



# PROJECT IDENTIFICATION FORM (PIF).

PROJECT TYPE: FULL SIZE PROJECT

TYPE OF TRUST FUND: LDCF

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## PART I: PROJECT INFORMATION

Project Title:	Strengthening climate services in Lesotho for climate resilient development and adaptation to climate change (2nd phase of the LMS/GEF/UNEP LDCF NAPA Early Warning Project)		
Country(ies):	Lesotho	GEF Project ID: <sup>1</sup>	6926
GEF Agency(ies):	UNEP (select) (select)	GEF Agency Project ID:	01317
Other Executing Partner(s):	Lesotho Meteorological Services (primary executing partner), Disaster Management Authority, Ministry of Energy, Meteorology and Water Affairs	Submission Date:	08/08/2014
		Resubmission Date:	28/11/2014
GEF Focal Area(s):	Climate Change Adaptation	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		Corporate Program: SGP <input type="checkbox"/>
Name of parent program:	N/A		

## A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>:

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
CCA-2, Outcome 2.3	LDCF	5,000,000	15,909,275
Total Project Cost		5,000,000	15,909,275

## B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To strengthen the climate monitoring capabilities, early warning systems and human resources in Lesotho in order to effectively address climate impacts and better plan adaptation to climate change					
Project Component	Financing Type <sup>3</sup>	Project Outcomes	Trust Fund	(in \$)	
				GEF Project Financing	Co-financing
1. Establishment of necessary infrastructure and human capacity in Lesotho Meteorological Services (LMS) to enable functional national EWS	INV/TA	1.1. Hydrometeorological infrastructure is installed and capacity of human resources built that will cover the country-wide needs to sustainably operate it, building on the recent identification of specific software and hardware equipment and associated training in Lesotho	LDCF	3,512,000	1,499,875
2. Creation of institutional mechanisms for coordination and implementation of EWS in Lesotho and for use of climate information generated in Component 1 in policy making and sector planning	TA	2.1. Enhanced institutional capacity for take-up of hydrometeorological services	LDCF	500,000	5,551,400
3. Pilot testing of EWS protocols and response strategies and sustainability plan	TA	3.1. More effective, efficient, targeted and sustainable delivery of timely climate information including early warnings to local communities	LDCF	750,000	7,928,000

<sup>1</sup> Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

<sup>2</sup> When completing Table A, refer to the GEF Website, [Focal Area Results Framework](#) which is an Excerpt from [GEF-6 Programming Directions](#).

<sup>3</sup> Financing type can be either investment or technical assistance.

	Subtotal		4,762,000	14,979,275
	Project Management Cost (PMC) <sup>4</sup>	LDCF	238,000	930,000
	<b>Total Project Cost</b>		<b>5,000,000</b>	<b>15,909,275</b>

If Multi-Trust Fund project :PMC in this table should be the total and enter trust fund PMC breakdown here ( )

### C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Donor Agency	World Bank through WFP	Grant	490,000
Donor Agency	IFAD	Grant	13,128,000
Donor Agency	EU	Grant	946,875
Donor Agency	IAEA	Grant	100,000
GEF Agency	UNEP	Grant	100,000
GoL Counterpart*	GoL	In-Kind	446,000
GoL Counterpart*	GoL	Cash	698,400
<b>Total Co-financing</b>			<b>15,909,275</b>

\* The In-Kind contribution would likely include office space, vehicles, drivers, internet facilities, electricity, other human resources such as accountant and procurement personnel (who should be permanent government employees and could access the government procurement and payment system), office assistants, guards, etc. The cash contribution could, among other activities, support the acquisition and installation of hardware and software as a platform for Numerical Weather Prediction to enhance prediction of extreme weather events, acquisition and installation of automatic weather stations to enhance the meteo-hydrological observation network for optimum coverage of the country, up-scaling of the EWS design to cover the entire country, etc.

### D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS <sup>a)</sup>

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) <sup>b)</sup>	Total (c)=a+b
UNEP	LDCF	Lesotho <input type="checkbox"/>	Climate Change Adaptation	N/A	5,000,000	475,000	5,475,000
<b>Total GEF Resources</b>					<b>5,000,000</b>	<b>475,000</b>	<b>5,475,000</b>

a) No need to fill this table if it is a single Agency, single Trust Fund, single focal area and single country project.

b) Refer to the [Fee Policy for GEF Partner Agencies](#).

### E. PROJECT PREPARATION GRANT (PPG)<sup>5</sup>

Is Project Preparation Grant requested? Yes  No  If no, skip item E.

### PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee <sup>6</sup> (b)	Total c = a + b

<sup>4</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

<sup>5</sup> PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$1 mil; \$100k for PF up to \$3 mil; \$150k for PF up to \$6 mil; \$200k for PF up to \$10 mil; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>6</sup> PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

UNEP	LDCF	Lesotho	Climate Change	N/A	120,000	11,400	131,400
<b>Total PPG Amount</b>					120,000	11,400	131,400

## F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>7</sup>

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	N/A
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	N/A
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	N/A
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	N/A
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2e</sub> mitigated (include both direct and indirect)	N/A
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	N/A
	Reduction of 1000 tons of Mercury	N/A
	Phase-out of 303.44 tons of ODP (HCFC)	N/A
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	N/A
	Functional environmental information systems are established to support decision-making in at least 10 countries	N/A

## **PART II: PROJECT JUSTIFICATION**

### **PROJECT OVERVIEW**

A.1. Project Description. Briefly describe: 1) the global environmental problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, with a brief description of expected outcomes and components of the project, 4) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; 5) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 6) innovativeness, sustainability and potential for scaling up.

<sup>7</sup> Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

### *A.1.1 The Project problem, root causes and barriers that need to be addressed*

Lesotho has a fragile mountainous ecosystem prone to natural disasters, drought and desertification, which make it particularly vulnerable to current climate variability and future impacts of climate change. Current climate variability such as increases in peak temperatures and erratic precipitation events often result in droughts and subsequent aridification, floods, heat and cold stresses, landslides, soil erosion and nutrient run-off. These impacts have a negative impact on food production and livestock and take a toll on rural populations who are already living in difficult conditions, with food insecurity and vulnerability prevalent across the country.

