GEF - PROJECT IMPLEMENTATION REPORT (PIR)

Document Generated by:
At:

Table of Contents

INSTRUCTIONS TO COMPLETE THIS PIR

1. *Instructions in blue are directed to Task Managers / Administrative Officers*
2. *Instructions in red are directed to Project Managers and Executing Agencies*

1. PROJECT IDENTIFICATION

1.1. Project details

This entire table is to be prepared by Task Managers

GEF ID: GEF ID.: 6926	**Umoja WBS:** SB-013200
SMA IPMR ID:	**Grant ID:**
Project Short Title: *Lesotho EWS 2*	
Project Title: *"Strengthening climate services in Lesotho for climate resilient development and adaptation to climate change*	
Duration months planned:	*60*
Duration months age:	*42*
Project Type:	*Full Size Project*
Parent Programme if child project:	*Insert ID of Parent Programme if child project*
Project Scope:	*National*
Region:	*Africa,*
Countries:	*Lesotho*
GEF Focal Area(s):	*Climate Change Adaptation*
GEF financing amount:	*5,000,000*
Co-financing amount:	*37,060,000*
Date of CEO Endorsement/Approval:	*25-03-2019*
UNEP Project Approval Date:	*25-03-2019*
Start of Implementation (PCA entering into force):	*06-11-2019*
Date of Inception Workshop, if available:	*4-11-2020*
Date of First Disbursement:	*06-03-2020*
Total expenditure as of 30 June 2024:	*1,198,263*
Total disbursement as of 30 June 2024:	*1,575,988*
Midterm undertaken?:	*NO*
Actual Mid-Term Date, if taken:	*NO*
Expected Mid-Term Date, if not taken:	*February 2025*

Completion Date Planned - Original PCA:	*September 2025*
Completion Date Revised - Current PCA:	*Insert date as per last revision/ no cost extension if any*
Expected Terminal Evaluation Date:	*April 2026*
Expected Financial Closure Date:	*January 2027*

1.2. Project description

Present a brief project description, stating objective, components, executing agency and main government/other partners involved. Summarize each component in one short paragraph:

The focus of this project is the need to reduce the country's vulnerability and risk to climate change hazards, characterized by irregular and unpredictable rainfall associated with increased floods and landslides as well as seasonal and prolonged droughts, through the development of an Early Warning System (EWS) and enhancing the availability of climate information for long-term planning. The project will be demonstrated in six pilot sites to test the effectiveness of the EWS on "nowcast" weather, flood forecasting and advisories capacity. The LDCF project will achieve this goal through three Components:

Component 1: *Establishment of necessary infrastructure and human capacity in LMS to enable a fully functional national EWS. Under Component 1, gaps related to the Hydrometeorological infrastructure and capacity of human resources will be bridged through five Outputs which overall aim is to enhance the LMS & MAFS monitoring network and stregthen the human capacity through massive training so to develop a Nowcast based, Medium, Short-term and seasonal forecasting system to support the Early Warning System (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. Component 2 of the project intends to enhance national institutional capacity for taking-up of hydrometeorological services by creating a coherent framework for issuing early warning and advisories in Lesotho.*

Component 3: *Pilot testing of EWS protocols and response strategies and sustainability plan. In this Component the 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. For that, 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.*

The implementing partner currently is the Ministry of Environment and Forestry (through the Lesotho Meteorological Services (LMS) as lead coordinator for climate change issues in Lesotho) and no longer the Ministry of Energy, Meteorology and Water Affairs as a result of the reshuffling of the ministries in the Government of Lesotho. the implementing partner will execute the project nationally in close collaboration with other national institutions which include the Lesotho Disaster Management Authority (DMA), the Ministry of Agriculture and Food Security (MAFS), National University of Lesotho (NUL) – Department of Geography and Environment Science and Department of Soil Science and Resource Conservation, Ministry

of Forestry, Range and Soil Conservation (MFRSC), Ministry of Water: Department of Water Affairs (DWA), Department of Environment (DE) - Ministry of Tourism, Environment and Culture, Bureau of Statistics (BO) as responsible parties, as well as the NGO's & CBO's collaborating in local level pilot interventions of the project in selected pilot communities.

1.3. Project Contacts

Division(s) Implementing the project	*Climate Change Adaptation Unit* *Climate Branch* *Ecosystems Division*
Name of co-implementing Agency	*Lesotho Meteorological Services*
Executing Agency(ies)	*Lesotho Meteorological Services*
Names of Other Project Partners	*Lesotho Disaster Management Authority (DMA),* *Ministry of Agriculture and Food Security and Nutrition (MAFSN),* *Department of Water Affairs (DWA),* *Ministry of Tourism, Sports, Arts and Culture* *Bureau of Statistics (BO),* *Ministry of Environment and Forestry,* • *Department of Soil Conservation,* • *Department of Range* • *Department Environment* *National University of Lesotho (NUL) –* • *Department of Geography and Environment Science* • *Department of Soil Science and Resource Conservation* • *Department of Physics and Electronics* • *Department of Mathematics and Computer Science*
UNEP Portfolio Manager(s)	*Jessica Troni*
UNEP Task Manager(s)	*Essey Daniel*
UNEP Budget/Finance Officer	*Bwiza Odemba*
UNEP Support/Assistants	*David Ochola*
EA Manager/Representative	*Mokoena France*
EA Project Manager	*Mosuoe Letuma*
EA Finance Manager	*Makatleho Matabooe*

EA Communications Lead, if relevant	*N/A*

2. OVERVIEW OF PROJECT STATUS

2.1 UNEP PoW and UN

UNEP Current Subprogramme(s)	*Thematic: Climate action, Nature action*
PoW Indicator(s)	**Strategic objective 1**: "Climate stability". **PoW 2023-2023 Indicators:** (i) Number of national, subnational and private-sector actors that adopt climate change mitigation and/or adaptation and disaster risk reduction strategies and policies with UNEP support (ii) Amounts provided and mobilized in $ per year in relation to the continued existing collective mobilization goal of the $100 billion commitment through to 2025 with UNEP support (iv) Positive shift in public opinion, attitudes, and actions in support of climate action as a result of UNEP action
UNEP previous Subprogramme(s)	*If the Subprogramme has changed, please indicate previous subprogramme(s)*
UNSDCF / UNDAF linkages	*United Nations Development*
Link to relevant SDG Goal(s)	• Goal 1: End poverty in all its forms everywhere. • Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. • Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable; and • Goal 13: Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy; and • Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
Link to relevant SDG Target(s)	*Assistance Plan | 2016–2021* Goal 13: Targets 13.1, 13.2 and 13.3 Goal 15: Targets 15.3 and 15.5

2.2. GEF Core Indicators:

GEF Core or sub indicators targeted by the project as defined at CEO Endorsement/Approval, as well as results.

Indicators	Targets – Expected Value			Materialized to date
	Mid-term	End-of-project	Total target	
Number of direct beneficiaries	39,195 people in 3 districts benefit from 30% reduction in loss and damages	39,195 people in 6 districts benefit from 50% reduction in loss and damages	39,195 people	*127 males and 129 females (Early warning messages dissemination of seasonal climate forecast and advisories for preparedness and better planning against climate hazards for DRR) Radio programmes, Social media platforms*
Number of people with enhanced capacity to identify climate risk and/or engage in adaptation measures	At least 30 percent of targeted population (gender disaggregated) in the 6 districts receive early warnings, advisories and weather-related messages by Year 3 and act on them.	39,195 people in 6 districts benefit receive early warnings, advisories and weather-related messages by Year 5 and act on them.	39,195 people	*2,172 (973 males 1,199) females (awareness on climate change and its impacts, early warning for DRR) which is about 5.5%*
Training	At least 30 % of training plan targets achieved or close to being achieved by the end of the year 3.	At least 5 Agrometeorologists, 4 Forecasting officers, 20 senior technical officers and 10 *69*	*50 people trained, (43 LMS staff and 7 other partners) about 73%. This has been achieved without repeating a person for training. However the reality is that we have trained one person more than once*	

		GIS/IT technicians and 6 IT maintenance engineers and 7 weather presenters are trained.		*whereby we have trained a total of 126 people.*

2.3. Implementation Status and Risk

[complete the fiscal year and select: 1st PIR; 2nd PIR; …. Final PIR; select HS; S; MS; MU; U; HU; unknown; not rated to rate the progress towards outcomes and outputs in third and fourth lines; select H; S; M; L; to rate risks for the fiscal year you are reporting in the fifth line. Add more columns if needed]

	PIR#	Rating towards outcomes (section 3.1)	Rating towards outputs (section 3.2)	Risk rating (section 4.2)
FY 2024	4TH	MS	S	L
FY 2023	3RD	MS	S	M
FY 2022	2ND	S	MS	S
FY 2021	1ST	MS	MS	M
FY 2020				
FY 2019				
FY 2018				
FY 2017				
FY 2016				
FY 2015				

Summary of Status

Summary of status. Please structure as follows, highlighting progress, challenges and main achievements, as needed:

Initially, the project faced some delays, from the start till March FY2020, given the need for setting up of office for the PMU, contracting the CTA. Regrettably, all activities were suddenly brought to a standstill due to the outbreak of the COVID-19 Pandemic and the restrictions on the movements of the citizens all around the country and globally. One immediate consequence of this situation was the immediate cancelation of the foreseen first visit of the CTA to the country indefinitely due to global travelling restrictions. Nevertheless, Inception Workshop was successfully organized and delivered with participation of 55 participants, the maximum number of individuals allowed to gather due to COVID-19 restrictions and 84 participants including those from the districts who connected online and attended the workshop virtually through the MS Teams Platform.

