Mpatamanga Hydro Power Project (MHPP)

Terms of Reference (ToR) for Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) Development

Draft Summary Version for Consultation prepared: 24th October 2022

(Current Final Draft Version aligns with ToR tendered 14th November 2022)

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1. PRESENTATION OF THE PROJECT

1.1 GENERAL CONTEXT: MPATAMANGA HPP PROJECT

The **Mpatamanga hydropower project** (350 MW) is planned to be built in the Shire River in southern Malawi. The Mpatamanga project will harness the river flow coming from Lake Malawi, which is regulated by the Kamuzu Barrage, and the significant head created by a first dam and the by-pass of a steeply sloped river stretch in the Middle Shire river catchment.

The Project as per the Baseline layout consists of two cascading Hydropower plants;

1. A power station at the main dam will have an installed capacity of 309 MW and will operate as a peaking plant to meet peak demand. The plant will be equipped with six vertical Francis turbine units of 52.5 MW capacity each. The rated discharge of each turbine will be 91.7 m³/s, for a **total rated discharge of 550 m³/s**. The **normal water level at the intake will be at EL 276 m**, the tailwater level at the power plant nominal discharge will be at EL 210.2 m: the rated gross head will be 66 m.
2. A Regulating Dam power station will have an installed capacity of 41 MW or 50MW to bring the flow of the river to its natural state to preserve the Majete reserve located downstream. The plant will be equipped with two bulb turbines of 20.5 MW capacity each. The rated discharge of each turbine will be 136 m³/s, for a total rated **discharge of 272 m³/s**.

The project will create two reservoirs, a large reservoir at the main dam and a smaller reservoir at the regulating dam. The main reservoir will be 22 km in length and will flood an area of 19 km² with a full supply level of EL 276 m. The regulating reservoir will be 6.6 km in length and will flood an area of 1.1 km² with a full supply level of EL 213 m and minimum operating level EL 206.5 m. The reservoir will have an active Volume of 6.9 hm³ (6.9 million m³). The reservoir level will fluctuate by 6.5 m most days.

The following table summarizes the main characteristics of the project as defined at this stage.

Item / Structure	Single Tunnel Alternative	Comment
General information		
Power stations (PS)	Main PS and RD PS	
Installed capacity	309 MW and 41 MW	
River	Shire River	
Position of the Main Power Station	15°43'21''S; 34°43'40''E	
Position of the RD Power Station	15°46'47''S; 34°44'19''E	
Main Reservoir		
Full Supply Level (FSL)	EL 276.0 m	
Minimum Operating Level (MOL)	EL 273.0 m	May be lowered by -1m to mitigate the impact of sedimentation in the upstream part of the reservoir
Design Flood Level	EL 276.5 m	Q 10 000 flood with N-1 gates open
Design Flood discharge	3 710 m³/s	Q 10 000
Total reservoir volume	261 Mm³	
Active reservoir volume	58 Mm³	
Main Dam		
Dam Crest level	EL 278.5 m	
Spillway Gated weir		
Number of gates	4	13 m H x 13 m W
Weir sill elevation	EL 263.0 ml	
Bottom Outlet		
Gate Size	6 m x 6 m	

Sill elevation	EL 235.0 m	
Water intake		
Water intake height	34 m	
Water intake invert elevation	EL 248.70 m	
Main Powerhouse		
Total discharge	550 m^3/s	
Turbine axis elevation	EL 203.40 m	
Regulating Dam Reservoir		
Us Full Supply Level (FSL)	EL 213.0 m	
Us Minimum Operating Level (MOL)	EL 206.5 m	
Ds Full Supply Level (FSL)	EL 192.0 m	
Ds Minimum Operating Level (MOL)	EL 191.38 m	
Downstream Design Flood Level	EL 199.0 m	
Active reservoir volume	6.95 hm^3	
Design Flood	3 710 m^3/s	= Q10 000
Regulating Dam - Gravity blocks		
Dam Crest level	EL 215.50 m	
Regulating Dam Spillway		
Number of gates	4	13 m H x 13 m W
Spillway Weir sill elevation	EL 200.00 m	
Regulating Dam Powerhouse		
Total discharge	272 m^3/s	
Turbine axis elevation	EL 184.50 m	

Table 1. Mpatamanga HPP Project characteristics (before the ongoing revision)

1.2 PROJECT LOCATION

The Project will be located on the Shire River between the existing Tedzani and Kapichira hydropower plants. It is positioned about 35km west of Blantyre in the south of Malawi at the intersecting boundary of two districts: Blantyre to the East and Neno to the West. The Shire River is the largest river in Malawi and is the only outlet of Lake Malawi.

The site of the main dam is about one and a half hours by car from the city of Blantyre, on an existing dirt road (S137) that leads from Chileka Airport to the location of the old Shire Bridge (now washed away) immediately above the proposed site for the main dam at Mpatamanga Gorge. The Mpatamanga Gorge and ridge are distinctive in the landscape, with altitudes between 450-500m that frame the project area. The regulating dam is located around 6km south of the main dam location, just north of the Majete Wildlife Reserve. Heading south from the main dam towards the regulating dam location the area is of lower topography and more undulating hills.

Settlements are dispersed around the main dam and reservoir location, with the area around the regulating dam far more sparsely populated.

The Project site is located upstream from sensitive sites for biodiversity; namely the Majete Wildlife Reserve (MWR) and the Elephant Marsh Ramsar Site.

The location in the national context is shown in Figure 1 below.

Figure 1. Project Location in the national context

More specifically, the Project (including the Transmission power lines) will be located in the Neno, Blantyre and Balaka districts, and in the Kunthembwe, Mlauli, Symon and Nsamala Traditional Authorities (TAs). The various village head groupings (GVHs) and villages near the Project area are listed in the table below, along with the project infrastructure in close proximity to these villages.

District	Traditional Authorities	Project component	Village
Blantyre	Kunthembwe	Main dam and water reservoir Regulating dam and water storage Regulating dam transmission line S137 access road	Affects GVH Kaliati and GVH Namputu Villages or households from these villages in main dam inundation area: Chaswanthaka, Chikila, Lisangwi Neighboring villages outside the inundation area or along the S137 road: Enosi, Liyedna, Nkoka, Felemu, Chisoni, Ndiranda, Chaswanthaka, Fose No villages are near the RD
Neno	Mlauli	Main dam and water reservoir Regulating dam and water storage Main dam transmission line S137 access road	Affects Felemu GVH Villages in the inundation area: Kambalame Villages along the S137 road: Felemu Villages close to the TL route: Julaya (Julayi/July), Jonathan
	Symon	Main dam and water reservoir Main dam transmission line	No villages in Symon in the inundation area Nearby villages outside the inundation area – Liyedna and Nkoka Villages close to the TL route: Liyenda (Lienda), Joseph, Mkoka, Mbemba, Tedzani, Kandoje, Ngewnyama, Matope
Balaka	Msamala	Main dam transmission line	Villages close to the TL route: Chikapa, Laja,

Source: Mott MacDonald, Mpatamanga Project Draft Environmental and Social Impact Assessment (ESIA) (*February 2021*).

1.3 TRANSMISSION LINES

The transmission lines included in the Project are:

- A 400 kV double circuit transmission line, 64 km long, connecting the substation at the Main Dam to the Phombeya Substation, and;
- A 132kV transmission line for the interconnection scheme for the regulating dam, with two options:
    - 132kV double-circuit 7.3 to 11.4km in loop-in / loop-out between Kapichira and Tedzani regulating dams; or a
    - 132kV single-circuit 6.6 km to the main plant switchyard.

The transmission line routing for the 400 kV line has already undergone optimization (Multiconsult study). It runs parallel to the transmission line for the Mozambique-Malawi Interconnector. The target date for completion of the new Mozambique-Malawi Interconnector power line is around October 2023[1].

The routing for the 132kV transmission line is currently being studied and the preferred option will be defined as part of the design freeze process.

