THE PUBLIC PRIVATE PARTNERSHIP COMMISSION

DIGITAL MALAWI ACCELERATION PROJECT (P505095)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

OCTOBER 2024

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Abbreviations and Acronyms

AIDS	Acquired Immunodeficiency Syndrome
CoC	Code of Conduct
COVID-19	Corona Virus Disease-19
CPP	Child Protection Plan
CSO	Civil Society Organisation
DMAP	Digital Malawi Acceleration Project
DPA	Data Protection Authority
E&S	Environmental and Social
EHSG	Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
EMF	Electromagnetic fields
EO	Environmental Officer
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
ESS	Environmental and Social Standards
ESSF	Environmental and Social Screening Form
FPIC	Prior and Informed Consent
GBV	Gender Based Violence
GRM	Grievance Redress Mechanism
HIV	Human Immunodeficiency Virus
IASC	Inter-Agency Standing Committee
ICT	Information, Communication and Technology
ID	Identity Document
IEC	Information, Education and Communication
IPV	Intimate Partner Violence
ITCZ	Intertropical Convergency Zone
IXPs	Internet Exchange Points
KPI	Key Performance Indicators
LAN	Local Area Network
LMP	Labour Management Plan
MACRA	Malawi Communications Regulatory Authority
MAREN	Malawi Research and Education Network
MCERT	Malawi Computer Emergency Response Team
MEPA	Malawi Environment Protection Authority
MITA	Malawi Information Technology Authority
MoID	Ministry of Information and Digitization

MoL	Ministry of Labour
NDS	National Data Strategy
NRB	National Registration Bureau
OHS	Occupational Health and Safety
PAD	Project Appraisal Document
PAPs	Project Affected Persons
PDO	Project Development Objective
PIM	Project Implementation Manual
PPE	Personal Protective Equipment
PPPC	Public Private Partnership Commission
PSC	Project Steering Committee
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SADC	Southern African Development Community
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
ToRs	Terms of References
ZAB	Zaire Air Boundary

Executive Summary

Project Background and Overview

The World Bank intends to provide technical and financial support to the Government of Malawi for the implementation of the Digital Malawi Acceleration Project (DMAP). The line ministry for the DMAP is the Ministry of Information and Digitization (MoID) but the project will be implemented by the Public Private Partnership Commission (PPPC). The development objective of DMAP is to increase access to, and inclusive use of, the internet and improve the government's capacity to deliver digitally enabled services.

The DMAP is structured into the following four main components:

- ***Component 1:*** Affordable Broadband and Secure Data Hosting focuses on expanding broadband coverage, particularly in rural areas, to achieve universal mobile broadband access. This component aims to target marginalised and climate-vulnerable communities by incentivising private sector investments through matching funds. It also includes upgrading mobile networks from 2G to 4G/5G, closing last-mile connectivity gaps for government institutions, including schools, and enhancing regional connectivity by addressing cross-border broadband links. Additionally, the component supports the national data centre, enabling cloud services, ensuring the safe migration of government data, and developing a National Data Strategy.
- ***Component 2:*** Interoperable and Secure Data Platforms is dedicated to improving digital ID systems and data exchange platforms. This involves transitioning to a next-generation digital ID, developing e-signatures, and facilitating cross-border recognition of IDs within the Southern African Development Community (SADC) region. The component also seeks to extend the Bomalathu government data exchange platform by on boarding more government agencies and expanding e-services. Furthermore, it focuses on harmonising regional policies to support digital integration and operationalising the Data Protection Authority (DPA) with an emphasis on strengthening cybersecurity resilience through the Malawi Computer Emergency Response Team (MCERT).
- ***Component 3:*** High-Impact Digital Services and Productive Digital Usage aims to boost digital skills, literacy, and entrepreneurship across Malawi. This component expands support to tech hubs, provides sub-grants to digital start-ups, and facilitates the establishment of tech entrepreneur associations. It also addresses device affordability by supporting initiatives to reduce costs and manage electronic waste. Additionally, the component explores key sectors such as social protection, financial inclusion, disaster response, and land management, promoting digital solutions to enhance efficiency and resilience in these areas.
- ***Component 4:*** Programme Management supports the establishment and operationalisation of the Malawi Information Technology Authority (MITA), ensuring a smooth transition from the existing e-government department. This component also encompasses programme management and coordination activities, covering

procurement, financial management, and adherence to environmental and social safeguards. It ensures effective communication, monitoring, evaluation, and security throughout the project's implementation