Although the activities were affected in this way by the COVID-19 constraints for several months and these are still behind schedule, project implementation is progressing with key achievements being outlined below. To ensure good coordination and maximum benefit on the existing synergies between the GEF – EWS project

and AF-WFP project, both projects share the same Project Steering Committee, housed in one building and both report to Director LMS for execution of day-to-day plans and activities. Moreover, the two projects agreed on contributing towards the payment of Chief Technical Advisor that is engaged by the GEF-EWS project still to ensure well-coordinated and complementary of project activities right from the designing and planning of activities. The three projects have together established a Technical Working Group at the national level, that provides the technical backstopping to the design of activities. There is also a proposal for LRCS to be a member of the PSC.

Under Component 1, the project contributed to cover the gaps in the LMS & MAFS monitoring network by conducting a baseline assessment with LMS to determine the actual number of stations per category that are required. Following the Baseline Assessment report on equipment. The equipment for new automatic weather stations including the civil works material (plates and anchor bolts) was received in August 2023. The civil works process then began for 73 stations. The constructed slabs needed time to set before the AWSs could be mounted. The installation of the AWSs was also delayed pending the availability of the supplier to conduct training for LMS staff on installing 5 stations as part of training where the training only took place from April 2024.The assessment of old weather stations is also ongoing the final report from the supplier will guide on the number of sensors per station to be purchased. The following new automatic weather stations have been installed:

- Agrometeorological stations (6)
- Synoptic stations (1)
- Climate stations (5)
- Lightning detection system (2)
- Rainfall stations (2)
- Old weather stations (2)

A number of parts will also be procured to repair the old automatic weather stations, these include solar panels, temperature, rainfall, wind and pressure sensors. Simultaneously, the baseline assessment with LMS included the need for increasing the Computing Power and the ancillary equipment to support a “nowcast” based, Medium, Short-term, and seasonal forecasting system. Therefore, the Procurement under way will also include a High-Performance Cluster Computer (HPC) and acquire 5 advanced running LINUX workstations (fast, high memory capacity and high resolution) to archive and process data from EWS network. The HPC is currently operational where the Weather Research and Forecasting (WRF) model has been customised for Lesotho context, The model is producing daily weather forecasts on two domains (at 9km outer domain and 3km inner domain) for once cycle (00Z cycle). There is also a one-hour nowcasting cycle available from the WRF model.

In addition, still under Component 1 the project also contributed towards the strengthening of LMS Human capacity to use the rehabilitated and upgraded network by conducting a Human Resource capacity needs assessment for LMS staff which allowed the identification of relevant training courses/ on-the-job capacity

development programmes. Owing to this exercise the following Training Courses and Capacity Development Programmes have been identified:

A. Training Programmes:
   - BSc Hons in Meteorology (2 completed 1 perusing 2nd year)
   - Meteorological Technician Basic Instruction Package (BIP-MT)
     - General Meteorological Technician Certificate (13 graduated)
     - Aeronautical Meteorological Observer (5 graduated)

B. Capacity Development Programmes:
   - Automatic Weather Stations (AWS) Management (7 candidates)
   - Meteorological Broadcasting (7 candidates)
   - Numerical Weather Prediction (NWP) (15 candidates)
   - Quality Control of Climate Data (13 people as part of BIP-MT modules)
   - Coding and decoding of meteorological messages (13 people as part of BIP-MT modules)
   - Climate modelling, including climate change scenarios development (12 candidates)
   - High Performance Computing (10 people trained)
   - GIS, Data and Information (18 people trained)
   - Early Warning Message Packaging
   - Seasonal Forecasting

Under Component 2, the project established the national Technical Working Group (TWG) with a cluster for provision of technical backstopping at the national level. The TWG serves this project, the Adaptation Fund funded "Improving adaptive capacity of vulnerable and food-insecure populations in Lesotho — (IACoV)" project and the Red Cross "Forecast Based Financing" project and is composed of various stakeholder institutions and has five clusters namely Capacity Building & Training, Communications & Awareness, Early Warning, Finance and Livelihoods. District-level TWGs will also be formed to ensure ownership of project activities by the district authorities and technocrats. This will contribute towards the objective of component 2 for the creation of institutional mechanisms for coordination and implementation of EWS in Lesotho and for use of climate information generated.

Lesotho Meteorological Services acquired a server from the ClimSA programme an update of the MESA system. The server has a functionality of being replicated in the workstations of the other 5 key stakeholders for them to have access to data for developing sectoral advisories and early warning products which will be made available through the Climate Change Information platform (CCIP).

Under the MoA with NUL procurement of Drones and consultancy for risk mapping are at an advanced stage. A prototype for Meteorological Application tool has been developed. Review of previously existing documents for DMA (SOPs, Legal Framework) completed and will be prepared to be presented in the parliament for approval. Moreover, NUL concept note, Workplan developed, ongoing discussions of implementation with Department of Soil Conservation.

Under Component 3, the project developed the Terms of Reference (TORs) for Baseline and Vulnerability Assessment Consultancy and launched the procurement process. The development of a baseline survey will support implementation of all project Outcomes and Outputs in the results framework and relevant indicators in the GEF Tracking Tool. This Consultancy will also gather primary data on loss and damage from previous climate shocks as the baseline to measure project effectiveness. Information gathered by this Consultancy will contribute for the climate change risk mapping in 6 project Districts and the planning of community awareness raising activities. The contractual negotiations with the preferred bidder are ongoing.

Main Achievements

- One candidate has been enrolled full time for the academic year 2024 to pursue BSc Honours in Meteorology at University of Pretoria. One candidate will be enrolled at UP in 2025.
- Three candidates have successfully completed BSc Honours in Meteorology.
- Contract negotiations are ongoing with the preferred bidder for Baseline and Vulnerability Assessment consultancy.
- The equipment for 76 Automatic Weather Stations (AWS) which included the plates and anchor bolts for civil works/slab construction was received in August 2023. Anchoring platforms for 73 AWSs have been completed. 15 AWSs have been installed.
- Assessment of old AWSs is ongoing, two dataloggers are installed at Tsehlanyane (Delta-T station) and Phuthiatsana (Vaisala station).
- The High-Performance Computer and 5 Linux workstations were received in April 2023. The HPC is currently operational and the HPC management training was conducted in July 2023.
- Weather Research and Forecasting (WRF) model has been installed and is operational the HPC cluster, it is customised to run on two domains (9km outer and 3km inner) for the 00Z cycle. The nowcasting (30minutes) for the 00Z cycle is also operational.
- For the first cohort, 13 graduates have been awarded certificates in General Meteorological Technician while 5 graduates have been awarded certificates on Aeronautical Meteorological Observer (AMO). The second cohort will start after Assessor and Moderator online course in August 2024.
- Under the LMS/NUL MoA the following has been achieved:

    - Concept note on Climate Information Platforms has been developed.
    - Procurement of Drones at advanced stage
    - Contractual discussions with a consultancy company, (GeoNest) ongoing
    - *A* prototype model for Meteorological Application has been developed
    - Review of previously existing documents for DMA (SOPs, Legal Framework) completed

Rating towards outcomes: The current rating is S. A number of activities have been already undertaken particularly progressing outputs on strengthening human capacity and equipment. On the human resource, a number of trainings have been completed as planned. Capacity building of on short-term training courses: WRF Installation & running, HPC Management, Website Content Management, GIS Basic and Expert Levels, Electronics for AWS, IT for AWS, Met Studio Presenter's Training and Assessors and Moderators course, with total of 105 trainees. In addition, Capacity building on medium to long-term training courses: BIP-MT (1st Batch): Course Entry Level (Maths & Science, 2 Months), BIP-MT (1st Batch): RTC Accredited Topics (4 months), General Meteorological Technician Certificate, Aeronautical Meteorological Observer Certificate and BSc Honours in Meteorology, with a total of 56 trainees have been undertaken and completed. Moreover, regarding the equipment the 76 AWSs equipment have been received and installation has begun and this activity is expected to be completed by December 2024. The HPC is currently operational where the Weather Research and Forecasting (WRF) model has been customised for Lesotho context, The model is producing daily weather forecasts on two domains (at 9km outer domain and 3km inner domain) for once cycle (00Z cycle). There is also a one-hour nowcasting cycle available from the WRF model.

Rating towards outputs: The rating is S.

Overall risk rating: The overall risk rating for implementation is rated L.

[section will be uploaded into the GEF Portal]

2.4. Co-financing

Planned Co-finance:	(in USD) *(37,060,000)*
Actual to date:	(in USD) Cumulative 14 638 314.24 constituting 39.5% of the total co-finance budget as at 31 December 2023.
Progress	**Justify progress in terms of materialization of expected co-finance. State any relevant challenges:**