2. ENVIRONMENTAL CATEGORIZATION

This project has been categorized by the World Bank as a Category A/High Risk Project[2] because it involves:

(i) the physical resettlement of at least 185 households and economic displacement of at least 385 households, a school with 500+ students and an estimated 43-50 households along the T-line and access road,

(ii) negative impacts on livelihoods and increased social risks related to construction-induced immigration,

(iii) impact on critical habitat triggers (several fish species in particular) and

(iv) contribution to cumulative impacts and risks from existing and planned HPPs on the Shire river, in addition to other activities in the catchment, and climate-related vulnerabilities.

3. APPLICABLE E&S STANDARDS AND GUIDELINES

E&S deliverables must be developed to comply with all applicable regulatory and lender requirements.

The applicable regulatory requirements include, but are not limited to:

- Applicable social and environmental laws, regulations and policies of Malawi relating to concessions, land acquisition and resettlement, labor and working conditions, pollution prevention and control, public health and safety, biodiversity protection and conservation, ethnic groups/indigenous peoples and environmental protection, required to obtain an updated GoM-compliant ESIA/BAP/RAP/CIA for the Mpatamanga HPP;
- Relevant international treaties to which Malawi is a signatory, such as (but not limited to) the UN Declarations, International Labor Organization (ILO) Core Conventions and all other ILO Conventions ratified by Malawi. Special attention should be placed on ensuring compliance with any conventions or treaties to which Malawi is a signatory that are related, but not limited to, any international waterways including the Zambezi River such as the Ramsar Convention and Convention of Biological Diversity.
- International Financing Institution (IFI) standards including:
    - The IFC Performance Standards (2012);
    - World Bank Environmental and Social Framework (ESF) (2017);
    - Equator Principles 4 (EP4) (July 2020).
    - Relevant World Bank Group (WBG) Environmental, Safety, and Health (ESH) Guidelines

[1] https://www.voanews.com/a/malawi-mozambique-launch-power-interconnector-project/6541176.html, accessed 19 September 2022.

[2] Category A in accordance with the World Bank's (previous) Operational Policies and High Risk in accordance with the World Bank's Environmental and Social Framework (ESF) (2017).

- The UN Guiding Principles on Business and Human Rights (UNGPs) (2011).
- Relevant EDF and SCATEC corporate requirements; for example the French Government's loi de vigilance *(Loi 2017-399 du 27 Mars 2017 relative au devoir de vigilance des sociétés mères et des enterprises donneuses d'ordre)*.

4. TERMS OF REFERENCE (TOR) FOR ESIA AND ESMP (SOW)

4.1 INTRODUCTION

This SoW relates to the appointment of a consultant (the "Consultant") to finalize the Environmental and Social Impact Assessment for the Mpatamanga Project and prepare the associated Environmental and Social Management and Monitoring Plans (ESMPs[3]).

The service will start with an inception phase which will be crucial to inform the rest of the SoW.

MHPL and the GoM PIU will work closely with the Consultant to ensure that fieldwork can commence as early as possible in order to undertake data collection taking into account the rainy season (the peak of the wet season being between December and March). To facilitate this, Consultants are requested to clearly outline the support they would need to in order to enable required fieldwork to commence.

Any other Consultant suggestions for how to ensure that appropriate data collection is able to commence as early as possible should be included in the Consultant's proposal. Consultants are likely to be requested to participate in Client discussions with IFIs and also present their findings to potential IFIs. Sufficient time for this scope needs to be included in the Consultant's proposal.

4.2 ESIA /ESMP DELIVERABLES SCOPE

In alignment with the requirements of the World Bank Group ESF, IFC PS and the World Bank Group ISDS (2020), the ESIA/ESMP deliverables scope is:

1. Final Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management and Monitoring Plan (ESMP) and associated processes: for the two dams, reservoirs, powers plants, and all ancillary facilities (access roads, workers' camp, quarries, borrow pits, transmission line connecting the substation at the regulating dam to the existing 132 kV transmission line between Kapichira and Tedzani etc.). The ESIA and ESMP will be reinforced by the findings and recommendations of the following additional assessments: i) Environmental Flows Assessment (EFA), ii) Biodiversity Action Plan (BAP), including associated assessments, iii) Critical Habitat Assessment (CHA), iv) downstream impacts assessment (DIA), included as part of the ESIA/ESMP scope, v) Cumulative Impacts Assessment (CIA); and others as needed.
2. Final Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) for the 64 km long 400 kV double circuit transmission line from the main dam to the Phombeya substation. This documentation can be integrated with Item 1 as a separate volume.

   Regarding the above-mentioned studies:

   - The EFA, CHA and a Rapid CIA have been completed by other consultants.
   - The BAP scope is being separately tendered.
   - The RAP scope is being separately tendered.
   - Further Downstream Impact Assessment (DIA) is within the scope of the ESIA Consultant. It includes reassessing / updating downstream impacts to take into account the residual impacts as determined in the updated Eflows Assessment and the results of the Hydro-sedimentary Studies

[3] For the purpose of clarity, the Environmental and Social Management and Monitoring Plans (referred to ESMP or ESMP) will be referred to as "ESMP" throughout this document. The scope (e.g., with a separate or integrated Environmental and Social Monitoring Plan), format and name of the ESMP will have to conform to regulatory, WB ESF and IFC PS requirements, and will be determined in the Inception Phase.

that are currently being tendered by MHPL.

- Fauna and Flora Studies (additional baseline surveys and evaluation) are currently underway by national consultants (managed by GoM).

Please note that the Project ESMS **is not part of the ESIA deliverables scope**. The draft ESMS that was previously prepared will be finalised directly by the Project Company.

3. Final Stakeholder Engagement Plan (SEP) describing the protocols and plan to ensure public engagement, consultation, and participation in the different stages of the project as described above. This should include a focus on engagement with vulnerable groups and support for human rights.
4. Labor Management Plan and Procedures, and Occupational Health and Safety Management Plan, describing the procedures for hiring, managing health and safety, and other requirements as per PS2 and WB ESF.
5. Preliminary Emergency Preparedness Plan (EPP), including a summary of all the dam safety requirements and of the content of other required documents, which are under management of the Technical Working Group.

Regarding the above: please note that items 2-4 will need to be:

i) prepared as separate documents; **and**

ii) integrated into the ESMP for the Project.

The ESIA Consultant will need to work closely with the following consultants to ensure that relevant content can be integrated into final ESIA and ESMP documentation:

- Consultant responsible for delivering BAP/BMEP documentation (and related deliverables).
- Consultant responsible for delivering RLRAP documentation.
- Consultants responsible for flora, fauna and labour influx management studies.
- Consultants undertaking a human rights risk analysis and assessment.
- Consultants responsible for preparing Project-specific cumulative impact assessment.
- Consultants responsible for conducting the sediment assessment and developing sediment management procedures and mitigation measures.

4.3 TASK 1: INCEPTION PHASE

The objective of the inception phase is to refine the gap analysis and work plan included in the Consultant's offer based on a detailed desk-based review of all relevant documentation and an initial Site Visit.

ACTIVITY 1 – PROJECT FAMILIARIZATION AND KICK-OFF MEETING

During the inception phase, to the Consultant will organize a kick-off meeting (KoM) that will be held to brief the Consultant on the Project and ensure the Consultant has received all the available and relevant Project documentation for their review. The KoM also serves to introduce the team, discuss planning arrangements and respond to questions raised by the Consultant regarding the Project. This KoM, which might be held in person and/or as a video-conference call, will be attended by the Consultant and its team of specialists, the Client's Project team and the Lenders.

The Consultant will prepare minutes of meeting of the KoM.

ACTIVITY 2 – CONDUCT A DESK-BASED REVIEW OF AVAILABLE INFORMATION

The Consultant will gather and review existing studies and available data to understand the Project area and activities and perform a data gap analysis for the deliverables.