Objective of the ESMF

The main objective of the ESMF is to provide processes and procedure that the project will follow to screen environmental and social risks for the project components (and sub-component) in line with World Bank ESF requirements and national legislations in Malawi. It also provides guidance to project workers and others participating in the project components regarding the sustainable environmental and social management programs.

Potential Adverse Risks and Impacts

Environmental Risks and Impacts: The potential environmental risks and impacts for the proposed project include:

i. Terrestrial habitat alteration
ii. Loss of vegetation
iii. Increased risk of soil erosion and sedimentation of streams and rivers
iv. Increased generation of solid, hazardous waste and e-waste.
v. Increased air pollution due to greenhouse gas emissions to air.
vi. Increased noise pollution and excessive vibration.

Social Risks and Impacts: The potential social risks and impacts for project activities will include:

i. Loss of land or source of livelihood
ii. Risks of non-compliance with labour laws
iii. Risks related to unequal access to employment in local communities
iv. Data protection and privacy risks that include cyberbullying, cybersecurity, addiction, and exposure to illicit materials.
v. Exclusion from, and elite capture of, project benefits, particularly among vulnerable and marginalised groups, resulting in unequal distribution of opportunities and services.
vi. Increased incidences of Gender-based violence (GBV) including sexual exploitation and abuse (SEA) and sexual harassment (SH)
vii. Increased incidences of communicable disease
viii. Risk of child labour and forced labour.
ix. Potential traffic disruptions
x. Impacts on cultural heritage/ archaeological resources.

Occupation Health and Safety risks and impacts: The potential Occupation Health and Safety (OHS) risks may include:

i. Injuries from falling during work at height
ii. Injuries from using sharp objects and power tools

iii. Ergonomic hazards
iv. Increased risk of traffic accidents
v. Trips and slips
vi. Electrical injuries

Environmental and Social Risk Management

These environmental, social as well as occupational health and safety risks and impacts will be managed and mitigated through the application of Environmental and Social Screening Form (ESSF), preparation and implementation of ESMP and/or ESIA, Resettlement Action Plan (RAP), Waste Management Plan (including e-waste), LMP, SEP and Chance Find Procedures. These environmental and social safeguards instruments will be prepared during project planning phase and will be duly approved by the bank before project implementation phase as required in the ESCP.

Implementing the ESMF for the DMAP involves a multi-tiered approach, with the PPPC through the Project of Manager (PM), who shall be assisted by the Environmental and Social Safeguards Specialists shall overseeing national coordination. Environmental Officers (EOs) at the local council level will support the environmental and social screenings process and propose mitigation measures. Contractors are responsible for preparing and adhering to site specific environmental and social assessment instruments such as ESMPs/ESIA/RAP that may be required as a result of environmental and social screening process. The E&S screening report and the subsequent E&S instruments will be submitted to the World Bank and Malawi Environment Protection Authority (MEPA) for clearance prior to project implementation.

The estimated budget for ESMF implementation is US$557,000 and covers training, monitoring, and other related activities, ensuring compliance with national laws and World Bank standards throughout the project's lifecycle.

