Country	**Lesotho**
Request ID#	**2025000020**
Title	*Supporting the adhesion of Lesotho to EWS4ALL*
NDE	Ministry of Environment and Forestry, Meteorological Services Department Lesotho Meteorological Services (LMS) Mr. Maqhanolle Tsekoa maqhanolle.tsekoa@gov.ls
Proponent	ICT Ministry of Lesotho Focal Point to the EWS4all initiative Principal Secretary Mr. Ramashamole kanono.ramashamole@gov.ls

Summary of the CTCN technical assistance

The summary should provide a brief description of the problem (barrier to climate technology deployment) and how the technical assistance will address it (summary of outputs and activities). Please also briefly indicate national actors involved and the anticipated timeline. Please note this summary will be used for public communication purposes so it is important that it is well written. (maximum 1250 characters including spaces)

The CTCN is invited to support Lesotho in accessing technical assistance under the UN Secretary General's global Early Warning Systems for All initiative, which aims to ensure that everyone on Earth is protected by effective, timely and context-specific multi-hazard early warning systems. The technical assistance requested will focus on strengthening the institutional, technical, and operational capacities needed to ensure that alerts are delivered reliably, inclusively, and at scale.

Specifically, the implementation will support countries in building warning dissemination and communication systems and to strengthen countries' ability to reach and warn people at risk ahead of disasters, to reduce their impact and save lives. It will be guided by the objectives identified in the EW4All Plan of Action that relate to Pillar 3 (Warning Dissemination and Communication).

CTCN TA should thus include:

- **Technical expertise and capacity building** to support national authorities, conduct training, and strengthen institutional capabilities in public warning systems.
- **Interpillar and cross-sectoral collaboration**: organizing workshops, consultations, and joint initiatives that enhance synergies between different components of the EW4All framework and promote integrated approaches to early warning dissemination.
- **Technical resource development**, including guidance materials, toolkits, and innovative solutions to enhance national implementation and technical preparedness.
- **Specialized technical assistance** to address country-specific challenges, optimize implementation strategies, and ensure alignment with evolving needs and technological advancements, including support in leveraging additional funding to complete the implementation cycle of the EWS for all Initiative.

Agreement:

(If possible, please use electronic signatures in Microsoft Word file format)

National Designated Entity to the UNFCCC Technology Mechanism
Name: Maqhanolle Tsekoa
Title: Weather Forecaster

Date: 22/09/2025

Signature:

Proponent (signature of the Proponent is optional)
Name: Mr Kanono Ramashamole
Title: Principal Secretary

Date: 22/09/205

Signature:

Adaptation Fund Focal Point
Name: Dr. Teke Ramotubei
Title: Director

Date: 29/09/2025

Signature:

UNFCCC Climate Technology Centre and Network (CTCN)
Name: Ariesta Ningrum
Title: CTCN Director

Date: 02.10.2025

Signature:

1. Background and context

Please provide a brief description of the background and context for the CTCN Response Plan. Please include national and sectoral information using recognized and publicly available sources. (maximum 2500 characters including spaces).

The Kingdom of Lesotho, a small landlocked nation in Southern Africa, is surrounded by the Republic of South Africa. With a population of 2.14 million people in 2020, Lesotho experiences an annual demographic growth rate of 0.8% in 2020. Projections indicate that the population may reach 2.3 million by 2030 and 2.6 million by 2050. The proportion of the population residing in urban areas is estimated to rise from 28% to 34% by 2030 and 46% by 2050.

Recent weather patterns have brought about extreme events, such as droughts and floods. Projections also suggest an increasing likelihood of higher temperatures and fluctuations in rainfall. Lesotho's vulnerability to climate change is exacerbated by the country's already challenging climate and is further compounded by issues of poverty and land degradation.

Lesotho is already witnessing the adverse impacts of climate change, including heightened frequency of extreme events, such as droughts, increased rates of soil erosion and desertification, and diminishing soil fertility. Projections indicate that Lesotho will generally experience hotter and drier conditions in the future, alongside an ongoing presence of extreme events like droughts and floods, as well as other climate-related hazards. These changes are likely to result in adverse environmental impacts, including soil erosion, deforestation, recurrent droughts, desertification, land degradation, and biodiversity loss, including wildlife. Key sectors, including agriculture and livestock, health, water resources, and tourism, face increasing vulnerability to these climate-related challenges.

Lesotho is prone to various climate-related hazards, making early warning systems critical for preparedness and response. While Lesotho has made strides in developing early warning systems, there's a need to scale up their implementation and coverage. This includes expanding the network of monitoring stations, improving risk knowledge and data collection, dissemination and use, and enhancing public awareness and response mechanisms. Multi-Hazard Early Warning Systems should be tailored to the specific needs of local communities and linked to preparedness and response plans. The support of both national and international partners as well as leveraging on global initiatives such as Early Warnings for All (EW4All) is essential to bolster these systems and make them accessible to all communities, particularly those in remote or vulnerable areas based on a UNFCCC report issued in October 2023[1].

2. Problem statement

Founded on the national and sectoral context as detailed in the section above, please include a brief problem statement clarifying the main problems and barriers for climate change mitigation and/or adaptation in terms of climate technologies that the CTCN Response Plan will address and overcome. (maximum 1250 characters including spaces).

