed planning outputs on the right-hand side.

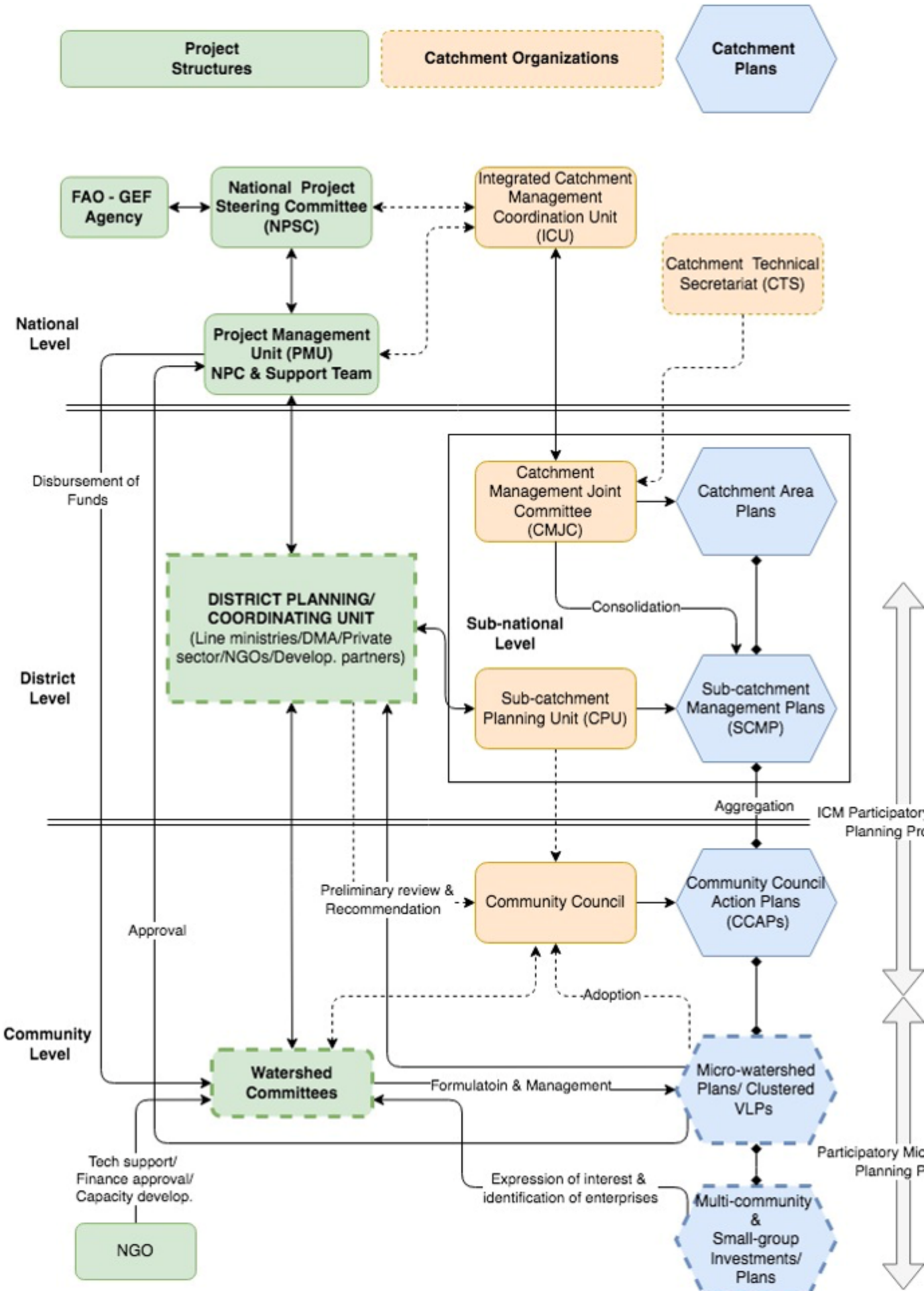

Project Structures
Catchment Organizations
Catchment Plans
FAO - GEF Agency
National Project Steering Committee (NPSC)
Integrated Catchment Management Coordination Unit (ICU)
Catchment Technical Secretariat (CTS)
National Level
Project Management Unit (PMU) NPC & Support Team
Disbursement of Funds
Catchment Management Joint Committee (CMJC)
Catchment Area Plans
DISTRICT PLANNING/ COORDINATING UNIT (Line ministries/DMA/Private sector/NGOs/Develop. partners)
Consolidation
Sub-national Level
District Level
Sub-catchment Planning Unit (CPU)
Sub-catchment Management Plans (SCMP)
Aggregation
ICM Participatory Planning Pro
Preliminary review & Recommendation
Community Council
Community Council Action Plans (CCAPs)
Approval
Adoption
Community Level
Watershed Committees
Formulatoin & Management
Micro-watershed Plans/ Clustered VLPs
Participatory Mic Planning P
Tech support/ Finance approval/ Capacity develop.
Expression of interest & identification of enterprises
Multi-community & Small-group Investments/ Plans
NGO

Figure 12: Project institutional setup aligned to catchment planning outputs

Table 9: Description of institutional and implementation arrangements (incl. EU-ICM)

Coordination with relevant GEF-financed projects

1. The project will be coordinated with relevant ongoing initiatives through the Project Steering Committee and District Planning Units.

Table 10: Relevant GEF-financed projects

Institution	*Composition*	*Functions*
National Level		
National Project Steering Committee (PSC)	? Ministry of Agriculture and Food Security (MAFS) (Directorates: Crops, Livestock, Planning & Policy Analysis, Agri. Research, Nutrition, Marketing, Department of Field Services); ? Ministry of Forestry, Range and Soil Conservation (MFRSC), ? Ministry of Local Government and Chieftainship (MLGC); ? Ministry of Energy and Meteorology (MEM); ? Ministry of Water (Department of Water Affairs, Water Commission) ? Ministry of Environment, Tourism and Culture (Department of Environment); ? Disaster Management Authority (DMA); ? FAO; ? Private Sector Rep. (Lesotho Chamber of Commerce and Industry); ? NGOs; ? National Project Coordinator (NPC) ? Secretariat ? EU-ICM Program ? IFAD ? UNDP ? WB	? Provides good governance (oversight) of the project from start to finish without getting involved in its day-to-day operations; ? Ensures that the project is implemented in line with the approved project document; ? Reviews and endorses all Annual Work Plans and Budgets of the project; ? Reviews project progress and achievement of planned results as presented in six-monthly Project Progress Reports, Project Implementation Reviews (PIRs) and Financial Reports; ? Provides advice on issues and problems arising from project implementation, submitted for consideration by the Project Management Unit or by various stakeholders; ? Provides inputs to the mid-term and final evaluations, review findings and provide comments; ? Facilitates dissemination and integration of project outcomes into national policies and programmes as appropriate; ? Facilitates collaboration amongst stakeholders and ensure the timely availability of co-financing.

Institution	*Composition*	*Functions*
Project Management Unit (PMU)	PMU comprises the following competencies: ? National Project Coordinator ? District Technical Coordinators ? Administration and Finance Officer ? Procurement Officer ? Stakeholder and Gender Specialist ? M & E Specialist ? Communication and Visibility Specialist ? Community Mobilisers	? Ensures effective and efficient day-to-day project operations; ? Develops project -level annual workplans, budget and procurement plans with partners; ? Prepares agenda and documentation of PSC meetings, ? Prepares for approval, financial plans, Terms of References (TORs), and contracts; ? Prepares project progress reports and achievement of planned results as presented in six-monthly Project Progress Reports, Project Implementation Reviews (PIRs). ? Monitors project implementation and participates in periodic reviews and project evaluations, mid and terminal. ? Conducts training needs assessments and facilitates training and capacity developments
Integrated Catchment Management Coordination Unit (ICU) ? EU-ICM funded	? Project Coordinator ? Deputy Coordinator ? M & E Specialist ? Decentralization Specialist	? Technical coordination; ? Ensure collaboration and alignment between on-going ICM activities in the pilot sub-catchments and the project ? Expert support to the formulation of Sub-catchment and council annual action plans to Community Councils.
District Level		

Institution	*Composition*	*Functions*
District Planning/Coordinating Unit (DPU) ? Operational [District Planning Unit (DPU), the District Development Coordination Committee (DDCC), and the District Planning Office (DPO) are responsible for the planning process at the district level].	? Ministry of Agriculture and Food Security (MAFS) ? District Agricultural Officer (DAO) and District Extension Office (DEO) supported by experts in Crops Livestock, nutrition, extension at district levels. ? Ministry of Forestry, Range and Soil Conservation(MFRSC) - District Coordination Office supported by experts in forestry, Soil and water conservation at the district level; ? Ministry of Local Government and Chieftainship (MLGC); ? Ministry of Energy, Meteorology and Water Affairs (MEMWA); ? Department of Environment; ? Disaster Management Authority (DMA); ? FAO - District Technical Coordinators; ? Private Sector Representatives; and NGOs; ? UNDP, IFAD and other partner funded initiatives.	? The already existing District Planning Units facilitate the bottom-up planning approach with focus on ICM. ? The district structures will be consulted and included in day-to-day activities of the project. They will provide advisory and technical support to implementation. ? The district level protocols for implementation will be made in consultation with the district authorities and community based organizations at the local level. More specifically, the DPU shall fulfil the following roles: ? Participate in sensitizing and mobilizing local leaders, wards and villages; ? Support participatory planning processes and assisting communities during the Community Council Action Plan (CCAP) formulation; ? Technical back-stopping for project implementation; ? Provision of technical implementation support to communities; ? Consolidate community requirements from micro-watershed plans; ? Supervise the works conducted by the community; ? Fulfil reporting responsibilities towards the PMU; ? Monitor and ensure compliance to the implementation of community projects; ? Review micro-watershed plans and make recommendations to PMU; ? Ensure consistency between the Project activities and local government plans; ? Ensure compliance with environmental and social safeguards requirements.