	At the time of Project development, the project activities were built from existing development baseline initiatives at national and regional level foreseen to contribute to $37,060,000 as co-financing. However, since then, several of the projects have been completed and the overall co-financing scenario has changed. Of particular importance are the following baseline projects which have already contributed to in-kind and cash co-financing to the LDCF-funded project: • *LMS Quality Management System (QMS) For Meteorological Services ISO 9001:2015 Certification Project. Financed by the Government of Lesotho. Ministry of Energy and Meteorology. Lesotho Meteorological Services which so far as contributes with around 4,5% ($40,500) in kind contribution. Activities of this project include procurement of instruments to replace mercury-filled thermometers and barometers; and Training of Meteorological Human resource in managing, calibrating, maintaining and repairing the newly installed equipment. In each Fiscal year during the lifetime of the EWS II Project LMS will budget around $280,000 for allowances of personnel carrying out observations at meteorological stations around the country and $31,000 for station monitoring. The procurement of equipment and training will cost around $176,500. Weather monitoring and data collection are important contributions towards Outcome 1 of this EWS II project.* • *AF-WFP Project "Improving Adaptive Capacity of Vulnerable and Food Insecure Populations in Lesotho (IACOV)" grant contributions of $230,000 in cash towards the acquisition of HPC cluster computer. This equipment will serve both projects and will in Outcome 1 contribute towards strengthening of sub-seasonal to seasonal precipitation and temperature forecasting to feed into National Early Warning System to trigger early action through government safety net programmes. In addition, this project also intends to strengthen access to better climate and weather information through the identification of most suitable dissemination channels; and to carry out training and capacity building of key stakeholders including media, NGOs, ICT providers, community radios, Red Cross, District Disaster Management Teams (DDMTs), Village Disaster Management Teams (VDMTs). All these activities will be in support of this EWSII project overall objectives.* • *In addition, the IACOV Project has pledged a contribution of $110,000 towards the acquisition and installation of completely new Rainfall monitoring network to further strengthen the sub-seasonal to seasonal precipitation and temperature forecasting Component.* • *The IACOV has committed funds amounting to $275,087 and undertook the following activites that add significant value to data processing and forecasting:* • *Elect agro climatic variables to forecast (e.g., total seasonal rainfall, or length of the rainy season or of dry spells,) that optimize forecast skill, as well as relevance to forecasting drought in Lesotho, by comparing against independent drought vulnerability indicators (e.g., IPC data, crop production data).* • *Conduct a workshop to introduce the science and tools developed for the stakeholders, and design triggers for the upcoming (2021) agricultural campaign. Stakeholders will come to elect triggers reflecting different degrees of drought severity, different forecast lead times, and how they relate to vulnerability indicators.* • *Transfer the required technology (CDT for ENACTS, PyCPT for forecasting, Data Library (DL) and Maprooms for data curation and information dissemination) to the Lesotho Meteorological Services (LMS), whose staff will be trained on the use and maintenance of this technology.* • *Establish a roadmap for activities in upcoming years to improve the FbF system (e.g. via improved forecasts, improved vulnerability indicators) and continue to build up the capacity of the LMS to use, maintain, and develop the whole set of tools.* • *AICoV has also made significant contributions in supporting both government (LMS and DMA) and community (District Disaster Management Technical Working Groups) efforts to mitigate the impacts of climate change during the year 2023/2024 amounting to $177,813. The following activities were undertaken:* • *Staff Training: Comprehensive training programs were conducted to enhance the skills and knowledge for LMS and DMA staff members including revival of Technical Working Groups.* • *Strengthening seasonal Forecasting efforts to refine forecasting models in support of LMS, DMA and other stakeholders for better climate change prediction and response:* • *Procurement of Technical Equipment: Essential technical equipment was acquired to bolster DMA coordination and LMS Technical capabilities: Computers and other technical equipment*

	• *These initiatives collectively contributed to the project's overarching goal of improving climate change mitigation strategies* • *Regeneration of Landscapes and Livelihoods (ROLL) Implemented initiatives which focused on reducing the overexploitation of natural resources by engaging private sector and communities in the development of innovative and alternative energy sources. These efforts aim to enhance resilience against resource depletion. These amount to $575 800.12. The activities include:* • *Land Regeneration Opportunities: carried out initial activities which lay groundwork for the planned National NRM Dialogue in 2024 by conducting awareness campaigns on Land regeneration and landscapes activities across the country. This initiative is designed to increase public understanding and engagement with sustainable practices.* • *Capacity Building: Organized workshops for LMS staff and other partners to enhance their knowledge and skills related to Natural Resource Management (NRM) good practices.* • *Integrated Catchment Management (ICM) also implemented activities during the year 2023 which amounts to $$2 034 492. The activities include:* • *Community Planning: 8 community Based Organisation (CBOSO supported to undertake NRM and livelihoods adaptation activities.* • *Promotion and Adaptation of Indigenous Knowledge: Public campaigns were conducted to compile and promote the indigenous knowledge base. These efforts focused on adapting traditional knowledge to address the challenges posed by changing environmental conditions and evolving agricultural practices.* • *Training Key Community Actors where key government officers working directly with communities received training on developing by laws aimed at enhancing environmental protection. This training focused on safeguarding rangelands, preserving biodiversity, and addressing other critical environmental issues.* • *Agricultural Productivity Programme for Southern Africa (APPSA) also contributed on activities amounting to $ $407 554.62. These initiatives include:* • *The project's efforts collectively contributed to advancing agricultural sustainability and economic resilience at farm/community level.* • *Research on Technology Adoption and Profitability where investigations were conducted into the drivers of technology adoption and the dissemination of improved maize and bean varieties. This research aimed to enhance both agricultural productivity and better economic returns in view of the changing farming landscape as a result of climate change.* • *Support for Climate-Smart Agriculture at the farm level where farmers received assistance in adopting climate-smart agriculture practices. This included the implementation of sustainable, solar-powered micro irrigation systems, which support small-scale businesses and promote sustainability.* • *Evaluation of Conservation Farming Practices where a study was carried out to assess the impact of conservation farming practices on food and nutrition security and income levels. The findings highlighted the effectiveness of these practices in improving both food security and economic stability for farmers.* • *Red Cross Forecast Based Financing project grant contributions of $60,000 in cash towards the acquisition of HPC cluster computer. The output from this system will support both projects. In addition, two of this project specific objectives are: to strengthen the institutional mechanism for disaster risk governance at both the national and local levels; and to reduce hazard exposure and vulnerability to disasters through comprehensive public and private investments in DRR. These specific objectives concur towards the achievements of this EWSII Outcome 2.* *In summary, the financing from the activities of these three projects is additional to the GEF grant and is directly supporting the achievement of the project objective especially outcomes 1 and 2.*

2.5. Stakeholder engagement

Date of project steering committee meeting	*Insert dates of Project Steering Committee/Board Meetings during reporting period (1 July to 30 June). Please also upload all meeting minutes.* *20th June 2024*
Stakeholder engagement	*Describe progress, challenges and outcomes on stakeholder engagement (based on the description of the Stakeholder engagement plan included at CEO endorsement). For older projects that did not have a Stakeholder Engagement Plan in the CEO Endorsement Document, simply mention any kind of stakeholder engagement activities undertaken during the reporting period.* *(maximum two paragraphs)* *Both the AF-WFP and the Red Cross aim at the strengthening of EWS seasonal forecast and advisory component. Therefore, they both share two of the districts EWSII is working and major stakeholders at national level. For this reason, we also share the same PSC and TWGs.* *The main stakeholders identified under the stakeholder participation plan in the CEO endorsement have been engaged in the project implementation. This includes the Lesotho Disaster Management Authority (DMA), the Ministry of Agriculture and Food Security (MAFS), National University of Lesotho (NUL) – Department of Geography and Environment Science and Department of Soil Science and Resource Conservation, Ministry of Forestry, Range and Soil Conservation (MFRSC), Ministry of Water: Department of Water Affairs (DWA), Department of Environment (DE) - Ministry of Tourism, Environment and Culture, Bureau of Statistics (BO) as responsible parties. The above stakeholders were consulted throughout the implementation period for various reasons to: i) discuss common implementation issues during the Inceptions Workshop; ii) to assess the status of the MESA Platform; iii) LMS has been proactive in the undertaking of the Baseline Assessment on equipment and human resources. Other agency consulted on some of the project activities include World Vision with whom the*

	Project expects to develop a collaboration for the Soil Erosion Mapping under the NUL-MoU. *The project is in the process of signing specific and tailored MoUs with the various stakeholders and so that each of them will be in charge of developing specific Project Output/activities. Therefore, it is expected that:* • *LMS will lead some of the Outputs/activities of Component 1, particularly those concerning the installation of the new equipment under procurement and operationalization of the monitoring network. The AWS installation plan has been developed in collaboration with LMS and OPTEC Environment, the subcontracted company for training and installation of AWS..* • *LMS, NUL and Regional Meteorological Training Centre, Pretoria have lead Organisation and delivery of the Training programme for technical staff on Middle Meteorological Technician Course (MMTC) – Met Observers WMO Class III for the first barge of 21 LMS employees. The LMS/NUL MoU has been signed and was launched in May 2023. The action plan that implements the MoU has also been signed and several courses have been completed for the first cohort. The course was delivered in partnership with Regional Meteorological Training Centre (RTC) Pretoria with WMO's financial support. The second cohort will start after the Assessor and Moderator online training (8 instructors) delivered by LMS with close supervision of RTC Pretoria without the support of WMO.* • *Under the LMS/NUL MoANUL is responsible for development of Climate Change Information Platform (EWS-CCIP). A ClimSA (SADC MESA follow up project) server has been connected and is now operational. Products from ClimSA will be incorporated in the CCIP for early warning products and services.* • *LMS and NUL will lead the activities related to the development of Climate change risk mapping to be carried out in 6 project Districts. There are ongoing contact negotiations with GEONEST over the draft contract. The contract will be signed with NUL, while PMU oversees the process. This activity will start in August 2024.* • *LMS and DMA will lead the activities related to the establishment of the Community based EWS (CB-EWS) piloted and evaluated is developed in 6 Districts*. DMA is mandated institution for delivering Early Warning in the country, and at the district level, they administer District Disaster Management Teams and deal directly with the target communities utilizing their already operational district structures. MoAs will be signed with DMA at the national level, but commitment will cover the district offices to utilize their already operational district structures. Also, the District Planning Units under the Local Government act shall ensure proper coordination at the districts. *This activity is foreseen to start in* October *2024.*

	[section will be uploaded into the GEF Portal]