Climate change is expected to further exacerbate these problems, with generally warmer and dryer conditions, seasonal shifts, increased variation in precipitation between years, and increased frequency of extreme weather events such as high precipitation (flooding), hailstorms (damage to crops) and even increased risk of snowstorms due to seasonal shifts in precipitation (wind damage, 'snow ins' of remote areas). Individually and together, each of these changes poses a significant challenge to the economy and livelihood in Lesotho.

The citizens of Lesotho, and in particular in rural areas, have only limited knowledge of these expected long term climate change impacts, and are generally unaware of even short term climate scenarios and weather warnings (such as seasonal forecasts and warnings of weather hazards such as heavy rain or hail). Nor are the majority of people aware of, or capable of implementing, alternative, climate resilient strategies such as resilient livestock management strategies, improved crop varieties etc. These limitations, combined with a general widespread poverty, a short planning horizon, and limited availability of surplus capital for investments in adaptation, are the main root causes and barriers for vulnerability in Lesotho.

One of Lesotho's NAPA priorities clearly identifies a need to improve early warning systems against climate induced disasters and hazards in order to provide a buffer against climate change impacts and help national policy makers and planners, as well as vulnerable citizens, be aware of, and respond to, climate threats in an anticipatory rather than reactive manner. Following the completion of their NAPA, Lesotho developed a first LDCF Early Warning project ('Improvement of Early Warning System to Reduce Impacts of Climate Change and Capacity Building to Integrate Climate Change into Development plans' – implemented through UNEP) but due to resource constraints at the time, only a very limited budget of USD 1,735,000 was allowed by the GEF. The first LDCF project will go some way in terms of strengthening technical and human capacity in Lesotho Meteorological Services (through upgrading of hydro meteorological stations in three pilot districts, training of forecasters, hiring of staff, development of models etc.), and it will create some practical lessons on generation and packaging of early warning messages in 3 pilot communities.

Unfortunately, due to the budget limitations, the first LDCF project will not be able to fully roll out and implement an optimally functional EWS at the national level, due to the following limitations: 1. Incomplete installation of equipment to consistently generate high quality real time climate data on a continuous basis in a network with adequate geographical coverage, 2. Incomplete training/hiring/retention of staff for LMS to adequately cover forecasting, modelling, EWS message generation/packaging and ongoing maintenance of the meteorological stations, 3. The established EWS is not geared to handle EWS message generation for other sectors than agriculture (other key vulnerable sectors that could benefit from EWS includes energy (hydropower), forestry, tourism, and health), 4. The established EWS is primarily focused on the three pilot regions, and will need additional resources to be scaled up and rolled out at the national level.

### *A.1.2 The baseline scenario and associated baseline projects*

The Lesotho meteorological observation network currently consists of 3 synoptic, 31 climate, 6 Agromet, 51 rainfall stations and 3 automatic wind stations. A recent audit of the climate station

observation network supported by the World Meteorological Organization (WMO) and the UNFCCC concluded that the network faced many challenges including obsolete and unserviceable equipment, human errors at monitoring stations, vandalism, poor communication facilities, and poor data archiving. Also, the network lacks certain essential climate equipment that facilitates accurate climate monitoring and prediction as outlined in the “Revised UNFCCC Reporting Guidelines on Global Climate Change Observing Systems. The audit recommended that the network should have a comprehensive makeover that should include rehabilitation of existing instruments and installation of new ones.

In the baseline scenario, which is assuming a full and successful implementation of the first LDCF EWS project (not accounted for in the abovementioned audit), the technical and human capacity of LMS is improved to deliver basic EWS services targeted primarily to the 3 pilot districts of Quthing, Thaba Tseka and Mafeteng and primarily to the agriculture sector. Automated weather stations, with automatic data logging to LMS HQ in Maseru will have been procured and installed in the 3 target districts (5 stations in total - 3 funded by LDCF and 2 by LMS) and existing synoptic stations in the same area will have been rehabilitated and calibrated for the transition period in accordance with WMO recommendations. These upgrades will enable continuous flow of climate data to LMS and delivery of improved forecasts and basic early warnings in the target districts. Furthermore, early lessons on packaging and targeting of early warning messages to a specific stakeholder group (i.e. farmers and herders in the pilot communities) and development of local level response plans and adaptation measures will have been generated. However, due to project budget limitations, improvements of data generation and human capacity of LMS would remain limited to the targeted pilot districts.

In addition to the LDCF project, however, other projects have provided, or are planning to provide, improvement of meteorological monitoring and data capacity: 5 automated weather stations have recently been installed through Japanese funding under the 'Programme for the Improvement of Capabilities to Cope with Natural Disasters Caused by Climate Change' (also not accounted for in the above estimate) and a yet unknown number of automated weather stations are also expected to be procured through the IFAD programme for climate resilient wool and mohair production mentioned below. However, even with such investments, meteorological equipment in the remaining 7 districts of Lesotho, not targeted by the first LDCF EWS project, would generally remain geographically scattered, ill maintained and non-automated (i.e. manually read and recorded by local staff) and would thus not be sufficient to provide detailed local forecasts and early warnings in real time.

Also the first LDCF EWS project will have established a basic institutional structure for assessing climate risks for agriculture in the three pilot districts as well as a local protocol for communication of, and responses to, messages generated through the EWS. It has also provided training of key institutional stakeholders, including local government policy makers, district administrators and agricultural planners. However, since this institutional structure and capacity building is focused primarily on the targeted districts and the agricultural sector, it does not have sufficient institutional participation or indeed mandate to comprehensively cover needs at the national scale and for different sectors than agriculture.

Through a number of projects (e.g. LDCF projects of FAO, IFAD and UNDP see section A.4, as well as baseline projects mentioned below) resilience of agriculture, rangelands and water management to the expected impacts of climate change will have been strengthened, in particular in the targeted communities. However, without timely and accurate early warning messages on impending extreme events (droughts, extreme rain and flooding, hail storms etc.) the effectiveness of such adaptive capacity could be significantly reduced.