Lesotho's current early warning dissemination mechanisms predominantly rely on traditional communication channels such as public gatherings, radio broadcasts, and SMS messages. A recent evaluation indicated that public gatherings were the most utilized method, accounting for 79% of early warning message dissemination, followed by radio and SMS channels. However, the country has not yet adopted Cell Broadcast (CB) technology for emergency alerting. CB offers the advantage of sending geo-targeted alerts to all mobile devices within a specific area without causing network congestion, a feature particularly beneficial during disasters when network traffic is high. The absence of CB in Lesotho's early warning infrastructure highlights a significant gap in the nation's

[1] https://unfccc.int/sites/default/files/resource/Lesotho%20Diagnostic%20Study_FINAL.pdf

ability to promptly and efficiently disseminate critical information during emergencies. Integrating CB technology could substantially enhance Lesotho's capacity to deliver timely alerts, thereby improving disaster preparedness and response.

Scaling Up Early Warning Systems: CRFS can facilitate the scaling up of Lesotho's Multi-Hazard Early Warning Systems to address existing gaps. CRFS can facilitate links with the EW4All initiative, leveraging UNDRR's membership, to support Lesotho in strengthening its Early Warning Systems and preparedness mechanisms.[2]

In Lesotho, the insufficient collection, management, analysis and dissemination of high-quality climate information is hindering the development of adaptation planning because policy- and decision-makers do not have access to the required information. The primary institution responsible for the collection, storage and dissemination of weather, climate and climate change data and information is LMS, while the Ministry of Water (MoW) is responsible for hydrological data. LMS has extensively studied Lesotho's climate regime, with meteorological records dating back to 1889. However, the only large-scale coordinated efforts for climate data generation have been for the development of Lesotho's National Communications, and the resulting climate models are at a relatively low resolution. Similarly, risk and impact assessments conducted in the country to date have lacked sector-specific detail. Indeed, a critical gap identified in the NAP workshop was a lack of sectoral climate risk and vulnerability assessments.

The Lesotho Meteorological Services (LMS), the Ministry of Information, Communication, Science, Technology and Innovation, the Lesotho Communications Authority and Econet Telecom Lesotho are ready to work closely with the Adaptation Fund focal point to implement Pillar 3 of EW4All in the country. All of them participated in the preparation of the request and have signed on the request.

Specifically, the implementation will support countries in building warning dissemination and communication systems and to strengthen countries' ability to reach and warn people at risk ahead of disasters, to reduce their impact and save lives. It will be guided by the objectives identified in the EW4All Plan of Action that relate to Pillar 3 (Warning Dissemination and Communication):

- Warnings should reach every person at risk, and all people should be covered by early warning information through local governments or national dissemination mechanisms.
- Risks should be understood, and messages should be clear and usable.
- Countries should have updated registries of alerting authorities.
- Warnings should be disseminated in the common alerting protocol (CAP) format.

Through this support, EW4All will support Lesotho to:

- Establish multi-channel alerting systems leveraging mobile, broadcast, digital, and community-based dissemination methods.
- Deploy Cell Broadcast technology to enable location-specific, real-time alerting that reaches populations at risk without network congestion.
- Adopt the Common Alerting Protocol (CAP) to ensure consistency and interoperability of alerts across all platforms and stakeholders.
- Develop and operationalize a National Emergency Telecommunication Plan (NETP) that strengthens telecom sector preparedness and coordination during emergencies.

[2] https://www.greenclimate.fund/sites/default/files/document/lso-rs003.pdf

3. Logical Framework for the CTCN Technical Assistance:

(Guidance: Please note that multiple activities lead to one Output, and multiple Outputs lead to one Outcome. There can be several Outputs, but only one Outcome description capturing the CTCN technical assistance. Deliverables are the products or services to be delivered to the NDE/Proponent/CTCN based on the Activities and the Outputs.)

	Month											
	2	4	6	8	10	12	14	16	18	20	22	24
Objective: Support the Government of Lesotho to implement the Early Warnings for All initiative and scale up warning dissemination and communication.												
Outcome: The technical assistance requested will focus on strengthening the institutional, technical, and operational capacities needed to ensure that alerts are delivered reliably, inclusively, and at scale. This includes the adoption of Cell Broadcast technology, the implementation of Common Alerting Protocol (CAP) standards, and the development of a National Emergency Telecommunication Plan (NETP) that ensures resilient communication infrastructure in the face of crises. This would be the first steps to access the full and functional EWS4ALL systems, and additional funding will need to be leveraged. A special output has been created on this regard.												
Mandatory Output: Project management *All implementers must undertake the following project management activities at the beginning of, during and at the end of the CTCN technical assistance.*												
Activity A: Beginning of implementation A detailed work plan of all activities, deliveries, outputs, deadlines and responsible persons/organisations and detailed budget to implement the Response Plan. The detailed work plan and budget must be based directly on this Response Plan. Based on the work plan, a monitoring and evaluation (M&E) plan with specific, measurable, achievable, relevant, and time-bound indicators used to monitor and evaluate the timeliness and appropriateness of the implementation. The monitoring and evaluation plan should apply selected indicators from the Closure and Data Collection report template and enable the lead implementer to complete the CTCN Closure and Data collection report at the end of the assignment (please refer to item iv below and section 14 in the Response Plan). This M&E plan also includes a CTCN Impact Description formulated in the beginning of the technical assistance which will be revised in the Closure and Data Collection report once the technical assistance is fully delivered (templates will be provided). Other additional monitoring and evaluation indicators or templates may be required depending on the donor that is funding the technical assistance. Furthermore, a gender evaluation and gender action plan (GAP) will be prepared and followed throughout the technical assistance (a template will be provided).[3]												

[3] Additional information is available under Section 10 of the response plan.