2.6. Gender

Does the project have a gender action plan?	*Yes,*
Gender mainstreaming	*Describe progress, challenges and outcomes on stakeholder engagement (based on the description of the Stakeholder engagement plan included at CEO endorsement). Older projects that were designed before gender mainstreaming should proactively report any possible gender benefits, as appropriate.* *(maximum two paragraphs)* *The implementation of the different project activities up to this date namely the Inception Workshop, the various PSC meetings and the Establishment of Technical Working Group (TWG) ensured that gender equity was taken into account, and it will continue to be in future planned activities. For example, as part of the participatory approach developed for the Baseline and VIA study, District and Village Disaster Management Teams (DDMT & VDMT's), extension officers in the project sites and local authorities, CBOs and CSOs in the remote districts engaged on the generation of local risk and vulnerability maps will ensure women's attendance and fair representation in the workshops, to guarantee gender inclusivity and consideration of their needs, capacities, knowledge and role in the communities. In addition, gender rights and protection against any harassment have been strengthened in the recently developed Grievance Redress Mechanism document specifically developed for this Project.* *Moreover, gender disaggregated indicators and targets have also been defined in the results framework and the draft M&E strategy of the project. Four of the eight Outcome indicators in the project results framework monitor gender equity.* *Gender mainstreaming has been addressed in the context of the Capacity and Training events that have been completed as planned. Capacity building of on short-term training courses: WRF Installation & running, HPC Management, Website Content Management, GIS Basic and Expert Levels, Electronics for AWS, IT for AWS, Met Studio Presenter's Training and Assessors and Moderators course, with total of 105 trainees, 23% of which are females.*

	*Further Gender mainstreaming has been also addressed on the Capacity building of on **medium to long-term training** courses: BIP-MT (1st Batch): Course Entry Level (Maths & Science, 2 Months), BIP-MT (1st Batch): RTC Accredited Topics (4 months), General Meteorological Technician Certificate, Aeronautical Meteorological Observer Certificate and BSc Honours in Meteorology, with a total of **56 trainees**, **67%** of which are **females*** [section will be uploaded into the GEF Portal]

2.7. Environmental and social safeguards management

Moderate/High risk projects (in terms of Environmental and social safeguards)	Was the project classified as **moderate/high risk CEO Endorsement/Approval Stage**? *No* If yes, what specific **safeguard risks** were identified in the SRIF/ESERN? *If yes, describe the specific safeguard risks that were identified in the SRIF/ESERN.* This is a climate change adaptation project through the development of EWS and ancillary risk and hazard prediction and projections. The project is expected to have net environmental and social benefits through risk and hazard prediction and projections that will be used to anticipate negative impacts into communities and environment. Land required for installation of meteorological equipment is minimal and there is no expected land acquisition in this project. All the communities, NGOs and CBOs contacted were willing to engage and collaborate in the project design process and no human-right issues have been identified. Hence, the proposed project has minimal or negligible environmental and social impacts that could affect indigenous people or other vulnerable groups of the communities where the project will be piloted. In addition, the Grievance Redress Mechanism has been developed and the first draft has been presented to the PSC. It is currently under further development and will be shared with broader stakeholders for inputs and adoption. The Environmental, Social and Economic Review Note conducted during the design of the project still holds and no need for modifications.
New social and/or environmental risks	Have any new social and/or environmental risks been identified during the reporting period? *Yes/No (delete as appropriate)* *If yes, describe the new risks or changes.*

Complaints and grievances related to social and/or environmental impacts (to be filled in by TM and EA)	Has the project received complaints related to social and/or environmental impacts (actual or potential) during the reporting period? */No* The project has not received any complaints related to social and/or environmental impacts (actual or potential) during the reporting period. However, as a matter of precaution a Grievance Redress Mechanism strategy has been developed and the first draft has been presented to the PSC. It is currently under further development and will be shared with broader stakeholders for inputs and adoption.
Environmental and social safeguards management	*Describe progress, challenges and outcomes related to the environmental and social safeguard-responsive measures documented at CEO Endorsement/ Approval in social safeguard action plan or equivalent. Older projects that were designed before environmental and social safeguard mainstreaming should proactively report any possible social safeguard benefits, as appropriate. (maximum one paragraph)* The project intends to 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 have been 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. At CEO Endorsement/ Approval the project ESE Screening Decision classified the project as Low risk with negligible Negative impacts and no further study or impact management being required. Therefore, the project will not likely result in significant, irreversible environmental and/or social impacts as assessed at CEO approval. However, some additional or modified potential risks of unintended environmental and social impacts have also been identified during project implementation, as outlined below. One of these is the likelihood of having inequitable negative impacts on gender equality and/or the situation of women and girls. For that, a Grievance Redress Mechanism has been developed and the first draft has been presented to the PSC. It is currently under further development and will be shared with broader stakeholders for inputs and adoption. Finally, one potential risk that has not yet materialized but that should be monitored, is related to the theft and Vandalism of early warning and climate

	monitoring equipment. This is a risk of eventual conflict with surrounding communities. [section will be uploaded into the GEF Portal]

2.8. Knowledge management

Knowledge activities and products	*Provide a narrative of knowledge activities/ products (when applicable), as outlined in knowledge management approved at CEO Endorsement/ Approval. Please attach a copy of any products.* *(maximum one paragraph)* This LDCF project builds on earlier project and strengthens those previous activities by including among other activities, a component aimed at increasing awareness and capacity for government and local stakeholders for reducing risks of climate induced losses in the agriculture sector. Specifically, a knowledge outreach programme for awareness raising and training on climate change risk impacts is designed and implemented to enhance decision-making and foster public awareness. It is anticipated that training events will take place at national, district and community level aiming at raising awareness of senior Government technical officers and policy makers linked to planning and risk prevention drawn from the major sectors as well as district community leaders as trainers on Climate Change impacts Vulnerability Assessment and EW preparedness. Communication of warnings and advisories to users and remote communities in the six target districts will be carried out using a variety of channels and vehicles from the traditional media channels (newspaper, radio & TV) to local community radios (LCRs) and community gathering using local languages for a speedy and targeted dissemination. The dissemination of vulnerability mapping work and risk assessment conducted in the target districts as well as the project results will be carried out among other means through an interactive user-friendly web portal established under the DMA and to be developed through the EWS-CCIP. Workshop and trainings will also be delivered. NUL has been engaged in the development and operationalisation of EWS-CCIP, climate risk mapping and GIS based mapping. The training sessions of senior Government technical officers and policy makers and district community leaders coupled with the results from the participatory

	risk/hazard mapping and climate change projections and resulting impacts of such risks will facilitate the mainstreaming of climate change impacts on the sector planning at national and district/community level. *The project has developed a series of Training Reports related to the Capacity and Training **short-term training** courses events that have been completed as planned.* *Similarly, the project has also developed a series of Training Reports related to the Capacity building of on **medium to long-term training** courses: BIP-MT (1st Batch).* *Lastly the Mert Tech officer of the Project have developed a series of Technical Reports in the context of his contract which includes the following:* *Annex I – Workplan Report* *Annex II – Baseline Human resource Capacity Gaps updated* *Annex III – Report on Status of Meteorological Observation Network and Equipment* *Annex IV – Frequency of Cold Temperatures for AWS procurement* *Annex V – Report on Network Coverage and Physical Locations of Stations* *Annex VI – Old AWS Site Assessment Report and LMS Recommendations* *Annex VII – Report on Civil Works and Fencing Poles Plan* *Annex VIII – WRF Training Report 1* *Annex IX – WRF Training Report 2* *Annex X – Report on Design and Training Plan of BIPMT* *Annex XI – Report on BIP-MT Training* Annex XII – Report on AWS Installation-Civil Works and Fencing Poles [section will be uploaded into the GEF Portal]
Main learning during the period	*Provide a short narrative on any learning during the reporting period (when applicable).* Procurement of specialised equipment/ services should be tendered in different lots to enable specialising suppliers to tender for any lot, as opposed to combining the items in one tender. This would significantly speed up procurement processes. Security of the solar panels at the remote sites where the AWSs has been installed as well as access to AC power for the heated stations. This had to be considered initially

2.9. Stories to be shared

Stories to be shared	*Optional for mature projects: Provide a brief summary of any especially interesting and impactful project results that are worth sharing with a larger audience, and/or investing communications time in, if any.* *(maximum one paragraph)* • The project facilitated development of seasonal climate outlook for the 2022/2023 rainfall season and its dissemination through National Outlook Forum (NCOF) in Maseru and District Outlook Forums (DCOFs) in Qacha's Nek, Mokhotlong, Thaba-Tseka, Berea, Leribe, Botha-Bothe, Quthing, Mohale's Hoek and Mafeteng for preparedness and better planning. The initiative went a long way and was highly appreciated by the district techno grads and the community leaders. However, there is still a big gap in the interpretation of meteorological products such as the seasonal forecasts. It is therefore recommended that further training be conducted at district and piloting community councils' levels. • Awareness (public gatherings) on Climate Change, Early Warning and the importance of Automatic Weather Stations conducted from the December 2022 to June 2023 in the villages where AWSs will be installed to sensitize communities to protect the AWS equipment. All the districts have been covered, but the campaigns were confined to the only villages when new AWSs will be installed. The communities appreciated the information shared but, in most cases, they needed more detailed clarifications, particularly on climate change impacts as most of them have since been associating the impacts with cultural and religious believes. They highly welcomed the activity that is going to gather the indigenous knowledge and compare with the meteorological observations with the intensions of documenting the synergies. *In the context of installation of AWSs, awareness campaigns on Climate Change, Weather monitoring equipment, Disaster risk reduction for villages across all the ten districts of Lesotho have been conducted in the villages where AWSs are expected to be installed.* [section to be shared with communication division/ GEF communication]

3. PROJECT PERFORMANCE AND RISK

*Based on inputs by the Project Manager, the **UNEP Task Manager**[1] will make an overall assessment and provide ratings of:*

(i) Progress towards achieving the project Results(s)- see section 3.1

(ii) Implementation progress – see section 3.2

Section 3.3 on Risk should be first completed by the Project Manager. The UNEP Task Manager will subsequently enter his/her own ratings in the appropriate column.