The Consultant will review the E&S documentation, the relevant technical studies and any other relevant

documentation as soon as it is made available. This review will continue while in-country (see Site Visit). In parallel, a stakeholder analysis will be performed; to identify parties that have direct and indirect interests in both the Project and its potential impacts, and who could influence the E&S Review work.

Deliverable

- Within three weeks of signing the contract and in advance of the Initial Site Visit, the Consultant will issue a preliminary inception report that will be drafted based on the desktop review. The draft Inception Report will include a detailed work plan for the study (including any anticipated data collection), timeline and expected deliverables and outcomes; to be consulted and approved by the key Project stakeholders (Strategic Sponsor/MHPL, GoM, IFC, WB). The report will list, by topic (e.g. community engagement, construction schedule, permitting process) all pending questions regarding the assumptions / methodology / organization / process / documentation that could not be answered through the review of existing documentation. The objective is to understand what the actual E&S documentation or technical study limitations were, and/or exclusions, and the reasons for these; in order to optimize the time spent in the field for the initial site visit. The **preliminary inception report** will include the following content:
    - Summary of the assignment scope.
    - Description of activities and key findings so far.
    - Preliminary Gap analysis and implications for the scope of the assignment.
    - Proposed changes in initial work plan as detailed in the offer (if any).
    - Issues of concern that would need particular attention during the site visit.
    - Road map for the field visit (see below).

ACTIVITY 3 – INITIAL SITE VISIT

The purpose of the field visit is for the Consultant to become familiar with the direct and indirect project impact areas and potential offset areas, with key aims being to: understand impact zones; verify stakeholders; meet and coordinate with relevant government and non-government representatives.

Prior to the field visit, **a roadmap for the planned site visit** will be prepared taking into account the availability of the various priority stakeholders. This will be submitted at the same time as the **Preliminary Inception Report**. In the site visit road map, the Consultant will propose a detailed agenda for the (i) areas to be visited, (ii) meetings with key persons/organizations to be arranged, and (iii) working sessions with the Strategic Sponsor and other stakeholders (possibly with the consultants who were involved in the previous studies) in order to make the best use of the time and resources available.

Deliverables

- **Road map** prior to the site visit.
- **Post-site visit:** Updated road map (annotated) to include actual sites visited, a list of documentation and data obtained, residual questions that could not be addressed, etc.

ACTIVITY 4 – PROJECT BRIEF REVIEW

To comply with GoM requirements, a Project Brief was prepared in October 2020. During the Inception Phase, the Consultant will review the GoM Regulatory requirements and current Project Brief to determine whether and, if so, when an updated Project Brief is required. The Consultant will determine the framework, process and schedule for the Project Brief update. Review results will be included in the Inception Report.

Deliverables

- Review of the **regulatory process and schedule** for the Project Brief in the Inception Report.
- **As needed, an updated Project Brief** that corresponds to GoM requirements (content, schedule, process).

ACTIVITY 5 – INCEPTION REPORT

The Inception Report will be finalised after the initial site visit and after receiving client and key stakeholder comments on the draft version.

Drawing on the site visit findings and the detailed review of Project documentation, the Consultant will complete the formal analysis of the environmental and social risks of the Project with respect to the applicable regulation/s and international safeguards and performance standards. This analysis will be structured into a set of topics deemed important to confidently form a view on the overall E&S performance of the Project, with particular respect to the required scope of the ESIA / ESMP process and documentation.

The analysis will consider the following topics; at a minimum:

- Regulatory requirements (including the GoM requirements for the ESIA process, e.g., Activity 4).
- Communications & Consultation.
- Siting & Design.
- Environmental & Social Impact Assessment & Management.
- Project Benefits.
- Downstream Flow Regimes.
- Project-Affected Communities & Livelihoods (link with separate RLRAP workflow/outputs).
- Resettlement (link with separate RLRAP workflow/outputs).
- Labour & Working Conditions (link with influx management study workflow/outputs).
- Cultural Heritage (scoping of any additional investigations required).
- Community Health and Safety.
- Biodiversity, Critical Habitat & Invasive Species (link with separate BAP workflow/outputs).
- Erosion & Sedimentation (link with hydro-sedimentary study workflow/outputs).
- Water Quality.
- Climate Change Mitigation and Resilience.
- Human Rights.
- etc…

For each of the above topics, the Consultant will summarise (i) the environmental and/or social issues, (ii) how the topic has been assessed in the existing technical, environmental and social documentation (baseline, impact analysis, mitigation strategy, management plans), (iii) how clear the Project's commitments are in terms of E&S performance, (iv) whether there are any data/information gaps e.g. in terms of geographic coverage, thematic aspects, level of detail or seasonal observations, (v) if/what complementary investigations / analysis / management action should be performed to address and document the gaps, if any. As part of this work, the Consultant will review the current definition/s of Areas of Influence to confirm or modify them; based on a clear rationale for their geographic delineation in relation to anticipated impacts and the nature of the relevant features.

The Consultant will provide a clear assessment of the E&S characteristics of the Project vis-à-vis the requirements of the World Bank ESF, IFC PS, GoM Regulations, Strategic Sponsor (EDF, SCATEC).

Deliverable

The Inception report will be prepared in line with the following main sections:

- **Section 1**. Introduction, which will describe the main features of the Project, the Status of preparation activities, the scope of the inception phase, the applicable standards (of the Strategic Sponsor, GoM, WB ESF, IFC PS) and the structure of the Inception report.

- **Section 2**. E&S Management Process, which will (i) present the ESIA process conducted so far, (ii) summarize the main chapters of the ESIA, and (iii) explain how the Project Company has planned the E&S management of the Project, how the Construction Contractor(s) will be organized, how the monitoring of construction activities is planned to be conducted and what grievance mechanisms have been planned and/or are operational.
- **Section 3**. Environmental & Social Performance of the Project as observed during the E&S Review process. This section will be structured by topic, as proposed above; tailored to the needs of the Project's current and future context.
- **Section 4**. Way forward for the delivery of the ESIA/ESMP: will describe and confirm the workplan proposed in the initial offer, or provide justification of the proposed changes taking into account the findings during the inception phase and the decisions made in coordination with the Strategic Sponsor/MHPL and other key stakeholders (GoM, WB, IFC). In conclusion, the Consultant will confirm or update the implementation schedule and then further develop a detailed field work plan considering all surveys, consultation, meetings required. This field work plan should be inclusive of proposed survey tools and templates for capturing and analysing E&S data.

The Consultant is also expected to lead a follow-up meeting ("FuM") with the Client's Project team in which its inception (scoping) report will be described and key findings will be highlighted. This FuM may be held via video-conference call or in person.

4.4 TASK 2 – ESIA DRAFTING AND FINALISATION

The ESIA will set out and apply a mitigation hierarchy, which will: i) Anticipate and avoid risks and impacts; ii) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; iii) Once risks and impacts have been minimized or reduced, mitigate; and iv) Where significant residual impacts remain, compensate for, or offset them, demonstrating technical and financial feasibility.

A considerable amount of work has already been conducted to advance the development of E&S Safeguards. The objective of this task is critically review this previous work, build upon it (with all of the necessary fieldwork to do so) and improve it to meet all of the required standards and guidelines (cf. section 4). The consultant is responsible to prepare an ESIA, based on the detailed gap analysis conducted in the inception/scoping phase (Task 1) and field work and consultation.

ACTIVITIES AND DELIVERABLES

Each proposed chapter listed below should be submitted as a deliverable for review:

- **Activity 1: Regulatory Review**

The Consultant will analyze the policy, legal, and administrative framework within which the assessment is carried out[3]. This chapter should (a) describe the relevant GoM laws and regulations applicable to the Project, (b) refer to the applicable WBG ESF and IFC Performance Standards, and (c) compare requirements and identify any significant differences between (a) and (b) to clearly identify gaps expected to be filled for the Final ESIA/s and ESMP/s to be aligned/ compliant with WBG (WB, IFC) and GoM requirements. This section should specify that under the WB ESF, the project is categorized as High Risk.