Chapter 1. Introduction

1.1 Project background information

The World Bank intends to provide technical and financial support to the Government of Malawi for the implementation of the Digital Malawi Acceleration Project (DMAP). The line ministry for the DMAP is the Ministry of Information and Digitization (MoID) but the project will be implemented by the Public Private Partnership Commission (PPPC). The development objective of DMAP is to increase access to, and inclusive use of, the internet and improve the government's capacity to deliver digitally enabled services. DMAP will be implemented national wide, focusing on expanding broadband coverage, particularly in rural and underserved areas, to achieve universal mobile broadband access. The project is expected to run for a period of six years from 2024 to 2030. The budget for the project is US$150 million.

1.2. Objective of the ESMF

The main objective of the ESMF is to describe the process for screening, assessing, addressing and managing safeguards issues for project components and sub-components whose precise locations are yet to be determined The ESMF also provides guidance to project workers and others participating in the project components regarding the sustainable environmental and social management programs.

Specifically, this ESMF has the following objectives:

- To describe components of the proposed DMAP.
- To recommend the environmental and social screening process for project sites and sub-project activities for environmental and social considerations.
- To review environmental and social policies and procedures of the Government of Malawi in the implementation of DMAP.
- Identify possible impacts and propose appropriate mitigation measures and assign roles and responsibilities for implementation; and
- To recommend appropriate capacity building and budget resources for environmental and social safeguards and monitoring in the project.

This ESMF should be read together with other plans prepared for the project, including the ESCP RPF, SEP, LMP and Grievance Redress Mechanism (GRM) Manual. These safeguards instruments will be disclosed on PPPC and World Banks websites when developed and approved.

1.3 Justification of the ESMF

The ESMF has been prepared as part of the World Bank's due diligence requirements for projects involving diverse subprojects with potentially varying environmental and social risks. This ESMF applies when the specific locations of subproject activities are not known. The subproject

locations will be known once detailed feasibility studies are completed and appropriate sub-project specific environmental and social assessments such as ESMP and in some cases, the sub-project Environmental and Social Impact Assessments (ESIA) will be prepared. The ESMF therefore provides a flexible framework to address potential environmental and social impacts while promoting sustainable development and inclusivity.

1.4 Methodology Used to Prepare the ESMF

The ESMF was developed through a participatory and inclusive process involving consultations with key national and district levels. The methodology involved:

- **Document Review:** A review of relevant national policies, legislation, and World Bank Environmental and Social Standards (ESSs), as well as previous environmental and social assessments related to digital infrastructure projects in Malawi. The review also included project documents such as the PAD, Project Implementation Manual (PIM), ESCP, SEP and other related documents.
- **Stakeholder Consultations:** From 26 August 2024 to 6 September 2024, engagement with government agencies and selected local councils (Blantyre, Chikwawa, Zomba, Dedza, Mchinji and Mzuzu) was conducted. The consultations were designed to gather input from these key stakeholders to ensure that their concerns and recommendations were incorporated into the ESMF for the DMAP project.
- **Risk Assessment:** Identification of potential environmental and social risks and impacts were done using World Bank risk screening tools, followed by formulating appropriate mitigation measures.

1.5 Potential Users of the ESMF

The ESMF is intended for use by a wide range of stakeholders involved in the DMAP, including:

- **Implementing Agency (PPPC**): To guide environmental and social management coordination and oversight throughout project implementation.
- **Contractors and Subcontractors:** To ensure compliance with environmental and social safeguards during project activities.
- **Government Agencies:** Particularly the Ministry of Information and Digitalization (MoID), MAREN, Malawi Communication and Regulatory Authority (MACRA) Ministry of Labour (MoL), and Malawi Environment Protection Authority (MEPA) to ensure alignment with national regulations.
- **Local Councils: District, city, municipal and community-level authorities:** To ensure proper monitoring and reporting on environmental and social issues in their respective areas.
- **World Bank:** To ensure compliance with the Environmental and Social Standards (ESSs) and provide oversight during project implementation.
- **Civil Society Organisations**: To support monitoring, advocacy, and ensure accountability in applying environmental and social safeguards.