3.1 Rating of progress towards achieving the project outcomes (Development Objectives)

[copy and paste the CEO Endorsement (or latest formal Revision) approved Results Framework, adding/deleting outcome rows, as appropriate]

[1] For joint projects and where applicable ratings should also be discussed with the Task Manager of co-implementing agency.

Project objective and Outcomes	Indicator	Baseline level	Mid-term target or Milestones	End-of-project target	Progress as of current period (numeric, percentage, or binary entry only)	Summary by the EA of attainment of the indicator & target as of 30 June 2024	Progress rating[2]

[2] Use GEF Secretariat required six-point scale system: Highly Satisfactory (HS), Satisfactory (S), Marginally Satisfactory (MS), Marginally Unsatisfactory (MU), Unsatisfactory (U), and Highly Unsatisfactory (HU).

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*	# maloti lost per year due to climate-related impacts	The vulnerability of the sites is high. The baseline losses and damages will be determined during the baseline and vulnerability assessment phase.	***N/A***	50 percent (%) reduction in loss and damages for 50% of the people living in the 6 project communities (total population: 78391 in 366 villages)	*30%*	The project strategy is for early warning advisories to be acted upon by communities to reduce loss and damage. The process to develop the early warning advisories has been started through three key steps: i) setting up coordination structure ii) procuring systems and training for staff to run the EWS and iii) EW advisory development by scoping out the hazards and impacts to be mitigated. *Conducted awareness campaigns on Climate Change, Weather monitoring equipment, Disaster risk reduction for villages across all the ten districts of Lesotho.* *Seasonal climate outlooks dissemination through district workshops, radios and social media platforms.* Although the Lesotho Meteorological Services are not yet capable of developing Nowcast products, they have successfully utilized the HPC Numerical Weather Prediction model (WRF) to effectively warn communities through the media across six project areas. During last winter's snowstorm, thanks to early warnings and advisories, there were fewer livestock deaths, fewer road accidents, and no loss of life. Hence, the increase in the % progress. It is anticipated that once the full network of AWS monitoring stations is in place, the accuracy of WRF-based forecast products and advisories will further improve, leading to even better preparedness and a reduction in losses and damages.	S

Project objective and Outcomes	Indicator	Baseline level	Mid-term target or Milestones	End-of-project target	Progress as of current period (numeric, percentage, or binary entry only)	Summary by the EA of attainment of the indicator & target as of 30 June 2024	Progress rating[2]
Outcome 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*	1.1. Number of fully operational additional AWS to strengthen current LMS networks.	1.2. No fully operational network stations with a number of faulty AWS, no Agromet stations, not automatized rainfall stations.	***N/A***	1.1 A total of 67 AWS which includes, Synoptic (1), Lightning (3), rainfall stations (48) and climate stations (15) installed. 1.2 About 6 new stations sites established and rehabilitation of 20 stations are in operation in the LMS network by the end of project.	*50%*	9 AWSs have been installed and are fully operational. Further 2 existing automatic weather stations have been rehabilitated and are now fully operational. . The assessment of old weather stations is ongoing two SIAP dataloggers are currently installed at Vaisala (Phuthiatsana) and Delta T (Tsehlanyane) sites reporting data to the new AWS server.	*S*
	1.2 Number of fully operational additional AWS to strengthen current MAFS Agromet network.	1.2 Four deceased Agromet AWS not functioning in the target areas.	***N/A***	1.2 At least 4 new Agromet AWS in operational in the MAFS network by the end of the project.	*100%*	Six agromet stations have been installed and further 3 awaiting installations. The new Agromet stations installed at Botha-Bothe, Leribe, Phuthiatsana, Matela, Mafeteng, Mohale's Hoek are expected to be fully operational by Q1 2025	*HS*

	1.3 Number of trained technical staff for strengthening LMS forecasting and development of early warning & advisory products.	1.3. Inadequate quantity and quality of human resources to carry out early warning & advisory products. Detailed baseline situation to be determined at the inception phase.	***N/A***	1.3 At least 5 Agro-meteorologists, 4 Forecasting officers, 20 senior technical officers and 10 GIS/IT technicians and 6 IT maintenance engineers are trained. 1.4 A gender balance achieved in the selection and participation of the trainees.	*100%*	Training has been completed for 50 officers within a target of 69, covering technical areas such as: GIS Basic (2 male and 10 female) and Expert levels (5 male and 1 female), AWS – Electronic (7 male and 0 female) AWS – IT (8 male and 0 female), WRF (13 male and 2 female), HPC management (8 male and 2 female), Website Content Management (10 male and 1 female) and BIP-MT first cohort (7 male and 14 female). AWS Installation (10 male and 0 female) Accounting software (0 male and 2 female) In addition, Ongoing training includes: • Assessors and Moderators online training (8 officers) • First phase Online course for Weather Presenters (7 officers) completed and second phase on-the- job training at SABC Johannesburg studios to follow in August. These are scheduled for completion in the next quarter (July-September 2024). It should be noted that some of the officers were trained on more than one course. Therefore, the trainings reached 126 officers of these 31% were females. On the other hand, if we avoid double counting, we have trained 50 officers out of 69 officers out of these 43% were female. One (1) LMS staff member enrolled for Honors in Meteorology at University if Pretoria in February 2024 while the one (1) staff member is expected to be enrolled in 2025.	*HS*

Project objective and Outcomes	Indicator	Baseline level	Mid-term target or Milestones	End-of-project target	Progress as of current period (numeric, percentage, or binary entry only)	Summary by the EA of attainment of the indicator & target as of 30 June 2024	Progress rating[2]
Outcome 2 *Enhanced institutional capacity for take- up of hydrometeorological services*	2.1 Number of Economic risk models and advisories, and establish roles and responsibilities are developed for the 6 Districts at the end of the project	2.1. No Economic risk models and advisories and establish roles and responsibilities have been developed in the 6 districts.	***N/A***	2.1 Economic risk models and advisories, and establish roles and responsibilities are developed in all 6 districts by the end of the project. 2.2 A gender balance achieved in the Working Groups convened for the advisories development,	*30%*	Contract negotiations with the preferred bidder were not successful as the increase which the preferred bidder requested was three times the original amount. Contract negations are at an advanced stages to engage the second preferred bidder during the month of July 2024. This Consultancy will also gather Information contributing for the climate change risk mapping in 6 project Districts and the planning of community awareness raising activities which will eventually feed into the Economic risk models.	*MS*

Project objective and Outcomes	Indicator	Baseline level	Mid-term target or Milestones	End-of-project target	Progress as of current period (numeric, percentage, or binary entry only)	Summary by the EA of attainment of the indicator & target as of 30 June 2024	Progress rating[2]
Outcome 3 *More effective, efficient, targeted and sustainable delivery of timely climate information including early warnings to local communities*	3.1 Percentage of targeted population (men and women) in the 6 districts receiving early warnings, advisories and weather-related messages to test effectiveness of EWS as end users.	3.1 Currently there is no targeted dissemination of early warnings, advisories and weather-related messages through Local Radios and/or wireless communication channels in the 6 target districts.	***N/A***	3.1 At least 50 percent of targeted population (gender disaggregated) in the 6 districts receive early warnings, advisories and weather-related messages by Year 5 and act on them.	*30%*	P*ublic awareness campaigns for all communities to host the AWSs have been held, including dissemination of seasonal climate outlook on media platforms and through a workshop.*	*MS*

3.2 Rating of progress implementation towards delivery of outputs (Implementation Progress)

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
COMPONENT 1: Establishment of necessary infrastructure and human capacity in LMS to enable a fully functional national EWS.					
Output 1.1: To cover the gaps in the LMS & MAFS monitoring network: 3 synoptic stations, 15 new automatic rain gauges, 6 new Agromet stations are installed following WMO standard; and 12 manual stations are upgraded following WMO standards to address the Minimata Convention requirements, 12 other Stations of various types are repaired.	*September 2024*	**45%**	*75%*	***Previous Progress on AWS installation*** Signed contract for the supply and installation of AWS by SIAP+MICROS. The contract has been effective from October 2022 to August 2024. There have been delays on production of the equipment by the supplier. The reviewed expected time of delivery of stations is August 2023. Civil works to be completed by July 2023. Installation is planned to start immediately after delivery and be completed by December 2023. Installation training scheduled in October 2023. The first assessment of old weather stations started in November 2022. Following the first assessment report the supplier delivered three dataloggers with three batteries in May 2023 to further assess the status of the old weather stations. ***Current progress on AWSs installation*** Service provider selected for delivery and installation of 67 AWSs of various types delivered AWS equipment to LMS by August 2023. The construction of anchoring platforms started in September 2023 to December 2023. AWS installation training for LMS by the supplier started in April 2024. About 9 AWSs (Climate (4), Lightning (2), Rainfall (2), Synoptic (1)) have been installed. Civil works is pending for 3 new sites out of 76 where negotiations with relevant authorities are ongoing to secure sites. Overall, the installation of the AWSs is going according with Plan with the Installation platforms (Slabs) completed in 73 stations except 3 still under negotiations. However, there is a small challenge which may slow the pace of the work which is related to the assurance of security conditions of the installed AWSs with a fencing. This is related to lack of	*S*

[3] Outputs and activities (or deliverables) as described in the project logframe (and workplan) or in any updated project revision.
[4] The completion dates should be as per latest workplan (latest project revision).
[5] As much as possible, describe in terms of immediate gains to target groups, e.g. access to project deliverables, participation in receiving services; gains in knowledge, etc.
[6] To be provided by the UNEP Task Manager

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
				sufficient fencing to protect the AWSs and their instruments. Apparently, fencing structures are made privately through a bidding process of at least five company providers overseen by a Government centralized body. Regrettably, the bidding process in the outer Districts is not always smooth given the lack of sufficient providers. When this happens the process of acquisition of fencing structures comes to a halt. Negotiations with the line Ministry were undertaken to seek a waiver for the 5 to 3 Service Providers in the Districts where there is a shortness of offers. Installation for the (24) AWSs was delayed due requirements of heated elements through AC power in extremely cold and remote areas. Alternatives are being explored to find the cost-effective solution. The results of the preliminary assessment report submitted by Optec, company subcontracted by SIAP+MICROS, indicated that several AWS parts should be procured to repair the twenty (20) old Automatic Weather Stations, these include solar panels, temperature, rainfall, wind and pressure sensors, depending on the assessment report. The process is still being undertaken. A letter of request was handed in 2nd quarter of 2023 to the relevant Government authorities (Ministry of Information and communications —MIA) to extend government fibre network link for LMS at Moshoeshoe I Internation Airport. Purchase order issued for network upgrade Although the purchase order has been issued by the line Ministry for network upgrade of Forecasting Office at Moshoeshoe I International Airport. The airport upgrade project has some key decisions pending, especially on the areas that will be affected by the project in terms of physical construction. This makes it difficult to install optic fibre cables around the place also LMS needs to have its dedicated fibre line which is done for all government departments by the Ministry of Communications. LMS is continuously engaging with Department of Civil Aviation (DCA) for further guidance and Ministry of Communications for fibre extension.	