The first LMS/GEF/UNEP LDCF NAPA Early Warning Project will thus be the primary baseline for the proposed project. However, the following ongoing and planned activities have also been identified

as relevant development baselines to which LDCF investments will be tied:

**WFP Lesotho, DRR and Information Management under Early Warning** (total budget \$490,000). This project, which is funded by the World Bank through World Food Programme (WFP), will support the establishment of an effective and "people centered" early warning system to enhance timely access to information, to assist in both disaster preparedness and responses and improving food security, and to reduce vulnerability and enhance resilience to natural shocks and climate change. The project was launched April 2014 and is expected to complete March 2015 under authority of the Lesotho Disaster Management Authority (DMA) and with LMS as a key executing partner. The project will have a primary focus on food security, but several planned activities and outputs will feed directly into the execution of this LDCF project. For instance, the WFP project will produce a national EWS improvement plan outlining a prioritized list of needed EWS improvements in the short, medium and long term, an EWS capacity assessment, and reviewing models for communication with EWS stakeholders such as local communities. The two projects will be closely coordinated through LMS and DMA to assure synergies are maximized.

**Wool and Mohair Promotion Project (WAMPP)** (total budget \$38.9 million - \$13,128,000 quoted as co-financing). This IFAD implemented project is targeted to the wool and mohair production sector, which is one of Lesotho's primary exports. The project's objective is to increase incomes of the rural farmers and entrepreneurs on a sustainable basis. This will be achieved by addressing the constraints (including climate change) that limit productivity and management of small stock and enterprise development in rural areas without putting staple food production at risk. The project consists of three integrated components: 1. Climate Smart Rangeland Management, 2. Improved Livestock Production and Management 3. Wool and Mohair Fibre Handling and Marketing, of which primarily component 1 (and its associated management cost) is relevant as direct baseline and co-financing for the proposed LDCF project. Component 1 will focus on climate resilient management of rangelands for wool and mohair production and includes outputs such as improvement of the coverage, quality and relevance of climate information to sheep farmers, preparation of local climate risk maps, and capacity building and support to the development of local climate resilient rangeland management plans. WAMPP activities will thus directly benefit and feed into planned LDCF activities, both in terms of improved data generating capacity (it should also be noted that WAMPP will invest in 5 meteorological stations to improve data generation capacity of LMS) and as an important economic sub-sector of the crosscutting national EWS system envisioned under this LDCF project. The LDCF project will, during its PPG phase, work closely with IFAD to assure that synergies are maximized and that EWS and modelling needs in the wool and mohair sector, as well as planned equipment investments, are fully mainstreamed into the national EWS. WAMPP is in its final stages of project preparation and expected to start implementation during 2015 for a total implementation period of 7 years.

**Development of National Climate Change Strategy** (total budget €4 million, €750,000 of this budget will provide technical support for the development of climate change policy and strategy and the energy policy, while the rest of the fund will support the government budget and will not be limited to climate change programmes. The implementation period was initially July 2014- November 2015. However, there is the delay on the engagement of consultants to guide the process, due to the lengthy procurement procedures by the EU. This has resulted in a likely extension of the process of a minimum of twelve months. With timely completion and initiation of this LDCF proposal, therefore, there should be ample scope for linking the two initiatives. This activity, which is funded through the EU's Global Climate Change Alliance, will support a national process to set up a National Climate Change Policy and Strategy, a National Sustainable Energy Strategy as well as required policy and institutional frameworks to support implementation of these policies and strategies. The planned LDCF activities will both be able to benefit from and mainstream into the political momentum and structures built through these processes. In particular the planned setup of a national EWS coordination body and creation of EW protocols should be mainstreamed into the national climate

change strategy as well as the institutional structures created through this process.

**Assessment of Groundwater Resources in the Lowlands of Lesotho using Isotope Methods** (total budget \$0.1 million for the period of April 2014 to May 2017). This International Atomic Energy Agency (IAEA) supported study will introduce improved methodologies for ground water assessments in Lesotho using radioactive isotope assessment techniques. The study will conduct a pilot in Maputsoe catchment and will involve staff capacity building in the Department of Water Affairs. The project will coordinate with the IAEA study, by providing improved climate information and by linking up improved ground water management with the EWS.

The **UNEP LIVE portal** (<http://www.uneplive.org/>), (total budget \$12 million, of which 0.1 million is estimated as co-financing for this project - i.e. UNEP live activities related to Lesotho). Launched in January 2014, the UNEP LIVE portal is a UNEP initiative that offers a cutting-edge, dynamic new platform to collect, process and share the world's best environmental science and research. It provides a single gateway to accessing and locating country-level statistics as well as providing access to Satellite/Space Programmes such as GEOSS Portal, Earthnet Online, USGS Earth Explorer, as well as an In Situ Programme called Argo. This portal will provide data access to both the public and policy makers using distributed networks, cloud computing, big data and improved search functions with the objective of filling gaps between data providers and consumers. It includes Communities of Practice that gather experts in various fields relating to the environment and bring them on a common platform that provides access to discussion and exchange. UNEP LIVE will also support streamlining of national monitoring, reporting and verification of data for global and regional environmental goals. In the further development of UNEP LIVE, this project will collaborate with UNEP LIVE and present it at the regional trainings as a means of accessing up to date environmental information and statistics.

The specific links to be made with each of these baseline projects, will be further scoped during the PPG phase.

#### *A.1.3 The proposed alternative scenario*

The alternative scenario will establish a fully functional national EWS, capable of providing timely and relevant warnings to a wide group of stakeholders and sectors at the national, regional and local level. Mechanisms will be put in place for enhanced coordination of policy and sector planning in response to scenarios generated from the improved EWS, including systems to better couple climate and socioeconomic data and scenarios.

The project will thus address remaining issues and gaps for implementation of a fully operational EWS in Lesotho, and will function as a second phase of the existing LMS/GEF/UNEP LDCF NAPA Early Warning Project currently under implementation. As such, the project will use needs assessments and baseline studies conducted under the first project, focussing specifically on the following aspects that have been touched upon, in the first project, but will not be implemented in full due to budget limitations:

- Acquisition and installation of climate monitoring equipment
- Piloting and testing of EWS and response protocols.
- Training materials for policymakers
- Coordination mechanisms building on the National Climate Change Committee (NCCC)

The overall aim of the proposed project is to scale up the existing Early Warning project's coverage to the whole country through procurement of additional modern equipment/technology and provision of additional support for improvement of the institutional and human capacity needed to develop and operationalize an effective climate change early warning system and to ensure this capacity is sustained beyond the lifetime of the project.