- **Local Communities and Affected Persons:** To understand the environmental and social measures in place and to know their rights, including grievance mechanisms.
- **General Public:** To understand the project objectives, the environmental and social measures in place and the grievance mechanisms for the project.

Chapter 2. Project Description

This chapter provides an overview of the DMAP, focusing on its development objectives, components, and institutional arrangements. The chapter outlines how the project will enhance internet accessibility, improve government service delivery, and foster digital entrepreneurship across Malawi. DMAP aims to address key challenges in the country's digital landscape, including low internet penetration and high service costs, while contributing to broader national development goals such as economic growth, digital inclusion, and resilience to climate change. This chapter also presents the project's four main components, detailing the specific subcomponents and activities designed to achieve the project's objectives. By laying out the project structure and institutional framework, this chapter serves as a foundation for understanding the project's implementation approach and how it will address Malawi's digital transformation needs.

2.1 Project Development Objectives

The Project Development Objective (PDO) for DMAP is to increase access to and inclusive internet use and improve the government's capacity to deliver digitally enabled services in Malawi. This goal aims to enhance digital connectivity and improve the quality and availability of digital services to support broader development objectives in the country.

The Project has four main components, twelve subcomponents, and 31 activities, as shown in Table 2-1.

Table 2-1: Overview of project components

Component	Subcomponent	Activities
Component 1: Affordable Broadband and Secure Data Hosting. This component focuses on expanding broadband coverage in rural areas to achieve universal mobile broadband, targeting marginalised and climate-vulnerable communities	*Subcomponent 1.1: Rural Connectivity*	Expand broadband in rural areas.
		Upgrade 2G to 4G/5G.
		Close last-mile connectivity gaps for government institutions.
	Subcomponent 1.2: Education Sector Connectivity	Connect to 1700 secondary schools and 500 primary schools.
		Coordinate connectivity with renewable energy and digital skills training.
	Subcomponent 1.3: Regional Connectivity and Climate Resilience	Address gaps in cross-border broadband links.
		Integrated planning of digital corridors for Southern Africa.
	Subcomponent 1.4: Enhancing Data Hosting	Support national data centre.
		Enable cloud services.

Component	Subcomponent	Activities
	Capacity and Transition to Cloud Computing	Migrate government data to secure data centre.
Component 2: Interoperable and Secure Data Platforms. This component is dedicated to enhancing digital ID systems and data exchange platforms.	*Subcomponent 2.1: Next Generation Digital ID and Identity Verification Services*	Transition to cost-effective digital ID.
		Develop e-signatures.
		Secure digital authentication services.
	Subcomponent 2.2: Extending the Bomalathu Data Exchange Platform	Onboard more government agencies to the platform.
		Expand e-services portal.
		Develop APIs for public and private sectors.
	Subcomponent 2.3: Enhancing Policy and Regulatory Frameworks	Harmonize regional policy and regulatory frameworks.
		Operationalize the Data Protection Authority (DPA).
		Enhance cybersecurity resilience.
Component 3: High-Impact Digital Services and Productive Digital Usage. This component aims to boost digital skills, literacy, and entrepreneurship across Malawi. It expands support to tech hubs, provides sub-grants to digital start-ups, and facilitates the establishment of tech entrepreneur associations.	*Subcomponent 3.1: Support to Tech Hubs and Sub-Grants for Digital Start-ups*	Expand support to tech hubs.
		Provide sub-grants to digital start-ups.
		Establish tech entrepreneur associations.
	Subcomponent 3.2: Participation in Regional Program on Device Affordability	Reduce device costs.
		Develop e-waste management initiatives.
	Subcomponent 3.3: Sectoral Deep Dives in Social Protection, Disaster Response, Financial Inclusion, and Land Management	Digitize social protection services.
		Improve financial inclusion.
		Support land management through digital systems.
Component 4: Program Management This component supports establishing and operationalising the MITA and it also includes program management and coordination activities	*Subcomponent 4.1: Establishment of Malawi Information Technology Authority (MITA).*	Operationalize the newly created MITA.
		Embed consultants in MITA for smooth transition.
	Subcomponent 4.2: Program Coordination and Management	Oversee program coordination.
		Manage procurement, FM, ESS, and other standard project management functions.