The analysis will therefore comprise the following:

[3] Please note that while there is no need to rewrite this whole section as the preliminary ESIA (2019) covered the Malawi existing Legal and Regulatory Framework, the Consultant/s are required to quality check, update and verify to ensure that more recent regulatory changes are included.

1. Detailed review of the environment, health, safety and social regulatory framework that governs the development of the Project from concept to operations;
2. Detailed review of laws, regulations, national guidelines, standards, international treaties and conventions to which Malawi is a signatory and which are relevant to the Project directly or indirectly. For each item deemed relevant, the associated requirements of the Project must be clearly described;
3. Detailed review of the relevant country regulations, environmental permit process and relevant institutional set-up (entities involved in environmental management in country);
4. Detailed review of the WB and IFC's E&S requirements as identified during the inception/scoping process. This includes confirming those that would be triggered by the development of the Project and articulating the associated requirements during Project development.

Deliverable

The Consultant will deliver the Policy, Legal, and Administrative Framework Review. This document will be included into the ESIA Report as a standalone section.

- **Activity 2: Project Description**

This chapter should be updated to include a presentation of the final Mpatamanga HPP Project design, major project components and associated facilities required by and for the Project, such as access roads, quarries and borrow pits, transmission lines, and camps. The Project description should present in sufficient detail all construction and operation activities that are relevant to environmental and social risks and impacts; in particular, the river diversion plan. Schematic diagrams to facilitate comprehension should be included. Drawings and maps showing the Project's layout and components, the Project site and Project area of influence should be provided. The expected ability of the Regulating Dam (RD) to fully buffer the peaking flow releases from the Main Dam should be well documented, along with the measures planned to ensure the RD's effective operation and guard against operator error, equipment failure, or intentional deviation from run-of-river flow releases.

The Consultant will produce a Project description report which, as a minimum:

1. Describes the Mpatamanga HPP project and its geographic, ecological, social, health and temporal context, including any ancillary infrastructure which would be considered as a Project component and any Associated Facilities. This refers to on-site and off-site infrastructure and utilities that will be required (e.g. transmission lines, sub-station(s), access road networks, contractor facilities, storage areas, quarries, among others);
2. Encompasses facilities and activities by third parties that could impact or be impacted by the Project or whose impacts could accumulate to those of the Project (e.g. synergies or antagonistic effects). Includes administrative set-up, land use and planned developments within the vicinity of the Project Location, detailed maps / photos showing the Project site and area of influence;
3. Summary of likely activities to take place during the Project phases; planning and construction; operation and decommissioning;
4. Expected timelines for execution of main Project development phases;
5. Summary of workforce management and accommodation strategy.

Deliverable

The Consultant will deliver the Project Description including Area of influence. This document will be included in the ESIA Report as a standalone section.

- **Activity 3: Alternatives Analysis**

The Consultant will describe and compare reasonable alternatives in terms of their technical, economic, social, environmental, health and safety positive and negative impacts related to use of resources (i.e., water source options and impacts), provisional transmission line route/corridor, etc.

This section should discuss economic, technical, environmental and social issues (including health, security, labour etc), compare project alternatives (considering power generation alternatives, major design features, including location and operational regimes), and clearly state the reasoning of why the selected Project, sites[5], designs[4] and operating regimes[5] were selected as the best alternatives. The alternatives analysis section must consider other power generation alternatives to assess if they can meet the same objectives and compare their E&S impacts (including as regards climate change). The detailed alternatives analysis performed for the RD siting should also be included in this section. In particular, this section should summarize the E-Flows assessments performed, all the alternatives studied (including those currently under study by the Technical Working Group up until the Design Freeze), and the reasoning behind the decision for the current alternative design including the RD. Elements of the Project for which alternative options need to be discussed to complete this section include, but are not limited to: the project operation regime (generation flows); spoil disposal sites; quarry site; access road alignment/s; and transmission line alignment. The "no project" alternative should also be presented and discussed.

The Consultant will therefore provide justifications as to why the proposed Project design (as included in the design freeze) is the most optimal solution, considering the following:

1. Project site.
2. Project technology.
3. Project and contextual E&S risks.
4. Project design and layout and impact on natural resources (including ecosystems services).
5. Project interface with Associated Facilities.
6. No Project alternative (what happens if the Project is not developed).

Deliverable

The Consultant will deliver the Analysis of Alternatives report. This document will be included in the ESIA Report as a standalone section.

- **Activity 4: Environment and Social Baseline, including integration of the CHA results**

The key objective of the E&S baseline conditions assessment is to identify and assess the constraints related to the Project site and the Associated Facilities, which can be addressed during the Project's design process, construction and operations and decommissioning.

Listed below are the indicative, but not exhaustive, topics on which the E&S baseline assessment may be carried out. It is the Consultant's responsibility to add any topics that are not listed below but are required to meet the objective of this activity and fully characterize the E&S baseline. The detailed gap analysis conducted in the **Inception phase** will determine the need, and scope, of fieldwork required to supplement the existing baseline data for each topic.

The E&S baseline chapter should clearly present the delineation of the Project impact areas (primary and secondary impact areas), particularly as they relate to sensitive receptors; both environmental (e.g. Majete

[4] These are in plural because it refers to both the Main Dam and the RD.

Wildlife Reserve) and social (e.g. lodges/ hotels, schools, hospitals, residential, churches/ temples and any other sites of religious, cultural, heritage or aesthetic value, etc.). Roads, transmission lines, quarries and any associated facilities should be included in the Project area of influence.

In this section, the methodology for data gathering, sampling, analysis and modelling (if applicable) should be presented. For the environmental baseline, sampling sites should be strategically selected, **for example** planning for water quality monitoring in areas both upstream and downstream of future wastewater discharge sites (e.g. tunnel process waters), cognizant of sensitive receptors, anticipated impacts, etc. The Consultant is responsible for determining and justifying a strategic approach and methodology, which includes use of existing data and design of additional data collection approaches and activities, as needed. Results of laboratory testing and interpretation (e.g. surface water, groundwater quality, air quality and noise / vibration levels, visual ranges) should be compared with local **and** international environmental standards.

For all topics, location maps, figures, graphs and diagrams should be provided to facilitate understanding.

Below is an indicative list of topics and their scope to be covered. The Consultant must conduct a critical analysis of the baseline requirements to modify and adapt this list as required to meet all regulatory requirements, WB ESF, IFC PS, and Strategic Sponsor corporate requirements.

Topic	**Indicative Scope**
Landscape and Visual	Identify general landscape and topography conditions within the area of influence. In addition, based on site assessment and consultations with relevant entities, identify any key visual receptors which could be impacted (touristic sites, villages, key archaeological/cultural sites, etc.)
Geology, soil and land cover	Detailed site survey of the Project site to identify and map geological and geotechnical/ hydrogeological features and confirm their relevance to the Project. Geo-hazards and any negative impacts should be identified and assessed. Description and analysis of land cover, soil types, quality, and their distribution over the Project area of influence. Regional geology, Project-specific geology and seismic hazards studies as discussed in the Feasibility Study should be included in the Final ESIA. Hydrological and meteorological data used in the ESIA should be updated based on data provided by IFC and/or GoM and/or Strategic Sponsor. Geo-morphological aspects such as catchment stability, sediment load, sediment transport, erosion management / soil permeability should be included in the Final ESIA based on data provided by the IFC and/or GoM and/or Strategic Sponsor. A synopsis of anticipated climate change effects under different scenarios and their effects on hydrology, as determined by ongoing work being conducted by the Strategic Sponsor, will also be presented.
Land Tenure and Use	Detailed site survey of the Project site to map all sensitive receptors along with a description of their relevance to the Project. This should include: (i) physical structures (e.g. temporary and permanent houses, shelters, commercial areas, etc.); (ii) economic activities that lead to income sources or other means of livelihood (e.g. farming areas, grazing, livestock, natural resources etc, and others as applicable); and (iii) formal and informal land users within the Project site to include any potential vulnerable groups. Consultation should be undertaken with such land users and landowners when identified, to the extent possible, to understand activities undertaken. In addition, consultation with relevant local entities should be undertaken, as applicable, to determine any additional land uses not recorded on-site (e.g. seasonal land uses) as well as to verify information above. Also, to review any informal land use plans (e.g., by traditional authorities) as well as formal E&S land use planning for the area (e.g. protected areas, important bird areas, etc.).