#### *A.1.4 Incremental cost reasoning and expected contributions from the baseline the LDCF and co-financing*

The proposed project would be hinged on the following three components:

- (1) Establishment of necessary infrastructure and human capacity in LMS to enable a fully functional national EWS
- (2) Creation of institutional mechanisms for coordination and implementation of EWS in Lesotho and for use of climate information generated in Component 1 in policy making and sector planning
- (3) Piloting packaging and dissemination of EWS messages to different stakeholders/end users

#### **Component 1: Establishment of necessary infrastructure and human capacity in LMS to enable a fully functional national EWS**

**Business as usual scenario:** As mentioned in section 1.2., Lesotho currently operates an aging and inadequate climate monitoring network. Through investments of the first LDCF EWS project, the Japan funded 'Programme for the Improvement of Capabilities to Cope with Natural Disasters Caused by Climate Change', and IFAD's 'Programme for Climate Resilient Wool and Mohair Production' Lesotho would have acquired at least 10 fully automated weather stations (the specific investments of the IFAD programme are still to be decided), primarily located in the three LDCF project sites and in strategic highland locations. Furthermore, LMS has, partly through recent project investments, access to other hardware and software for dataprocessing and forecasting such as: high performance computer, satellite receiving station, four computers for numerical weather prediction, two automatic weather station servers, eight desktop computers installed with Climsoft software (a web-based data management tool). Finally, in terms of human capacity LMS currently employs 145 staff (7 meteorologists, 9 weather forecasters, 2 field technicians, 24 technical assistants, and 103 meteorological observers). Through ongoing and planned projects (LDCF-EWS1, WAMPP, LASAP (see below), and the EU funded Development of Climate Change Policy and Strategy), 26 LMS staff would be trained; 2 MSc in Agrometeorology and short term courses which include policy development, downscaling of climate change scenarios, and AWS maintenance. While this equipment and additional human capacity will significantly improve the ability of LMS to provide forecasts and model future climate change, it will have limited and scattered geographical coverage and will not be sufficient to deliver EWS services at a scale and quality outlined in the NAPA. An internal assessment conducted by LMS as part of the preparation of this PIF, concluded that the minimum equipment needs for supporting a fully functional forecasting and early warning service would include: an upgrade of all rainfall stations, installation of at least 30 new automatic automatic raingauges, adding 5 new agromet stations representing all ecological regions (one in each region and two in the highlands), and upgrade 3 synoptic stations with equipment for measuring solar radiation, cloud cover (amount and height), visibility, pressure, humidity and wind. On top of this will come investments in capacity on the staff side in LMS to process the improved data sources (training of old staff and new hires), and investments in computer hardware and software to support forecasting, modelling, communication and storing of climate data and warning messages. A preliminary assessment in LMS have identified that full roll out of a national EWS would require at least the training of further 33 staff in GIS, data and information sharing technologies and most likely also additional staff hires. A full technical assessment of additional equipment and staff needs for establishing adequate EWS performance in Lesotho will be conducted as part of the PPG phase. As outlined above investments in both infrastructure and human capacity of the first EWS LDCF project and other baseline initiatives will only partly cover the needs of a modern data network capable of generating the high quality, real time meteorological and hydrological data needed to monitor current climate variability and produce the short and long term forecasts and models needed to implement a fully operational EWS at the national scale.

**Alternative scenario:** The 2<sup>nd</sup> phase LDCF EWS project will build on, and top up, the achievements of the first LDCF EWS project, as well as investments by other development partners, to achieve a modern, automated and fully equipped meteorological and hydrological data monitoring system as well as the human capacity needed to comprehensively process and communicate national and local climate forecasts and early warnings. Additional meteorological and hydrological equipment will be procured to enable LMS to continuously monitor climate and hydrological data at the spatial and temporal resolution recommended for optimal functionality of a national EWS system covering all key economic sectors (see section A1 for list of potential sectors to be covered - a further assessment of sector needs will be conducted in the PPG phase). The project will also support the procurement and installation of modern computer hardware and software to support forecasting, modelling, communication and storing of climate data and warning messages. Furthermore, project funding will be directed to facilitate the hiring of additional forecasters and support staff as well as training and upskilling of existing staff in line with needs to develop more, better and more downscaled forecasts, models and early warnings. Finally, a financing plan will be drafted in consultation with national policy makers to ensure that the operation and maintenance of installed EWS and human capacity is sustained after project the LDCF financing is phased out. As outlined above, the PPG phase will conduct a detailed needs assessment, supported by international expertise, to firmly establish equipment and staff needs (as well as cost) to achieve optimal functionality of the Lesotho EWS.

## **Component 2: Creation of institutional mechanisms for coordination and implementation of EWS in Lesotho and for use of climate information generated in Component 1 in policy making and sector planning**

**Business as usual scenario:** Through the first LDCF EWS project, a number of activities will have been implemented and will have increased the general institutional capacity for mainstreaming of climate change adaptation into sectoral planning and policymaking including: 1. Development of hazard and vulnerability maps for the pilot regions, 2. Training of government ministries, central planning agencies and other key stakeholders, and 3. Economic impact assessments and policy recommendations in support of mainstreaming of climate change adaptation into sectoral policies and planning frameworks (in particular for agriculture, water and forests) as well as support to development of a national adaptation policy. Also, the first project have, together with AAP, created and coordinated a new multisectoral task force on climate change and climate change adaptation policy making, which, among other things will be backstopping the development of the national adaptation policy (which in turn is linked to the national climate change policy supported by EU – see section A 1.2.). . Furthermore, Lesotho Disaster Management Authority (DMA) has established a national EWS task team, which, unfortunately, is yet to effectively fulfil its mandate due to limitations in the current EWS and the lack of clear national protocols for responding to early warnings generated from the system. Finally, local and regional coordination forums will have been established in the pilot regions to facilitate local level adaptation planning and implementation as well as emergency and disaster response protocols.