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
Activity 1.1.1 *optional (to be decided by TM[7])*					
Output 1.2: A Nowcast based, Medium, Short-term and seasonal forecasting system is developed through the strengthening of Forecasting tools.	*March 2025*	70%	*90%*	***Previous progress on Nowcast based, Medium, Short-term and seasonal forecasting*** The contract was signed for: I. Supply of hardware and Operationalisation of High-Performance computer and 5 Linux-based workstations by Datacentrix. II. Installation and customisation of Numerical Weather Predictions models to enhance early warning products by Weather Information Solutions (WIS). Installed WRF model on LMS mini-cluster and conducted hands on trainings for LMS personnel. The High-Performance computer and 5 Linux-based workstations has been delivered in April 2023. ***Current progress on Nowcast based, Medium, Short-term and seasonal forecasting 2023-2024*** The High-Performance computer and 5 Linux-based workstations that were delivered in April 2023 have been operationalised. Training on the management of HPC was also conducted in July 2023 for LMS staff and the operationalisation of the High Performance Computing (HPC) with the installation of Weather Research and Forecasting (WRF) model which was conducted in August 2023, with further training of LMS staff on forecast model products at resolution 9km Outer Domain, 3km Inner Domain, Cycle 00Z, four days while the nowcasting run is for 00Z cycle at 30 minutes. Currently, the only activity left is the assimilation of the data from the whole of the monitoring network which will be achieved once the installation of AWSs is completed. This will then allow to obtain Nowcast based, Medium, Short-term and seasonal forecasting forecast. Trials on installing the ICON model remotely were not successful. Capacity building for three LMS experts for the training conducted annually by the model developer in	*HS*

[7] The Task Manager will decide on the relevant level of disaggregation (i.e. either at the output or activity level).

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
				Germany will be explored. The trained experts will install the ICON model and further train local weather forecasters. ***Previous Progress on Ancillary Forecasting Facilities to support Nowcast based, Medium, Short-term and seasonal forecasting*** • Approval by the new ministry had been attained to conduct limited tendering since SADIS is a highly specialised product that very few companies provide globally. The tender was issued during the second week of July 2023. • The SADC MESA follow-up project, ClimSA had started to be adopted by the SADC countries and a server has been received after the official request by LMS. ***Current activities towards operationalisation of Ancillary Forecasting Facilities to support Nowcast based, Medium, Short-term and seasonal forecasting*** • The tender panel has approved the required additional costs for upgrading to the latest software version. Contract negotiations are at an advanced stages to engage the preferred bidder for SADIS supply and installation in July 2024. • The ClimSA server is currently operational but only accessed through the government network. There are ongoing negotiations between LMS and Ministry of communications for the server to be available using public IP address. • NUL has developed the concept note for the operationalisation of Climate Information Platforms (CCIP). Needs assessment for each CCIP member, hardware and software installations and capacity building will be conducted between the second and fourth quarter of 2024 under the LMS/NUL MoA.	
Output 1.3: Human capacity programme to use the rehabilitated and upgraded network is developed through training of existing staff and new recruitments including at least 5 Agro-meteorologists, 4 Forecasting Officers, 20 Senior Technical Officers and 10 GIS/IT operators/Technicians and 6 IT Maintenance & Repair Technicians	December 2025	55%	75%	***Previous progress on Baseline and Vulnerability assessment*** • The Baseline and Vulnerability assessment award decision that was made by the previous Ministry was adopted by the new Ministry. Soon after this in July 2023 the contract was being drafted to be signed next. ***Current progress Baseline and Vulnerability assessment status in***	*S*

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
				• Following the slow response of the first preferred bidder, the tender panel has approved engagement of the second preferred bidder on Baseline and Vulnerability Assessment consultancy. It is expected that the study will commence in August 2024. ***Previous progress on Human Resource training & capacity development status*** The first 5 of 14 candidates had been successfully enrolled with University of Pretoria for the bridging course to BSc Honours in Meteorology. Training institutions were approached at the time in 2023 for delivery of other courses, and the issue of making provision for fulltime online training has not been secured. The Human Resource capacity assessment was finalized for LMS staff and identified relevant training courses/ on-the-job capacity development programmes offered by South African Weather Service (SAWS), University of Pretoria (UP) and University of Cape Town Climate Systems Analysis Group (UCT CSAG). The following is the **Long-Term Training** Courses and **Short-Term** Capacity Development Programmes have been identified: A. **Training Programmes**: - BSc Hons in Meteorology (14 candidates) - Meteorological Technician Basic Instruction Package (BIP-MT) (34 candidates) B. **Capacity Development Programmes**: - Automatic Weather Stations (AWS) Management (10 candidates) - Meteorological Broadcasting (13 candidates) - Numerical Weather Prediction (NWP) (10 candidates) - Quality Control of Climate Data (9 candidates) - Coding and decoding of meteorological messages (6 candidates) - Climate modelling, including climate change scenarios development (12 candidates) - High Performance Computing - GIS, Data and Information - Early Warning Message Packaging - Seasonal Forecasting The assessment further identified a need for long-term training on Electronics to enable deeper understanding of	

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
				AWS and how they function, and on NWP to enable usage of various models that could assist in making the consensus forecast. ***Current Progress in the Human Resource training & capacity development status*** ***Long-term training:*** • The progress in Capacity building of on medium to long term training courses in 202-2024 include the following: • BIP-MT (1st Batch): Course Entry Level (Maths & Science, 2 Months), BIP-MT (1st Batch): RTC Accredited Topics (4 months), General Meteorological Technician Certificate, Aeronautical Meteorological Observer Certificate and BSc Honours in Meteorology, with a total of **56 trainees, 67% of which are females.** • BIP-MT (first cohort) 21 officers (14 male, 7 female) were enrolled for training. • General Meteorological Technician Certificate - 13 officers (2 male, 11 female) • Aeronautical Meteorological Observer (AMO) certificate - 5 officers (0 male, 5 female) • 1 LMS staff member enrolled for Honors in Meteorology at University if Pretoria in February 2024 while the one staff member is expected to be enrolled in 2025. • Climate modelling, including climate change scenarios development (12 candidates), Early Warning Message Packaging and Seasonal Forecasting will be conducted during the third quarter of 2024. ***Short-term Training:*** Capacity building on short-term training courses: WRF Installation & running, HPC Management, Website Content Management, GIS Basic and Expert Levels, Electronics for AWS, IT for AWS, Met Studio Presenter's Training and Assessors and Moderators course, with total of **105 trainees, 23% of which are females**. Training has been completed for 50 officers within a target of 69, covering technical areas such as: GIS Basic 12 officers (2 male, 10 female) and Expert levels 6 officers (5 male, 1 female) AWS – Electronic 7 officers (7 male, 0 female) and AWS – IT 8 officers (8 male, 0 female) WRF 15 officers (13 male, 2 female) HPC management 10 officers (8 male, 2 female)	

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
				Website Content Management 11 officers (10 male, 1 female) Accounting Software 2 officers (0 male, 2 female) AWS Installation 10 officers (10 male, 0 female) In addition, Ongoing training includes: • Assessors and Moderators online training (8 Officers) in July 2024. First phase Online course for Weather Presenters 7 officers (2 male**, 5 female**) was completed and the second phase on-the- job training at SABC Johannesburg studios to follow in August 2024.	
Output 1.4: Advanced Meteorological Technician Course (AMTC) - Met Forecasters WMO Class II and Middle Meteorological Technician Course (MMTC) – Met Observers WMO Class III professional courses developed to meet the needs generated through staff turnover.	December 2025	*40%*	70%	***Previous progress on Status of Advanced Meteorological Technician Course (AMTC)*** To this effect, 7 out of 14 candidates have enrolled with the University of Pretoria since March 2021. The BIP-MT program started in June 2023 with Mathematics and Physics courses for the first batch of 21 trainees supported by NUL and WMO RTC Pretoria. The program would take about 4 to 5 months (June to October 2023) for the first batch and would continue for the other 21 trainees for similar program. ***Current Progress on Status of Advanced Meteorological Technician Course (AMTC) in 2023-2024*** BIP-MT (first cohort) 21 officers (14 male, 7 female) were successfully trained. The next batch of 23 trainees for similar will start in the next reporting period.	*S*
Output 1.5: A financing plan developed for sustainability of operation and maintenance of installed EWS and human capacity	*June 2025*	N/A	*0%*	*This activity will be developed on the 5th year of the* project once the various monitoring networks are fully installed and functional to assess the cost and benefits.	*N/A*
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.					
Output 2.1: A Climate Change Information Platform (EWS-CCIP) for inter-institutional data sharing and hazard monitoring & disaster risk assessment for scaling up of	March 2025	**35%**	40%	***Previous progress on Status of Climate Change Information Portal (CCIP)***	*MS*