	Description and analysis of the different types of land tenure and ownership systems of the Project and associated facility sites and any land legacy issues. A particular focus will be on whether any of the lands are considered (either by law or in practice) to be of traditional/customary ownership and/or tenure and, in addition, any lands to which formal land title is held. Also, where business losses due to Project impacts on land use are able to be quantified.
Sedimentation, Sediments and Fluvial Geomorphology	This chapter will fully integrate the results of the Hydro-sedimentary study currently underway to present the status of watershed-level and Project site level sedimentation in the Shire River (based on watershed erosion). Suspended and bedload sediment transport in the entire Shire River watershed will be discussed. A specific emphasis on sediment dynamics in the Project area and downstream (including Elephant Marsh) will be included. Current sediment management in the watershed (by dam operators, such as Kapichira HPP, or in the catchment) will be discussed. The past and current fluvial geomorphological dynamics of the Shire River will be presented; in particular with respect to sediment transport and land-use change.
Biodiversity	This chapter provides a detailed site survey and secondary data review to identify vegetation cover, existing flora and fauna, threatened or range-restricted species, Invasive Alien Species, proximity to protected and/or sensitive habitats, and priority ecosystem services. The content of this section should be developed in coordination with the BAP Consultant. Close coordination will be needed between the ESIA Consultant and BAP Consultant to avoid duplicate data collection. This section will be based on existing ecological survey data and supplemented as required (to be determined in the **Inception phase** and in consultation with the BAP Consultant). It will also include a delineation of the Project impact and influence areas as well as potential offset areas, such as (i) areas likely to be submerged by water impoundment; (ii) the about 7 km stretch of the river reach from Main Dam down to RD that will be subjected to permanent flow fluctuation due to peak generation, (iii) reaches downstream from the RD, (iv) terrestrial areas to be permanently and temporary impacted / modified due to Project construction and operation, and (v) areas that are being considered as offset locations (in coordination with BAP outputs). This section should reference the detailed BAP and should note the environmentally sensitive areas, including legally protected and internationally recognized areas, within the Project's area of influence. The biodiversity baseline content should be developed in coordination with the BAP Consultant. The location of sensitive areas potentially impacted should be reflected in figures and maps. The methodology used for data gathering, mapping, surveys, sampling and special studies - terrestrial (vegetation/flora/fauna and terrestrial wildlife), aquatic (fish /fisheries /plankton/benthic organisms, etc.) within the study area should be provided. The Inception phase will determine whether additional biodiversity data collection is required (in coordination with the BAP Consultant). A critical review of the methodology used for dry season and wet season fish sampling and analysis should set the basis for the quarterly sampling protocol to be executed through the construction, commissioning and first year of operation. A clear statement of WB ESF and IFC PS6 defined natural vs modified habitat, supported by any necessary justification, maps and tables, must be included. The outcomes of the Critical Habitat Assessment (CHA) must be summarized. The results of the terrestrial and aquatic survey and studies should note any species of conservation concern including legally protected species, nationally and globally threatened species, endemic or restricted range species, migratory species (including important concentrations of these). The occurrence and current spatial extent of alien invasive species (fauna and flora) should be noted. In addition, species with the potential to cause public health issues (in particular those resulting in water-borne diseases, such as malaria, dengue, schistosomiasis, etc.) need to be particularly noted and discussed. Appropriate maps, figures,

	graphs and diagrams should be provided to facilitate understanding e.g. land use map of the Project area. Maps must be of appropriate scale; in some cases even 1: 5000 or 10, 000, indicate the north, the coordinates (UTM), the sources of the map, the datum, etc.
Archaeology and cultural heritage	Site survey and review of secondary data by an archaeology and cultural heritage expert to ascertain the presence of any archaeological, paleontological and historical remains within the Project area of impact, as well as tangible and intangible cultural heritage items. Any sites of importance should be recorded and delineated appropriately and their implications for the Project assessed. In addition, consultation should be undertaken with relevant authorities as applicable to determine any additional requirements the Project is required to take into account. This assessment should be undertaken after review of the CHIA prepared by the Dept of Museum and Monuments. It should include detailed maps prepared using existing data and any new data.
Air Quality	The Consultant is expected to provide a classification of the site environment, establish present background air pollutants, applicable ambient air quality limits for the area, local dimensioning practice, and assess future expected air quality based on available contextual information. This should consider any implications for the Project design or construction and/or operational issues. The air quality monitoring baseline should reflect conditions at the Project site and any sensitive off-site locations which may be impacted by the Project. The minimum set of air quality parameters that will be monitored are those expected to be affected by the Project's development.
Noise & Vibration	The Consultant is expected to provide a classification of the site environment, establish the present background noise level, and identify applicable noise limits and the location of the boundary to a level sufficient for the development of envisaged mitigation measures. Also to assess the future expected noise, and if applicable, vibration levels during operations. The noise and vibration monitoring baseline should reflect conditions at the Project sit, and any sensitive off-site locations which may be impacted by the Project (in particular communities in proximity to construction sites or transportation routes, Majete Wildlife Reserve…).
Water	Assess the water sourcing and permitting requirements as well as water quality and any other potential water impacts on local communities. This should include an assessment of the sustainability of groundwater and/or surface resources, and aspects such as ecological flow requirements in any surface water resources the Project might exploit. If groundwater resources are potentially limited and/or there is an indication of potential impacts on other water users or ecological aspects, a groundwater model should be developed.
Wastewater & Solid Waste	Determine the expected types and amounts of waste streams. Map local disposal options and associated quality requirements, including the permitting status of local landfills and their compliance with international standards and guidelines. Assess local recycling capacity for wastes generated by the Project (including the potential for waste to energy), and any needs, longer term, for building local capacity.
Socio-economic	The social baseline should be conducted to identify all project affected persons (PAP) who will be directly and indirectly affected by the Project. The content of this section should be developed in coordination with the RLRAP Consultant and close coordination will be needed between the ESIA Consultant and the RLRAP consultant to avoid duplication of data collection efforts. This section is expected to describe both the PAPs that will be physically or economically displaced and others who could be temporarily affected by construction activities or those whose well-being, livelihoods, or status quo could be permanently affected (directly or indirectly) by the Project (e.g. by modification of river water flows regime, modification of sediment loads or water quality, reduction of fish catch, downstream riparian lands erosion) to enable an assessment of the Project's socio-economic impacts on them, if any. This section should outline the proposed methodology[5] to be used and describe downstream water and river uses (e.g. domestic water

[5] Methodology should be clearly defined in the Inception Report refer to in Sections 3.4 and 5.2.