2.2 Summary of Project Components and Subcomponents

A summary of the project components is described in the Project Information Document (PID) was disclosed on 10 April 2024 and can be accessed at: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099041024100022386/p50509518c82f00c19a87183ec87a3fa99?_gl=1*sa4j63*_gcl_au*MTA2MzEyOTc1OS4xNzIxODk5OTQ1

2.3 Institutional Arrangement.

The PPPC will coordinate project activities, including day-to-day implementation, coordination, supervision, and overall management. The PPPC will oversee the overall coordination of the DMAP and ensure that the various components and subcomponents are effectively implemented in line with project objectives.

The contact details for the PPPC are as follows:

Public Private Partnership Commission (PPPC)
2nd Floor, Livingstone Towers, Glyn Jones Road,
P.O. Box 937, Blantyre, Malawi
Phone: +265 1 824 282
Email: info@pppc.mw

In addition to the PPPC, several institutions will support the implementation of the project, each with specific responsibilities as follows:

- **The Ministry of Information & Digitalisation (MoID)** will provide technical expertise, policy guidance, and oversight to ensure the project's alignment with national digital strategies.
- **Malawi Research and Education Network (MAREN)** will handle the implementation of the Education Sector Connectivity component, working to connect educational institutions to the Internet.
- **National Registration Bureau** (NRB) will implement the Next Generation Digital ID component, focusing on the rollout of digital identification systems.
- **Malawi Communications Regulatory Authority (MACRA)** will oversee the regulation of internet service provision and cybersecurity measures within the project.
- **Malawi Information Technology Authority (MITA)** will support the transition to cloud computing and government data management, ensuring that data hosting and digital infrastructure meet international standards."

Chapter 3. Environmental and Social Policies, Regulations, and Laws

3.1 Malawi Legal Framework

Table 3-1 provides the Malawi policies, laws, and regulations relevant and directly applicable to subcomponent activities' environmental and social risks and impacts. Descriptions of laws and regulations should be brief and only describe elements applicable to subproject activities. The list includes laws and regulations prohibiting discrimination based on personal characteristics, such as gender, disability, and race.

Table 3-1: Malawi Relevant Legal Framework

Policy / Regulation / Law	Summary of Relevance to DMAP	Implications for DMAP Subprojects
National Environmental Policy (2004)	Promotes sustainable development through environmental management, including the need for Environmental Impact Assessments (EIA).	All subprojects must incorporate environmental sustainability, conduct Impact Assessments, and ensure minimal impact on natural habitats and biodiversity. On-going environmental monitoring and community engagement are essential.
National Gender Policy (2015)	Provides guidelines for gender mainstreaming to reduce inequalities and promote equitable participation.	Subprojects must ensure gender equality in employment, decision-making, and benefits from digital services, while also addressing gender-based violence and promoting economic empowerment of women.
Malawi National Land Policy (2002)	Regulates land administration, acquisition, and compensation, ensuring fair treatment and protection of property rights.	Subprojects involving land acquisition must ensure appropriate compensation and protection of property rights, conduct environmental impact assessments for sensitive ecosystems, and follow national land use planning objectives.
National Water Policy (2005)	Ensures sustainable water management, access to potable water, and adequate sanitation services.	Subprojects involving water use must incorporate measures to prevent environmental impacts on water bodies, implement water-efficient technologies, and engage the public in water management discussions.
National Energy Policy (2018)	Promotes access to affordable, reliable, and sustainable energy with a	Subprojects should integrate energy-efficient technologies, use renewable energy sources like solar power, and align with national energy goals to support sustainable digital infrastructure.