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
hazard and vulnerability mapping for the pilot regions in support of the EWS is established.				*The 5 workstations procured with the HPC have been already delivered awaiting to be installed as there was a problem of display cables which were not compatible, and the supplier had to return them and supply compatible cables. There was also a delay in the procurement of the SADIS system but the tender panel has approved limited tendering for procurement and it is expected that the same will be installed by the end of the year 2023. MoA between LMS and NUL has been signed in January 2023. Signed the Action Plan and officially launched the MoA in May 2023. The initial 20% of MoA amount has been transferred to NUL to start activities. The MoA with NUL contains among others this activity where NUL will be tasked to develop a web-based Climate Change Information Portal to serve a platform for early warning dissemination among other functions.* ***Current progress on Status of Climate Change Information Portal (CCIP) in 2023-2024*** The ClimSA server is now operational but only accessed through the government network. Ongoing negotiations between LMS and Ministry of communications for the server to be available using public IP address. NUL has developed the concept note for the operationalisation of Climate Information Platforms (CCIP). The concept also includes the work plan. Needs assessment for each CCIP member, hardware and software installations and capacity building will be conducted between the second and fourth quarter of 2024 under the LMS/NUL MoA. It is envisaged that workstations will be installed in all members of the virtual CCIP (Agric, Water, DMA, Environment and Health) so that the ClimSA software can be replicated on each of the workstations to enable access to relevant sectoral data to develop products and advisories. The generated advisories and sectoral products will be shared through the virtual CCIP.	

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
Output 2.2: Economic risk models developed for 5 sectors (Agriculture, Livestock, Settlements, Health and Water (Dam) for a range of climate hazards in representative areas of the country	June 2025	25%	26%	***Previous progress on Development of Economic Risk model development for 5 sectors*** The National Technical Working Group (TWG) has been established in collaboration with this project's two sister projects. Due to its big size, the TWG is made up of five clusters name Early Warning, Livelihoods, Finance, Capacity building & Training and Communications & Public Awareness. At the districts TWGs have been temporarily established under the leadership of Disaster Management Authority as a key stakeholder for project implementation, while District Planning Units are being resuscitated and support and coordinate all projects being implemented in the districts. The tender panel has approved engagement of the second preferred bidder on Baseline and Vulnerability Assessment consultancy. It is expected that the study will commence in August 2024. This study will serve as an input to the Economic risk models. ***Current progress towards Development of Economic Risk model development for 5 sectors (2023-2024)*** The TWG has been revived in collaboration with the Adaptation Fund funded IACOV project, with review of ToRs. Due to the slow responses and the 15.7% increase on the consultancy fees by the preferred bidder Baseline and Vulnerability Assessment consultancy , the Tender Panel has approved a decision to engage the second preferred bidder who has confirm interest and availability with the cost that is within the budget. A draft contract has been developed and awaiting clearance by the Ministry and shall then be sent to the second preferred bidder for consideration	*MU*
Output 2.3: Five (5) sets of sector-based EW advisories developed	December 2025	15%	15%	There is no direct progress made on this output. This will be informed by, among others, the nowcasting products from the Numerical Weather Prediction Models as well as the baseline on communities vulnerabilities.	*MU*

Outputs/Activities[3]	Expected completion date[4]	Implementation status as of 30 June 2023 (%)	Implementation status as of 30 June 2024 (%)	Progress rating justification[5], description of challenges faced and explanations for any delay	Progress rating[6]
Output 2.4: Multi-sector protocols developed and national EWS framework built.	March 2026	2%	2%	There is no direct progress made on this output. This will be informed by the outcomes of the Baseline and Vulnerability Assessment consultancy.	*MU*
COMPONENT 3: Pilot testing of EWS protocols and response strategies and sustainability plan.					
Output 3.1: Climate change risk mapping carried out in 6 project Districts (to complement the 3 done already under Phase 1 of the project) and disseminated in order to raise awareness and support for engaging in EWS and to validate or finetune Environment the sectoral advisories	December 2025	0%	10%	This activity will be informed by the Baseline Vulnerability Assessment activity. Contract negotiations are on-going where NUL is in a process of engaging Geonest under the MoA.	MS
Output 3.2: Community based EWS (CB-EWS) piloted and evaluated is developed in 6 Districts including at least Quthing, Thaba-Tseka and Mafeteng, Tsoelike Catchment (Qacha's Nek district), Khubelu (Mokhotlong District) and Upper Hlotse –Mamafubelu (Leribe district) to enhance and test its impact on risk reduction in sectors and population.	March 2026	0%	0%	Community based EWS (CB-EWS) will be developed, piloted and evaluated in 6 Districts once the Seasonal and "nowcast" forecasting systems are already operationalized and advisories and Warning are being disseminated.	N./A
Output 3.3: A knowledge outreach programme for awareness raising and training on climate change risk impacts is designed and implemented to enhance decision-making and foster public awareness.	March 2026	0%	0%	Once the Seasonal and "nowcast" forecasting systems are already operationalized and advisories and Warning are being disseminated a portal will be created in a manner that it also forms part of CB-EWS testing. It will be developed following the results of Baseline vulnerability and shall be improved based on the feedback on early warning activities and drills.	N/A

4. Risk Rating

4.1 Table A. Project management Risk

Please refer to the **Risk Help Sheet** for more details on rating.

Risk Factor	EA's Rating	TM's Rating
1. Management structure – Roles and responsibilities	*L*	*L*
2. Governance structure – Oversight	*L*	*L*
3. Implementation schedule	*M*	*L*
4. Budget	*L*	*L*
5. Financial Management	*L*	*L*
6. Reporting	*L*	*L*
7. Capacity to deliver	*L*	*L*

If any of the risk factors is rated a Moderate or higher, please include it in table B below.

4.2 Table B. Risk-Log

Insert ALL the risks identified either at CEO endorsement (inc. safeguards screening), previous/current PIRs, and MTRs. Use the last line to propose a suggested consolidated rating.

Risk	Risk affecting:	Risk Rating							Variation respect to last rating	
	Outcome / outputs	CEO ED	PIR 1	PIR 2	MTR	PIR 3 (this PIR)	PIR 4	PIR 5	Δ	Justification
1. Theft and Vandalism of early warning and climate monitoring equipment. (Technical & Operational)	Outcomes 1-3	M	L	L		L			=	The risk is very low at this moment, as LMS has not yet started to install the equipment across the country. So far, no incidences of vandalism have been experienced on the LMS facilities. Conducted awareness (public gatherings) on Climate Change, Early Warning and the importance of Automatic Weather Stations conducted from the 05th to 16th December 2022 and from 12th to 25th April 2023 in the villages where AWSs will be installed to sensitize communities on Climate Change, Early Warning and the importance the AWS equipment in their respective communities. All the 10 Districts have been covered. The awareness was carried out to address the challenge of vandalism of meteorological equipment by members of the society and covered cause and impacts of climate change, extreme events that result from climate change and the

										importance of effective early warning system to protect life and property of the communities, and the importance of AWSs as the sources of early warning information. *Identified/classified areas where vandalism is medium (install welded mesh fencing) and high (install palisade fencing). Furthermore, welding was applied to the casing of the solar panel to make it less vulnerable to vandalism. Also local authorities (Chief, police, etc.) are being informed when the AWSs are being installed.*
2. Delayed policy level adoption of EWS protocol	All outcomes & outputs	M	L	L		L			=	There has been no change at his level. Draft policy documents have been reviewed by DMA and NUL and submitted to the office of CEO DMA thereafter to parliament for approval.
3. Unavailability of requisite human resources and data (Strategic & Operational)	Output 1.2	H	H	H		L			↓	This risk has been lowered in the current reporting period based on the following progress: • The WIS company that has been engaged to operationalise the HPC and train weather forecasters on Numerical Weather Predictions has made a significant contribution is solving the human resource capacity gap as well as access and utilisation of global datasets for enhancement of modelling. The presence of both Monitoring and Evaluation expert and the Met Tech has since brought significant progress in the implementation of project activities. • The procurement challenges that were experienced are mainly associated with several changes of administration from one Ministry to another have currently stabilised and new tender panel members have been appointed and capacitate to perform their duties. There is since evident progress in the processing of tenders. • The first batch of 21 candidates to the BIP-MT course have been trained under the support of WMO and RTC Pretoria. The BIP-MT instructors are undertaking a course for Assessor – Moderator, with the financial support from WMO. This will enable smooth delivery of the course starting with the second batch of 23 candidates.
4. Local IT and telecommunications infrastructure weak e.g. international bandwidth and local mobile telecommunications networks (Strategic & Operational)	Output 1.2	M	M	M		L			↓	The initial assessment of old AWS was done, though the report was not accepted since it did not give a true reflection of status of AWSs. The secondary assessment is underway. The inhouse capacity of IT at LMS has improved with qualified personnel and training on HPC management, and LMS has now been able to manage IT network. However, the meteorological network infrastructure management still have several gaps which the project has started addressing.