Institution	*Composition*	*Functions*
Project Implementation Forum	Formed at district level comprising: ? Principal Chiefs; ? Community Council members and Council Secretary; ? District Coordinator (MFLR) and other staff; ? District Agricultural Officer and other MAFS staff; ? Local Government (Council Secretariat), ? Home Affairs (Livestock Registration); ? Common interest Groups (CiGs); ? Representatives of grazing association committee; and ? Project management unit. ?	Provides feedback, interaction and exchange of views and ideas in a robust manner.
Community Level		
Community Council	Constituted by the Chiefs and elected community representatives	? The annual action planning will be a collaborative effort overseen by the community councils and coordinated by selected service provider. The intensive community participation process will draw in traditional authorities, community formations (e.g. grazing associations) and local businesses. Community Council Action Plans include activities in relation to economic planning, grazing management, natural resource management, pollution and environmental management, water supply among others. ? They will demonstrate how measures contribute to the objectives of the Catchment Area Plans and how they are linked to action plans of other Sub-Catchments in the main Catchment. ? The councils that are part of a given sub-catchment will jointly produce annual action plans for the financing, implementation and monitoring of ICM measures in their areas of jurisdiction.

Institution	*Composition*	*Functions*
Watershed Development Committees (WDC)	The Watershed Development Committees shall be made up of a Chairperson, Vice Chairperson, Treasurer, Financial Secretary, Secretary, Assistant Secretary, PRO and Auditor. Membership of the WDC are elected community members and representatives of Common Interest Groups. Female community members are encouraged to be well represented. This must be standard in all communities embarking on micro-watershed project implementation.	The watershed committee shall be responsible for the facilitation, formulation, implementation and management of the micro-watershed plans (MWP)/clustered village level pans (VLPs). The specific responsibility of the WDCs are highlighted below: ? Deepen sensitisation and mobilization of the entire community members; ? Formulation of micro-watershed plans; ? Submit and defend plans to the DPU for preliminary review and recommendation; ? Align plans with Community Council priorities and seek adoption of plans by Council; ? Submission of plans to the PMU for appraisal and validation; ? Mobilize community contribution in term of labour, materials and funds for project implementation; ? Procure needed goods/services projects, through a Procurement Sub-Committee; ? Maintain financial records; ? Collect and collate information and data requirement at local level; ? Conduct monthly review meeting of project activities; ? Submit and display required MWPs/clustered VLPs progress reports (monthly, quarterly etc.); ? Promote and disseminate information on the LDCF project; ? Ensure implementation of environmental mitigation measures; ? Formulate Operations and Maintenance Plan and ensure appropriate resources are mobilized.
NGOs	NGOs	? Local NGOs will assist with community mobilization and facilitation support to the WDC and DPU; ? Provide technical and capacity building support to the watershed committees.

GEF-7 Regeneration of Livelihoods and Landscapes (ROLL) Project, with IFAD.	ROLL 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 ROLL. ROLL project team will be engaged in the LDCF project, as a knowledge partner, through the district coordination units.
GEF-6 Strengthening Climate Services in Lesotho for Climate Resilient Development and Adaptation to Climate Change (EWS II), UNEP.	EWS II is: (i) establishing infrastructure and capacity to enable functional early warning system (EWS); (ii) creating 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.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

The project is in alignment with and contributes to the following national priorities and targets:

Table11: Consistency with national priorities

National Adaptation Programme of Action (NAPA - 2007)	Among 11 priorities identified in the NAPA, the project will contribute to the following: ? Promoting sustainable crop-based livelihood systems in Foothills, Lowlands and the Senqu River Valley; ? Capacity building and policy reform to integrate climate change in sectoral development plans; ? 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?.
National Climate Change Policy (NCCP 2017-2027)	The project is directly aligned with key policy priorities identified in the NCCP, namely: ? Enhance the resilience of water resources including promoting integrated catchment management, ensuring access, supply and sanitation; ? Promote climate-smart agriculture and food security systems.

Paris Agreement Nationally Determined Contribution (2017)	Lesotho?s NDC adaptation needs and actions have been formulated taking into account NAPA priorities, and past and ongoing programmes and projects. The proposed project in line with a number of these adaptation actions including: ? Build adaptation capacity in climate resilient agronomic practices for smallholder farmers; ? Implement conservation agriculture and agroforestry practices; ? Promote the growing of drought-tolerant and heat-tolerant crop varieties and hardy livestock; ? Establish a national integrated water resource management framework that incorporates district and community-based catchment management; ? Diversify livestock; improve range management; increase access to drought resistant crops and livestock feeds; adopt better soil management practices.
National Strategic Development Plan II (NSDP II 2018/19 ? 2022/23)	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.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

1. livelihoods in Lesotho. There are a number of important ongoing programs and projects generating important knowledge and innovations are not being well captured and/or shared, indicating absence of and weaknesses in existing knowledge management systems.

2. A detailed knowledge management system (KMS) and communication strategy will be developed during the first 6 months of the project taking into consideration knowledge and communication platforms and materials prepared under related projects (e.g. EU ICM, FAO, etc.). The plan will be reviewed and refined periodically to meet the objectives of the Project based on feedback from stakeholders and target audiences (both internal and external to the project).

3. The development of the knowledge management and communication strategy will also take into account needs of project stakeholders, with special attention to key messages and communication channels towards the empowerment of women and youth.

4. The process and elements of the knowledge management system will include the following:

- **Establishment and management of a web-based portal** which includes the management of existing and new data, storage and retrieval processes and mechanisms, including quality assurance and ethical aspects. This will serve as an umbrella system for all project data and information for stakeholders to access on various devises from computers to smartphones. It will incorporate the community-based management system (e.g. dashboards, portals, Apps, etc.) under output 1.1.2. For project stakeholders without access to the internet, relevant information (or based on demand) will need to be made easily accessible in the form of brochures, posters, radio broadcasts and other appropriate media, and translated to Sesotho if necessary.

- **Development and dissemination of knowledge products**. With support from the M&E Specialist and PMU team, this will involve the preparation and dissemination of synthesized information, best practices and lessons learned as key inputs to the stakeholder engagement platforms, watershed planning processes (micro-watershed, sub-catchment and national level) and knowledge sharing and communication

to community of practice (CoP) and knowledge networks, farmer networks and Virtual Villages, as well as international platforms, bilateral and multilateral agencies and NGOs (e.g. World Vision) as depicted in Figure 13 below.

5. To have a better chance of achieving effective communication and information sharing, the project will utilize available channels for sharing different kinds of information at different levels, in different languages and in different forms. The starting point would be to assess the communication channels and media used by rural communities in Lesotho. While some may have ready access to the internet, and use websites, Facebook and other web-based social media, others may be limited to the printed word, when available, and television and radio. Considerable research has been conducted into rural communications in similar contexts, and indicates that WhatsApp is growing in popularity as the preferred medium of communication. Radio is also a powerful medium in rural areas, and a regular slot on the appropriate station can provide a strong link to stakeholders in the area. Another option is the production of newsletters, which can be distributed among the villages in a printed form or posted digitally on various websites, Facebook pages or blogs.

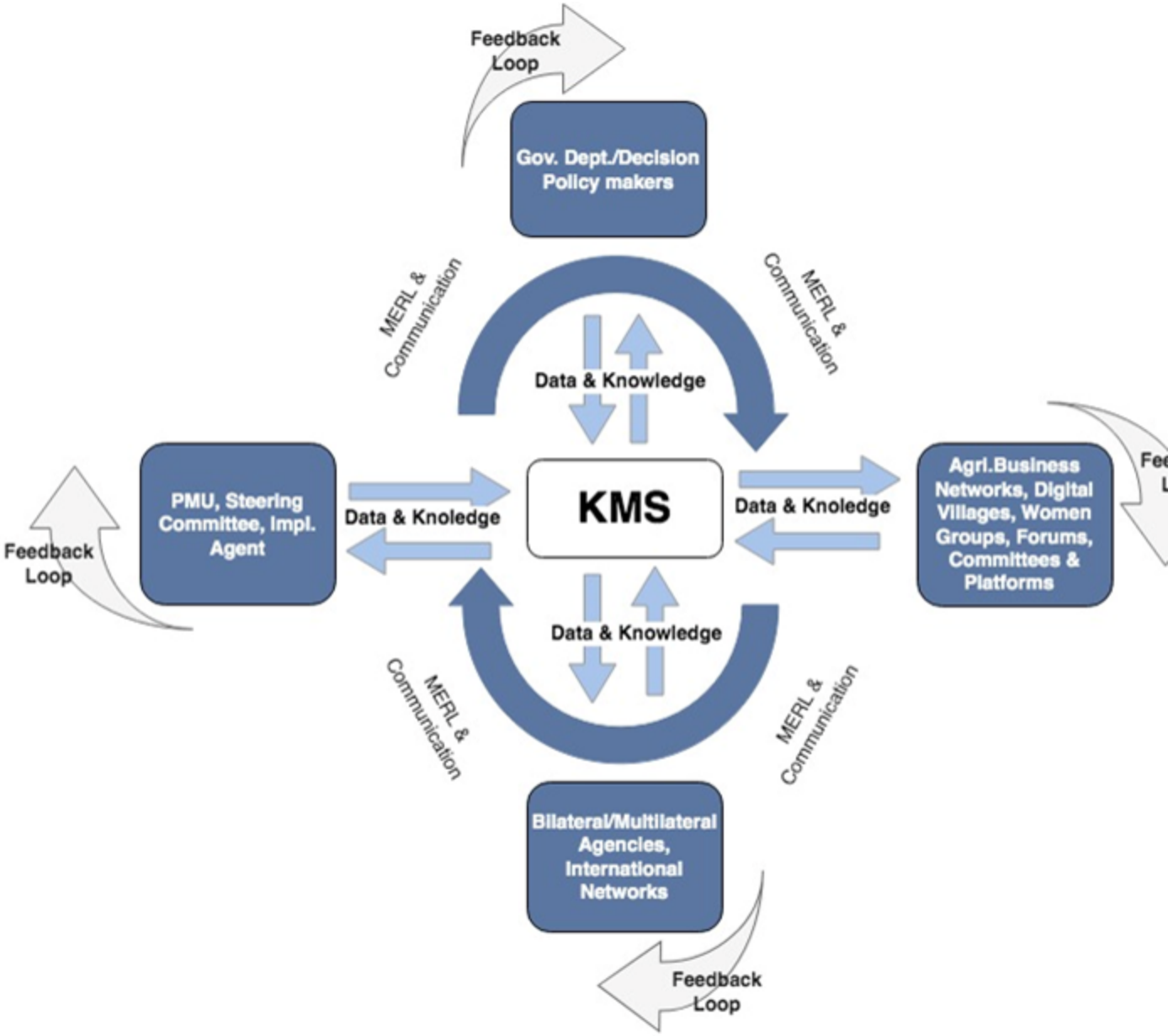


Figure 13: *Project knowledge and information flows*

The knowledge management activities are summarized in the table below.

Table 12: Summary knowledge management activities

Key deliverable	Timeline	Budget (USD)
Knowledge management and communication strategies implemented. Knowledge products shared through key platforms. Learning events with key stakeholders.	Within first 6 months of project implementation Throughout project implementation	252,701
Total Budget		**USD 252,701**

9. Monitoring and Evaluation

Describe the budgeted M and E plan

1. Project oversight will be carried out by the National Project Steering Committee (PSC) and FAO. Oversight will ensure that: (i) project outputs are produced in accordance with the project results framework and leading to the achievement of project outcomes; (ii) project outcomes are leading to the achievement of the project objective; (iii) risks are continuously identified and monitored and appropriate mitigation strategies are applied; and (iv) agreed project adaptation and socio-economic benefits are being delivered.

2. FAO will provide oversight of GEF financed activities, outputs and outcomes largely through the annual Project Implementation Reports (PIRs), periodic backstopping and supervision missions.

3. Day-to-day project monitoring will be carried out by the Project Management Unit (PMU). Project performance will be monitored using the project results matrix, including indicators (baseline and targets) and annual work plans and budgets. At inception the results matrix will be reviewed to finalize identification of: i) outputs ii) indicators; and iii) missing baseline information and targets. A detailed M&E system, which builds on the results matrix and defines specific requirements for each indicator (data collection methods, frequency, responsibilities for data collection and analysis, etc.) will also be developed during project inception by the M&E Specialist.

Table 13: Monitoring and Evaluation Plan

M&E Activity	**Responsible Parties**	**Timeframe**	**GEF Budget (USD)**
Inception Workshop	Project Management Unit (PMU).	Within two months of project document signature	12,500
Project Inception Report	PMU	Within two weeks of inception workshop	None
Monitoring system implementation and reporting	M&E Specialist	Continuous	172,800
Project Implementation Review report (PIR)	PMU	Annually in July	National Project Coordinator + M&E Specialist
Co-financing Reports	PMU	Annually	Co-financing
Mid-term Review	Organized by FAO: FAO Lesotho will be responsible to contact the Regional Evaluation Specialist (RES)	At project mid-term	45,000
Final Evaluation	The BH will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED.	To be launched 6 months before operational closure	45,000

M&E Activity	Responsible Parties	Timeframe	GEF Budget (USD)
Final Workshop	FAO Lesotho	End of the project	12,500
Terminal report	FAO Lesotho	At least three months before operational closure	7,000
Total Budget			**294,800**

4. Specific reports that will be prepared under the M&E program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) annual Project Implementation Review (PIR); (v) Technical Reports; (vi) co-financing reports; and (vii) Terminal Report. In addition, assessment of the GEF Monitoring Evaluation Tracking Tools against the baseline will be required at midterm and final project evaluation. In each of the reports a dedicated session will be included with information on gender-related progress made and results achieved, with some sex-disaggregated data and gender-sensitive lessons learned.

5. Project Inception Report. The Project Management Unit (PMU) will prepare a project inception report in consultation with project partners and FAO. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B, a detailed project monitoring plan. The draft inception report will be circulated to the PSC for review and comments before its finalization, no later than one month after project start-up.

6. Results-based Annual Work Plan and Budget (AWP/B). The draft of the first AWP/B will be prepared by the PMU in consultation with FAO and reviewed at the project Inception Workshop. The Inception Workshop (IW) inputs will be incorporated and the PMU will submit a final draft AWP/B within two weeks of the IW to the BH. For subsequent AWP/B, the PMU will organize a project progress review and planning meeting for its review. The AWP/B must be linked to the project?s Results Framework indicators so that the project?s work is contributing to the achievement of the indicators. The AWP/B should include detailed activities to be implemented to achieve the project outputs and output targets and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The AWP/B should be approved by the Project Steering Committee.

7. Project Progress Reports (PPR). PPRs will be prepared by the PMU based on the systematic monitoring of output and outcome indicators identified in the project?s Results Framework (Annex A). The purpose of the PPR is to identify constraints, problems or bottlenecks that impede timely implementation and to take appropriate remedial action in a timely manner. They will also report on projects risks and implementation of the risk mitigation plan.

8. Annual Project Implementation Review. FAO in collaboration with PMU will prepare an annual PIR covering the period July (the previous year) through June (current year) for submission to the GEF Secretariat. The PIRs will be circulated to the PSC and the GEF Operational Focal Point for information.

9. Technical Reports. Technical reports will be prepared as part of project outputs and to document and share project outcomes and lessons learned. The FAO Lead Technical Officer will be responsible for ensuring appropriate technical review and clearance of technical reports. Copies of the technical reports will be distributed to project partners and the Project Steering Committee as appropriate.

10. Co-financing Reports. The PMU will be responsible for collecting the required information and reporting on co-financing as indicated in the Project Document. The co-financing report, which covers the period 1 July through 30 June, is to be submitted on or before 31 July and will be incorporated into the annual PIR.

11. Terminal Report. Within two months before the end date of the project, and one month before the Final Evaluation, the PMU will submit to FAO, a Terminal Report. The main purpose of the Terminal Report is to give guidance at ministerial or senior government level on the policy decisions required for the follow-up of the project, and to provide the GEF with information on how the funds were utilized. The Terminal Report is accordingly a concise account of the main products, results, conclusions and recommendations of the project. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for insuring sustainability of project results.