**Alternative scenario:** With LDCF funding, the proposed project will build on ongoing adaptation policy development and the newly established multisectoral task force, to create a coherent framework for early warning in Lesotho. First of all, the project will, based on the vulnerability mapping work conducted in the target districts of the 1<sup>st</sup> LDCF EWS project (as well as information from the recent World Bank study 'Climate and Water Risk Analysis Technical Assistance' and data generated through the Lesotho Highlands Water Project) , develop a 'Climate Change Atlas' built on the model of a similar publication that was recently published for South Africa. The 'Climate Change Atlas' will thus map projected climate impacts (rainfall, temperature etc) and key impacts on various economic sectors (e.g. crop yields of individual crops, water availability, health etc.) and suggest potential adaptation measures that can be applied in response to such impacts. This improved and easily accessible analytical foundation, will in turn provide a better foundation for decision making and development of

early warning protocols (see below). Furthermore, the LDCF project will improve the capacity and functionality of the crossdisciplinary EWS task team established by the DMA through various training activities, technical support, as well as review and expansion of the task team's TOR and membership. The aim is to transform the EWS task team into a small technically focused work group consisting of delegated staff members from key ministries and other relevant national organizations, including private sector as appropriate. A main task for the team in relation to this project will be to define a national EWS protocol covering all vulnerable sectors and all geographical regions. Development of the EWS protocol will consist of the following steps coordinated through the EWS task team: 1. Agreeing on terms of reference for functionality of the system – i.e. what services are the system expected to deliver and to whom?, 2. Analyse available data and knowledge of climate events (i.e. both short term extreme events such as flooding as well as longer term seasonal events such as drought spells) and associated socio-economic impacts and impacts on different economic sectors and in different regions of the country - and based on this define 'trigger points' for impacts that requires national (or regional/local) level intervention. This may also include mapping of specific private sector needs (e.g. dams/hydroelectricity, commercial farmers etc.), demand for climate related services/products and potential avenues for a 'payment for services' scheme. 3. Develop EWS protocols for each trigger point. I.e. in the case of a particular climate event, WHO does WHAT and WHEN<sup>8</sup>. With a clear and comprehensive national protocol (with predefined 'trigger points'), early warnings created through the improved monitoring and modelling capacity (component 1) will feed automatically and directly into a pre-coordinated chain of institutional action<sup>9</sup> from a range of stakeholders, supervised and coordinated by a cross-institutional, competent and experienced national EWS TT.

### Component 3: Pilot testing of EWS protocols and response strategies and sustainability plan

**Baseline scenario:** Through the first LDCF project a small scale regional EWS will have been tested and implemented in the three vulnerable districts of Quthing, Thaba Tseka and Mafeteng. These tests have focused primarily on the needs of farming and animal husbandry – the traditional livelihoods of rural Lesotho. Similar testing of targeted climate information dissemination to farmers is planned under the IFAD implemented LDCF project 'Lesotho Adaptation of Small-scale Agriculture (LASAP) – see section A4. However neither of these initiatives will be rolling out good practices from such pilots at the national level through standardized EWS protocols, nor will they pilot appropriate and effective communication of EWS messages to other private stakeholders than farmers and herders. The scope of the EWS created by LDCF and other investments would thus remain regional and not able to effectively cover all vulnerable districts and sectors. Furthermore, without a fully scaled national monitoring system, creation of a cross-sectoral EWS TT and national protocols to coordinate and sustain national efforts for early warning in Lesotho, there is a high risk that follow up on lessons and good practice from such early investments in EWS will remain fragmented, short lived, and not fully mainstreamed into regular business and budgets.

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<sup>8</sup> E.g. just to give one generic example (flood from extreme rain) of what a protocol would/should cover: If rainfall of more than X mm/hour is expected in region Y (based on differences in hydrology, soil, land cover etc.), the risk of catastrophic flooding of farmer houses and fields will become 'statistically significant' (to be defined through comprehensive analysis and consultation) and should thus trigger evacuation of the population and distribution of emergency relief. Initial warnings will then be issued by institution A, before B hours and local evacuation will then be handled by local institutions C while food relief and recovery (rebuilding of roads e.g.) are initiated by national institutions D.

<sup>9</sup> Some examples of potential pre-defined actions using the flood example: The first action based on a 'risk of flooding' warning may be to forward details of the warning to villages and local authorities through SMS, followed by preplanned evacuation of population to safe areas, strategic sand-bagging, and temporary re-housing coordinated by local police and/or army. The next step may be to implement pre-planned emergency and health care relief by local health care institutions or a national health care Task Team ready to move out on short notice. A further pre-planned action may be the immediate initiation of recovery operations from key ministries (reconstruction of entry roads, delivery of food aid, recovery of local livelihoods etc.). In cases that do not require immediate government emergency response (e.g. drought predictions, the first action may simply be sending out of targeted EWS information to different stakeholders targeted to their needs and interests (as piloted in the 1<sup>st</sup> LDCF EWS project, and further developed in component 3)

**Alternative scenario:** The proposed project will build on the results and lessons achieved in the baseline, to create and pilot test a fully functional national EWS reaching the majority of vulnerable stakeholders in Lesotho. Firstly, the project will identify the most appropriate and effective channels for communication of climate early warnings to different stakeholders and for different types of weather events/warnings. This will include considerations both on the means of communication (e.g. sirens, SMS, email, radio etc.) and the form (i.e. matching early warning with user interests/needs and levels of background knowledge). Initial lessons on targeted communication of climate messages (LDCF and IFAD) will be expanded through further surveys and pilots (see below) under this project, and subsequently codified and mainstreamed into the protocols established under component 2. Once drafted, LDCF funding will also support pilot testing of the national EWS protocol in a number of communities. These pilot tests will assume the occurrence of a random climate event and test the ability of both local and national institutions to implement (without prior notice) the full scope of response measures identified in the protocol (within practical limits). The pilots will help identify bottlenecks and weaknesses in the proposed protocol and thus provide a background for further discussion and refinement before its full adoption and implementation at the national level. Finally, the LDCF will support the EWS TT in negotiating with the national government and appropriate ministries a plan for the sustainable financing for the operation and maintenance of the installed EWS after closure of the project. Elements of the sustainable financing plan may include both regular national budget and increased payment for services from major private end-users benefitting from targeted climate forecasting and data services (e.g. operators of dams, commercial farmer associations etc.) and/or in-kind local community participation in the maintenance and operation of climate stations.