Activity B: Implementation A project steering committee will be formed, consisting of the implementing team (international and local consultants), the NDE, the project proponent(s), beneficiary(ies), and CTCN. The objective of this steering committee is for the implementing partner to report on progress, and to guide the implementation of the project at a high level. It is recommended that this steering committee is virtually meeting monthly.												
Activity C: End of implementation A Closure and Data Collection report completed at the end of the technical assistance (a template will be provided). Potential project-end communication and dissemination activities (such as knowledge sharing webinar, dialogue with financial institutions, press release) may be conducted in collaboration with the CTCN Secretariat, subject to appropriateness.												
Mandatory deliverables: Deliverable A: Detailed work plan; M&E plan; gender assessment and gender action plan Deliverable B: Project Steering Committee meeting reports Deliverable C: Closure and Data Collection report; press release, webinar, dialogue with financial institutions	X X					X						X X
Output 1: EWS Pillar 3 Initial Assessment & Roadmap												
Activity 1.1: Conduct a national multi-stakeholder workshop to assess existing early warning dissemination systems and define gaps.												
Activity 1.2: Compile detailed Pillar 3 gap analysis and maturity index for Lesotho												
Activity 1.3: Develop National Roadmap for EWS, including a communication & dissemination component												
Deliverables 1: * • Detailed Pillar 3 gap analysis and maturity index for Lesotho. • National Roadmap for Early Warning Systems Scale-up, including a dedicated alert communication and dissemination component	x	x x										
Output 2: National Emergency Telecommunication Plan (NETP)												
Activity 2.1: Develop NETP Framework in consultation with stakeholders												
Activity 2.2: Develop NETP Implementation framework and guidance documents												
Activity 2.3: Hold a national NETP validation and training workshop												
Deliverables 2: National NETP and supporting implementation framework												
Output 3: Cell Broadcast Feasibility Study and Groundwork for Implementation												
Activity 3.1: Conduct feasibility study for a national Cell Broadcast-based Public Warning System												
Activity 3.2: Develop detailed technical specifications for CB procurement												

Activity 3.3: Conduct capacity building & training on CB implementation												
Deliverables 3: Cell Broadcast Feasibility Study and Technical Specifications Document (as basis for CB procurement & tender process)												
Output 4: Disaster Connectivity Map (DCM)												
Activity 4.1: Map mobile network coverage and identify gaps in at-risk areas												
Deliverables 4: Disaster connectivity map and workshop report												
Output 5: Technical capacity Building and Regulatory Strengthening												
Activity 5.1: Conduct CAP workshop and training for key agencies, alerting authorities and telecom regulators and Mobile Network Operators, etc.												
Activity 5.2: Carry out legislative & regulatory assessment and provide recommendations												
Deliverables 5: CAP training and legislative / regulatory support for emergency telecommunications												
Output 6: Leveraging Additional funding to continue the implementation of the EWS4all												
Activity 6.1: Benchmark the potential source of funding												
Activity 6.2: Draft the CN to request additional funding to the identified financial institutions												
Activity 6.3: Workshops (at least 2) are organized: one for the review and one final consultations on the CN before submission of the CN.												
Deliverables 6: The country is engaged with donors to further support the deployment of the EWS4all.												

4. Resources required and itemized budget:

Please provide an indicative overview of the resources required and itemized budget required to implement the CTCN technical assistance, including for M&E-related activities, using the table below. Important to note that minimum 5% of the budget should explicitly target gender specific activities related to the technical assistance (please see section 10 for further information on gender). A maximum of 20% of the budget can be allocated to procurement (e.g. infrastructure purchase, technology piloting), Once the Response Plan is completed, a Response Implementation partner(s) will be selected by the Climate Technology Centre (CTC). A detailed activity-based budget for the CTCN assistance will be finalized by the CTCN and selected Implementer.

Activities and Outputs	**Input: Human Resources** *(Title, role, estimated number of days)*	**Input: Travel**[4] *(Purpose, national vs. international, number of days)*	**Inputs: Meetings/events**[5] *(Meeting title, number of participants, number of days)*	**Input: Equipment/Material** *(Item, purpose, buy/rent, quantity)*	**Budget**
Manda tory Output	**The TL and the local team will be requested to participate to this outcome**	**N/A**	**Coordination meetings, virtual**	**N/A**	**20'000**
Output 1: Pillar 3 Initial Assessment & Roadmap	**The TL and the local team will be requested to participate to this outcome**	**National travel for consultants (3 days)**	**National workshop (30 participants, 1 day); roadmap presentation**	**Venue, stationery, projector rental**	**25,000**
Output 2: National Emergency Telecommunication Plan (NETP)	**The TL and the local team will be requested to participate to this outcome**	**National travel for consultations (2 days)**	**Stakeholder consultations (20 participants, 1 day); NETP validation & training (30 participants, 1 day)**	**Printing NETP, training materials**	**25,000**
Output 3: Cell Broadcast Feasibility	**1 international telecom expert;**	**National travel for site visits (3 days)**	**Stakeholder interviews (various,**	**Training materials, printing specs**	**60'000**

[4] All budget values related to Daily Subsistence Allowance or logistical support for local participants shall remain as indicated.
[5] All budget values related to the organization of meetings and events shall remain as indicated.