Policy / Regulation / Law	Summary of Relevance to DMAP	Implications for DMAP Subprojects
	focus on efficiency and conservation.	
The Constitution of the Republic of Malawi (1995)	The Constitution of the Republic of Malawi is the supreme law of the land. All other pieces of legislation or acts of government are valid to the extent of their consistency with the Constitution	Section 13 (d) provides for the State to manage the environment responsibly in order to prevent the degradation of the environment, provide a healthy living and working environment for the people of Malawi, accord full recognition to the rights of future generations by means of environmental protection and the sustainable development of natural resources; and conserve and enhance the biological diversity of Malawi. Section 30 provides for the State to take all necessary measures for the realization of the right to development. The State shall take measures to introduce reforms aimed at eradicating social injustices and inequalities. DMAP will strive to comply with these provisions in its operations.
Environment Management Act (2017)	Mandates protection and sustainable use of natural resources, requiring environmental planning and assessments.	Subprojects with environmental and social impacts must be screened and conduct a relevant assessment, either ESIAs or ESMP, adhere to environmental standards, engage communities in planning, and ensure continuous environmental monitoring and audits.
Public Roads (Amendment) Act (2017)	The Public Roads Act of 1962 as amended was enacted to consolidate and amend the law relating to Public Roads. In this Act the highway authority is assigned responsibilities for the construction, care and maintenance of any road or class of road in accordance with the Act.	The Public Roads Act provides for various instances when compensation may or may not be paid. Sections 44-50 of the Act provide for issues relating to compensation including assessment of compensation generally and for surface rights, compensation for land which becomes public land, matters to be taken into consideration in assessing compensation for alienated land and claims for compensation. The part also provides for procedures to be followed before a Land Tribunal and the right to apply to the High Court for judicial review if the claimant of highway authority is unhappy with a decision of the Land Tribunal
Land Laws (Land Act 2016, Customary Land Act 2016, Land Acquisition and	Regulates land acquisition, compensation, and categorization to ensure fair treatment and	Subprojects must follow legal procedures for land acquisition, provide fair compensation, prepare Resettlement Action Plans (RAPs), and ensure transparency in land-related decisions to protect community rights.

Policy / Regulation / Law	Summary of Relevance to DMAP	Implications for DMAP Subprojects
Compensation Act 2017)	property rights protection.	
Water Resources Act (2013)	Governs water management, conservation, and use, emphasizing pollution control and safe waste disposal.	Subprojects involving water use must obtain necessary licenses, implement strict pollution control, and adopt sustainable water management practices to protect water resources and ensure compliance.
Childcare, Protection and Justice Act (2010)	Provides legal protection for children, prohibiting exploitation and hazardous work.	Subprojects must prevent child labour, particularly in hazardous conditions, and establish mechanisms for reporting and addressing child protection concerns, ensuring community engagement and compliance.
Gender Equality Act (2013)	Prohibits sex discrimination, harmful practices, and mandates workplace policies to prevent sexual harassment.	Subprojects must implement gender equality policies, prohibit sex discrimination, and enforce workplace policies to prevent sexual harassment, creating a safe and respectful environment for all employees.
Trafficking in Persons Act (2017)	Prevents and eliminates trafficking, imposing penalties for trafficking and requiring due diligence in labour practices.	Subprojects must prevent the use of trafficked persons, conduct due diligence on contractors, provide training on trafficking prevention, and collaborate with authorities to ensure compliance and protect victims.
Disability Act (2012)	Prohibits discrimination based on disability and mandates accessibility and inclusion for persons with disabilities.	Subprojects must ensure accessibility, provide reasonable accommodations, and prevent discrimination against persons with disabilities, ensuring digital services are inclusive and align with the Disability Act.
HIV and AIDS (Prevention and Management) Act (2018)	Prohibits discrimination based on HIV status and mandates workplace HIV/AIDS policies.	Subprojects must ensure non-discrimination, privacy, and support for employees living with HIV, providing regular training on HIV prevention and management, and conducting audits to ensure compliance.
Occupation Safety Health and Welfare Act (1997)	Regulates workplace safety, health, and welfare, requiring safe work systems and accident prevention measures.	Subprojects must register workplaces, implement safe work systems, provide training, ensure proper material handling, and conduct regular inspections to maintain a safe work environment and comply with safety standards.

Policy / Regulation / Law	Summary of Relevance to DMAP	Implications for DMAP Subprojects
Employment Act (2000)	Sets minimum standards for employment, including prohibitions on child and forced labour, anti-discrimination, and equal pay.	Subprojects must enforce anti-discrimination policies, ensure equal pay, prohibit forced labour, and provide equal opportunities to all workers, promoting a fair and equitable work environment.
Public Health Act (1948)	Regulates public health, sanitation, waste management, and infectious disease prevention.	Subprojects must prevent public health risks, ensure proper waste management and sanitation, and comply with health standards for disease prevention, drainage, and sanitation facilities.
Forestry (Amendment) Act (2020)	Protects forest resources, requiring licenses for removal and promoting reforestation and compensation.	Subprojects involving forest products must obtain licenses, implement reforestation, provide compensation, and ensure compliance with forestry regulations to support conservation goals.
Telecommunication Act (2016)	Regulates communication services, establishing MACRA to oversee licensing, compliance, and consumer protection.	Subprojects must comply with MACRA regulations, obtain licenses, ensure reliable communication services, protect consumer interests, and adhere to international communication standards, promoting efficiency and competition.

3.2 National Environmental and Social Assessment and Permitting

MEPA manages environmental assessments and permits in Malawi, as outlined in the Environment Management Act of 2017. The ESIA/ESMP review and approval process follows these key steps:

- ***Submission of a Project Brief:*** A Project Brief is submitted to the Director General of MEPA. This document provides preliminary information about the intended project and summarises the outcomes of the initial screening process. The Project Brief is essential for informing MEPA about the proposed activities and their potential environmental and social impacts.

- ***Review of the Project Brief:*** The Director General of MEPA reviews the submitted Project Brief and conducts an internal screening to determine the appropriate level of environmental assessment required. This determination is based on the Government of Malawi's Gazetted “List of Prescribed Projects.” The screening process requires that an ESIA be undertaken if the project is a prescribed project or if it is likely to have significant or severe environmental and social impacts. An ESMP is required if the project will likely

have less severe environmental and social impacts. No assessment is required when it is unlikely to result in any significant environmental and social impacts. The table below summarises the environmental categorisations and requirements.

Table 3-2: MEPA Categorisation Requirements

Category	Criteria	Action Required
High Risk	Projects likely to cause significant adverse environmental and social impacts.	Full ESIA required.
Moderate Risk	Projects with potential adverse impacts, but of lesser magnitude.	ESMP required.
Low Risk	Projects unlikely to have significant adverse environmental impacts.	No assessment required.

3. ***Issuance of Terms of Reference (ToR):*** Following the review of the Project Brief, MEPA issues Terms of Reference (ToR) if an ESIA or ESMP is required. The ToR outlines the specific requirements and scope for the assessment, guiding the project developer in preparing the relevant reports.

4. ***Review and Approval of ESIA/ESMP Reports:*** Once the ESIA or ESMP report is prepared, it must be submitted to MEPA for review and approval. MEPA evaluates the report to ensure that it meets all regulatory requirements and adequately addresses the proposed project's environmental and social impacts.

3.3 World Bank ESF Standards

The project will follow the World Bank ESSs and the World Bank Group Environmental, Health, and Safety Guidelines (EHSG).

The World Bank's ESS applicable to project activities are summarised in table 3-3.