#### *A.1.5 Global environmental benefits (GEFTF, NPIF) and adaptation benefits (LDCF/SCCF)*

As outlined in section A.1. Lesotho's economy and livelihoods are highly vulnerable to the impacts of climate change. This is true not only for the primary sectors of the rural economy (agriculture and animal husbandry), but also for the water/energy sector which is key source of export revenues<sup>10</sup> and other key sectors such tourism, forestry, health, industry, ecosystems and urban development. Through creation of a full national EWS scaled and scoped to cover all regions and sectors of the economy, the LDCF project will provide tangible adaptation benefits for a wide group of stakeholders. First of all, through component 1, Lesotho Meteorological Services (LMS) will be capacitated with equipment, training and staff additions to comprehensively and consistently monitor climate and hydrology in Lesotho, provide short and long term forecasts and scenarios as well as early warnings. Component 2 and 3 in turn, will create the institutional infrastructure necessary to convert early warnings into action through establishment of an EWS task team capable of supporting the drafting, testing, and eventually full implementation, of a national EWS protocol. Through this EWS, vulnerable stakeholders will be able to act early to protect lives and property from impacts of extreme climate events (such as flash flooding, hail storms, snow and wind) as well as implementing adequate adaptation responses in response to more accurate seasonal forecasts (e.g. changed timing of crop planting in response to drought forecasts) or longer term scenarios (e.g. planning of changed crop patterns and management in response to trends in average precipitation). As the potential target of this effort is essentially all citizens of the country, the overall long term benefit from implementing the EWS is expected to be significant.

#### *A.1.6 Innovativeness, sustainability and potential for scaling up*

The Lesotho EWS will build on and learn from experiences from other UNEP/LDCF EWS projects implemented in other parts of Africa, in particular in Gambia ('Strengthening of the Gambia's climate

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<sup>10</sup> Large scale investments have recently been implemented to dam Lesotho's remote but plentyfull water resources for energy generation and diversion and export of water for irrigation in neighboring South Africa's dryland agriculture.

change early warning system’ and ‘Strengthening climate services and early warning systems in the Gambia for climate resilient development and adaptation to climate change – 2<sup>nd</sup> phase of the GOTG/GEF/UNEP LDCF NAPA Early Warning Project’) and Rwanda (‘Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in flood prone areas’), which are currently implementing similar national EWS structures as proposed here. This project, however, will go further in creating a national EWS protocol covering all sectors and regions of the country thus mandating automated and coordinated action to known and predicted climate events from a multitude of national stakeholders. This in turn, may create further lessons that can be applied in other UNEP EWS projects.

Sustainability of the established EWS, will be sought through creation of a national EWS task team comprised of stakeholders from key national institutions. This structure will coordinate development and testing of the EWS protocol created through the project, but is intended to remain in place following closure as a permanent body able to step in to coordinate government response to climate early warnings as and when needed. The EWS TT, will, through LDCF support, negotiate a permanent government budget allocation for sustaining the EWS. Furthermore, as mentioned in section A 1.4., the project will also explore other elements of a sustainable financing plan such as increased payment for services from major private end-users benefitting from targeted climate forecasting and data services (e.g. operators of dams, commercial farmer associations etc.) and/or in-kind local community participation in the maintenance and operation of climate stations

*A.2. Stakeholders.* Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes X /no ) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation:

The proposed project will, by its nature, depend on active participation, interest and ownership from a broad group of stakeholders at ministerial and local/district authority level as well as from private beneficiaries of the EWS such as farmers, business owners etc. Each of these stakeholders needs to clearly understand and appreciate their unique role in the successful implementation of the EWS and, since most of the hours laid in the project by external partners will be in-kind, they also need to quickly see results and direct benefits from their participation. Bottom-up definition of needs and functionalities of the EWS, as well as a focus on delivery of tangible benefits to stakeholders will thus be core guiding principles throughout the preparation and implementation of the project. The PPG phase will conduct targeted consultations with representative end users (e.g. local farmer communities, relevant private sector interest groups etc.) with the aim of mapping of all relevant stakeholders involved in, and potentially benefiting from, the EWS system, including a draft members list for the proposed EWS task team. What are their interests and needs in terms of climate information? What are the relevant mechanisms for providing climate information and setting up response protocols? How can they contribute (both financially and elsehow) to the maintenance and operation of the EWS after closure of the pilot phase? The preliminary input on these questions will help further scope out the project intervention strategy and identify potential innovative solutions that can be brought into bearing in the full project document before the detailed analysis and consultations anticipated as part the implementation of component 2.

The PPG phase will also further engage with key bilateral and multilateral partners with ongoing initiatives related to the functionality of the EWS.

*A.3. Gender Considerations.* Are gender considerations taken into account? (yes X /no ) . If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

The project preparation phase will include specific measures to assure that gender considerations are taken into account in the design and implementation of the project. This includes (but not limited to): integrating a gender analysis into the baseline including the collection of gender-disaggregated data, ensuring participation of women through seeking gender balance in the training and recruitment of new staff, assuring gender balance in the EWS TT

and PSC and, if appropriate, inclusion of women’s interest organisations in management and decision structures, ensuring gender balance in stakeholder consultations to identify priority response strategies in selected pilot communities in order to develop a gender-sensitive adaptation strategy is proposed by the project. In addition, the project will monitor and report on gender mainstreaming through the development of gender-disaggregated indicators in the project's log-frame.

*A.4 Risk.* Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable):

A number of key risks and mitigation measures have been identified and are presented in table 1 below. A more thorough analysis of risks will be conducted in the PPG phase.