Evaluation provisions

12. A mid-term evaluation will be undertaken at project mid-term to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs. Findings and recommendations of this evaluation will be instrumental for bringing any necessary improvement in the overall project design and execution strategy for the remaining period of the project?s term.

13. The GEF evaluation policy foresees that all medium and large size projects require a separate terminal evaluation. Such evaluation provides: i) accountability on results, processes, and performance; ii) recommendations to improve the sustainability of the results achieved and iii) lessons learned as an evidence-base for decision-making to be shared with all stakeholders (government, execution agency, other national partners, the GEF and FAO) to improve the performance of future projects.

14. The FAO Budget Holder will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date. The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED and will be responsible for quality assurance. Independent external evaluators will conduct the terminal evaluation of the project taking into account the ?GEF Guidelines for GEF Agencies in Conducting Terminal Evaluation for Full-sized Projects.? FAO Office of Evaluation (OED) will provide technical assistance throughout the evaluation process, via the OED Decentralized Evaluation Support team ? in particular, it will also give quality assurance feedback on: selection of the external evaluators, Terms of Reference of the evaluation, draft and final report. OED will be responsible for the quality assessment of the terminal evaluation report, including the GEF ratings.

15. After the completion of the terminal evaluation, the BH will be responsible to prepare the management response to the evaluation within 4 weeks and share it with national partners, GEF Operational Focal Point (OFP), OED and the FAO-GEF Coordination Unit.

Disclosure

16. The project will ensure transparency in the preparation, conduct, reporting and evaluation of its activities. This includes full disclosure of all non-confidential information, and consultation with major groups and representatives of local communities. The disclosure of information shall be ensured through posting on websites and dissemination of findings through knowledge products and events. Project reports will be broadly and freely shared, and findings and lessons learned made available.

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

1. The project will facilitate an integrated and participatory catchment management approach that fully incorporates adaptation objectives and targets, for implementation by district and local community structures in partnership with the private sector. At least 8 integrated micro-watershed management plans, and enabling gender-sensitive policies, with climate change adaptation mainstreamed will be developed and implemented.

2. Implementation of the plans will lead to 40,000 people (50% women), including smallholder farmers and agri-food SMEs with increased resilience through the adoption of innovative climate-smart land and water management and agricultural production practices and technologies and strengthened access to knowledge and technical support, finance and markets. In addition to farm-level climate smart practices and technologies, the project will support and catalyse watershed scale adaptation investments ? including community-level soil-conservation and restoration of wetlands and grazing lands to increase the resilience and productivity of the landscapes.

11. 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	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

An environmental and social risk screening and identification was conducted during PPG. The proposed project has been classified as of moderate risk. The table below presents key risks and proposed mitigation measures. The risk rating will be reviewed periodically throughout the project life cycle to ensure that it continues to accurately reflect the level of risk that the project presents.

Applicable standard	Identified risk	Risk classification	Mitigation measures	Responsibility

Applicable standard	Identified risk	Risk classification	Mitigation measures	Responsibility
Biodiversity conservation and the sustainable management of natural resources	Poor natural resource management practices	Low	Proposed activities promote inclusive and sustainable use and management of ecosystems and responsible governance of resources.	PMU, local authorities, Farmers
Resource efficiency and pollution prevention & management	There is likelihood of use of highly hazardous pesticides and fertilizers by farmers and will potentially result in environmental pollution.	Moderate	The project will promote IPM through FFS (part of the component 2) and adopt the International Code of Conduct for the sustainable use and management of fertilizers (FAO, 2019d) to avoid adverse environmental impacts and economic losses to farmers. Refresher courses will be conducted for extension officers in MAFS who are already familiar with the World Bank?s and IFAD?s social and environmental safeguards policies and the social and environmental standards.	PMU, Farmers
Decent work	Poor working conditions	Low	The project will comply with the Lesotho code in terms of working conditions and prohibition of child and forced labour.	PMU
Community health, safety and security	Exclusion of marginalised groups	Low	The proposed activities contribute to economic growth, resilience and strengthening of value chains, towards a more sustainable and resilient communities. The potential risk of exclusion of vulnerable groups from fully participating/benefiting from the project will be addressed through the youth and gender action plan that incorporates specific measures to ensure inclusion these groups.	PMU, MAFS

Applicable standard	Identified risk	Risk classification	Mitigation measures	Responsibility
Gender equality and prevention of gender-based violence	Inherent gender-based violence	Low	The gender action plan includes sensitivity and appropriate measures to address this risk. The project will further adopt GALS approach for gender transformation and empowerment.	PMU, FAO, Department of Gender, local authorities
Land tenure, displacement and resettlement	The project will emphasise on increasing enforcement and protection of rangelands and improved land use management and these could result in temporary restricted access and use of rangelands for grazing.	Low	The project will not result in any physical displacement or resettlement.	PMU, FAO
Indigenous peoples	No indigenous communities in Lesotho.	Low	There are no groups in Lesotho meeting the criteria and definition of indigenous people.	PMU
Stakeholder engagement, information disclosure, and grievance, conflict resolution and accountability mechanisms	Lack of stakeholder engagement and participation	Moderate	A Stakeholder Engagement Plan was prepared during project preparation and the project team conducted several inclusive consultations with various stakeholders taking into account feedback from stakeholders to inform project design. During implementation the PMU will continue to engage in meaningful and inclusive consultations with all stakeholders paying particular attention to the marginalized, vulnerable and disadvantaged groups.	PMU, FAO, local authorities, common interest groups

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
GEF LDCF Lesotho_FAO ES Screening Checklist_08092022	CEO Endorsement ESS	
Environmental and Social Risk Identification ? Screening Checklist	Project PIF ESS	
Risk Certification Document_Lesotho	Project PIF ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Results framework						
The project will contribute to the following Sustainable Development Goals (SDGs): SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 8 (inclusive and sustainable economic growth), SDG 13 (Climate Action), SDG 15 (Life on Land), SDG 17 (Partnerships for Goals)						
Project Objective: To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.						
Results	**Indicators**	**Baseline**	**Mid-term**	**End of Project Target**	**Means of Verification**	**Assumptions**
Objective level indicators						

Results framework						
The project will contribute to the following Sustainable Development Goals (SDGs): SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 8 (inclusive and sustainable economic growth), SDG 13 (Climate Action), SDG 15 (Life on Land), SDG 17 (Partnerships for Goals)						
Project Objective: To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.						
Results	**Indicators**	**Baseline**	**Mid-term**	**End of Project Target**	**Means of Verification**	**Assumptions**
LDCF Core indicators	a) *Core Indicator 1: Total # of direct beneficiaries (gender disaggregated)*; *b) Core indicator 2: Area of land managed for climate resilience;* *c) Core indicator 3: Total no. of policies/plans that mainstream climate resilience* d) *Core indicator 4: Total number of people trained.*	0	*1: 10,000 (50% women)* *2: 15,000 hectares* *3: 8 integrated micro-watershed management plans with climate resilience mainstreamed.* *4: 10,000 (50% women)*	*1: 40,000 (50% women)* *2 : 15,000 hectares* *3: 8 integrated micro-watershed management plans with climate resilience mainstreamed.* *4: 20,000 (50% women)*	Monitoring systems Project supervision reports	? Commitment at all levels of Government (National, District) and support (including co-financing) to the objectives of the project. ? Local communities are actively engaged in the catchment management planning. ? The project successfully demonstrates and communicates adaptation and socio-economic benefits, incentivizing stakeholders to adopt and invest in adaptation practices.

Results framework						
The project will contribute to the following Sustainable Development Goals (SDGs): SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 8 (inclusive and sustainable economic growth), SDG 13 (Climate Action), SDG 15 (Life on Land), SDG 17 (Partnerships for Goals)						
Project Objective: To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.						
Results	**Indicators**	**Baseline**	**Mid-term**	**End of Project Target**	**Means of Verification**	**Assumptions**
Component 1: Strengthening policy and institutional capacities						
Outcome 1.1: Strengthened gender-sensitive policies and planning frameworks enable investments in climate change adaptation measures leading to resilience of landscapes and communities for food and nutrition security	# Inclusive multi-stakeholder platforms (balanced representation of women and men) at district level.	0	5	5	Project supervision reports.	? Stakeholder commitment at all levels. ? There is sufficient institutional stability and collaboration that allows participatory watershed management planning.
	# Participatory integrated micro-watershed management plans incorporating adaptation validated by stakeholders and under implementation.	0	8	8	Official documents. Project supervision reports. Mid-term and final evaluations.	
	# Public-private partnership agreements/frameworks supporting policy formulation and investments.	0	At least 2	At least 4	M&E and supervision reports. M&E and supervision reports.	
	Weather and climate information services and products disseminated for planning at district and community level.	0	1	1		
Component 2: Promoting innovative, sustainable land and climate resilient agricultural water management						

Results framework						
The project will contribute to the following Sustainable Development Goals (SDGs): SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 8 (inclusive and sustainable economic growth), SDG 13 (Climate Action), SDG 15 (Life on Land), SDG 17 (Partnerships for Goals)						
Project Objective: To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.						
Results	**Indicators**	**Baseline**	**Mid-term**	**End of Project Target**	**Means of Verification**	**Assumptions**
Outcome 2.1: Resilience of landscapes and livelihoods strengthened with sustainable land and agricultural water management (AWM) and infrastructure, addressing droughts, floods and other hazards.	# Area of landscapes under SLM and AWM	0	15,000 ha	15,000 ha	Project supervision reports. Mid-term review and final evaluation.	? Smallholder producers, women and youth participate in trainings, and incentivized to adopt SLM and AWM. ? Full engagement of district level Government structures ? delivering technical support to farming communities in the target catchments.
	# of smallholder farmers (at least 50% women) have benefited from capacity development program.	0	2,000	5,000	Capacity building reports, project supervision reports.	
	% increase in productivity	0	TBD	TBD	Project monitoring and supervision missions and reports. Mid-term review and final evaluation.	
	# Instruments enabling access to finance for investments in SLM and AWM	0	1	1	Project supervision reports. Mid-term review and final evaluation.	
Component 3: Strengthening resilience of agricultural and food value chains						

Results framework						
The project will contribute to the following Sustainable Development Goals (SDGs): SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 8 (inclusive and sustainable economic growth), SDG 13 (Climate Action), SDG 15 (Life on Land), SDG 17 (Partnerships for Goals)						
Project Objective: To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.						
Results	**Indicators**	**Baseline**	**Mid-term**	**End of Project Target**	**Means of Verification**	**Assumptions**
Outcome 3.1: Agriculture and food value chains strengthened to enhance resilience to climate and other shocks.	# Agri-food chains selected and being strengthened.	0	At least 6	At least 6	Project monitoring system and supervision missions and reports. Mid-term review and final evaluation.	? All value chain players and associated service providers willing to engage and participate. ? Commitment and support from the Government and private sector.
	# of common interest groups (CiGs) established and trained including women, and youth-led CiGs	0	120	120		
	# local financing models established and/or strengthened (Savings and Internal Lending Communities - SILC)	0	At least 10	At least 25		
	# Linkages-partnerships-agreements linking producers to markets.	0	TBD	TBD		
	% Producers and SMEs reporting profitable activities with the project?s contribution.	TBD	-	At least 60%		
Component 4: Communication, knowledge management, and M&E						
Outcome 4.1: Effective knowledge management	# Communication and knowledge products disseminated (case studies, best practices).	0	At least 3 annually.	At least 3 annually.	M&E reports.	? MAFS strong leadership and continued

Results framework						
The project will contribute to the following Sustainable Development Goals (SDGs): SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 8 (inclusive and sustainable economic growth), SDG 13 (Climate Action), SDG 15 (Life on Land), SDG 17 (Partnerships for Goals)						
Project Objective: To enhance climate resilience of landscapes and communities for food and nutrition security through sustainable water management.						
Results	**Indicators**	**Baseline**	**Mid-term**	**End of Project Target**	**Means of Verification**	**Assumptions**
and M&E supporting adaptive management, impact and scale-up at district and national level.	# of networks, and stakeholders connected to and accessing the knowledge management platform(s)	0	Target to be determined at inception.	Target to be determined.	M&E and supervision reports.	support to the project, working with partners.
	Project M&E system operational - with protocols for collection and analysis of results in place	0	1 Quality M&E information and reports, as scheduled.	1 Quality M&E information and reports, as scheduled.	M&E reports	

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

GEFSEC Comment	Response

- During the PPG stage prior to CEO Endorsement, please continue to consider opportunity to strengthen engagement and innovation with the finance sector, including with regards to policy and other enabling environment conditions, to enable finance (and particularly micro-finance) for lending products tailored to climate resilience and adaptation of MSMEs and smallholder farmers. We also note the high percentage of unemployed youth in Lesotho, and the focus of this project on youth enterprise engagement in climate resilience and adaptation practices. During the PPG stage prior to CEO Endorsement, please further consider innovation in approached to youth engagement and innovation in enterprise development for climate resilience and adaptation. As indicated in the question on private sector engagement above, during PPG and prior to CEO Endorsement, please further consider opportunities to strengthen private sector engagement in this project, including to increase access to markets and financing opportunity for the small holder farmers and MSMEs that will be supported.	- Indeed limited access to finance is an important barrier for smallholder farmers and micro, small and medium agro-enterprises to invest in adaptation innovations and infrastructure. Through the National Agriculture Investment Plan (NAIP, 2022-2026), the Government has made a commitment to addressing this barrier by: 1) designing measures for providing financial support for transformation of agricultural enterprises to socially responsible and environmentally sustainable and resilient agriculture; 2) providing subsidies for interest rates on loans provided through rural banking system to support and incentivize sustainable practices; and 3) establishing a special fund within the Agricultural Fund mechanism to provide loans and grants. Consultations were conducted with Lesotho Post Bank and other financial institutions during PPG. Post Bank has recently launched an agricultural financing department to expand lending to formally registered agribusinesses. The Bank is developing agri-finance lending products that will include more flexible loan repayment terms and collateral requirements. The Bank has been invited to participate in the project to participate in the project through the multi-stakeholder public-private partnership platform to be established at district level ? to disseminate information about agri-finance opportunities for smallholder farmers and SMEs and identify further issues to be addressed.

STAP Comment	Response
The problem statement suggests that the confluence of climate change, drought, and land degradation ?are expected to have devastating consequences on food security and livelihoods of vulnerable Basotho, in the absence of concerted efforts to address these problems? but the evidence in the PIF does not support this conclusion, at least not in terms of the details provided. This is not to suggest that Lesotho has no climate-related challenges, but that the PIF provides inadequate information for assessing the scale of those challenges, the pathways of climate change to climate impacts, or means of identifying appropriate interventions that can address those pathways.	A climate risk assessment was conducted during project preparation. The information and recommendations of the assessment have been incorporated in the design. The full report is included in Annex I.

The baseline is most clearly established in the additional cost reasoning section of the PIF. The baseline suggests a continuation of current conditions going forward. The principle focus of the baseline statement is that Lesotho will not make progress needed to graduate from LDC status. STAP strongly recommends that projects consider more than one plausible future when setting out a problem statement and baseline scenario. The future climate is probabilistic and therefore even the best models have significant variance in their projections as they move into the future. In the PPG stage, the project would be well served to consider adding two more scenarios that capture some of this plausible variance in temperature and precipitation, and use all three scenarios to assess 1) adaptation needs and 2) the potential effectiveness of different interventions across these plausible futures. This will ensure the project selects interventions that target the most likely future needs while delivering adaptation benefits across a range of possible futures. There is some baseline-related data in the problem description that help to quantify some of the more general aspects of the baseline scenario as laid out in the additional cost reasoning section.	As mentioned above, a climate risk assessment was conducted during PPG. Further details are included in the project document. One of the key sources of information taken into consideration in the climate risk assessment and recommendations is the recent Third National Communication to the UNFCC (TNC, 2021). A thorough climate risk assessment consisting of looking at multiple scenarios was part of the TNC preparation. We understand the probabilistic nature of climate projections, hence a ?no-regrets? approach recommended by the UNFCCC has been adopted UNFCCC.
STAP notes that nearly all assumptions place responsibility for project success on a variety of local stakeholders without any parallel responsibility on the project. STAP also notes that the project assumptions do not include a critical, cross-cutting assumption: that the project has identified key barriers to graduation from LDC status, and that the project has identified effective means of addressing the barriers to this goal.	Assumptions for the project have been turned into concrete responsibilities ? what is under the control of the project. LDC graduation ? the goal of the project is now better defined, informed by extensive consultations with stakeholders.

As the PIF clearly notes, the decision support system proposed is innovative in Lesotho but well-understood and utilized in other places. Therefore, this innovation is not likely to scale beyond Lesotho, as it is already out in the world. Also, while it is noted that maintenance of the system is inexpensive (compared with initial set up), the approach appears to be quite complex, requiring specialized technical skills to operate. Has the project identified which organization will be responsible for operation of this system which appears to form the backbone of much of the project? Is it one of the many government agencies and/or national university? Similarly, the climate-resilient irrigation and water management technologies are new and innovative in Lesotho, but already tested and proven elsewhere. Sustainability will be achieved by mainstreaming and capacity building ? two measures that are often cited as promoting the continuation of projects; however, often without much supporting detail or evidence. The project has the potential to scale up within Lesotho, but it speaks to very specific situations in the country. Further, it is using technologies that are already used and proven in other contexts.	Agreement with STAP?s observation, the decision-support system output needed re-thinking. Given the scale at which the project is operating, and the complexity foreseen, it was decided to take it out. This section has been revised.
A very simple map is provided, which helpfully indicates where the project sites are located within the country. The map could be much improved by adding land cover and land use as background (or perhaps elevation as this is a mountainous area) as well as administrative boundaries and water bodies including rivers and streams to help orient the reader.	An improved map provided.

The PIF identifies a wide range of stakeholders that appears to cover all relevant actors. STAP notes that the target beneficiaries have not yet been engaged, which is of concern as the PIF represents their situation extensively but, as noted above, does not always clearly demonstrate the connection between climate change and agricultural challenges. Also considering beneficiaries, there is little discussion, in the rest of the PIF or in this section, of gender-differentiated risks or challenges (or other differentiations that might produce different experiences of risks and challenges). However, STAP notes that the project plans to work with the Ministry of Gender and an NGO with a gender equality promotion mission going forward. This organization should help identify any such gendered or otherwise-differentiated issues. The private sector has not yet been engaged but will be in the PPG stage.	Field-level consultations were conducted with communities in the target sub-catchments during PPG. A gender analysis was also conducted and a gender action plan is presented in Annex L.

Council Comments ? Germany	Response
Germany appreciates the clear adaptation rationale of the proposed project. The components, outcomes, targets and outputs as outlined in the proposal appear logical and comprehensive. However, more detailed information on the implementation of some of the planned activities under Component 1 and 2 would be helpful. Specifically, while output 1.1.1 indicates some of the financial instruments to be reviewed, it is unclear which policies for leveraging investments for climate change resilient water management in production landscape will be considered using which the selection criteria. A clearer demarcation may be made between output 1.1.2 on integration of agro-ecological zoning and climate resilience actions into local planning processes and output 1.1.3 on developing decision support systems to assist with formulation and evaluation of policies and measures for climate-resilient food systems transformations. Finally, output 2.1.4 on livelihood diversification strategies and plans can be further elaborated with specific examples. Germany proposes reviewing the information on co-financing. The PIF indicates USD 28 million from EU via the ICM program. As correctly stated later, this is an "associated baseline project", without co-financing being available.	Project component outputs and activities have been revised and elaborated based on PPG studies and consultations with stakeholders at national and local level. We also took into account the comments from Germany. Changes and improvements have been fully described in Section 1.8 ?Summary of changes in alignment with the project design with the original PIF?. Co-financing information has been reviewed following GEF guidelines on co-financing.

Integrated Catchment Management as a proposed technical principle should be defined and referenced through its application in Lesotho and its current institutionalisation with support from the EU. Reference should be made to the corresponding inter-ministerial process with catchment planning guidelines, a compendium of watershed rehabilitation measures and respective institutional arrangements at the national and sub-national level.	ICM and its application in Lesotho, and in this specific project is fully described in Section 1.3 ?The proposed alternative scenario and description of components? and in Annex M.
Outcomes 1.1, 1.2 and 2.1 should align policy and institutional capacity building to the ongoing institutionalisation of integrated catchment management through Catchment Management Joint Committees at the level of Catchment Management Areas (cf. 2014 Long-Term Water and Sanitation Strategy and 2007 Local Government Act) and community based Subcatchment Management Plans at the local level. These plans include water resource protection, climate change and eco-system based adaptation, flood and drought risk management in their key strategic areas among others.	Fully addressed ? alignment the institutionalization of ICM and structures at national and local levels, working with the Ministry of Water (ICM focal Ministry), the Ministry of Agriculture, and other partners.
For output 1.1.1, Germany suggests to align review of financial instruments to ongoing work towards the establishment of local financing mechanisms undertaken jointly by EU-ICM, ROLL and UNCDF LoCAL.	Output 1.1.1 has been revised. Partnership with EU-ICM, GEF-7 ROLL and other ongoing initiatives has been established during PPG.
Germany suggests that the proposal provides additional alignment at the execution level coordination to the existing coordination structures for integrated catchment management, such as the National ICM Committee, the ICM Coordination Unit and the National Technical Secretariat.	Execution level coordination has been aligned with the existing ICM structures ? as described in section 6 ?Institutional arrangements and coordination?.
Germany agrees with the PIF review that there needs to be more clarity on how the project intends to ensure consideration of gender during project preparation. While the agency identifies the Department of Gender and the NGO, Gender Links, as key stakeholders for consultation, the proposal currently lacks a clear approach and methodology to incorporate gender in project design.	A gender analysis was conducted during PPG and a gender action plan developed. A clear approach and methodology are presented in the design.
As stated in the proposal, the Covid-19 pandemic has led to sharp increases in unemployment, poverty and food insecurity. Germany appreciates the consideration of potential impacts in this context and identification of synergies. However, Germany suggests specifying what kind of additional support will be provided.?	As described in section 1.1. and in the description of the component, the COVID-19 impacts, particularly related to poverty, food security and youth unemployment have been taken into consideration in the design.

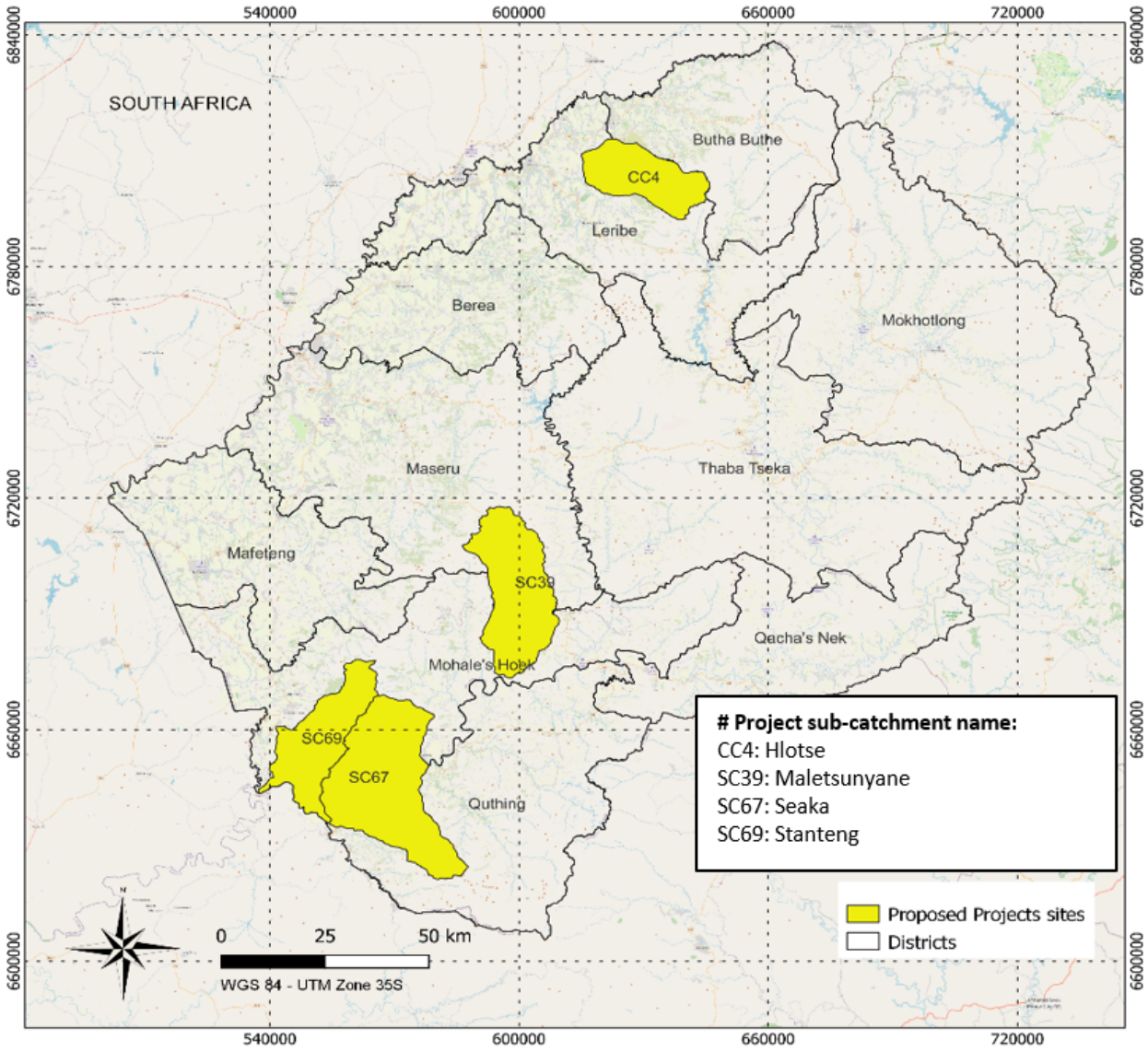
ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: 200,000 USD **GCP /LES/802P/LDF**			
Project Preparation Activities Implemented	***Budgeted Amount ($)***	***Amount Spent To date ($)***	***Amount Committed***
HR inputs Consultants	149,970	125,259	24,711
(5014) Contracts	8,400	4,038	4,362
(5021) Travel	30,190	2,850	27,340
(5023) Training	11,440	3,885	7,555
Total	**200,000**	**136,032**	**63,968**