Study and Groundwork for Implementation	**Local team of experts**		**2–3 days); CB training workshop (25 participants, 1 day)**		
Output 4: Disaster Connectivity Map (DCM)	**1 international GIS specialist; 1 national data analyst**	**Field mapping visits (3 days)**	**Map presentation (10 participants, 0.5 day)**	**GIS software license (if needed), data storage**	**25'000**
Output 5: Technical capacity Building and Regulatory Strengthening	**1 international legal expert; 1 national legal expert; capacity building expert; Local team of expert**	**Travel**	**CAP workshop (30 participants, 1 day); consultations (15 participants, virtual)** **Branding materials (banners, media coverage)**	**Training materials, venue rental**	**25'000**
Output 6: Leveraging additional support	**Expert in Finance, Local team**				**20'000**
Estimated range of costing for the entire Response Plan					***200'000***

5. Profile and experience of experts

Experts required	Brief description of required profile
Team Leader	PhD or at least master's degree in meteorology, climate change, Early Warning systems or affiliate At least 12 years of demonstrated experience in developing EWS for developing countries. Minimum 8 years of experience in digital technologies such as SIG, satellites, weather forecast platform or affiliate Minimum 8 years of experience in communicating weather forecast to beneficiaries in developing countries. At least 5 references in designing EWS in developing countries. At least 5 references in disseminating weather forecast in developing countries. Experience with coordinating and liaising with multiple national and international agencies such as UN. Experience in campaign awareness, capacity building and trainings to professionals. Excellent level of English is compulsory. Qualified women candidates are highly encouraged to apply.
A telecom expert (international expert)	PhD or the least master's degree in telecommunication, weather forecast dissemination or affiliate At least 8 years of experience in telecommunication, weather forecast dissemination or affiliate At least 5 relevant references on disseminating weather forecast in developing countries. Experience in Africa is a plus. Excellent level of English is mandatory. Qualified women candidates are highly encouraged to apply.
A GIS specialist (International)	Master's degree (or above) in GIS or affiliate At least 8 years of experience in GIS or affiliate At least 5 relevant references on using GIS for weather forecast in developing countries. Experience in Africa is a plus. Excellent level of English is mandatory. Qualified women candidates are highly encouraged to apply.
A financial expert (international)	Master's degree (or above) in climate finance, or affiliate At least 8 years of experience in the development of climate funding proposals for the GCF or affiliate. At least 5 relevant references on of project/programme developed for the GCF, Adaptation Fund, GEF or affiliated approved on behalf of developing countries.

	Experience in Africa is a plus. Excellent level of English is mandatory. Qualified women candidates are highly encouraged to apply.
A **national data analyst (national)**	Master's degree (or above) in data analysis, meteorology, weather forecast, weather forecast dissemination or affiliate. At least 8 years of experience in data analysis in meteorology, weather forecast, weather forecast dissemination or affiliate At least 5 relevant references on data analysis for weather forecast in developing countries. Experience in Africa is a plus. Previous work experience in Lesotho is a plus. Excellent level of English is mandatory. Qualified women candidates are highly encouraged to apply.
Legal expert (International)	Master's degree (or above) in law, environmental law or affiliate. At least 8 years of experience in practicing law for the climate change, environment or affiliate At least 5 relevant references on formulating regulation in the environmental sector for developing countries. Experience in Africa is a plus. Excellent level of English is mandatory. Qualified women candidates are highly encouraged to apply.
Legal expert (National)	Master's degree (or above) in law, environmental law or affiliate. At least 8 years of experience in practicing law for the climate change, environment or affiliate At least 5 relevant references on formulating regulation in the environmental sector for developing countries. Experience in Africa is a plus. Previous work experience in Lesotho is a plus. Excellent level of English is mandatory. Qualified women candidates are highly encouraged to apply. Expected localization in Lesotho or with availability to travel to Lesotho often and for long period of time.
Capacity building expert (national or international)	Master's degree (or above) in journalism, communication, coach, people´s empowerment or affiliate. At least 8 years of experience in developing capacity building programmes for the climate change, environment or affiliate At least 5 relevant references on providing capacity building on climate change/environment in developing countries. Experience in Africa is a plus. Excellent level of English is mandatory.

	Qualified women candidates are highly encouraged to apply.
Gender expert (national)	A master's or bachelor's degree specializing in gender studies or other related field from a recognized university. At least 5 years of experience in mainstreaming gender benefits in development programs. Knowledge of climate change, adaptation, green infrastructure, urban planning, smart cities of affiliate. Demonstrated experience in Africa. Expected localization in Lesotho or with availability to travel to Lesotho often and for long period of time. Fluency in English is a must. Qualified women candidates are highly encouraged to apply.

6. Intended contribution to impact over time

At current levels of global greenhouse gas emissions, the world is not on track to meet the climate targets, which would increase the risks of pervasive climate change impacts beyond what is already observed.

Early Warning Systems (EWS) are an established, cost-effective, and reliable climate adaptation measure. Research demonstrates that EWS provide at least a tenfold return on investment, and countries with limited early warning coverage experience disaster mortality that is eight times higher than countries with substantial to comprehensive coverage6. However, one-third of the population is not covered by EWS. This figure is notable as approximately 130 million people worldwide are affected by disasters each year.

After implementing this TA, Lesotho will be affiliated to the EWS4all Initiative.
It is expected that the country will leverage additional funding sources (through the GCF or CREWS) to continue the deployment of the initiative.

7. Relevance to NDCs and other national priorities

Reference document (please include date of document)	**Extract** (please include chapter, page number, etc.).
Nationally Determined Contribution (NDC)	Direct alignment and contribution to NDC implementation is required for all CTCN technical assistances. Please include a direct reference to the INDC/NDC document (chapter, page number, etc.). The NDC clearly states in p10, under agriculture sector the need to "provide early warning/meteorological forecasts and related information". It also states under p18, cross cutting "Establishment of an integrated early warning system, and disaster response plans"
Technology Needs Assessment and Technology Action Plan	The TNA of Lesotho updated in 202 has a specific Technology factsheet on EWS where the adhesion to EWS for All initiative is clearly referenced: The target is to establish DCEWS in every district by 2030 leveraging on the current six pilot areas supported by upgraded and modernized climate monitoring and forecasting systems. The timeline for realizing DCEWS covers the period 2024-2030 in line with national and development policies and the Early Warnings for All initiative, launched by the United Nations Secretary- in March 2022, which seeks to ensure that everyone is protected from hazardous weather and/or climatic hazards by the end of 2027. [7]
National Adaptation Plans	Intends to build on the NAPA, the NCCP and the other plans and strategies mentioned by assessing opportunities for implementing medium- and long-term climate change adaptation actions. 11 projects were identified as per the NAPA, the 4th one is "Improvement of an Early Warning System against Climate Induced Disasters and Hazards".
GCF Country Programme	EWS for All has recently approved a full proposal to further support the adhesion of countries to EWS for all initiatives. Lesotho being a LDC other source of funding are also available.
National Policies	National Climate Change Policy (NCCP)

[6] Global Status of Multi-Hazard Early Warning Systems 2023, available at: https://www.undrr.org/media/91954/download?startDownload=20250227
[7] https://tech-action.unepccc.org/wp-content/uploads/sites/2/2024/12/dcews-approved-181124.pdf

	National Environmental Action Plan (NEAP)

8. Linkages to relevant parallel on-going activities:

In preparation for the FNC to the UNFCCC, national climate change scenarios were developed for the years 2030, 2050 and 2075 using several methods 32. To inform these climate change scenarios — and early warning systems — LMS currently manages over 90 meteorological stations33 distributed across Lesotho. These consist of i) 31 climate stations with the primary purpose of carrying out temperature and precipitation observations; ii) three synoptic stations fully equipped with sensors for various weather elements; iii) six agrometeorological stations which make meteorological observations primarily for application to farming activities; and iv) and 52 rainfall stations recording daily rainfall. Several of these meteorological stations are in disrepair, requiring refurbishment and upgrading to include other parameters for observation. There is also a shortage of technically qualified personnel who can calibrate and monitor this equipment. The data collected from Lesotho's national network of meteorological stations is stored in a computerized data bank, managed by LMS. Although the data collected by LMS is useful, it is not converted into user friendly information that can be easily analyzed or distributed. For example, the LMS data bank is not freely accessible to other government institutions, external organizations or members of society. To counteract this shortcoming, LMS regularly publishes climate information in print and on electronic media for distribution to relevant stakeholders. The LMS website34 is one of the few external sources for national climate change information and needs updating. Although the website has been recently revamped and now includes a designated Climate Change Portal, many of the sections are not fully populated and relevant documents — including vulnerability assessment reports, NCs and sectoral plans — have not been uploaded to the website. Under the Africa Adaptation Programme35, a GIS-based knowledge management system was implemented in Lesotho to store information related to climate change and adaptation activities. However, the system stopped working after the project ended as the GoL were unable to purchase the required software license. The availability and quality of climate information and the capacity required to effectively use this information in adaptation planning are significant barriers to implementation of the NAP process. In addition to the climate information generated by government entities, the private sector, NGOs and academic institutions contribute to climate research in Lesotho. Information sharing between these entities is largely insufficient because much of the data are compiled for internal use only and the limited coordination and collaboration between these entities can lead to the duplication of climate research. Furthermore, climate research led by academic institutions is limited because there is currently no tertiary institution in Lesotho offering specialized courses in climate change or other climate-related fields such as meteorology36. Similarly, primary and secondary school curriculums do not explicitly incorporate education on climate change. As a result, there are limited opportunities within Lesotho for learning about climate change and generating climate research. Lack of awareness is consequently a major issue facing the NAP process in Lesotho. While many people are aware of climatic conditions such as droughts, flooding and hailstorms, the occurrence of these events is not necessarily linked to climate change. There is also very little awareness of Multi-Lateral Environmental Agreements (MEAs) such as those enforced by the UN37. Local government structures such as district and community councils as well as district and village disaster management teams are commonly used groups for sharing climate information with local communities. However, these councils and teams do not have adequate financial resources or technical capacity to continually provide communities with up-to-date climate change information. Although other methods of information dissemination exist — including radio and television broadcasts — they are only appropriate for communities with access to these technologies.

9. Anticipated follow up activities after this technical assistance is completed:

Following this TA, the country will continue to work with the IP and with the UN organization in charge of managing the EWA4all initiatives to leverage additional funding and work through the other angles, components of the EWS until having an efficient and reliable system in place.

10. Gender and co-benefits:

Each technical assistance must integrate gender mainstreaming activities and lead to gender and other co-benefits. At least 5% of the technical assistance budget need to be allocated to gender mainstreaming activities.

Gender benefits embedded in the implementation and because of activities:	The "Early Warnings for All" (EW4All) initiative recognizes the importance of gender-responsive and inclusive early warning systems (EWS). It aims to ensure that EWS are accessible to everyone, including marginalized groups, women, and those with disabilities, by addressing their unique needs and vulnerabilities. This means considering how gender shapes vulnerability to hazards and how warnings can be made more effective and equitable. Key aspects of gender-responsive EWS within the EW4All initiative: • **Addressing gender inequalities:** EWS should not perpetuate existing inequalities or marginalization but rather strive to address them. • **Tailoring messaging and communication:** Warnings should be designed to reach diverse audiences, including those with different literacy levels and access to technology. • **Involving women in EWS development:** Women's leadership and expertise are crucial in designing and implementing effective EWS, as they often have a deeper understanding of local contexts and needs. • **Intersectional approach:** Recognizing that gender interacts with other factors like disability, socio-economic status, and ethnicity, and addressing these intersections in EWS. • **Monitoring and evaluation:** EWS should be regularly evaluated to ensure they are effectively meeting the needs of all users, including women and marginalized groups. Examples of how gender is integrated into EWS: • **Communication:** Using culturally relevant language, accessible formats (like voice recordings), and local media to ensure that warnings reach women in diverse communities. • **Preparedness:** Ensuring that women and girls have access to information about preparedness activities and safety plans.

	• **Disaster response:** Integrating gender considerations into relief efforts and recovery plans to ensure that women's specific needs are met. • **Data collection:** Collecting data on gender-specific risks and vulnerabilities to inform EWS development and improve their effectiveness. By prioritizing gender-responsive approaches, the EW4All initiative aims to build more resilient and equitable communities that can better withstand the impacts of climate change and other hazards.
Other co-benefits embedded in the implementation and intended as result of the activities:	The CTCN project will enable the country to: • develop preliminary assessments on EWS and Cell Broadcast • evaluate where the country sands on EWS and CB, in relation to technical, economic, regulatory and general aspects • conduct Disaster Connectivity Map for Risk Assessment to identify populations lacking access to early warning notifications because they are beyond the reach of mobile networks • to develop a feasibility study for the implementation of a National Public Warning System in the country • identify the most suitable technical and economic solution and estimating the costs for its implementation • convene a national workshop on Pillar 3 to bring together all stakeholders involved in DRM and emergency telecommunications and identify the main gaps for the achievement of an effective, people-centered early warning system in the country • support the country in the process of leveraging additional funding that will ensure the full deployment of the mobile EWS solution (Cell Broadcast). In parallel to this CTCN TA, the country will initiate the process of leveraging additional funding with the support of the IP with the objective to deploy fully the initiative.

11. Main in-country stakeholders in implementation of the technical assistance activities:

Using the table below, please list and describe the role of in-country stakeholders, participants and beneficiaries who will be involved in or directly consulted during implementation of the assistance.

Key stakeholders:

Please list the stakeholders who will be involved in the implementation of the requested CTCN technical assistance and describe their role during the implementation (for example, government agencies and ministries, academic institutions and universities, private sector, community organizations, civil society, etc.).

Stakeholders	Role to support the implementation of the technical assistance
National Designated Entity	Member of the Steering Committee
ICT Ministry of Lesotho	Proponent and Member of the Steering Committee
Lesotho Communication Authority	Member of the Steering Committee

Econet Telecom Lesotho.	Member of the Steering Committee
Vodacom Lesotho	Member of the Steering Committee
National Climate Change Committee (NCCC)	Member of the Steering Committee or key observer
GCF, LDCF, Adaptation Fund	Potential Donors
Disaster Management Authority	Member of the Steering Committee or key observer
Lesotho Vulnerability Assessment Committee	Member of the Steering Committee or key observer
Other governmental entities	MAFSN Ministry of Agriculture, Food Security and Nutrition, MoE Ministry of Energy, MoET Ministry of Education and Training, MoF Ministry of Finance and Development Planning, MEF Ministry of Environment and Forestry, MoGYSR Ministry of Gender and Youth and Social Development, MoH Ministry of Health, MoLGCHAP Ministry of Local Government, Chieftainship, Home Affairs and Police, MNR Ministry of Natural Resources
International Organisations	UN Resident Coordinator Office and resident UN agencies providing support on climate adaptation and EWS; National Red Cross Society; The World Bank, GIZ, World Vision
MISA	Radio, Print Media, TV, Social media houses, etc
Academia	NUL, Limkokwing, Botho, Agric College
Private Sector	Econet Telecom Lesotho (key stakeholder and member of the steering committee)
CSO	LENAFU

12. SDG Contributions:

*Instructions: Please complete the grey section below for **a maximum of three SDGs** that will be advanced through this TA. A complete list of SDGs and their targets is available here: https://sustainabledevelopment.un.org/partnership/register/.*

Goal	Sustainable Development Goal	Direct contribution from CTCN TA (1 sentence for top 1-3 SDGs)
1	End poverty in all its forms everywhere	
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	
3	Ensure healthy lives and promote well-being for all at all ages	
4	Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	
5	Achieve gender equality and empower all women and girls	
6	Ensure availability and sustainable management of water and sanitation for all	
7	Ensure access to affordable, reliable, sustainable, and modern energy for all (consider adding targets for 7)	
	7.1 - By 2030, ensure universal access to affordable, reliable and modern energy services	
	7.2 - By 2030, increase substantially the share of renewable energy in the global energy mix	

	7.3 - By 2030, double the global rate of improvement in energy efficiency	
	7.a - By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	
	7.b - By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
10	Reduce inequality within and among countries	
11	Make cities and human settlements inclusive, safe, resilient and sustainable	
12	Ensure sustainable consumption and production patterns	
13	Take urgent action to combat climate change and its impacts	*All TAs should indicate relevance to Goal 13 and at least one target below (13.1 to 13.b).*
	13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Through this TA, Lesotho will adhere to the EWS4all initiative which will enable the country to foster its capacity to provide timely and reliable alerts when a climate hazard is coming.
	13.2 - Integrate climate change measures into national policies, strategies and planning	Regulations will be created to ensure that the private sector (the communication agencies) is disseminating the alerts.
	13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	
	13.a - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	EWS4all is a UN initiative that aims at supporting all the countries in the world.
	13.b - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	This TA will also support the country in accessing more funding to continue the implementation of the EWS4all initiative.

14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
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	
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	

13. Classification of technical assistance:

Please tick off the relevant boxes below	*Primary*	*Secondary*
☐ 1. Decision-making tools and/or information provision	X	☐
☐ 2. Sectoral roadmaps and strategies	X	
☐ 3. Recommendations for law, policy and regulations	X	
☐ 4. Financing facilitation	X	☐
☐ 5. Private sector engagement and market creation	☐	X
☐ 6. Research and development of technologies	☐	☐
☐ 7. Feasibility of technology options	☐	☐
☐ 8. Piloting and deployment of technologies in local conditions	☐	X
☐ 9. Technology identification and prioritization	☐	☐

Please note that all CTCN technical assistance contributes to strengthening the capacity of in country actors.

14. Monitoring and Evaluation process

Upon contracting of the implementing partners to implement this Response Plan, the lead implementer will produce a monitoring and evaluation plan for the technical assistance. The monitoring and evaluation plan must include specific, measurable, achievable, relevant, and time-bound indicators that will be used to monitor and evaluate the timeliness and appropriateness of the implementation. The CTCN Technology Manager responsible for the technical assistance will monitor the timeliness and appropriateness of the Response Plan implementation. Upon completion of all activities and outputs, evaluation forms will be completed by the (i) NDE about overall satisfaction level with the technical assistance service provided; and (ii) the Lead Implementer about the knowledge and learning gained through delivery of technical assistance. Furthermore, the NDE together with the project proponent(s) will complete a periodic post-implementation form to track the impact of the activities beyond the technical assistance end date.

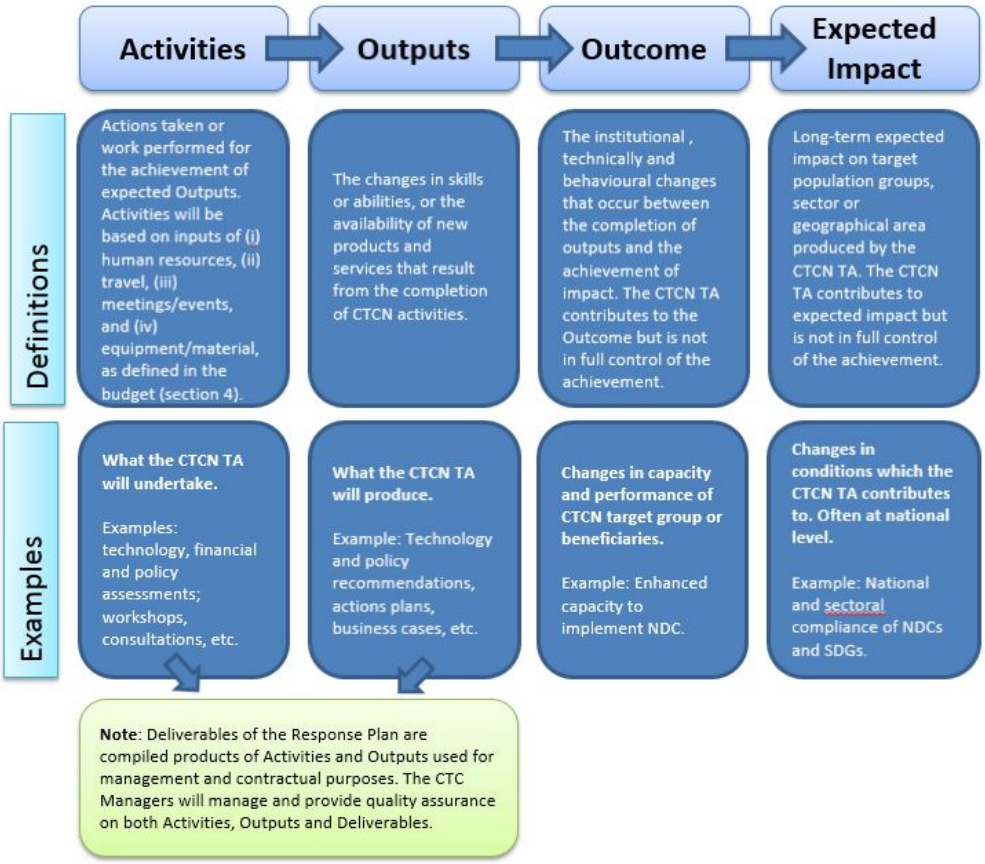
Annex 1: Guidance note for designing a Response Plan (to be deleted when submitting the Response Plan)

1. Objective of the Response Plan

The Response Plan is developed by CTCN specialists in response to a country request for technical assistance. It constitutes the Terms of Reference of the CTCN technical assistance that will be provided to the country, and it provides the formulation of and subsequent basis for the monitoring and evaluation of the Response Plan implementation, as well as its expected outcomes and anticipated impacts.

2. Results chain and Logical Framework Approach to be defined in the CTCN Response Plan

The result chain is the causal sequence that stipulates the necessary flow of actions and processes to achieve desired objectives and results – beginning with inputs, moving through activities and outputs, and culminating in individual outcomes. The outcome will contribute to the desired impact in the society. The Logical Framework Approach is an analytical process used to support objectives-oriented project planning and management. It provides a set of pre-defined concepts which are used as part of an iterative process to aid structured and systematic analysis and management of the CTCN technical assistance.



3. Process for designing the Response Plan

The Response Planning process should be completed over a period of up to 60 working days (12 weeks). Indicative steps and related timelines are laid out below:

4. Design Considerations

To maximize the impact of the technical assistance provided by the CTCN and provide an effective M&E process, the Response Plan should integrate as much as possible the considerations below:

Climate Technology focus: The Response Plan should have a clear focus on climate technologies, and identify activities that enable the identification, development, deployment or diffusion of one or several specific technologies (including equipment, techniques, knowledge and skills).

Barrier removal / Problem solving: The activities should contribute to address the specific problem statement identified in the Request. The barriers identified should be those hampering the identification, development, deployment or diffusion of one or several climate technologies or climate actions. Therefore, it may be necessary to limit the CTCN Response Plan to a set of activities for technical assistance commonly agreed with the NDE (and Proponent when needed) compared to the original request submitted. The CTCN will liaise with NDEs and Proponent in case the scope of the technical assistance deviates from the original request.

Use of the CTCN assistance by stakeholders: The Response Plan should identify clearly how the products of the CTCN assistance will be used in the short term once support is delivered, by who and when, to ensure it will lead to specific impacts in the country. The activities should engage the stakeholders that will use the concrete results of the assistance to deploy the technologies, including from the private sector, the public sector, research institutions, etc.

Within the scope of CTCN resources: The cost of the technical assistance provided by the CTCN cannot exceed USD 250,000 per Response Plan. Therefore, it may be necessary to prioritize activities and limit the CTCN Response Plan to a set of priority activities commonly agreed with the Proponent and the NDE to remain under this value. Under section 4 of the Response Plan template, an indicative activity-based budget should be presented. The proposed budget is indicative and should present an estimated costing range per activity, output as well as a total costing range for the delivery of the Response Plan. Once the Response Plan is finalised and published for tendering, interested parties will provide competitive offer against the indicative budget.

CTCN activities and outputs should be linkable to monitoring and evaluation indicators: All proposed activities and outputs must be linkable to monitoring and evaluation indicators that are specific, measurable, achievable, relevant, and time bound. The monitoring and evaluation process and

corresponding indicators will be developed by the Lead Implementer as part of the work plan and will allow the CTCN technology Manager to monitor the timeliness and appropriateness of the implementation.

Synergies with existing efforts: The Response Plan should focus on activities that are not already being fully supported or that are in the process of being fully supported by another national, regional or international organization. Synergies and complementarity also require that the CTCN assistance is not duplicating past activities. It is possible in the Response Plan to indicate co-financing from the government, the Proponent or another stakeholder, that will maximize the effectiveness of the CTCN assistance.

Gender mainstreaming: The CTCN mission is to build or strengthen developing countries' capacities to identify technology needs, to facilitate the preparation and implementation of technology projects and strategies considering gender considerations. The Response Plan must therefore describe how gender considerations will be included and monitored within the proposed activities, and any gender co-benefits that will be gained because of implementing the CTCN technical assistance. For that purpose, a Gender Assessment and Action Plan (GAAP) template has been designed to be followed by the implementation partner.