*Table 1: Risks, rating and mitigation measures*

<b>Identified Risks</b>	<b>Risk rating</b>	<b>Mitigation Measures</b>
Theft and Vandalism of early warning and climate monitoring equipment.	Medium	The presence and proper functioning of early warning and climate monitoring equipment is critical to the attainment of outcomes from the three project components. While the meteorological observation network will continue to function with a few pieces of stolen or damaged equipment, the reliability of its weather reports, forecasts, and early warnings will be comprised if a significant proportion of its infrastructure is no longer functional. A series of public awareness workshops will be performed to sensitize communities to the importance of this infrastructure, as well as to involve local stakeholders in their maintenance and surveillance. Incentives may need to be provided to certain communities in order to maintain a basic level of operation of the stations. These incentives may include small financial contributions in the first years of the project, through the recruitment of dedicated “climate observers” at local level who would also be tasked with surveillance. Community-level participation in the maintenance and surveillance of equipment will be mobilized in-kind to ensure long-term sustainability. The Lesotho Meteorological Service will acquire insurance for all its equipment and will invest in surveillance and monitoring.
Delayed policy level adoption of EWS protocol	Medium	There is a risk that due to lengthy coordination processes among various ministries and stakeholders, the adoption of the EWS protocol could be delayed. Protocol drafting will be monitored regularly by the project steering committee as well as by the Climate Change Steering Committee, who has expressed its commitment to this output.
Unavailability of requisite human resources and data	High	The issue of the unavailability of requisite human resources will be mitigated by recruitment of international consultants who will work closely with in-country counterparts and by targeted capacity building activities. Training activities of local personnel (not least the EWS TT) will also be part of all aspects of the work and the relevant institutions will be encouraged to expand the staff base if it is weak in particular areas.

Local IT and telecommunications infrastructure weak e.g. international bandwidth and local mobile telecommunications networks	Medium	Cost-effective solutions for each particular situation will be used e.g. satellite and/or radio communications. Where feasible automatic weather and hydrological stations reporting over the mobile telecoms network will be preferred.
Work progresses in a compartmentalized fashion and there is little integration e.g. government departments refuse to share data and information	Medium	This risk is always present in a project such as this. By ensuring that capacity is built across a range of departments and implementing ‘quick win’ measures early (developing products based on internationally available data), these issues can be mitigated.
Climate shock occurring during the design and implementation phase of the project	Low to medium	There may be some delays as more urgent priorities may need to be addressed by some of the stakeholders (e.g. NHMS or disaster management) but it is unlikely that this will derail the project.
High staff turn over in LMS	High	LMS have been challenged by high staff turnover in recent years, which could limit the effectiveness of capacity building efforts envisioned in this project. To overcome such challenges the project will develop a strategy for better retaining skilled staff (output 1.1.3) and this strategy will also be included in the sustainable financing plan (out 3.1.4).

*A.5. Coordination.* Outline the coordination with other relevant GEF-financed and other initiatives:

First of all the project will be fully mainstreamed into the first LDCF funded and UNEP implemented, EWS project that started in 2010 ‘**Improvement of Early Warning System to Reduce Impacts of Climate Change and Capacity Building to Integrate Climate Change into Development Plans**’, to which the this project would constitute a second phase. Continuity and coherence in implementation between the 1<sup>st</sup> and the 2<sup>nd</sup> phase would be assured through maintaining the same management structure (i.e. execution through Lesotho Meteorological Services and already established project team, continuation of the same Project Steering Committee etc.).

**Lesotho Adaptation of Small-Scale Agriculture (LASAP).** This project, which is funded by LDCF and implemented by IFAD, is aiming to increase the resilience of small-scale agriculture to climate change impacts by promoting climate-proofed investments for agriculture-based development, as well as by enhancing the resilience of agricultural productivity under increased climate variability. Among other activities, the project includes a component aimed at increasing awareness and capacity for government and local stakeholders for reducing risks of climate induced losses in the agriculture sector. This component will, among other things, work with LMS to improve agro-meteorological capacity in the country, including through installation of a number of automated agro-meteorological stations, preparation and validation of local level climate/production models for agriculture (through set up of test plots in different microclimates and training of LMS staff), and work with ministry of agriculture and its extension services to increase capacity for ‘translating’ climate bulletins into production relevant advice at community and farm levels. The project will primarily work in Botha-Bothe, Leribe, Berea, and Mafeteng districts. This LDCF project will keep close contact with IFAD throughout the project preparation phase to make sure that synergies are maximized and that a mechanism for coordination is set up for the implementation phase. LMS will have a key role to play here as a key partner in both projects. In particular, it is anticipated that the installed met stations and downscaled models for agriculture can feed directly into the early warning system and mechanisms envisioned in this project.

**The Smallholder Agriculture Development Programme.** This programme, also implemented by IFAD and the primary baseline for their ‘Lesotho Adaptation of Small-Scale Agriculture’ (LASAP) LDCF project, will increase the

resilience of small scale agriculture to climate change impacts by promoting climate-proofed investments for agriculture-based development, as well as by enhancing the resilience of agricultural productivity under increased climate variability. The LDCF project will improve the effectiveness of this project by producing and disseminating more detailed and downscaled climate models as well as early warnings for the agriculture sector which will help to design more appropriate local adaptation strategies and reduce the risks of disruptions by extreme events.

**Reducing Vulnerability from Climate Change in the Foothills, Lowlands and Lower Senqu River Basin.** This project, funded by LDCF and implemented by UNDP, will, using an EbA approach, mainstream climate change into the ongoing Land Rehabilitation Programme, through a variety of adaptation measures including establishment of a geo-based ecological and hydrological information system to increase the understanding of the relationships between climate change, ecosystems, and resilient livelihoods. While the project is still in its preparation phase, there is significant scope for synergy with the proposed EWS project. E.g. the planned mapping of climate vulnerabilities and hazards of sensitive natural resource will benefit significantly from improved data foundation, and greater resolution and accuracy in forecasting and scenario enabled through this project. At the same time, the improved understanding and documentation of links between climate, ecosystems and hydrology will provide valuable input into the EWS protocols planned under this project.