The HR inputs cover the costs associated with hiring PPG consultants. Specifically, the PPG document indicates the composition of the PPG team as follows: a GEF Project Design Specialist and experts in various areas such as Climate impact assessment, PPG Coordination/KM/stakeholder engagement, Policy and Institutions, Agricultural water management, Sustainable agriculture, Value-chain/Finance/Private sector, Gender and socio-economics and, lastly, Environment and social safeguards. Contracts line covers for the costs associated with the Capacity Assessment of the identified Executing Partner.

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.



Hlotse Sub-catchment

Hlotse falls under the Leribe district in the northern Lowlands agro-ecological zone. The catchment is characterized by flat plains with fertile soils along the Hlotse River, extensive arable land and several wetland areas. Hlotse is often referred to as the bread basket of the country because of its agricultural potential.

Climate: The catchment is located at an altitude of 1,600 metres above sea level. Historical mean monthly temperatures range between 6?C (in winter months) and 17?C (in summer). The area receives 880mm of mean annual precipitation most falling from October to April. Like in the rest of the country, there has been a shift in precipitation and temperature patterns. Over the 1979-2019 period, the catchment (Leribe district) has experienced x/decade decrease in annual precipitation. The integrated context analysis (ICA), an exercise conducted by the World Food Programme and the Government of Lesotho) to assess the level of food insecurity and risk of exposure to natural shocks including drought and floods, found that the catchment district experienced a high level of flood risk (occurrence) and medium drought risk[1].

Land-use and socio-economic context: Settlements occupy 5% of the total land area in the catchment, cropland 20%, grasslands and shrubs 68%, wetlands 0.4%, and barren land 6%.

The majority of households in Lesotho have large families, which often affects the ability of some households to cope with the effects of climate variability or any external shocks, as there are more people to feed and take care of.

The majority of the population in the catchment are reliant on subsistence agriculture, mixed crop-livestock farming, for their livelihoods. Crop production is almost entirely rain-fed with limited irrigation practiced by a few semi-commercial farmers. The main crops include maize, wheat, sorghum and beans. Vegetables such as spinach, green pepper, carrots, beetroot, tomatoes, potatoes and pumpkin are grown as subsidiary crops. Anecdotally, women are more active in farming than men in the catchment, particular in vegetable and poultry production.

Livestock rearing includes cattle (the most common), goats, sheep and pigs. During project formulation, communities highlighted poor pastures due to overstocking, overgrazing and poor governance and management of pastures. Consequently, livestock farmers stated poor livestock conditions and general decline in livestock products including wool and mohair, severely affecting their livelihoods, and diminishing household income and resilience to external shocks.

Communities also highlighted that they are affected by the changing climate including erratic rains, high costs of tractor services, expensive inputs, limited technical capacity and limited market access.

Regarding poverty, 53 percent of households live below the national poverty line, and 17% live in extreme food poverty[2].

Maletsunyane Sub-catchment

The sub-catchment is situated deep in the mountains of Lesotho at an altitude of 2,226 metres above sea level. Administratively it is within the Maseru district ? it is about 100 km from the capital city. The area is characterized by wetlands. It is an area that attracts many tourists because of its beautiful scenery and the famous Maletsunyane falls which is one of the biggest falls in Lesotho.

Climate: Maletsunyane is located within the Mountains agro-ecological zone, at an altitude of 2,226m above sea level. The sub-catchment is characterized by cold winters and mild summers with mean annual minimum and maximum temperatures ranging between 2?C and 20?C, and receives mean annual precipitation of 600 mm. Frost can occur at any time, and on average there are only about 100 frost-free days in a year. Maletsunyane experiences high climate variability and frequent hazards including frost, hail, drought and severe rainstorms.

Land-use and socio-economic context: The main land-use categories consist of settlements (2.5%); rain-fed cropland (8.5%); grassland (63%); wetlands (1%); shrubs (20%); and barren land. About 10 acres of field crops along the Maletsunyane River are under irrigation. Main crops under irrigation are vegetables for cash sales.

In terms of socio-economic activities, the catchment is mainly used for crop and livestock farming. Livestock rearing and wool and mohair production play a critical role in the small-scale farming system in Maletsunyane ? 70% of the population owns livestock. At the same time, overstocking and overgrazing has driven the significant degradation of rangelands and the destruction of wetlands.

Although the area has colder climatic conditions, its soils are generally fertile and it is well known for its quality potato production. During project preparation consultations with communities, they stated that potatoes have been the most climate suitable and marketable product, with less expenses incurred - the area is less prone to pests and plant diseases, and chemical inputs are seldom used.

The overall poverty rate in the catchment is 68% with 34% of the population extremely food insecure[3].

Maphutseng Stanteng Sub-catchment

Maphutseng is located in Mohale?s Hoek District of Lesotho, about 140km south of Maseru, and 15km from Mohale?s Hoek town. Maphutseng is a rural settlement with basic amenities such as schools,

clinic, church and the Ministry of Agriculture sub-office. Majority of households in this area are female headed. Geographically, Maphutseng can be divided into three parts: mountains, foothills and lowlands. The area is generally semi-arid and land degradation is a common feature in the area due to fragile soils, heavy run-off and poor land management practices. The main sources of income are remittances from relatives working as labourers in South African wine farms. There are four main land uses in this area namely; cropping land, settlements, pastures and the mountain side used mainly for cattle posts.

Stanteng is located along the Maphutseng River, with high potential for irrigation. However, there is only one farmer operating an irrigation system for vegetable production in the area. The rest of the farmers produce a variety of cash crops such as cabbage, carrots, beans and maize. Majority of households own livestock ranging from cattle to chickens. Though production is mainly for subsistence, farmers sell surplus to neighbours and in Mohale?s hoek. Additionally, there have been a number of agricultural related projects piloted in this area such as SADP, RVCC which introduced a number of climate smart agricultural practices such as shadenets and permaculture.

As with the rest of the country Maphutseng is prone to natural hazards and is regarded as highly vulnerable to climate change. Natural hazards, which include floods, drought, severe frost, strong winds and heavy snowfall, have affected many people and many sectors of this society.

Seaka Sub-catchment

The catchment in located in the Senqu River Valley agro-ecological zone. It is within a district (Quthing) regarded as one of the most vulnerable in terms of high recurrence of food insecurity in 20% or more of the population, with frequent exposure to climate hazards eroding people and their surrounding natural resource base to cope with future shocks[4]. 28% of the population live in food poverty and 57% of households below the national poverty line.

Climate: The historical mean annual precipitation in Seaka is estimated at 670mm, with the summer months receiving more rainfall than winter months. Average maximum temperatures range between 15? and 27?C and minimum temperatures between 2? and 15?C. In terms of climate hazards, the area experiences severe droughts, heavy snowfall, and frosts.

Land-use and socio-economic context: Seaka is located 10 km from Moyeni, the administrative town for the Quthing district and about 170km from Maseru. There are three main land uses in Seaka: settlements, grazing areas and cropping land. There has been encroachment of settlements into cropping land due rural urban migration and to lack of enforcement of the Land Act, many households sell and sub-divide their fields into residential plots.

The main sources of household income in Seaka are piece jobs, crop and livestock sales and cash remittances. The main challenges faced by households include high rates of unemployment, unskilled labor and low agricultural output. The area has three main wealth groups: destitute, poor and middle, influenced by livestock ownership, agricultural production and income earned. However, majority of households are still categorized poor compared with very poor by the communities. The key determinants of wealth distribution in this zone are land size cultivated and livestock ownership.

Communities around Seaka area practice mixed agriculture comprising of crop production and livestock farming. The soils are relatively poor and thinly covered with vegetation due to over grazing. The main type of vegetation is shrubs and grass species. The population of the zone is mostly dependent on crop production, livestock rearing and agricultural/non-agricultural casual labor employment for their main sources of livelihoods. The main livestock reared include cattle, goats, sheep and pigs and crops produced by the local population include maize, sorghum and beans. The zone is characterized by flat plains with desert-like characteristics like shrubs and rangelands. As a result of soil erosion and environmental degradation, the zone is mostly characterized by shallow and infertile soils. Environmental degradation coupled with climate variability, dependence on declining

rainfed agriculture and high unemployment rates worsen vulnerability of communities and households in Seaka.

A climate risk assessment that includes climate trends, projections and impacts that guided the selection of the prioritized districts ? sub-catchments and proposed climate change adaptation measures is presented in Annex I.

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[1] World Food Programme (WFP), Integrated Context Analysis (ICA), Lesotho. 2015.

[2] Lesotho Bureau of Statistics Survey, 2017-2018.

[3]

[4] WFP, ICA, 2015.

ANNEX E: Project Budget Table

Please attach a project budget table.

FAO Cost Categories	Unit	No. of units	Unit cost	Total cost	Component 1 Total	Component 2 Total	Component 3 Total	Component 4 Total	M&E (4.1.2)	PMC	Total	Ministry of Agriculture and Food Security
5013 Consultants												
Chief Technical Advisor	month	24	6,000	144,000	**36,000**	**36,000**	**48,000**	**24000**			**144,000**	144,000.00
Value chain, finance and private sector specialist	month	18	4,000	72,000	**0**	**0**	**72,000**	**0**			**72,000**	72,000.00
Sub-total International Consultants					***36,000***	***36,000***	***120,000***	***24000***	*0.00*	*0.00*	***216,000***	*216,000*
National Project Coordinator	month	72	2,800	201,600	**0**	**0**	**0**	**0**		201,600	**201,600**	201,600.00
Admin Assistant	month	72	600	43,200	**0**	**0**	**0**	**0**		43,200	**43,200**	43,200.00
Operations Officer (50%)	month	72	1,200	86,400	**0**	**0**	**0**	**0**		86,400	**86,400**	86,400.00
Communication and Visibility Specialist	month	12	2,400	28,800	**7,200**	**7,200**	**9,600**	**4800**			**28,800**	28,800.00
Stakeholder and Gender Specialist	month	24	2,400	57,600	**14,400**	**14,400**	**19,200**	**9600**			**57,600**	57,600.00
Regional Technical Multi-stakeholder Engagement Specialist (3)	month	72	7,200	518,400	**129,600**	**129,600**	**172,800**	**86400**			**518,400**	518,400.00
Micro-watershed Village coordinators x 8 persons (2people per 4sites)	month	72	2,400	172,800	**43,200**	**43,200**	**57,600**	**28800**			**172,800**	172,800.00
M & E Specialist	month	72	2,400	172,800	**0**	**0**	**0**	**0**	172,800		**172,800**	172,800.00
Sub-total national Consultants					***194,400***	***194,400***	***259,200***	***129,600***	*172,800*	*331,200*	***1,281,600***	*1,281,600*
5013 Sub-total consultants					**230,400**	**230,400**	**379,200**	**153,600**	172,800	331,200	**1,497,600**	**1,497,600**
5650 Contracts												
MSPs and policy dialogues	lumpsum	1	100,000	100,000	**100,000**	**0**	**0**	**0**			**100,000**	100,000
Participative Micro-watershed planning	lumpsum	12	53,000	636,000	**636,000**	**0**	**0**	**0**			**636,000**	636,000
Tailored weather and climate advisory services and products + crop advisories	lumpsum	2	100,000	200,000	**200,000**	**0**	**0**	**0**			**200,000**	200,000
Develop and rollout FFS: 5 VCs, 100 CiGs	lumpsum	1	575,000	575,000	**0**	**575,000**	**0**	**0**			**575,000**	575,000
multi-community landscape investments	lumpsum	8	209,000	1,672,000	**0**	**1,672,000**	**0**	**0**			**1,672,000**	
Community interest group micro-projects	lumpsum	100	17,000	1,700,000	**0**	**0**	**1,700,000**	**0**			**1,700,000**	
Support investments for individual farmers	lumpsum	106	3,774	400,000	**0**	**0**	**400,000**	**0**			**400,000**	
Agri-business platforms for women and youth	lumpsum	8	18,002	144,016	**0**	**0**	**144,016**	**0**			**144,016**	144,016
Digital links to financing options	lumpsum	1	144,000	144,000	**0**	**0**	**144,000**	**0**			**144,000**	144,000
Citizen science and local monitoring in micro-watersheds	lumpsum	10	30,000	300,000	**0**	**0**	**0**	**300,000**			**300,000**	300,000
Program level data consolidation and M&E	lumpsum	1	120,000	120,000	**0**	**0**	**0**	**120,000**			**120,000**	120,000
Audit (1/year) (USD 6,500each)	lumpsum	6	6,500	39,000	**0**	**0**	**0**	**0**		39,000	**39,000**	
Spot-checks (OP Mod. Risk= 2/year, USD 3,600each)	lumpsum	12	3,600	43,200	**0**	**0**	**0**	**0**		43,200	**43,200**	
Mid Term Review	lumpsum	1	45,000	45,000	**0**	**0**	**0**	**0**	45,000		**45,000**	
Final Evaluation	lumpsum	1	45,000	45,000	**0**	**0**	**0**	**0**	45,000		**45,000**	
Terminal Report	lumpsum	1	7,000	7,000	**0**	**0**	**0**	**0**	7,000		**7,000**	
5650 Sub-total Contracts					**936,000**	**2,247,000**	**2,388,016**	**420,000**	**97,000**	**82,200**	**6,170,216**	**2,219,016**
5021 Travel												
International Consultant travels	unit	12	4000	48,000	**12000**	**12000**	**16000**	**8000**			**48,000**	48,000
National Consultant travels	unit	40	1800	72,000	**18000**	**18000**	**24000**	**12000**			**72,000**	72,000
Travels for operational and executing partners for technical support	unit	100	1,710	171,000	**42750**	**42750**	**57000**	**28500**			**171,000**	171,000
community consultations logistic expenses	lumpsum	1	204,000	204,000	**51000**	**51000**	**68000**	**34000**			**204,000**	204,000
5021 Sub-total travel					**123750**	**123750**	**165000**	**82500**	**0**	**0**	**495,000**	**495,000**
5023 Training												
Support and establish CiGs	unit	100	5,000	500,000	**0**	**0**	**500,000**	**0**			**500,000**	500,000
Training on techniques from output	lumpsum	1	120,000	120,000	**0**	**120,000**	**0**	**0**			**120,000**	120,000
Inception workshop	lumpsum	1	12500	12500	**0**	**0**	**0**	**0**	12,500		**12,500**	12,500
Final workshop	lumpsum	1	12500	12500	**0**	**0**	**0**	**0**	12,500		**12,500**	12,500
5023 Sub-total training					**0**	**120,000**	**500,000**	**0**	**25,000**	**0**	**645,000**	**645,000**
5024 Expendable procurement												
Procurement of production inputs	unit	7	14,000	98,000	**0**	**42,000**	**56000**	**0**			**98,000**	98,000
Production of Knowledge Management materials (publications, videos, media news etc)	lumpsum	1	14,651	14,651	**0**	**0**	**0**	**14,651**			**14,651**	14,651
5024 Sub-total expendable procurement					**0**	**42,000**	**56,000**	**14,651**	**0**	**0**	**112,651**	**112,651**
6100 Non-expendable procurement												
Office supplies IT (computers)	lumpsum	1	5,000	5,000	**0**	**0**	**0**	**0**		5,000	**5,000**	5,000
6100 Sub-total non-expendable procurement					**-**	**-**	**-**	**-**	**-**	**5,000**	**5,000**	**5,000**
5028 GOE budget												
Office expenses (electricity, water, phone, internet etc)	lumpsum	1	6,953	6,953	**0**	**0**	**0**	**0**		6,953	**6,953**	6,953
6300 Sub-total GOE budget					**0**	**0**	**0**	**0**	**0**	**6,953**	**6,953**	**6,953**
TOTAL					**1,290,150**	**2,763,150**	**3,488,216**	**670,751**	294,800	425,353	**8,932,420**	4,981,220

SUBTOTAL Comp 1	**1,290,150**			
SUBTOTAL Comp 2	**2,763,150**			
SUBTOTAL Comp 3	**3,488,216**			
SUBTOTAL Comp 4	**670,751**			
M&E Budget	**294,800**	**3.3%**	**from PIF**	**to adjust**
Subtotal	**8,507,067**		**8,507,067**	**0**
Project Management Cost (PMC)	**425,353**	**5.0%**	**425,353**	**0**
TOTAL GEF	**8,932,420**		**8,932,420**	**0**

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).