	supply for part of the year, fishing, irrigation, navigation, ceremonial, cultural or recreational uses). River uses should be assessed in all affected segments of the river: (i) upstream from the expected reservoir, (ii) flooded area, (iii) the section between the Main Dam and the RD, and (iv) downstream of the RD power house/ tailrace. This section should include identification and summation of relevant development partner programs active in the Project area of influence. It should consider ecosystems services. The baseline should identify directly and indirectly affected communities including vulnerable persons/groups, and ethnic groups/communities. It should consider risks associated with GBV, Sexual Exploitation and Abuse, and Sexual Harassment within the Project's area of influence. Social and economic conditions of the communities in the Project's area of influence should be characterized and assessed. For example; demographic dynamics, population characteristics, employment status, income distribution, community structure, gender, livelihoods, community health and safety, poverty status, economic indicators, labor status, access to social and health services and other data sets. To the extent possible, this section should be based on available secondary data supplemented by consultations with relevant local entities. Description of the political and administrative environment (local government and administration, government policies, local Non-Governmental Organizations (NGOs) and community-based organizations (CBOs), social organization and leadership, social network structures), as per stakeholder identification and analysis. Social and other community services and facilities (education, health, police and security, religious, etc.) should be described including access and quality considerations. Analysis of persons and assets/structures that will be physically and/or economically displaced by the Project. Where physical/economic displacement is expected, establish whether and how many displaced persons are from each of the following categories: (i) those who have formal legal rights to land; (ii) those who do not have formal legal rights to land but have a claim to such land or assets recognized under national laws; (iii) those with no recognizable legal right or claim to the land they are occupying (informal).
Ecosystem Services	The Ecosystem Services Assessment (ESA) must be undertaken in close coordination with the biodiversity and social assessments. Any priority ecosystem service should be identified and assessed as regards the nature and spatial area of any potential impacts.
Infrastructure and Utilities	Site survey and review of secondary data to determine any infrastructure elements within the Project site and area of influence (e.g. roads, telecommunication towers, electricity lines, petroleum activities, etc.). In addition; infrastructure and utility requirements for the Project should be identified in relation to: (i) access roads, (ii) transport (iii) water resources and water supply, (iv) wastewater infrastructure and utilities; (v) solid waste infrastructure and utilities; (vi) hazardous waste infrastructure and utilities. Consultation should be undertaken, as relevant, to verify infrastructure and utility elements within the area, and the degree of influence the Project has on the development and routing of those being implemented to support the Project.
Cumulative Impacts	The Consultant will summarize results of the completed RCIA and Project-specific CIA and, in coordination with the CIA Consultant, undertake an assessment of other existing or planned/permitted projects that, along with the Project, could have cumulative impacts on Valued Environmental and Social Components (VECs). This should recognize that cumulative impacts are contextual and encompass a broad spectrum of impacts at different spatial and temporal scales. The information will be used in development of management plans to avoid and/or minimize these impacts to the greatest extent possible. A map/s should be included that illustrate the proximity of these features to the Project area of influence and, as appropriate, VECs.

The analysis will explicitly consider mitigation measures considered necessary, including the effect of these measures on the operation of the Project and, most importantly, the environmental and social benefits.

Deliverable

The Consultant will deliver the Environment and Social Baseline Conditions, in compliance with the objectives set out above. This document will be included in the ESIA Report as a standalone section.

- **Activity 5: Assessment of E&S Impacts, including a revised assessment of downstream impacts (integrating the most recent E-flows Assessment)**

The potential impacts of the Project and the Associated Facilities' activities during the planning, design, construction, operation and de-commissioning phase on the environment, social and health and safety aspects of the receptors will be identified. This impact assessment will take into account the sensitivity of parameters, nature, magnitude, effect, duration, reversibility, significance, etc., and follow good industry practice and methodologies for the assessment of impacts. It should also consider any legacy environmental and social risks and impacts which the Project may generate (e.g. closure of other Client facilities). E&S effects of climate change due to the implementation of the Project will be identified.

The impacts and risks assessment should draw on the conclusions of the separate Human Rights Risk Assessment (HRRA) to be undertaken, and should clearly identify the potential areas of human rights risks.

The ESIA must include the assessment of all of the Project's potential impacts on E&S topics identified in Activity 4. This should include those arising from Associated Facilities and integrate a summary of relevant data from the Cumulative Impact Assessment (CIA) that is being separately undertaken.

The key areas of potential impacts that may be considered include, but are not limited to, the following: *(specific guidance is provided for certain topics):*

- **Landscape and visual**
- **Land use**
- **Waste management**
- **Flood risks**
- **Sediments and fluvial geomorphology**

  This section will evaluate the impacts of the Project on sediment transport and fluvial geomorphology (both upstream and downstream consequences) and will fully integrate the results of the hydro-sedimentary study that is being undertaken separately. Both suspended and bedload sediment transport will be considered. Impacts on riparian and wetland habitats and consequences for the Majete Wildlife Reserve and Elephant Marsh will be discussed.

- **Biodiversity**

  Provide **a summary of the impacts** related to biodiversity values, alien invasive species, and ecosystem services as determined in the BAP workstream and cross reference the BAP for further details. This will require close liaison with the BAP Consultant.

- **Air quality**
- **Noise & vibration**
- **Water quality**
- **Greenhouse Gas Emissions**

  The Consultant should present an estimate of emission savings from the generation of renewable energy as this is one of the major Project benefits. The volume of CO_2 emissions that will be avoided per annum by the generation of renewable energy from the Project, as opposed to the volume of CO_2 that would be emitted by the generation of an equivalent amount of power from the current generation supplying Malawi's grid, should be estimated. This should include an estimation of greenhouse gas emissions from submergence of vegetation and land primarily at the reservoir area (e.g. biomass and soil carbon), emissions attributable to the construction phase, etc., using a recognized methodology (G-RES Tool from the IHA). If there are any potential emissions from the reservoir, emission reduction should be quantified on a gross and net basis.

- **Archaeology and cultural heritage**

- **Occupational health and safety and worker accommodation**

  This section should include discussion of construction-related impacts, including those associated with worker wellbeing, camps, road safety risks, hazardous materials, working at heights, etc.

- **Community health and safety**

  Includes evaluation of impacts on community health and safety, emergency response, influx of external labor into poor rural communities. Integrates Labor Influx management study results).

- **Infrastructure and utilities**
- **Socio-economic aspects including** land acquisition & involuntary resettlement, economic displacement, aspects related to Project-induced migration (cost of living, pressure on social services, crime, etc.), socio-economic development opportunities (jobs, capacity development, etc.).

The social impacts section will provide a summary of the potential impacts to people, their livelihoods and well-being, and include impacts that would cause physical or economic displacement, loss or reduction of livelihoods resulting from taking of land and/or loss or limitation of access to natural resources. This section should also include construction-related impacts, including those associated with community health and safety, emergency response and an influx of external labor into poor rural communities. It is expected that the results of the separate Labor Influx management study will be integrated into this section. Social impacts should also be cross-referenced to the RLRAP for further details and should consider potential impacts on host communities and risks or impacts associated with land and natural resource tenure and use (will require close consultation with the RLRAP consultant). As part of the social impact assessment, the Consultants should identify individuals and groups who may be differentially or disproportionately affected by the Project because of their disadvantaged or vulnerable status. This section should include an assessment of potential health impacts and impacts associated with Project-induced in-migration including potential gender-based violence (GBV), sexual exploitation and abuse (SEA) and sexual harassment (SH), child exploitation and labor, illicit behaviour (commercial sex, alcoholism, and drugs), the spread of HIV/AIDS, STDs etc...

Deliverable

The Consultant will deliver several drafts of the ESIA Report.

For each submitted Draft, the Consultant is also expected to attend a follow-up meeting (“FuM”) with the Project Company team (this FuM may be physical and/or held through a video-conference call) in which the draft of the ESIA Report will be presented by the Consultant and the key findings, impacts and mitigation strategies, and opportunities, highlighted.

- **Activity 6: Risk Assessment (including an updated climate risk assessment)**

Define what potential risks related to human activities and/or natural disaster could jeopardize the success of the Project or could aggravate its social and/or environmental impacts. This section will include at least the following elements:

- Climate Risk Assessment (CRA). This section should build on the CRA developed as part of the Preliminary ESIA and ongoing work being conducted by the Strategic Sponsor to quantify the impacts of climate change on river flows. The CRA should follow IHA guidelines on Climate Risk Assessment.
- Any other relevant potential risks such as erosion, watershed deforestation, catchment degradation, pandemic, epidemics, floods, droughts, collapse of coffer dam, etc. sedimentation risk, riparian encroachment, security risks, amongst others.

Deliverable

The Risk Assessment will be submitted as part of the E&S Impact assessment chapter (pending validation in the Inception phase).