**Strengthening Capacity for Climate Change Adaptation through Support to Integrated Watershed Management.** This LDCF project (FAO implemented), which is still in its development phase is focused on implementation of adaptation measures related to sustainable land management and integrated water management. While the project will primarily focus on community level activities, it will also include a component on data, tools and methods for assessment of climate change impacts on land suitability and livelihoods. As for the UNDP project mentioned above, there is wide scope for potential synergies with the proposed EWS project, and these will be further explored during the PPG phase.

**Strengthening capacity for climate change adaptation through support to Integrated Watershed Management Programme** (total budget \$3.593 million). This activity, which is funded by LDCF and implemented through a number of national ministries (Forestry and Land Reclamation, Agriculture and Food Security, Natural Resources, and Local Government), Department of Environment and National University of Lesotho, will implement climate change adaptation measures at the local level to reduce vulnerability of local communities and improve their livelihoods and adaptive capacity. Scaling-up and transfer of climate resilient measures will also be considered. The current LDCF project will build on and further the developed institutional capacity of national and district level staff and institutions on climate change adaptation, sustainable land and water management. In particular the EWS project should be able to benefit from activities under 2.2.1., which aims to 'assess vulnerabilities and risks for selected watersheds in 3 livelihood zones' and will build comprehensive databases on livelihood to enable detailed quantitative analysis of CC impacts.

**Protection of the Orange-Senqu Water Sources (Sponge) Project** (total budget \$0.45 million). This GIZ led project (implemented at national level through the Department of Water Affairs) is part of the larger programme on "Transboundary Water Management in SADC" and is aimed at strengthening the capacities of local communities to apply Integrated Water Resource Management through the adoption of a 'learning by doing approach'. Through a pilot focused on range management and wetlands rehabilitation of selected areas within the Khubelu Catchment in the Mokhotlong District, the project will act as a catalyst for replication and scaling-up approaches to improve water resources development and management at national and river basin levels. One key objective of the pilot intervention (and by extension integrated water resource management at the regional level) is to improve climate resilience of water resources by increasing natural and man-made storage capacity of critical basins. The proposed LDCF project will link with the project both at the national level (by improving capacity for climate resilient water resource management through early warnings and improved real time meteorological data and projections) and the local level through provision of specific downscaled data and early warnings. Among other things, the GIZ project will be investing in a meteorological station in Mokhotlong district and is actively coordinating with LMS on provision of specific data and scenarios for the targeted basin. As the GIZ project is implemented from January 2013 to March 2015, it is likely to have concluded by the time the LDCF project will get off the ground, however, the outcomes of



the project will feed directly into EWS protocol development for the water sector in Lesotho, and will be an important baseline and reference point during the PPG phase.

#### **DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:**

**B.1** Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes X /no ). If yes, which ones and how: NAPAs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.:

**INC.** Lesotho's first national communication (INC) reiterated that despite both short- and long-term training that had taken place in climate-related fields, the country required additional financial resources and greater coordination skills to build institutional capacity and take the subject of climate change to a broader audience, including rural communities

**SNC.** The second national communication follows up on the INC in analysing critical climate impacts and providing updates on what policies and measures the country has taken and envisaged to implement the Convention. The assessment again highlights critical CC impacts such as reduced precipitation - in particular in the south, and generally increasing temperatures and how this will trigger a number of challenges in vulnerable economic sectors such as agriculture, water resources, forestry, livestock and rangelands, soil and land degradation, health and culture/heritage. The need for a comprehensive EWS is also highlighted, e.g. for the health sector.

**National Disaster Management Plan (NDMP).** The NDMP aims at: reducing its vulnerability to climate-related disasters such as sustained and severe droughts; increasing its capability to prevent, alleviate, contain, or minimize the effects of climate-related disasters; enhancing readiness or preparedness to deal with climate-related disasters; and ensuring the country's full recovery from the impacts of disasters. The DMA is conscious of the data requirements of this planning process that involves coordinating data from more than 10 government departmental sources. LDCF assistance will therefore not only support the overall objectives of disaster management but also strengthen and capacitate the process of planning for disaster mitigation.

**Lesotho's Poverty Reduction Strategy** advocates for building capacity in environmental education in order to break this link. In particular, the strategy calls for the augmentation of public awareness campaigns, the inclusion of environmental issues in school curricula, and the intensification of the awareness of the importance of integrating environmental impact assessments into the country's planning process. In this respect, interventions in climate change, which is a major component of environmental management, are bound to have a direct impact on poverty alleviation. The latter occupies the highest priority on Lesotho's development agenda.

**Lesotho's Vision 2020**, a document that embodies the country's development aspirations up to the year 2020, advocates for the strengthening of institutions that are responsible for natural resources and environmental management, environmental advocacy and awareness campaigns as the main challenge for the implementation of global agreements for sustainable development. As part of the implementation strategy for Vision 2020 (and succeeding the Poverty Reduction Strategy Paper (PRSP) and the Interim National Development Framework (INDF)), Lesotho developed the National Strategic Development Plan (NSDP) of 2012/13 – 2016/17. The project responds directly to 4th and 5th strategic Goals of the NSDP by improving national resilience to climate change through undertaking or reviewing vulnerability assessments and strengthening capacity for disaster risk management.

The project is also in line with key policies in Lesotho, chief among which the **National Disaster Risk Reduction policy (2011)**, **Environmental Act (2008)** and **National Environmental Action Plan, the Water Policy (2007) and the Rural Development Policy**. It is expected that this project will generate valuable lessons, methodologies and approaches to strengthen these policies so as to promote resilience throughout sectoral and national planning.


**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. Record of Endorsement<sup>11</sup> of GEF Operational Focal Point (S) on Behalf of the Government(s):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr Stanley M. DAMANE	Operational Focal Point	The National Environment Secretariat Ministry of Tourism, Environment and Culture	26/06/2014

**B. GEF Agency(ies) Certification**

**This request has been prepared in accordance with GEF policies<sup>12</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6.**

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Brennan Van Dyke, Director, GEF Coordination Office, UNEP		November 28, 2014	Ermira Fida, Head- GEF Adaptation Unit, UNEP	+(254)20 7623113	ermira.fida@unep.org

**C. Additional GEF Project Agency Certification** (*Applicable Only to newly accredited GEF Project Agencies*)  
For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

<sup>11</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

<sup>12</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF