

KINGDOM OF LESOTHO



MINISTRY OF PUBLIC WORKS AND TRANSPORT

TRANSPORT INFRASTRUCTURE AND CONNECTIVITY PROJECT (P155229)

CONTINGENCY EMERGENCY RESPONSE COMPONENT

Environmental and Social Management Framework (ESMF)

June 8, 2021

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ACRONYMS

ARAP	Abbreviated Resettlement Action Plan
ART	Antiretroviral Therapy
CERC	Contingency Emergency Response Component
CLO	Community Liaison Officer
DMA	Disaster Management Authority
EAP	Emergency Action Plan
EHS	Environment, Health and Safety
ERM	Emergency Response Manual
ES	Environmental Screening
ESA	Environmental Site Agent
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Safeguards
GBV	Gender Based Violence
GoL	Government of Lesotho
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
KPI	Key Performance Indicator
LENASO	Lesotho Network of AIDS Service Organization
LTICP	Lesotho Transport Infrastructure and Connectivity Project
MoH	Ministry of Health
MoPW	Ministry of Public Works
NDRTF	National Disaster Relief Task Force
OHS	Occupational Health and Safety
PAPs	Project Affected Persons
PIU	Project Implementation Unit
RD	Roads Directorate
RPF	Resettlement Policy Framework
SEA	Sexual Exploitation and Abuse
TB	Tuberculosis
TICP	Transport Infrastructure and Connectivity Project
TICP	Transport Infrastructure and Connectivity Project
WB	World Bank

I. Introduction

1. This document is prepared as an addendum to the existing ESMF¹ of the Transport Infrastructure and Connectivity Project (TICP) (P155229) (the Project). It describes additional information on the environment and social safeguards, as well as Occupational Health and Safety (OHS) and Sexual Exploitation and Abuse/Sexual Harassment/Gender/GBV requirements for the implementation of the proposed activities to be carried out under Component 4 of the Project (Contingency Emergency Response Component or CERC). The Ministry of Public Works (MoPW) will be the project owner while the Roads Directorate (RD) will be the project implementation unit (PIU) and they will be assisted by the Disaster Management Authority (DMA). The National Disaster Relief Task Force (NDRTF) will be responsible for guiding and coordinating all Contingency Emergency Response Component (CERC) activities and is chaired by the Deputy Prime Minister. The following environmental and social safeguards instruments were prepared by the Roads Directorate as the implementing agency:
 - An **Environmental and Social Management Framework (ESMF)** was prepared and disclosed (June 01, 2017) to establish procedures for screening all proposed sub-projects/investments for their potential adverse environmental and social impacts; specified measures for managing, mitigating and monitoring environmental and social impacts during project operation; and outlined training and capacity building arrangements needed to implement the ESMF provisions. The ESMF proposed a generic Environmental and Social Management Plan (ESMP) to mitigate potential impacts during project implementation.
 - A **Resettlement Policy Framework (RPF)** was also prepared and disclosed (April 01, 2017) to address any resettlement impacts and issues that may occur for sub-projects identified during implementation. Screening criteria and relevant protocols are included as part of the RPF. The RPF defines terms and provides guidance for involuntary acquisition of land or other assets (including restrictions on asset use), and establishes principles and procedures to be followed to ensure equitable treatment for, and rehabilitation of, any persons adversely affected.
2. This CERC section is developed as an addendum to the existing ESMF of the Transport Infrastructure and Connectivity Project (TICP) (P155229) (the Project). It describes

¹<http://documents1.worldbank.org/curated/en/516191498681117803/pdf/SFG3470-V1-EA-155229-Box402916B-PUBLIC-Disclosed-8-17-2017.pdf>

additional information on the environment and social safeguard requirements for activities to be financed under CERC Component.

3. The guidance and procedures included in this CERC ESMF should be considered part of the Emergency Response Manual (ERM) that is being prepared and contains the environmental and social as well as the associated Occupational Health and Safety (OHS) requirements to activate the CERC. The guidelines and procedures included in this ESMF CERC Addendum takes into account the Bank's safeguard requirement for the CERC (Bank's Guidance on CERC, October 2017).

II. Background

4. Lesotho has experienced heavy rains between December 2020 and March 2021. Various sectors such Agriculture, Roads and health were negatively affected by the widespread rains. In January 2021, the Lesotho DMA declared serious damage on road infrastructure consequently disconnecting many communities from essential social services such as hospitals and schools. This aggravates challenges that the TICP Component 1 attempts to overcome. The rapid assessment carried out by DMA in January indicates that about 54 bridges were completely damaged with 20 partially damaged. The number of roads with partial damage sits at 127 with 56 completely damaged. There also 36 culverts completely damaged while 41 are partially damaged (DMA 2021).
5. RD as the custodians of road infrastructure have also taken their own assessment in order to prioritize the damaged bridges, roads and the culverts and hence the list of CERC activities in Table 2 below.

III. Identification of potential activities that the CERC could finance:

6. The activities to be carried out under the CERC Component include: goods, services, training and works as identified in Table 1 below². The Location of the contingency activities will be in all Lesotho districts except Qacha's Nek, Mokhotlong and Butha Buthe as shown in Table 2 below.
7. It is important to mention that the activities or subprojects that will be financed by the CERC Component, should avoid activities or subproject with complex environmental and social aspects (for example resettlement), because the CERC objective is to support immediate priority activities (less than 18 months). The subprojects with more environmental and social complexity, could be financed with other specific sources of financing.

²More details on the proposed emergency works for which the CERC activation is being requested in April 2021 can be found in Annex 6 to this document.

Table 1: List of positive goods and works

Item
Goods
• Equipment and supplies for temporary housing/living (gas stoves, utensils, tents, beds, sleeping bags, mattresses, blankets, hammocks, kit of personal and family hygiene, etc.) Water, transport equipment, including spare parts • Any other item agreed to between the World Bank and the Recipient (as documented in an Aide-Memoire or other appropriate formal Project document)
Works
• Repair of damaged roads and bridges infrastructure. • Removal and disposal of debris associated with any eligible activity. Clearance of debris from roadways, such as vegetation, large trees or tree members, construction debris (from work sites or from structures demolished during the event), abandoned vehicles, etc. • Spot Improvement Activities: ✓ Re-Construction of stone / gabion retaining walls ✓ Filling of erosion/gullies on road way ✓ Reinstating approaches to drainage structures ✓ Unblocking culvert and vented ford barrels ✓ Reinstating washed away/eroded embankments ✓ Re-building destroyed/damaged drifts ✓ Repair damages to drainage structures
Training
• Conduct necessary training related to emergency response including, but not limited to the Implementation of the Emergency Action Plan (EAP)³. • Training on rapid needs assessment and other related assessments. • E & S training to the implementers (RD and Contractors) and monitors (PIU Community Liaison Officers)
Emergency Operating Costs
• Incremental expenses by the Government for a defined period related to early recovery efforts arising as a result of the impact of an eligible emergency. This includes, but is not limited to: costs of staff attending emergency response, operational costs⁴ and rental of equipment.

³ Annex 6 of this document

⁴ As per Financing Agreement, signed November 30, 2017 " "Operating Costs" means the reasonable costs of goods and non-consulting services required for the day-to-day coordination, administration and supervision of Project activities, including leasing and or routine repair and maintenance of vehicles, equipment, facilities and office premises, fuel, office supplies, utilities, consumables, communication expenses (including postage, telephone and internet costs), website maintenance, translation, printing and photocopying expenses, bank charges, publications and advertising expenses, insurance, Project-related travel, subsistence and lodging expenses, and other costs directly related to the Project, but excluding salaries, bonuses, fees and honoraria of equivalent payment of members of the Recipient's civil service."

Table 2: Locations for CERC activities

District	Location	Activity
1. Maseru	Mazenod – Au	Ha Jimisi mini-bridge/major culvert construction
2. Maseru	Mahloenyeng – Khitlone	Mahloenyeng bridge construction
3. Thaba Tseka	Lephoi - Likamoreng	Spot improvement
4. Berea	Mateka – Pulane	Spot improvement
5. Mafeteng	Mosala – Raleqheka Tlali	Bridge reconstruction + spot improvement
6. Mohale's Hoek	Siloe – Likhoele	Reconstruction of crossing approaches
7. Quthing	Mt. Moorosi – Makoae	Spot improvement
8. Mohale's Hoek	Seaka – Ketane	Spot improvement
9. Leribe	Selomo - Tsime	Culvert desilting, spot improvement and river draining
10. Berea	Lenkoane- Nkhahle	Reconstruction of culvert crossing, spot improvement
11. Berea	Bobojane - Tsereaoane	Spot improvement and gabion reconstruction

IV. Scope of the CERC-ESMF

8. This CERC Environmental and Social Management Framework (CERC-ESMF) is developed to support identifying, avoiding, minimizing and mitigating adverse environmental and social impacts resulting from the implementation of the proposed CERC activities in line with the relevant environmental and social regulations of the Lesotho legal framework and the World Bank's Operational Policies as detailed in the project's environmental and social safeguards instruments such as the ESMF and RPF⁵.
9. Where risks and impacts of planned CERC activities overlap in nature and geographic scope with those identified in the existing ESMF, the environmental and social provisions for mitigating risks and impacts in the existing ESMF should apply. In the event overlap is not established, new environmental and social provisions for mitigating risks and impacts associated with the proposed CERC activities will be advanced under the present CERC-ESMF.
10. The CERC-ESMF presents the underlying environmental and social principles, rules, guidelines, and procedures for implementing the planned CERC activities. It outlines proposed activities, defines eligible activities, establishes procedures to assess the environmental and social impacts associated with the eligible activities, and lays down measures to reduce, mitigate and/or offset potential impacts. It also identifies implementation arrangements for environment and social safeguards.

V. Potential Environmental and Social (ES) Impacts

11. Implementation of the activities will be positive and urgently needed. The proposed emergency works to be financed under CERC in April 2021 are presented in Annex 6 to this document. The proposed civil works listed in table 1 above and Annex 6 and other related sub-activities are small and medium-scale works and provision of essential goods. The potential negative impacts are expected to be moderate, localized, and temporary that can be mitigated through the implementation of the existing safeguards instruments of the Project and close supervision by the project manager and E & S compliance monitoring by the Environmental and Social Safeguards Specialist. The required mitigation measures will be included as part of the Environment and Social Management Plan (ESMP) to be prepared if required upon completion of screening of specific sub-projects referred to in Table 2. Otherwise, the current E&S checklist will still be applicable (**Annex 1**).
12. In terms of social impacts, activities that will result in the involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households' use of land

⁵<http://documents1.worldbank.org/curated/en/252621498681202808/pdf/SFG3471-RP-P155229-Box402916B-PUBLIC-Disclosed-6-28-2017.pdf>

and livelihoods will not be supported. Therefore, every effort should be made to eliminate activities that may result in such impacts. The Screening Checklist form (Annex 2) will be applied to all the projects and those that may result in the aforementioned impacts will not be implemented.

13. In addition, workers contracted to conduct civil or other works for contingency activities, will have to sign a worker's code of conduct, which covers issues such as preventing gender based violence, as well as sexual exploitation and abuse. The services of the GBV/HIV consultant (LENASO) will be maintained. In addition, construction works or uses of goods and equipment involving forced labor, child labor, or other harmful or exploitative forms of labor are prohibited. Moreover, the parent project's GRM procedures apply. However, there is no independent worker's GRM for the project, workers utilize the common GRM in place.
14. The implementing agencies will follow the ongoing citizen engagement⁶ and stakeholder consultation procedures of the parent project. Training, communication and public-awareness activities follow Covid 19 protocols and include special provisions to ensure that they meet requirements established at the project's safeguards instruments and the guidance from Risk communication and community engagement (RCCE) readiness and response to the 2019 novel coronavirus (2019-nCoV).
15. Table 3 below identifies potential impacts of the proposed activities/subprojects. Due consideration will be given to ensure compliance with the WB's Environmental, Health and Safety (EHS) Guidelines (General and Specific)⁷.

Table 3: Potential impacts of the proposed activities to be carried out under Component 4 (CERC)

No	Subprojects/Activities (nationwide)	Potential ES impact issues (risks)	Expected Significance
1	Repair of damaged roads and bridges infrastructure	Increase dust, noise, water pollution, solid/hazardous/ Toxic wastes, waste oil/fuels, public and occupational health and safety; and land acquisition which will be avoided for the CERC activities; and impacts vulnerable groups including women, disabled, elderly youth etc ⁸ .	Moderate
2	Removal and disposal of debris	Waste management and	Moderate

⁶ Pg 25 of the TICP ESMF, Section on Component 3 explains citizen engagement, link on the first footnote

⁷ https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines

⁸ Pg. 62, Section 6.1.1 bullet 2 of TICP ESMF, link on the first footnote

	associated with any eligible activity. Clearance of debris from roadways, such as vegetation, large trees or tree members, construction debris (from work sites or from structures demolished during the event), abandoned vehicles, etc.	disposal	
3	- Spot Improvement Activities: ✓ Re-Construction of stone / gabion retaining walls ✓ Filling of erosion/gullies on road way ✓ Reinstating approaches to drainage structures ✓ Unblocking culvert and vented ford barrels ✓ Reinstating washed away/eroded embankments ✓ Re-building destroyed/damaged drifts ✓ Repair damages to drainage structures	Same as (1) above	Moderate
4	Roads resurfacing with gravel, geometry, side drains, vegetation removal, potholes filling and minor cross road structures	Same as (1) above Temporary land take for borrow pits ⁹	Moderate
5	Temporary toilets	Hygiene, waste management	Moderate

16. To ensure that adverse impacts will not occur given the nature of emergency, the items and activities identified in Table 4 is prohibited.

Table 4: Prohibited Activities for CERC

1	Uses of goods and equipment financed by the CERC, which also applies to use and storage for DRM-related activities including hazard monitoring, disaster preparedness, and future response to natural disasters.
2	Activities of any type classifiable as Category A pursuant to the Association's Operational Policy (OP) 4.01

⁹ Pg. 42 of TICP ESMP Section 4.3.14,
<http://documents1.worldbank.org/curated/en/873791501187882999/pdf/SFG3470-V2-EA-155229-Box402916B-PUBLIC-Disclosed-8-1-2017.pdf>

3	Activities that would lead to conversion or degradation of critical forest areas, critical natural habitats, and clearing of forests or forest ecosystems
4	Activities affecting protected areas (or buffer zones thereof), other than to rehabilitate areas damaged by previous natural disasters.
5	Land reclamation (i.e., drainage of wetlands or filling of water bodies to create land)
6	Land clearance and leveling in areas that are not affected by debris resulting from the eligible crisis or emergency
7	River draining (i.e., realignment, contraction or deepening of an existing river channel, or excavation of a new river channel)
8	Activities that will result in the involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households' use of land and livelihoods.
9	Construction of new roads, realignment of roads, or expansion of roads, or rehabilitation of roads that are currently located on communal lands but will be registered as government assets after rehabilitation.
10	Construction works, or the use of goods and equipment on lands abandoned due to social tension / conflict, or the ownership of the land is disputed or cannot be ascertained
11	Construction works, or the use of goods and equipment to demolish or remove assets, unless the ownership of the assets can be ascertained and the owners are consulted
12	Construction works, or the uses of goods and equipment involving forced labor, child labor, or other harmful or exploitative forms of labor
13	Construction works, or the uses of goods and equipment for activities that would affect indigenous peoples, unless due consultation and broad support has been documented and confirmed prior to the commencement of the activities
14	Construction works, or the uses of goods and equipment for military or paramilitary purposes.
15	Construction works, or the uses of goods and equipment in response to conflict, in any area with active military or armed group operations
16	Activities related to returning refugees and internally displaced populations
17	Activities which, when being carried out, would affect, or involve the use of, water of rivers or of other bodies of water (or their tributaries) which flow through or are bordered by countries other than the Borrower/Recipient, in such a manner as to in any way adversely change the quality or quantity of water flowing to or bordering said countries.
18	Use of asbestos-based construction materials for reconstruction works

VI. Environmental and Social Management Framework Process

17. When the CERC component is activated, RD in collaboration with DMA and assisted by TICP ESS Specialist will carry out the following steps:

- **Step 1: Application of the ES Screening Form.** The ESMF includes a template to screen the subprojects from the ES point of view (**Annex 2**). These forms will be used also for the CERC subprojects. The prohibited activities for CERC in Table 4 above will also

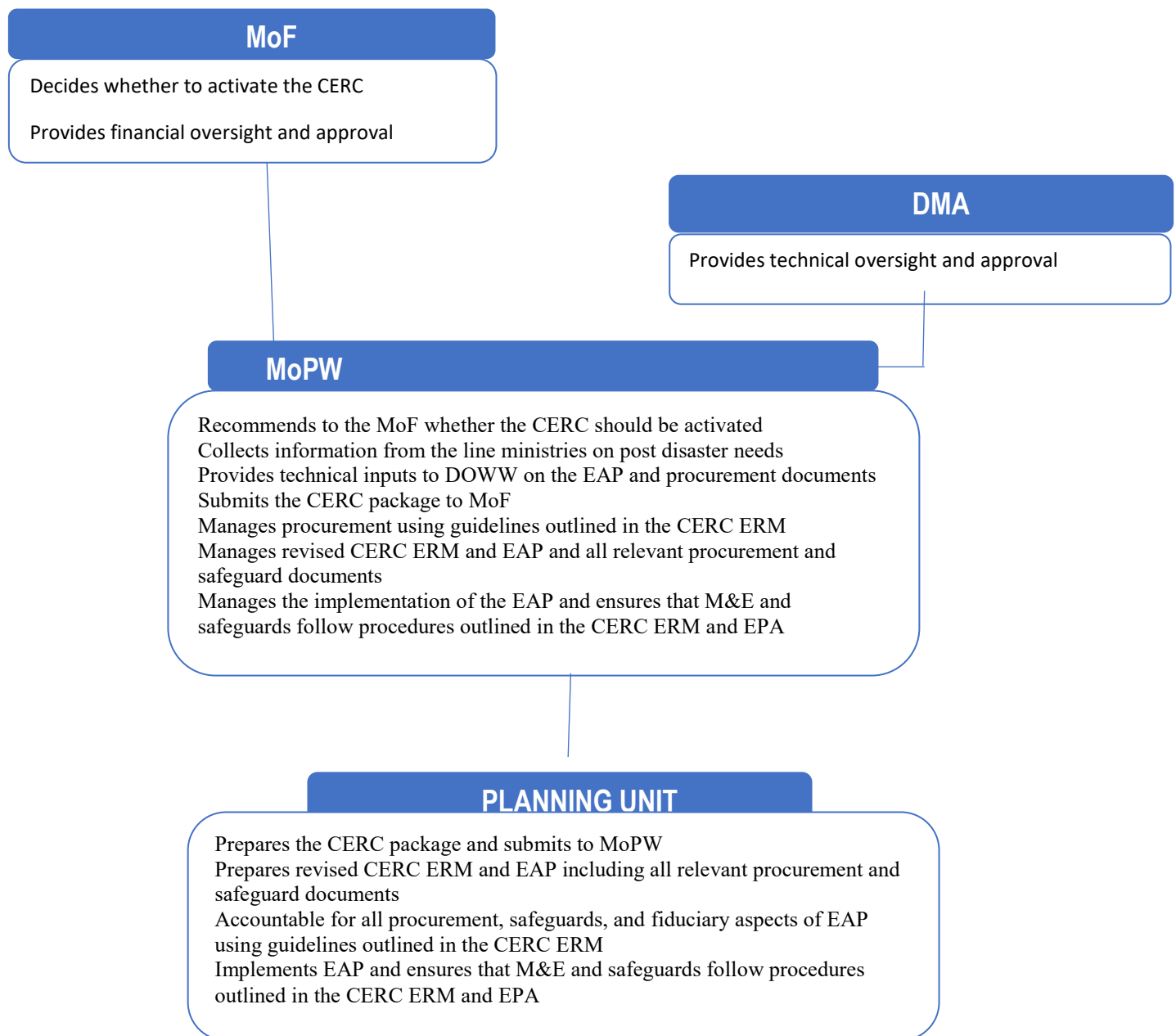
be applied. Given that the CERC objective is to support immediate priority activities (18 months), the activities or subprojects with resettlement issues will be avoided.

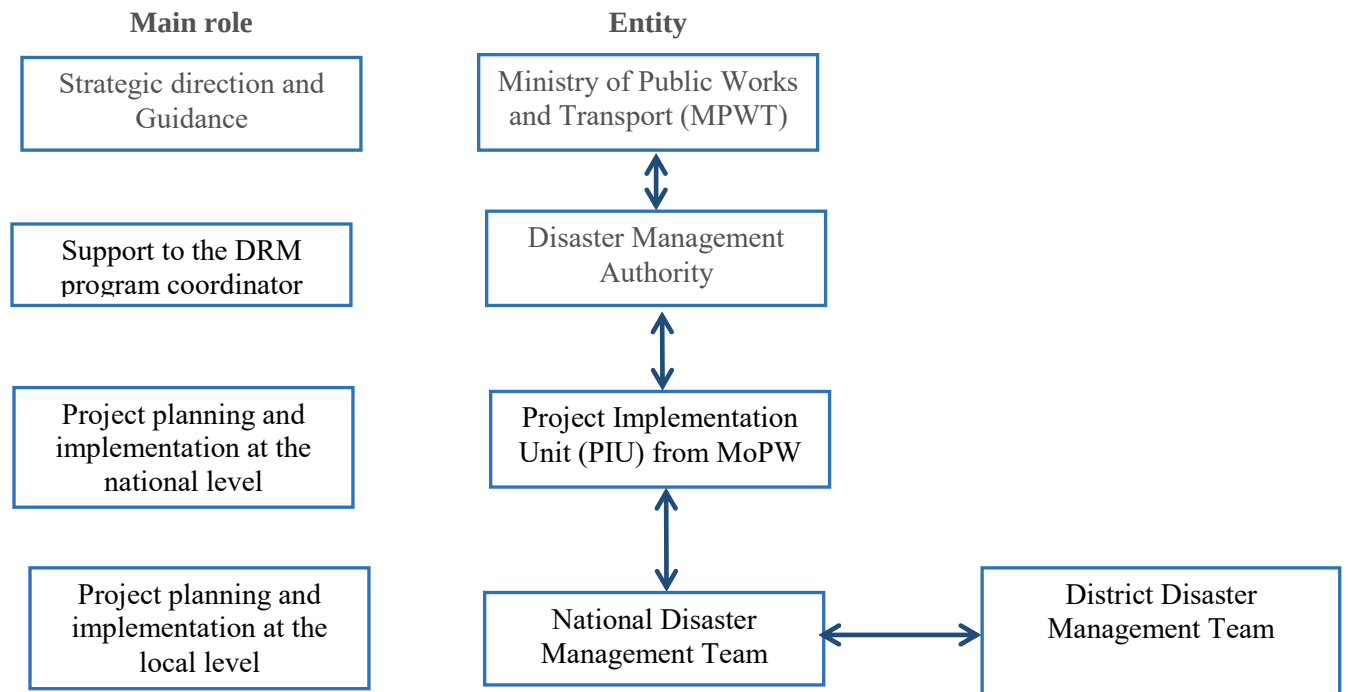
- **Step 2: Identification of ES issues and preparation of mitigation plans.** Based on the results from Step 1, MoPW will prepare an ESMP for the CERC subprojects describing the works/activities and mitigation measures to be conducted during detailed design, bidding/contract, repair/restoration, and closure plans, taken into account the magnitude, scope, and nature of the emergency. The contractor will be required to ensure that all works are safe from all hazardous wastes are safely and appropriately managed during the implementation of the subproject (**Annex 3**). Consultation with local authorities and communities will be made during this stage and Screening Checklist applied to projects to ensure that projects that may result in Land taking or impact on ethnic groups will be excluded for implementation. A CERC ESMP will be developed if the existing TICP generic ESMP appears insufficient to cover identified impacts of the CERC activities.
- **Step 3: WB clearance and GOL approval.** The CERC ESMP will be cleared by WB (pre or post) as agreed as well as approved by the NDRTF.
- **Step 4: Implementation and M&E.** The approved ESMP will be implemented according to the agreed implementation arrangement. National Disaster Relief Task Force (NDRTF) will monitor the implementation on the ground and report the results to Cabinet. Consultation with stakeholders will be made during the process.
- **Step 5: Completion and Evaluation.** Once the CERC subproject has been completed, MoPW in collaboration with DMA will monitor and evaluate the results before closing the contract. Any pending issues and/or grievance must be solved before the subproject is considered fully completed. MoPW will submit the completion report describing the compliance of safeguard performance and submit it to WB when required.

VII. Institutional Arrangement for Project Implementation

18. As mentioned above, MoPW will lead the implementation at subproject level while DMA will provide assistance. MoPW will report to the NDRTF which is responsible for guiding and coordinating all CERC activities and is chaired by the Deputy Prime Minister. The Disaster Management Authority is the lead coordinator. NDRTF will provide the inputs to MoPW to prepare the package to activate the CERC including the declaration of disaster, the latest impact assessment of situation report and the list of goods and works to be included in the Emergency Action Plan (EAP).
19. Diagram below presents organization arrangement for CERC as well as those for the ESMF addendum.

Figure 1: Implementation Arrangements for CERC





VIII. E&S Safeguards Implementation Arrangements

20. In order to ensure that the safeguards are implemented at project level, the Roads Directorate (RD) which implements construction on behalf of GoL will make contractual agreements with construction companies that are to implement the CERC activities. In the contracts, the companies will commit to execute construction in an environmentally sustainable manner and sensitive to social issues as per the requirements of the generic ESMP outlined in the tender documents. The contractors will engage Environmental Site Agents (ESA) who will be responsible for the implementation of the ESMP requirements on daily basis during construction.
21. RD should assign a Project Manager (PM) who shall be responsible for oversight of the 11 subprojects (Table 2) and project progress reporting on E&S aspects of the project. RD will send a Project Engineer and a Technician on-site once a month and at least twice a week respectively. These officers will work hand-in-hand with the ESAs to take care of Health and Safety requirements during project implementation. RD also has a Sociologist based in Maseru who will be responsible for coordinating a Consultant for implementation of social safeguards requirements of the project. The consultant already engaged in the parent project is Lesotho Network of AIDS Service Organization (LENASO) who is a Network of Community Based Organizations (CBOs) and support groups supporting the Ministry of Health (MOH) to implement Primary Health Care activities, TB, HIV and AIDS services at the grassroots in the communities of Lesotho. LENASO has been assigned to support GoL with awareness raising on Sexual Exploitation and Abuse (SEA) and HIV&AIDS.

E&S Safeguards Monitoring

22. The Transport Infrastructure Connectivity Project – Project Implementing Unit (TICP-PIU) has engaged an Environment and Social Safeguards Specialist (ESSS) who is responsible for developing and overseeing environmental and social policies and procedures, as well as reviewing and appraising the project for compliance with environmental and social requirements. The specialist is expected to visit each project site once a month as part of monitoring. In an effort to improve monitoring efficiency, TICP-PIU is about to engage Community Liaison Officers (PIU-CLO) who will be on-site on the daily basis monitor project compliance with the ESMF, ESMP and RFP requirements. These officers are to facilitate a good relationship between the project and host communities through implementation of Grievance Redress Mechanism (GRM) for timeous and effective dispute resolution.
23. To enhance monitoring, three monitoring instruments have been developed namely Weekly Environmental and Social Monitoring Sheet, Monthly ESMP Compliance Monitoring and Evaluation Checklist as well as Monthly Reporting Template. On weekly basis, the ESA will undertake inspection of environmental and social issues on-site to measure their performance against given key performance indicators (KPI). This exercise

will be done in the presence of the PIU-CLO for them to sign-off the monitoring sheets. The PIU-CLO will in turn perform monthly monitoring in the absence of ESSS using the monthly monitoring checklist. Using the collected data, the PIU-CLO will generate information to draw up monthly report to the ESSS following the Monthly Reporting Template.

24. The PIU-CLO will also work closely with LENASO to ensure that all groups affected by the project have undergone necessary training in terms of HIV/AIDS, SEA and GBV at the prescribed intensity and frequency.

E&S Organogram

25. An E&S Organogram (**Annex 4**) is developed to indicate the relationships among TICP, RD, Contractors and LENASO. The solid lines indicate direct relationship while the dotted lines show flow of information between parties.

IX. Grievance Redress Mechanism

Grievance Redress Process¹⁰

26. A grievance redress mechanism (GRM) is an important element of an ESMF. For CERC-related activities it remains important that such a mechanism is available to address concerns and complaints promptly and transparently with no impacts (cost, discrimination) for any reports made by project affected people (PAPs). Each project site will have a GRM box and/or GRM log register operated by the project CLO. The grievances can be submitted in various ways including telephonically, face to face or recorded during a public gathering.

27. The CERC-related GRM should:

- Record, categorize and prioritize the grievances (within 24 hours);
- Forward complaint to relevant agency for assessment and action as necessary,
- Including LTICP implementing agency (within 3 days);
- Respond to stakeholder to communicate decision and check adequacy (within 10 days);
- Settle the grievances via consultation with stakeholders (within 14 days);
- Forward any unresolved cases to the relevant authority.

28. However, it must be recognized that CERC-related activities often need to be undertaken as a matter of urgency, and that any CERC-related GRM must provide for

¹⁰ Pg. 97 Table 15 in TICP ESMF, link available on the first footnote

timely resolution of critical issues, with non-critical issues able to be deferred until after the activities have been completed.

29. Many grievances will be minor and revolve around nuisances generated during construction such as noise, dust, vibration, etc. These should be resolved on site by the project manager, who should adopt a good-faith and flexible approach within the constraints of undertaking the CERC-related activity.
30. Concerns relating to personal or community safety should be given high priority with the operation manager adopting a precautionary approach wherever practicable.
31. The project CLO will log all complaints in a Complaints Register (**Annex 5**) which shall record:
 - Details and nature of the complaint
 - The complainant name and their contact details
 - Date
 - Corrective actions taken in response to the complaint.
32. It is vital that appropriate signage is erected at the sites of all works providing the public with updated hazard. If the grievance is not remedied to the acceptance of the complainant, the project manager shall convey the complaint details to the Grievance Redress Committee (GRC)¹¹ for resolution. If in-house escalation does not resolve the issue, the complainant will have recourse to the Lesotho legal system for post-event resolution.

¹¹ Pg. 97, Section 9.2.1 of TICP ESMF, link available on the first footnote

Annex 1: Monthly ESMP Compliance Monitoring and Evaluation Checklist

Inspection Date & Time:.....Site Name.....

Project Phase:.....Activities.....

Environmental Site Agent.....PIU-CLO.....

C = Compliant NC = Non-Compliant PC = Partially Compliant N/A = Not Applicable

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
1.	CAMP ESTABLISHMENT & CONSTRUCTION						
1.1	Camp and Construction sites fenced						
1.2	Camp and Construction sites security established						
1.3	Camp and Construction sites kept neat						
1.4	No breaches on camp and construction site fence						
1.5	Location of camp poses minimum impact on Environmental and Social conditions						
1.6	No unauthorised pedestrian or vehicular access allowed						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
	into fenced off-limits						
1.7	No construction camp located on sensitive ecosystem						
1.8	Camp buildings are either containers or prefabricates						
1.9	Camp buildings appropriately constructed						
1.10	Standard firefighting equipment available on site and in working order						
1.11	No gas/metal cutting or welding takes place in the camp area						
1.12	All construction related structures, equipment, materials and facilities are removed at the completion of the project						
1.13	The construction site is cleared and cleaned and rehabilitated to the satisfaction of the ESA						
2	CLEARING, STRIPPING AND GRUBBING						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
2.1	Use of appropriate machinery for each task ensuring minimal environmental impact						
2.2	Topsoil cleared of invasive vegetation and debris						
2.3	Topsoil not compacted						
2.4	Topsoil stockpiles within 2.5m height, not steeper than 1 vertical to 2.5 horizontal and not stored for more than 1 year						
2.5	Topsoil protected from oil contamination						
2.6	Topsoil protected from soil erosion						
2.7	Chance Find Program followed in case of unearthed artefacts						
3	INITIAL EARTHWORKS AND PLATFORMS						
3.1	Stormwater diverted away from easily erodible areas e.g. Topsoil stockpiles, disturbed areas and steep ground						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
3.2	Soil piling done on flat surfaces						
3.3	Stockpiles seeded or protected by erosion control fabric						
3.4	Collect water run-off from platforms into drainage system						
4	HYDROCARBON MANAGEMENT						
4.1	No oil or fuel leaks from vehicles or plant						
4.2	All vehicles have drip trays for emergencies						
4.3	No vehicle servicing and refuelling on bare soil						
4.4	No oils enter waterbodies						
4.5	Use of oil spill kits in case of spills						
4.6	Oil separation performed prior to water being discharged into the environment						
4.7	Staff trained on hydrocarbon handling and clean up						
5	STORAGE AREAS						
5.1	Fuel						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
a)	Stored above ground						
b)	Stored on bund walls with a sump installed and the walls are such that they accommodate 110% of the contents of the storage facility						
5.2	Topsoil						
a)	Stored on a flat surface						
b)	Protected from stormwater run-off and strong winds						
5.3	Explosives						
a)	Explosives stored and handled in accordance with <i>South African Explosives Act</i> of 1956, <i>Lesotho Explosives Proclamation Act no.41</i> of (1958) or any regulations since published in terms of Section 75 of <i>Lesotho Environment Act</i> of 2001						
b)	Established explosives and detonator magazine on site						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
c)	Design and siting of storage approved by the Department of Mines						
d)	The magazine fenced and safeguarded						
5.4	Aggregate						
a)	Fine aggregate is stored on a compacted sub-base platform protected from erosion (e.g. bund walls)						
b)	Coarse aggregate stored on compacted inert sub-base material						
c)	No aggregate spread beyond the storage area						
5.5	Cement						
a)	Storage area is enclosed						
b)	The storage area is clean; free from cement products						
5.6	Batching						
a)	Batching area demarcated for this purpose						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
b)	Storm water not allowed to follow through this area						
c)	Area enclosed in bund walls divided into compartments for various types of materials						
d)	Air filters cleaned and replaced on regular basis						
e)	Batching area effluent discharges into sedimentation pond						
f)	The pond undergoes evaporation for residual solid to be Collected for proper disposal						
5.7	Waste						
a)	Waste collection site demarcated						
b)	Use of labelled waste bins for easy waste separation (e.g. of waste streams: general waste, concrete rubble, hazardous waste and effluent)						
c)	Bins secured or guarded against wind and animals						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
d)	Appropriate signage for hazardous waste						
6	BLASTING MANAGEMENT						
6.1	Only certified blaster conducts blasting						
6.2	Demarcated blasting zones						
6.3	Blasting schedule developed and communicated with employees and communities						
6.4	Deploy flagmen to control human and animal movement during blasting						
6.5	Wear appropriate PPE at all times						
6.6	Pre- and post- blast dilapidation survey in the vicinity (any property within 100m of the blasting area) of the site completed and signed off by households.						
6.7	Supervising Engineer or their representative permit or prohibit blasting in writing						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
6.8	Blasting performed where rock shattering is impossible						
6.9	Injury to persons and animals and damage to property and concrete works already set-up prevented						
6.10	Compensation paid in full by the contractor in case of injury or damage repairs.						
7	DUST CONTROL						
7.1	Appropriate measures taken to minimise dust during drilling and batching						
7.2	Dust control by spraying						
7.3	Personnel wear nose masks for protection against dust						
8	ACCESS ROADS AND ACCOMMODATION OF TRAFFIC						
8.1	Use of existing access roads favoured						
8.2	Topsoil removed (refer to section 2) prior to constructing new access road						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
8.3	All new temporary roads approved by Project Manager						
8.4	Temporary roads decommissioned and rehabilitated using stockpiled topsoil						
8.5	Areas susceptible to erosion protected by permanent or temporary drainage works						
8.6	Detailed method statement for pedestrian traffic management if the bridge is to be constructed at the existing community crossing						
9	SANITATION						
9.1	Adequate chemical latrines (or temporary pit latrines: VIP Type) provided on site						
9.2	Chemical latrines serviced on weekly basis to prevent overflow						
9.3	Latrines are efficient, sanitary and non-offensive						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
9.4	Minimum ratio of 1 toilet to 10 persons per one work area (i.e. camp site and construction site) NB: If both men and women work on the project, 2 toilets (one with sanitary facilities) are required irrespective of whether there are 10 or less employees.						
9.5	The latrine(s) are decommissioned, structures removed from site and pit filled with stockpiled soil						
10	HOUSEKEEPING AND WASTES						
10.1	Temporary storage of construction waste kept in designated areas						
10.2	Off-site disposal of construction done in an approved area (approved by Supervising Engineer and the property owner)						
10.3	Spoil material used for rehabilitation to mitigate the visual impact (spread and level out)						
10.4	General waste generated on site stored and sent to approved site						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
10.5	Site clean-up done regularly and litter appropriately kept in refuse bins						
10.6	Site induction includes waste management: waste handling, separation and appropriate PPE						
11	HYDROLOGY AND RIVER COURSES						
11.1	Contractor notified the Department of Water Affairs and provided construction programme prior to commencement of works close to the river or riverbank						
11.2	Construction works cause no further damage to the river embankment and rehabilitation implemented in case of any preventable damage						
11.3	River water not contaminated with construction materials and other pollutants						
11.4	No laundry or car wash done in the river						
11.5	No greywater discharged into the river						
11.6	No eroded sediments enter the						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
	river						
11.7	The river flow is unobstructed						
12	FAUNA AND FLORA						
12.1	Impact on natural vegetation kept minimal						
12.2	Indigenous plants and animals are protected						
12.3	All incidents of harm to any animal or natural vegetation reported to ECO						
13	BORROW PITS						
13.1	Existing borrow pits used as far as possible						
13.2	Pond formation avoided in borrow pits						
13.3	No steep slopes allowed in a borrow pit						
13.4	All borrow pits rehabilitated after use						
13.5	New borrow pits endorsed by ECO						
14	PERSONNEL						
14.1	Labour Recruitment						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
a)	Locals recruited for unskilled and semi-skilled labour positions						
b)	Normal working hours adhered to otherwise overtime principle applies and overtime remunerated accordingly (Labour Code Order of 1992 ¹²)						
c)	Transparent non- discriminatory (in terms of gender, disability, religion and culture) recruitment policy in place						
14.2	Facilities						
a)	Cooking facilities provided for staff in the camp						
b)	Food services provided for day labourers						
c)	Entertainment centre (bar, board games) for residing staff						
d)	Laundry services for residing staff						
14.3	Health and Safety						
a)	Portable water made available for staff by contractor						

¹²<https://www.ilo.org/dyn/natlex/docs/WEBTEXT/31536/64865/E92LSO01.htm>

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
b)	Brand new PPE for each newly appointed person						
c)	Safety regulations and precaution in place and communicated with staff						
d)	Disease outbreaks prevented or overcome						
e)	Adequate First Aid and Emergency Transport services available						
f)	Fire Fighting equipment available at all areas prone to risk of fire						
g)	Safety warning signs put up, visible to every employee						
h)	Employees have clear understanding of HIV/AIDS and associated preventative measures						
i)	Employees have access to HIV testing services, Free preventative commodities, ART (Antiretroviral Therapy - treatment for HIV) and GBV referral system						
14.4	Security						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
a)	Tight security ¹³ maintained on site at all times						
14.5	Conduct						
a)	Observe safety warnings at all times						
b)	No tree felling except if approved by SE for execution of works						
c)	No fire setting outside designated areas						
d)	No trespassing on adjoining properties and no interference with livestock, crops or games						
e)	Personnel behaviour and discipline strictly supervised by the contractor						
f)	Measures to prevent hunting, capturing or killing animals are adhered to						
15	PERSONNEL EDUCATION						
15.1	Staff well educated and informed about the ESMP requirements through site inductions						

¹³ Contractors are encouraged to have guards on-site especially at night time to protect their equipment and machinery against theft and vandalism

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
15.2	Staff conversant with Health and Safety regulations and precautions through daily toolbox talks						
15.3	Contractor enforces compliance to ESMP requirements by employees						
15.4	Employees sign off induction forms						
16	COMMUNITY ENGAGEMENT						
16.1	Community Liaison Officer appointed (link between the project and the community)						
16.2	Project steering committee ¹⁴ elected to oversee community concerns regarding the project						
16.3	Grievance Redress Mechanism in place						
17	CULTURAL HERITAGE SITES						
17.1	An Archaeological chance find procedure is in place						
17.2	All archaeological chance finds are reported to the ESA						

¹⁴ Pg. 18 of TICP ESMF, link on first footnote

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
17.3	Construction activities put on-hold after a chance find						
17.4	Investigations by Specialist/Archaeologist conducted						
17.5	Appropriate decision taken to alter the project design to preserve heritage or relocate the cultural objects						
17.6	Community participation in relocation plans						
18	AFFECTED FIELDS						
18.1	Efforts made to avoid disturbance to planted fields						
18.2	No vehicular traffic entered any agricultural field						
18.3	Slopes stabilised to protect agricultural fields						
18.4	Loss of fields compensated accordingly ¹⁵ (TICP RPF document of 2017 ¹⁶)						

¹⁵ Projects that may lead to loss of field will not be implemented under the CERC

¹⁶ <http://documents1.worldbank.org/curated/en/252621498681202808/pdf/SFG3471-RP-P155229-Box402916B-PUBLIC-Disclosed-6-28-2017.pdf>200

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
19	SITE CLEAN-UP AND REHABILITATION						
19.1	All structures, equipment, materials and facilities removed						
19.2	Site cleaned to pre-project conditions						
19.3	Use 150mm thick topsoil to rehabilitate disturbed areas upon completion of construction						
19.4	Loosen up compacted soil through ripping parallel to the contours						
19.5	Suitable substitute materials used in case of insufficient topsoil						
19.6	Vehicle access prohibited after topsoil placement						
19.7	Indigenous grass mix used for revegetation						
19.8	Visual impact managed through landscaping						
19.9	Initial topography nearly restored						
20	COVID 19						
20.1	Enough Hygiene Stations established on-site						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
20.2	Employees protected through PPE						
20.3	Sufficient awareness raising provided for employees and host communities						
21	MONITORING						
21.1	The ESA keeps records of monitoring						
21.2	The frequency of monitoring is adequate						

Annex 2: Screening Checklist

Annex E. Screening Checklist

Format 1.0: SCREENING CHECKLIST (Filled and prepared by TICP/PIT environmental and social experts)

TICP Project: Select relevant project		
Project Investment name	[type here]	
Location	[type here]	
Estimated cost (USD)	[type here]	
TYPE OF PROJECT OR ACTIVITY		
Sub Project Type		
☐ Construction of roads ☐ Construction of bridges		
Please give more details: [type here]		
For all sub- projects, an Environmental and Social Management Plan (ESMP/ESIA) will be required due to the fact that they are in the Schedule A list of Government of Lesotho in regard to projects requiring ESIA. In addition, the following studies may be required:		
Will this project affect vulnerable and marginalized groups? If yes, a Vulnerable and Marginalized Groups' Plan will be required	☐	☐
Will the project require land for its development, and therefore displace individuals, families or businesses from land that is currently occupied, or restrict people's access to crops, pasture, fisheries or forests, even, whether on a permanent or temporary basis? If yes, a Resettlement Action Plan will be required	☐	☐
Will the investment project involve the construction of roads or bridges?	☐	☐
Will the Project:	Yes	No
Adversely affect natural habitats nearby, including forests, rivers or wetlands?	☐	☐
Require large volumes of construction materials (e.g. gravel, stone, water, timber, firewood)?	☐	☐
Use water during or after construction, which will reduce the local availability of groundwater and surface water?	☐	☐
Affect the quantity or quality of surface waters (e.g. rivers, streams, wetlands), or groundwater (e.g. wells, reservoirs)?	☐	☐
Be located within or nearby environmentally sensitive areas (e.g. intact natural forests, mangroves, wetlands) or threatened species?	☐	☐
Lead to soil degradation, soil erosion in the area?	☐	☐
Create waste that could adversely affect local soils, vegetation, rivers and streams or groundwater	☐	☐
Create pools of water that provide breeding grounds for disease vectors (for example malaria or bilharzia)?	☐	☐
Involve significant excavations, demolition, and movement of earth, flooding, or other environmental changes?	☐	☐
Affect historically-important or culturally-important site nearby?	☐	☐
Require land for its development, and therefore displace individuals, families or businesses from land that is currently occupied, or restrict people's access to crops, pasture, fisheries, forests or cultural resources, whether on a permanent or temporary basis?	☐	☐
Result in human health or safety risks during construction or later?	☐	☐
Involve inward migration of people from outside the area for employment or other purposes?	☐	☐
Will the Project:	Yes	No
Result in conflict or disputes among communities?	☐	☐
Affect indigenous people, or be located in an area occupied by indigenous people?	☐	☐
Be located in or near an area where there is an important historical, archaeological or cultural	☐	☐

heritage site?		
Result in a significant change/loss in livelihood of individuals?	☐	☐
Adversely affect the livelihoods and /or the rights of women?	☐	☐
If you have answered Yes to any of the above, please describe the measures that the project will take to avoid or mitigate environmental and social impacts		
[type here]		

What measures will the project take to ensure that it is technically and financially sustainable?	[type here]
---	-------------

If the answer to any of questions "Yes", please use the indicated Annexes or sections(s) of the ESMF for guidance on how to avoid or minimize typical impacts and risks.

When considering the location of an investment, rate the sensitivity of the proposed site in the following table 10 according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects.

CONCLUSION

Which course of action do you recommend?

☐ FULL ESIA ☐ ESMP ☐ RAP/RPF is the reference document with reference to resettlement issues

☐ OTHER ENVIRONMENTAL/SOCIAL PLANS

☐ There are no environmental or social risks

[Type here]

If a RAP is required, will the project Displace or restrict access for less than 200 individuals, or if over 200, are losses for all individuals less than 10% of their assets?

If Yes, Prepare an abbreviated RAP ☐
If No, Prepare a full RAP ☐

Full details of resettlement requirements are provided in the accompanying Resettlement Policy Framework.

Completed by: [type here]
Name: [type here]
Position: [type here]
Date: [type here]

Format 2.0: SCREENING CHECKLIST REVIEW FORM (Prepared by Environment and Social Specialists TICP/PIT).

	Yes	No
Based on the location and the type of investment, please explain whether the Proponent's responses are satisfactory.	☐	☐
Their description of the compliance of the investment with relevant planning Documents	☐	☐
If 'No', please explain: [type here]		
Their responses to the questions on environmental and social impacts	☐	☐
If 'No', please explain: [type here]		
Their proposed mitigation measures	☐	☐
If 'No', please explain: [type here]		

Their proposed measures to ensure sustainability

☐ ☐

If 'No', please explain: [type here]

REVIEWER'S CONCLUSION

Which course of action do you recommend?

☐ FULL ESIA ☐ ESMP; ☐ RAP-RPF is the reference document with reference to resettlement issues

☐ There are no environmental or social risks

[Type here]

If a RAP is required, will the investment displace or restrict access for less than 200 Individuals, or if over 200, are losses for all individuals less than 10% of their assets?

If Yes, Prepare an abbreviated RAP ☐

If No, Prepare a full RAP ☐

Full details of resettlement requirements are provided in the accompanying Resettlement Policy Framework. If this differs from the Proponent's recommended course of action, please explain:

[Type here]

☐ Preparation of a project Report, based on field appraisal by DOE District Officer, is required to investigate further, specifically to investigate:

[Type here]

☐ Reject

Review form completed by: [type here]

Name: [type here]

Position / Community: [type here]

Completion of this screening form will facilitate the identification of potential environmental and social impacts, determination of their significance, assignment of the appropriate environmental category, proposal of appropriate environmental mitigation measures, or recommend the execution of an Environmental and Social Impact Assessment (ESIA), if necessary.

Annex 3: Wastes Management for Emergency Response and/or Recovery Activities in Lesotho

1. The MoPW will ensure that the contractor make appropriate arrangement with a qualified waste management service provider during the implementation of the subproject. Specific measures will be included as part of the ESMP and/or incorporated into the contract and bidding documents as appropriate. Below list key steps for waste management.

(1) Waste categorization

2. Different type of wastes has different nature of composition and create different consequence to human and environment. Lesotho however is a small country with low population and the amount of wastes generated from human activities is relatively small compared to other neighboring countries, especially in rural area. In case of natural disaster due to flood and landslides, mud, rocks, snow, hail and other physical wastes such as broken trunks, trees, building/house structures, schools, hospitals, etc. may be expected. The identified wastes may fall into two main groups of waste types: non-hazardous wastes and hazardous wastes (see scope in Box 1). If practical, a *Waste Inventory* should be produced that covers disposal/treatment options which will be used to manage the wastes generated during construction and/or implementation of the subproject.

Box 1: scope of hazardous and non-hazardous wastes

<i>Hazardous/Toxic/Sanitary wastes</i> are wastes with physical, chemical or biological hazards such as toxic chemicals (and their containers/packages), general medical wastes (used bandages, empty medication bottles, used syringes), hazardous (batteries, used oil, lamp, fluorescent, electrical products etc.), and other dangerous wastes (e.g. glass bottles, knife, pharmaceutical products, etc.). This amount of waste is expected to be small due to the emergency nature and low population in general. Nonetheless, these wastes need to be collected, stored, and disposed of safely. Sanitary wastes (such as toilet waste, food wastes, etc.) may be included in this category to reflect the need for special attention to avoid potential impacts on human health and local environment.	<i>Non-hazardous wastes:</i> This may include (a) durable wastes that will be in use/operation for years or decades (e.g. tractors, motorcycles, trucks, ambulances, boats, analytical equipment, computers, plastics, etc.). Many of these wastes can be recycled and reused with appropriate knowledge and understanding. This may include many types of general wastes/debris with inert chemical properties, no physical hazards (e.g. towels, aluminum cooking bowls, soap, blankets, etc.), trees, branches, wooden structure from building/house, bricks/cement, etc. With proper management, they can be reused as appropriate
--	---

(2) Safe/Appropriate Collection, Storage, and Disposals.

3. Hazardous/Toxic wastes can be divided into medical waste, common hazardous waste, and waste with asbestos-contaminated. These wastes will be managed as follows:

- *Medical wastes:* Will be managed according to the regulations issued by the Ministry of Health. Medical waste will be incinerated as far as possible, and all remain safely disposed, again in a safely engineered and operated facility. If such facilities do not exist in Lesotho, possible option is to use facilities available in the Republic of South Africa or other appropriate facilities. Temporary storage in a facility deemed safe, until proper disposal can be found will be necessary. Sanitary wastes will be managed according to local regulations regarding sanitary waste and good hygienic practices.
- *Common hazardous/ noxious wastes* (such as soils, solvents, paints etc.) would have to be safely stored in suitable containers and disposed in a facility designed, constructed and operated for the safe disposal of hazardous wastes. Special facilities will be identified to treat e.g. spent engine oils, or incinerates solvents, paint etc. Such facilities commonly include cement kilns, where organic solvents, oils, bitumen etc. can be incinerated safely under high temperature.
- *Asbestos-contamination wastes.* Use of asbestos or asbestos-based construction materials has been banned in most developed countries due to its effect to human health. However, in developing countries, they are often used as part of construction materials (such as panel/ceiling etc.) due to its low cost. In Lesotho, efforts are being made to ban the use of asbestos. For the subproject construction, asbestos-based construction materials will not be allowed and this is included in the ineligibility list. Given the lack of knowledge on debris from construction of structure, care will be required to ensure that the service provider can identify the debris/structure that may be contaminated and ensure proper disposal of these wastes.

4. A number of non-hazardous wastes could be generated resulting from the subproject activities. In summary the main non-hazardous construction wastes will include: metals (scrap metal); textiles (clothing, towels, tents); timber (packaging materials); containers (steel and plastic); waste paper, card and cardboard (packaging materials); plastics (packaging materials, tarpaulins, bottles); glass bottles. These wastes will be managed as follows:

- Metals will be provided to the local community (if required) for re-use or stored until an appropriate land fill has been established or recycled if a suitable facility is available. It is expected that the commercial value of scrap metal will facilitate recycling options.
- Timber, e.g. from redundant untreated wooden packaging will be provided to the local communities for firewood and re-use.
- In first instance, plastics materials (e.g. bottles) will be recycled.

Plastics materials, which are unable to be recycled, will be transferred to a suitable landfill or for storage prior to the development of such landfill.

- Glass bottles will be segregated and returned to the supplier for reuse, as far as possible. Prime recyclables (e.g. paper, card, plastics) will, as far as is practicable, be segregated for recovery/recycling. These materials will be supplied to the local community for reuse and recycling or to an approved third party facility.
- The following options will be used to handle waste containers (which contained non-hazardous materials): re-used for storage (including waste storage if suitable); returned to supplier (if possible); supplied to the local community for re-use; disposed to landfill as last resort.

(3) Reuse/Recycle

5. During the waste management process mentioned above, efforts will be made to reuse and recycle wastes. Table 1 identified materials that can either be sent for reuse/recycling directly from the site at which the waste is produced or from a specific place that can manage them in Lesotho and/or the northeast of Thailand. Special attention will be given not to give the asbestos-based materials to people for reuse and/or properly dispose them.

Table 1: Reusable and Recyclable Wastes	
Waste	Reuse/Recycle method
Waste vegetable matter	Waste vegetable matter ONLY may be provided to the local community to be used as pig feed.
Waste paper, card and cardboard	Provided to local community for reuse or to approved recycling plant
Plastics	Either sent to recycling plant for chipping and/or provided to local community for reuse.
Glass Bottles	Returned to supplier for reuse.
Lubricating Oil	Returned to supplier.
Timber	Timber packaging (which cannot be reused) will be made available for communities to use as firewood.
Metal	If possible provided to local community for reuse or to a third party company for export and recycling
Containers (metal and Plastic)	Reused by for storage, returned to supplier or provided to local community for reuse (non-hazardous materials ONLY).

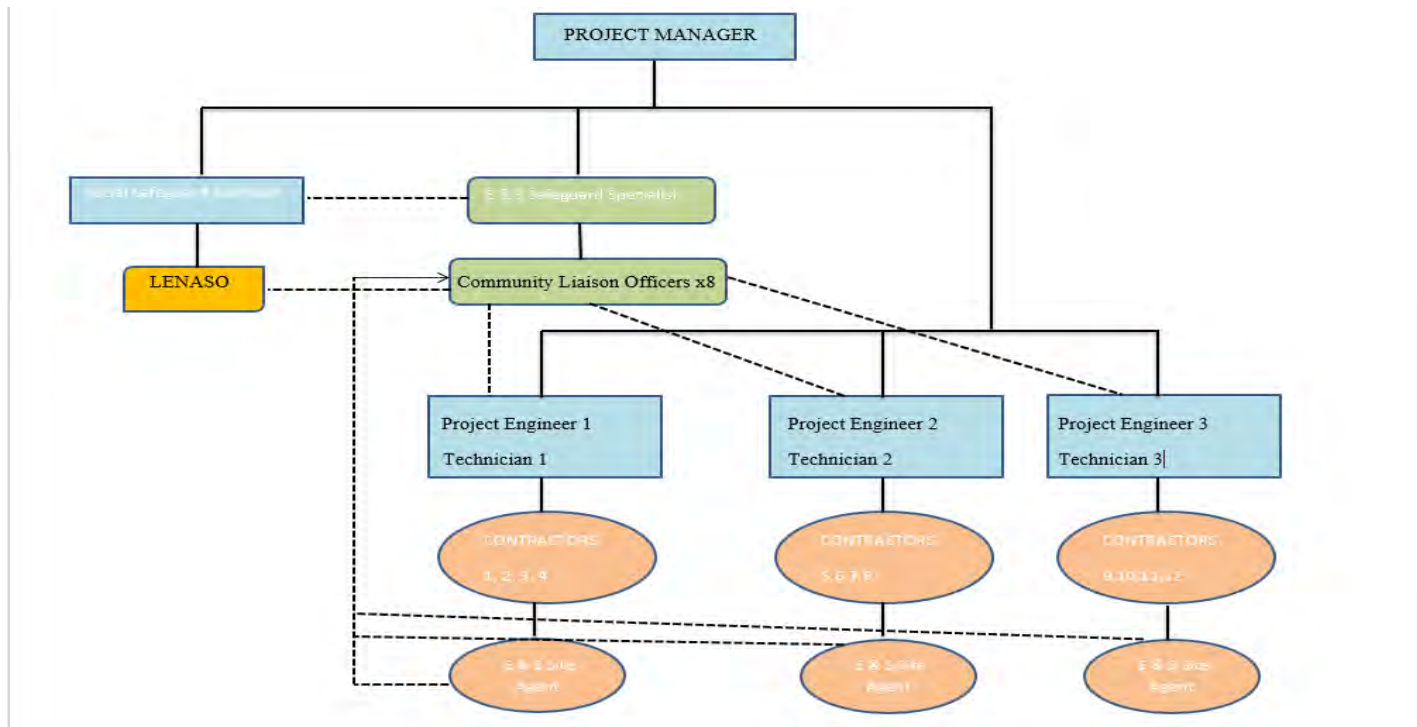
(4) Temporary Storage.

6. Due to the lack of safe and proper disposal of sanitary land fill in Lesotho and short time frame during the implementation of the emergency activities/subproject, temporary storage may be the best options, but this will be allowed on a case by case basis, until suitable treatment and disposal facilities have been developed.

(5) Training.

7. During the implementation, efforts will be made to provide sufficient knowledge to all staff and service providers regarding mishandling of toxic and hazardous to human health and environment and to ensure that they are aware of proper methods to handle them.

Annex 4: E&S Organogram



Annex 5: Grievance Register

[illegible]

Annex 6: Lesotho Transport Infrastructure and Connectivity Project

CERC Emergency Action Plan

Executive Summary¹⁷

The disaster and its impacts: Lesotho recently experienced higher than normal precipitation which caused high discharges along major streams and rivers while flash floods occurred in several locations. The average annual precipitation ranges from less than 600 mm in the upper and middle Senqu Valley to higher than 800mm in the highlands. The disaster affected a range of infrastructure in the country; lower class roads (C and D) and the associated drainage systems were hit hard by the floods. Two dominant geologic formations namely **basaltic** and **Molteno/Stromberg** dominate the area traversed by the roads and structures affected by the adverse weather event.

The scope of Work: Based on a quick Damage Needs Assessment (DNA), 11 road sections with a total estimated length of XX and associated drainage structures have been identified by the GoL as priority to restore connectivity of the population that is cut off from basic social and economic services.

Infrastructure Damages and Causes:

Road failures in the basaltic formation are characterised by gravel erosion on steeper grades compounded by the poor bond between the naturally even rock subgrade and the overlaying gravel layer. This should be mitigated by the provision of short walls along the verges and cross walls at 100 m intervals to trap gravel moved by traffic and erosion to the sides and along the road respectively. Water tends to flow across the surface when the side drains clogged by sediments, which requires the provision of drifts at about every 250 m along such sections. The gravel retained will be reused to resurface the carriageway after the wet season. Most *small streams* crossings the drainage structures provided are inadequate in capacity hence overflowed undermining the embankment downstream causing road to cut off. Drainage structures, although designed to overtopped in low class roads, should be designed to the standards focusing on the protection works for embankments. All *major streams* crossing in the basaltic formation have either been provided with *vented fords* or *low level bridge* structures with almost all vented fords were either blocked by boulders due to small openings which result in overtopping of the vented ford and undermining the structures on the outlet due to lack of protection works; and in some other cases the structure being completely washed off as a result of large forces exerted by the floods on the structure. In most of the cases where the vented ford structures have been washed off, the structures are generally of low quality and not constructed to Roads Directorate standard vented ford designs. Most of the *low level bridges* provided in the basaltic formation have adequate openings that allow the boulders to go through, however tree stumps are the main source as stumps block openings resulting in piling up of boulders behind which then renders structure inefficient and not fit for purpose in flush floods.

On the Molteno/Stromberg formation, the inter-bedding of sandstone, mudrock and shales are problematic in that water tends to undermine the mudrock and shales resulting in huge blocks of

¹⁷ EAP is currently being prepared by the Government. An executive summary is provided in this Annex.

sandstone block failure as well as mud slides and in majority of cases necessitating the protection of slopes using gabion retaining walls. In the high erodible and collapsible soils, erosion is problematic resulting in formation of gullies on the sides of the roads, however where silt traps have been provided, it has been observed that the spacing of such structures have not been adequately designed resulting in such structures being undermined which in turn undermines the carriageway of the road. The other major factor that has been observed in this geologic formation is the gravel loss where the subgrade is sandstone, which like the basaltic formation doesn't provide adequate bondage to the gravel layer to with stand erosion. The majority of cases the gravel loss happens after every rainy season and is excessively induced by heavy floods, this therefore warrants that protection of gravel layers by the longitudinal and transverse walls discussed on the basaltic formation.

There have been cases where the structures provided along major rivers were washed off or undermined, the reason was either the structure was not designed to adequately cater for the flow regime or adjoining embankments both at the inlet and outlet were not protected sufficiently. Vortex currents which form when structures overtop scour the embankments of such structures which result in most cases cutting of the road and washing off the entire structure. It has been observed that the hydrology with the recent climate change requires that further reviews be undertaken on the flood regime and design requirements for all structures for different road classes.

Meandering rivers have been observed to change courses has resulted in roads being cut off due to the change regime flow. This natural phenomenon usually occurs cyclically once every four to five years. The solution to this natural phenomenon is to usually undertake river training works which usually involves protection of the river embankments through the provision of gabion works and the dumping of rip rap to reduce the scouring effect of the river and or provision of gabion mattresses to stabilise the embankments of the river.

Flood damages were assessed on a scale of 1 to 5 as follows; 1- Most Urgent (needs immediate attention), 2-Urgent (must be attended within the next 12 months), 3-Critical (must be given priority in next financial year), 4 -Not Critical (must be attended funds permitting in next financial year), and 5-Less Urgent (plan to implement within 2-years duration)

The costing and recommended plan of action is based on Level 1 damages and in summary the activities of the flood damages can be generalised in the form of;

- Construction of masonry stone walls
- Provision of drifts -
- Low level bridges in river crossings
- Re-gravelling works
- Protection Works on inlet and outlet of structures
- River training works
- Slope protection works
- Erosion protection works through provision of silt traps
- Proper sighting of structures in stream/river crossing such that river/stream regime is not affected/impacted both upstream and downstream

Based on the foregoing solutions and cost proposal have been formulated for each of the eleven roads proposed for funding through CERC and summarised below;

Road	Level 1 Damages	Level 1 Activities per Road Section	Estimated cost in Maloti	Estimated Costs in US\$ (1US\$=M14.08)
Mazenod-Au	Vented ford undermined road cut off from the structure	Mini Bridge, Protection Works, Road realignment	6,328,656.64	449,478.45
Mahloenyeng khithione	Vented ford undermined road cut off from the structure	Low level bridge, Protection Works and Road realignment	4,487,145.60	318,689.32
Lephoi Likamoreng	Vented ford undermined road cut off from the structure, Gravel loss for 3kms	Vented Ford and Protection Works	201,670.04	14,323.16
Mateka Pulane	Gravel loss on steep incline and on basalt roadbed, Culvert fully silted and overtopped, gravel loss on sandstone roadbed, Gully formation, Vented ford damaged and silted, Stormwater from access road erodes gravel on main road No access to farmyard stormwater from access road erodes gravel on main road Culvert fully silted, Vented ford damaged, Subgrade rut failure Vented ford damaged at outlet protection	Stone Masonry Wall, Gravel backfill, Re-gravelling, Vented Ford, Protection Works and Subsurface Drain and Vertical alignment improvement	4,431,209.13	314,716.56
Mosala Releqheka Tlali		Mini Bridge Construction and re-gravelling	4,758,336.00	337,950.00
Siloe Likhoele	Vented crossing Likhethlane and Qhoqhoane Rivers including protection works washed away, Gravel loss, vented ford structures damaged, drift damaged, culvert silted	Mini Bridge Construction crossing two rivers	2,520,000.00	178,977.27
Mt. Moorosi Makoe	Road cut off by Quthing River, Gravel loss, culvert silted, and side drains blocked	River training works and road reconstruction	9,724,933.20	690,691.28
Seaka Ketane	Mudslide, silted culverts, erosion and poor road condition, streams with high velocity have blocked vented ford, Road undermined and half the road has formed a deep gully, 2x half 1.5φ Armco Pipes w, stormwater runoff crossing the road washed away, Drift damaged and beyond repair	Pipe installation, Road reinstatement, re-gravelling, Erosion and Slope Protection, Drift construction and Protection Works on stream crossings	9,089,900.59	645,589.53
Selomo Tsime	excessive potholes, Gravel Loss, Vented ford silted, Scouring of road gravel loss on sandstone roadbed, Culverts blocked, Drift scoured on downstream, Earth Road	Masonry Wall and backfill, re-gravelling River Training, Clearing of Hydraulic Structures	8,745,785.11	621,149.51

	Road cut off, Stormwater damage on road surface Stone rubble wall collapsed			
Lenkoane Nkhahle	Two Vented ford washed away	Mini Bridge and Protection Works	1,152,087.55	81,824.40
Bobojane Tsereane	Deep Erosion and collapsed gabions	Re-gravelling, Slope and Erosion Protection Works	2,777,448.00	197,261.99
Total Estimate Costs			54,216,871.86	3,850,630.10