										The HPC is operational and the WRF model has been installed. About 15 AWSs have been installed and the carrier network for data transmission is stable. However, there is still a need to continue with the sustainability model study beyond the project lifetime.
5. Limited Institutional capacity to effectively tackle all project components in simultaneous (Strategic and organizational)	Outcomes 1-3	M	M	L		L L			↓= ↓	In the current period, this risk has been lowered due to the following progress: • Trainings on LMS personnel have been conducted. Thus, LMS has been capacity with infrastructure and skills. The M&E personnel has been engaged on the PMU. NUL has been engaged where the MoA has been signed on issues regarding EWS Task teams, SOPs and EWS framework. Biweekly meetings are ongoing to track the MoA with NUL. Most of the activities on the MoA have started. • Partnering with NGOs and other similar projects when implementing activities such as Soil Erosion study and GIS based Drone mapping. • Since then, the Met Tech has been supporting the project implementation. • The Met Tech have already completed a series of activities that were pending due to limited capacity
6. COVID-19 related constraints	All outcomes & outputs		M	L		L			=	There have been implementation delays experienced due to COVID-19 related measures, including travel restrictions which has prevented the CTA to pay the expected technical visits to the country, restrictions on gatherings such as meetings and training events which has caused sluggishness on the implementation process, and challenges to international travel. However, with the relaxation of international restrictions on COVID-19, it was possible for CTA to carry out his first visit to the country between 26th March to 8th April 2022 as well as 25th Apr - 8th May 2023, in order to participate in the PSC meeting and other Stakeholders engagements.
7. Poor coordination among institutions	Outcomes 2-3		M	L		L			=	Risk of poor coordination among institutions, particularly DMA and LMS. This risk is not considered to be high at this stage as the implementation of the activities on the ground at district level have not yet started. However, this risk should be monitored closely once the dissemination of Early Warning message to communities at district level starts. The first high level meeting

										was the first high-level meeting between the PMU, LMS and DMA was held during CTA's visit to the country and work plan was established to be included under the NUL MOU which is now under implementation. With the new government, LMS and DMA are now in the same Ministry, and this will make coordination work very easy and effective. However, given the delays in the implementation of Project activities this risk is still to be considered as potential.
8. Uncertainty on the MESA follow up Programme			M	L		L			=	The establishment of the Climate Change Information Platform (EWS-CCIP) for inter-institutional data sharing and hazard monitoring & disaster risk assessment for scaling up of hazard and vulnerability mapping for the pilot regions in support of the EWS depends greatly on the MESA follow up programme. The MESA follow-up project, ClimSA has now commenced, and products will be able to inform EWS.
9. Procurement delays of synoptic stations						M			↓	Service providers have delivered all synoptic stations to Lesotho and awaiting installations
10. Governance Structure						M			=	The LMS has moved from the Ministry of Defence to Ministry of Environment and Forestry. The project does not foresee any changes in decision making structures. Project team is working closely with the ministry to ensure no delays are experienced in procurement processes between changes in Ministry
Consolidated project risk			L						L	*This section focuses on the variation. The overall rating is discussed in section 2.3.*

Table B. Outstanding Moderate, Significant, and High risks

*List here **only risks from Table A above that have a risk rating of M or higher** in the **current** PIR*

Risk	Actions decided during the previous reporting instance (PIR_{t-1}, MTR, etc.)	Actions effectively undertaken this reporting period	Additional mitigation measures for the next periods		
			What	When	By whom
Add rows as needed to reflect additional risks					

High Risk (H): There is a probability of greater than 75% that **assumptions** may fail to hold or materialize, and/or the project may face high risks.
Significant Risk (S): There is a probability of between 51% and 75% that **assumptions** may fail to hold and/or the project may face substantial risks.
Moderate Risk (M): There is a probability of between 26% and 50% that **assumptions** may fail to hold or materialize, and/or the project may face only modest risks.
Low Risk (L): There is a probability of up to 25% that **assumptions** may fail to hold or materialize, and/or the project may face only modest risks.

Project Minor Amendments

Minor amendments are changes to the project design or implementation that do not have significant impact on the project objectives or scope, or an increase of the GEF project financing up to 5% as described in Annex 9 of the Project and Program Cycle Policy Guidelines.

Please tick each category for which a change occurred in the fiscal year of reporting and provide a description of the change that occurred in the textbox. You may attach supporting document as appropriate.

To be completed by Task Managers

5.1 Table A: Listing of all Minor Amendment

Minor Amendments	**Changes**
Results Framework:	
Components and Cost:	
Institutional and implementation arrangements:	
Financial Management:	
Implementation Schedule:	
Executing Entity:	
Executing Entity Category:	
Minor project objective change:	
Safeguards:	
Risk analysis:	
Increase of GEF financing up to 5%:	
Location of project activity:	
Other:	

[Annex document linked to reported minor amendment]

Minor amendments	*[Provide a description of the change that occurred in the fiscal year of reporting]*

5.2 Table B: History of project revisions and/or extensions

To be completed by Task Managers

Version	Type	Signed/Approved by UNEP	Entry into Force (last signature Date)	Agreement Expiry Date	Main changes introduced in this revision
Original legal instrument					
Amendment 1	Revision				
Extension 1	Extension				

GEO Location Information:

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate. Web mapping applications such as OpenStreetMap or GeoNames use this format. Consider using a conversion tool as needed, such as: https://coordinates-converter.com Please see the Geocoding User Guide by clicking here

Location Name Required field	Latitude Required field	Longitude Required field	Geo Name ID Required field if the location is not an exact site	Location Description Optional text field	Activity Description Optional text field
Boiketsiso	-28.62	28.60			Rainfall station to be installed
Botha-Bothe	-28.76	28.26			Agromet station installed
Botsabelo	-29.34	27.53			Rainfall station to be installed
Cheche	-29.65	28.08			Rainfall station to be installed
Dilly-Dilly	-30.52	27.67			Rainfall station to be installed
Fort-Hartley	-30.34	27.74			Rainfall station to be installed
Ha Sempe	-30.31	27.81			Rainfall station to be installed
Hololo-Court	-28.70	28.36			Rainfall station to be installed
Khubelu	-29.08	28.86			Rainfall station to be installed
Kolbere	-29.46	28.60			Climate station to be installed
Lazaro	-30.47	28.13			Rainfall station to be installed

Lelingoana	-29.26	28.86			Rainfall station to be installed
Leribe	-28.86	28.05			Agromet station installed
Leribe	-28.86	28.05			Lightning station to be installed
Lesobeng	-29.75	28.38			Rainfall station to be installed
Libibing	-29.37	28.99			Rainfall station to be installed
Linakeng	-29.61	28.98			Climate station to be installed
Liqhobong	-28.99	28.60			Rainfall station to be installed
Mafeteng	-29.81	27.25			Agromet station installed
Makoae	-30.28	28.05			Rainfall station to be installed
Makopela	-29.22	28.56			Rainfall station to be installed
Malealea	-29.83	27.29			Rainfall station to be installed
Malefiloane	-29.34	29.18			Climate station to be installed
Maoa-Mafubelu	-28.89	28.17			Climate station to be installed
Mapholaneng	-29.20	28.86			Climate station to be installed
Maphutseng	-30.21	27.49			Rainfall station to be installed
Maputsoe	-28.88	27.90			Climate station installed
Mashai	-29.68	28.81			Rainfall station to be installed
Matela	-29.38	27.77			Agromet station installed
Matelile	-29.81	27.51			Rainfall station to be installed
Mazenod	-29.42	27.56			Rainfall station to be installed
Metolong	-29.33	27.79			Climate station installed
Mofoka	-29.51	27.59			Rainfall station to be installed
Mohale's Hoek	-30.15	27.47			Agromet station installed
Mohlanapeng	-29.59	28.67			Rainfall station to be installed
Mokoroane	-29.93	27.21			Rainfall station to be installed
Moletsane	-29.16	28.03			Rainfall station to be installed
Molimo-Nthuse	-29.42	27.91			Rainfall station to be installed
Morija	-29.61	27.57			Rainfall station to be installed
Moshoeshoe-I	-29.45	27.56			Lightning station installed
Mt.Carmel	-29.99	27.58			Climate station installed
Mt-Moorosi	-30.26	27.87			Climate station installed

Mt-Olivet	-29.88	27.40			Rainfall station to be installed
Nohana	-30.07	27.86			Climate station to be installed
Paray	-29.51	28.61			Rainfall station to be installed
Paul-VI	-29.97	27.33			Climate station to be installed
Phuthiatsana	-29.14	27.76			Agromet station installed
Pitseng	-28.97	28.21			Climate station to be installed
Pontseng	-29.03	28.29			Rainfall station to be installed
Qaba	-29.87	27.56			Rainfall station to be installed
Qacha's Nek	-30.11	28.75			Lightning station installed
Qacha's Nek	-30.11	28.75			Synoptic station installed
Qibing	-29.72	27.13			Rainfall station to be installed
Qoqolosing	-28.85	28.12			Rainfall station to be installed
Ramatseliso	-30.05	28.73			Rainfall station to be installed
Rapase	-30.05	28.55			Rainfall station to be installed
Samaria	-29.73	27.29			Rainfall station to be installed
Sani-Top	-29.58	29.28			Climate station to be installed
Seaka	-30.37	27.58			Agromet station to be installed
Sebedia	-29.13	28.09			Rainfall station to be installed
Semonkong	-29.84	28.11			Agromet station to be installed
Seshote	-29.27	28.55			Rainfall station to be installed
St-Peters	-28.75	28.47			Rainfall station to be installed
St-Rose	-28.96	27.79			Rainfall station to be installed
St-Thomas	-29.75	27.54			Rainfall station to be installed
Thaba-Khupa	-29.40	27.63			Rainfall station to be installed
Thaba-Putsoa	-29.43	27.97			Climate station installed
Thaba-Tseka	-29.52	28.62			Agromet station to be installed
Thube	-30.02	28.76			Rainfall station to be installed
Tsákholo	-29.65	27.16			Climate station installed
Tsekelo	-29.09	27.78			Rainfall station to be installed
Tsilo	-29.58	27.61			Rainfall station to be installed
Tsoelike	-30.03	28.90			Rainfall station installed

White-Hill	-30.06	28.48			Rainfall station to be installed

Please provide any further geo-referenced information and map where the project interventions is taking place as appropriate. *
[Annex any linked geospatial file]

[Please provide any further geo-referenced information and map where the project interventions is taking place as appropriate]