- **Activity 7: Summary of the CIA results and delineation of Project-specific actions and mitigations**

A Project-specific CIA is being separately tendered by MHPL. A summary of its results should be presented as a specific chapter along with Project-specific additional actions/mitigations required based on the CIA.

Deliverable

The Consultant will deliver the CIA summary in compliance with the objectives set out above. This document will be included in the ESIA Report either as a standalone section or as a part of the E&S Impacts section (and integrated in the ESMP). The placement of this section will be determined during the Inception Phase.

- **Activity 8: Non-technical summary**

The Consultant shall prepare a Non-Technical Summary ("NTS") report, which concisely discusses meaningful information about the Project, its environmental and social footprint and impacts, significant findings and recommended actions in easily understandable (non-technical) language. The section will include a summary of the ESIA undertaken (Project description, baselines, impact analysis and mitigation measures for the environmental, social and health and safety negative and positive impacts) and a summary of the associated stakeholder engagement process.

Deliverables

The Consultant will submit the Non-Technical Summary (NTS) in English and arrange its translation into Chichewa language and any other relevant local languages (to be confirmed during the Inception Phase).

SYNTHESIS OF ESIA CONTENT REQUIREMENTS

The Consultant will propose in the final Inception report the proposed ESIA structure for Client and key stakeholder approval (GoM, IFC, WB). The structure and proposed content must meet all regulatory, WB ESF and IFC PS requirements. The Consultant may also refer to the Government of Malawi (GoM)'s Guidelines for Environmental Impact Assessment (1997) and Terms of Reference for ESIA for the Mpatamanga Project (2020) that provide guidance regarding GoM regulatory requirements. **Note that the Consultant is ultimately responsible for ensuring that all current regulatory and IFI requirements are adequately addressed within all deliverables**.

4.5 TASK 3 – ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY MANAGEMENT AND MONITORING PLANS (ESMPS)

The Consultant will ensure that all identified impacts and risks have matching mitigation measures within subject-specific ESMP sub-plans, as deemed relevant.

For each impact, the mitigation, monitoring and management measures to be taken during the various phases of the project (construction, commissioning, operations) to avoid, reduce, mitigate, or compensate for adverse environmental, social, and health and safety impacts will be presented.

In particular, for each identified impact the Consultant will establish:

- A set of mitigation measures that will include feasible measures to prevent significant adverse impacts or reduce them to acceptable levels. Such measures could include technical requirements, guidelines or procedures and practices to be implemented during design, construction and operation phases of the Project;

- A set of monitoring requirements that ensure that the identified mitigation measures are taken into account, appropriately implemented, and are sufficient measures for protecting the environment and environmental resources, local communities, and workers.

The ESMP should be designed in compliance with national government regulations, Good International Industry Practice (GIIP)[6], and WBG Safeguard and Performance Standards[7].

The current draft ESMPs should be significantly revised and strengthened based on:

i) feedback previously provided by the WBG, GoM and the Strategic Sponsor that has not yet been addressed;
ii) updated environmental and social baseline data; and
iii) updated impact assessment (both within the ESIA scope and in other scopes).

The identification and mitigation of **human rights risks** should be 'mainstreamed' throughout the ESMP documentation.

The ESMP should specifically take into account the following updated project information:

- Analysis of new sediment studies and proposed management measures.
- The ESMP and subplans will reflect the design changes and details presented as a part of this RFP Where design details are outstanding, these will be described with an explanation of who will take responsibility for finalising the ESMPs and the approximate time period for doing so.

The ESMP will clearly indicate roles and responsibilities for implementing each mitigation measure (Project Company, EPC Contractor). Specific subplans for EPC Contractor requirements will be developed.

The final ESMP should cover all applicable issues from WB ESS 1-10 and IFC PS1-PS8.

A Commitments Register should be developed as part of the ESIA and incorporated into the relevant subject specific ESMP sub-plans.

The ESMPs need to be developed by phase and should include tables that summarise the below information. Subject-specific ESMPs should have sections on pre-construction, construction, commissioning and operations. For Construction-phase ESMPs, a clear distinction of the roles and responsibilities of different responsible parties (Project Company, EPC Contractor) needs to be presented such that the document can be included in the EPC Contractor tender and contractual documents.

- Purpose.
- Scope *(identifying relevant components/geographical area plus sources of activities across the lifecycle that create the impact being managed).*
- Responsibility.
- Summary of main impacts and risks (for all lifecycle phases).
- Standards (national and international).
- Impact and risk avoidance and control measures, inclusive of a table summarising:
  i) impact to be addressed – from the ESIA.
  ii) control, management, mitigation and enhancement measures,
  iii) timing,
  iv) location.
- Monitoring program, inclusive of a table summarising;

[6] Including ICOLD, OSHA, Hydropower IHA Standard, World Health Organisation standards.

[7] WBG Safeguard and Performance Standards include World Bank ESF and ESS and relevant IFC Performance Standards.

i) monitoring topic,

ii) monitoring parameters,

iii) monitoring locations,

iv) monitoring frequency,

v) monitoring timing/duration

vi) responsibility

vii) Key Performance Indicators (KPIs) and targets.

The Consultant is required to provide plans of sufficient detail that they can easily be implemented with minimal additional specification (i.e. not just a summary plan) unless there is missing information or a requirement for input that is not currently available. If this is the case, the Consultant will indicate the necessary actions to obtain the missing information and the process for detailing the mitigation measure.

Where possible, the ESMPs should be developed to distinguish plans that are specific to the EPC Contractor from those for the Project Company, although it is acknowledged that certain plans will contain actions under both parties' responsibility. In such cases, the actions and respective responsibilities need to be clearly presented.

Below is a **preliminary** list of potential specific ESMP sub-plans that are anticipated to be necessary.

During the Inception Phase, the Consultant may propose a reorganization of the below listed Plans and identify the need for additional plans.

Note that during the preparation of the ESIA, the need for additional plans not listed in the Inception Phase Report may be identified.

1. Local Recruitment and Training Plan.
2. Grievance Redress Mechanism for workers.
3. Labour Management and Working Conditions (including Gender / GBV), and worker grievance management.
4. Gender Management Plan (including management of gender-based violence and harassment (GBVH); this could also be mainstreamed into all relevant plans).
5. Influx Management Plan[8].
6. Community Development Plan for the full Project Area of Influence; with a prioritized focus on Project Affected Households (PAHs) affected by physical and/or economic displacement.
7. Local Development Plan.
8. Benefit sharing program, covering both environmental and social aspects.
9. Cultural Heritage Protection and Management Plan, inclusive of Chance Finds Procedure[9].
10. Community Health and Safety (CHS) Management Plan, including Public Health.
11. Occupational Health and Safety (OHS) Management Plan (includes explosive storage, blasting, tunnelling etc).
12. Construction Camp Management Plan.
13. ESHS Training Management Plan.
14. Ecological Management Plan, including Restoration and Vegetation Plan.

[8] Drawing on outputs of GoM-commissioned Labour Influx Management Study.

[9] Drawing on GoM data collected to date by the GoM Department of Museums and Monuments.

15. Landscape restoration and Visual Management Plan.
16. Reservoir Management Plan inclusive of operational rules, monitoring of water quality and sediment, protocols for vegetation removal (if necessary), ecotourism, reservoir access and fishing activities management.
17. Sedimentation and Erosion Control Plan (reservoir and downstream).
18. Water Resource Management Plan, including as regards reservoir impoundment and operating procedures.
19. Pollution Prevention and Control Management Plan (including air emissions, noise, vibration, spill prevention, concrete/batch plant management, tunnel wastewater etc).
20. Hazardous Materials Management Plan.
21. Waste Minimization and Resource Efficiency and Conservation Management Plan.
22. Solid Waste and Wastewater Management Plan.
23. Procurement, Materials and Resource Management Plan (includes quarry, spoil, timber, water management).
24. Cumulative Impacts Mitigation Plan (summary and connect with the CIA).
25. Infrastructure and Services Management Plan (including as regards potential resettlement sites).
26. Climate Risk Management Plan.
27. Security Risk Management Plan.
28. Traffic and Transport Management Plan.
29. Dam Safety Plans (Risk assessment and presentation of plans to be prepared by the Project).
30. Emergency Preparedness and Response Plan.
31. Contractor E&S Management Plan (including Gender and GBV).
32. Monitoring, Performance Evaluation, and Reporting Plan.

The Consultant will also support the MHPL-led process of developing Environmental, Social, Health, Safety and Security (ESHS) clauses for the EPC Contractor tender and contract documents.

4.6 TASK 4 – BUDGET FOR ESMP

The Consultant will propose a complete budget for the ESMP and its implementation, as well as integrating budget summaries from other independent management plans (RLRAP and BAP in particular).

The budget for each mitigation measure in the ESMP must be presented, as well as the budget source(s).

The Consultant will review, update, validate and justify the costs associated with Environmental and Social Mitigation and Management including but not limited to cross referencing cost estimates in the RLRAP and BAP. The Consultant will revise all existing estimates regarding the cost of managing environmental and social aspects and the implementation and monitoring of proposed mitigation measures, as appropriate.

The ESMP budget needs to include at a minimum:

- Budget for all mitigation measures for all project stages, regardless of the responsibility for their implementation ;
- Allocations for the PIU, transportation, housing, salaries, office, field equipment, computers, etc.;
- Allocations for offset measures and all other types of compensation.

Each budgeted item will need to be split into the budget coming from the GoM, MHPL, Construction Contractors, etc.

The budget proposed must include a split between DEVEX, CAPEX and OPEX and provide justification for budget estimates including details on how proposed costs have been benchmarked against other relevant Projects (sector, scale, geography etc). The Consultant will indicate the uncertainty associated with each budget estimate and identify what, if any, actions can be undertaken to refine the budget estimate and reduce uncertainty.

4.7 TASK 5 – STAKEHOLDER ENGAGEMENT PLAN FOR ESIA AND ESMP PROCESS

The Consultant will develop a Stakeholder Engagement Plan (SEP) as a standalone document in line with the IFC and WB ESF requirements, **specific to the ESIA / ESMP process**. The SEP developed by the Consultant must be compatible with the Project-level SEP jointly developed by the Strategic Sponsor and GoM PIU. The ESIA SEP should recognize that stakeholder engagement is an ongoing process that involves: stakeholder analysis & planning, disclosure and dissemination of information, consultation & participation, grievance mechanism and on-going reporting to affected communities. In line with the requirements of IFC and WB, the SEP must be developed and scaled to the Project risks and impacts and be tailored to the characteristics and interests of the Affected Communities and key stakeholders.

The Consultant should build the SEP based on the environmental and social impact assessment outcomes taking into account local settings. The SEP should be developed to include the following:

- Identify all Project related stakeholders influenced by the Project inclusive of central governmental entities, local governmental entities, NGOs, local communities and CBOs; academic and research institutions; private sector companies; media organizations; and most importantly any vulnerable groups if applicable;
- Evaluate Project-related stakeholders to understand their priorities and relevance to the Project;
- Define the Project's approach to stakeholder engagement (post ESIA study, during construction and operations). Priority should be given to identification of engagement mechanisms that are: (i) culturally appropriate, (ii) scaled to the project risks and impacts, (iii) tailored to the characteristics and interests of the stakeholder groups' language preferences, and decision-making processes;
- Identify the objective of undertaking such consultation activities for each stakeholder group;
- Identify the phase of involvement of stakeholders. This will include: (i) summary of stakeholder consultations and engagement undertaken as part of the ESIA (scoping process, baseline, impact assessment, mitigation, etc.) and (ii) future engagement post-ESIA phase to be implemented across the four phases of project duration: planning, construction, operation, decommissioning;
- A detailed grievance/project complaints mechanism that is responsive and facilitates establishing and facilitating the resolution of stakeholders' concerns and grievances.

This SEP should describe the process planned to be undertaken to disclose project information; consulting key stakeholders and, where appropriate, incorporating responses into project design and mitigation. It should also list all key issues raised to date, who raised them (unless anonymous/confidential), and responses provided, as well as the dates and times of meetings held, details of how meetings were advertised, methods of info dissemination etc. (e.g. radio, TV, newspaper adverts, public meetings, small meetings / focus groups, key informant discussions). It should establish a Grievance Mechanism to record, evaluate, and address complaints or issues raised by stakeholders and to provide feedback to the ESMS.

Deliverables

The Consultant will submit the Stakeholder Engagement Plan, along with the Grievance Mechanism, in compliance with the applicable requirements.

4.8 TASK 6 – FINAL ESIA / ESMP

Based on comments received on deliverables from Tasks 2-5, the final ESIA and ESMP will be developed.

The ESIA report shall be organized according to the outline below:

- Executive Summary (with some maps and photos);
- Description of the proposed Project;
- Policy, legal and institutional framework for the ESIA;
- Analysis of Alternatives approaches for environment and social impacts, including the no Project scenario;
- Baseline of the environment and social conditions;
- Identification and evaluation of environmental and social impacts;
- Cumulative Impacts;
- Environmental and Social Management (and separate E&S Monitoring) Plans (ESMPs) including outlining the impacts, mitigation, implementing agent, monitoring, implementation schedule, and proposed team structure and capacity, in tabular form;
- Stakeholder Engagement Plan (SEP), in which the public consultation, participation and disclosure process on ESIA scope, findings and recommendations will be described in detail, including grievance mechanism;
- List of References;
- Appendices;
    - Records and evidence of Public Consultation;
    - List of Data and Unpublished Reference Documents.

Deliverables

The Consultant will submit the ESIA Report in line with the above requirements. The ESIA Report will be submitted in English.

The Consultant will assist the Client to have the final revised and approved document publicly disclosed.

The Non-Technical Summaries in English and Chichewa are to be presented as separate reports. The Non-Technical Summaries will need to be distributed in the Project affected areas in a manner in keeping with the local situation and ensuring access to vulnerable groups.

The Consultant is expected to attend a final meeting with the Project Company team and Lenders (to be determined if in-person or via video-conference call) in which the final ESIA will be presented and key factors highlighted.

4.9 KEY DELIVERABLES

The expected **key deliverables** associated with the Mpatamanga Project ESIA / ESMP are presented in the table below.

Deliverable
ESIA/ESMP Stakeholder Engagement Plan
ESIA including Budget
ESMPs including Budget
Non-Technical Summary (NTS)

4.10 TEAM PROFILE

The Consultant is expected to demonstrate the range of qualifications, skills, knowledge, and experience to effectively conduct this assignment including:

- Previous experience and working familiarity with WBG Safeguards, WB ESF & IFC Performance Standards;
- Malawi -specific resource knowledge and experience;
- Past-experience in the hydropower sector and/or similar industry sectors; and
- A multidisciplinary team of professionals trained in applicable fields of study, such as in environmental engineering, environmental sciences, biology, geology, social sciences, civil engineering, and/or archaeology.

The consulting firm (or consortium of firms) must meet the following minimum requirements:

- At least 15 years of experience in developing and implementing large and complex ESIAs and ESMPs in developing countries/emerging markets; preferably in the Sub-Saharan region.
- Project experience in ESIA planning and management.
- Project experience working with Governments to plan and coordinate ESIA and ESMP preparation.
- Proven track record of successful E&S assessment of projects under the framework of World Bank Operational Policies and/or Environmental and Social Framework (ESF) (2017), IFC Performance Standards (2012), Equator Principles 4, and World Bank Group EHS Guidelines.
- Proficiency in English and Chichewa, and partnership with a local consultant is preferred.

The Consultant's team is expected to have experts who are familiar with the local area and have the appropriate language skills and should include local experts wherever possible. For international consultants, association with Malawian specialists is encouraged unless the international consultant can demonstrate significant knowledge and experience of Malawi. The team should also have a gender balance and include Malawian team members if possible.

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