Table 3-3: Relevant World Bank ESS and Key Gaps with the National Framework

E&S Standard	Relevance
1. Assessment and Management of Environmental and Social Risks and Impacts	ESS1 is relevant for the project because project activities are expected to pose substantial environmental and social risks, such as e-waste generation, potential deforestation, and community health and safety risks. The ESMF will guide the assessment and management of these risks. ESIAs/ ESMPs, and Environmental and Social Audits will be conducted when specific sites and activities are identified.
2. Labour and Working Conditions	ESS2 is relevant for the project because there are significant labour-related risks for project workers, including (i) occupational health and safety risks, particularly related to construction activities, (ii) potential for

E&S Standard	Relevance
	sexual harassment in the workplace, and (iii) inadequate labour management practices. LMP has been developed separately to address these issues.
3. Resource Efficiency and Pollution Prevention and Management	ESS3 is relevant because the DMAP addresses aspects of resource efficiency, focusing on the efficient use of energy, water, and construction materials. It promotes using renewable energy sources, water conservation techniques, and sustainable building materials to reduce the project's environmental footprint. The project will also mainstream climate change adaptation and resilience. ESS3 is also relevant since the project involves the use of electronic devices and materials, leading to e-waste generation. Other waste streams such as solid and liquid wastes (including hazardous waste) will also be generated during the project life cycle. The ESMF has included an E-Waste Management Plan, to ensure safe collection, storage, and disposal. Other waste mitigation measures have also been included to promote effective waste management.
4. Community Health and Safety	ESS4 is relevant as the project will interact with communities, exposing them to risks such as accidents, e-waste hazards, and disease transmission. Ensuring community health and safety will be a priority. Though focused on road reserves and government facilities, the project will inevitably affect community access points, particularly where trenching crosses paths, and may cause noise during underground work.
5. Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	ESS5 is relevant due to the need for land acquisition for installing infrastructure such as fibre cables and towers, which may lead to resettlement and restrictions on land use. The project will utilize road reserves and Government owned land to avoid any involuntary displacements from personal property. An RPF has been developed to provide guidance if land has to be acquired.
6. Biodiversity Conservation and Sustainable Management of Living Natural Resources	ESS6 is relevant because the project may impact biodiversity through activities such as land clearing for infrastructure. The project will not affect wetlands and Protected Areas like wildlife reserves, forests and parks. However, laying fibre optic in road reserve site clearance may affect site biodiversity and utilisation of antennas could also impact on avifauna.
8. Cultural Heritage	ESS8 is relevant given the fact that it involves point excavations for pits and trenching and the project shall develop and rely on a chance finds procedure. The chance finds procedure has been included in the ESMF.
10. Stakeholder Engagement and Information Disclosure	ESS10 is relevant for all projects, including this one, given the need to systematically engage with a diverse range of stakeholders at national, district, and community levels. The project will implement a SEP and a GRM.

3.4 Gaps between World Bank ESF and the National Legislation

There are some gaps between existing laws of the country and World Bank's ESSs. Gaps between Malawi laws including policies related to environmental and social risk management and suggested gap filling measures are discussed in Table 3.4.

Table 3-4 Gaps between World Bank and the National Legislations in Malawi

WB ESF Standard	Gaps in Malawian Legislation
ESS1: Assessment and Management of Environmental and Social Impacts and Risks	The overarching Act related to this standard is the Environment Management Act (2017) and the following are the identified gaps: i. There is no provision for environmental and social screening of projects whose activities and locations are not known. ii. ESIA study screening and scoping do not guarantee coverage of all ESS standards in the assessment. iii. The stakeholder engagement during the conduct of the ESIA is limited and the final ESIA reports are not disclosed. To resolve this gap the project has prepared the ESMF to provide guidance in situations where these gaps exist.
ESS2: Labour and Working Conditions	The Occupational Safety, Health, and Welfare Act (1997) is the Act related to ESS2 and the following are the identified gaps: i. The Act does not specifically require that development be assessed and reviewed in terms of labour and working conditions including OHS requirements before approval. ii. The Act does not require development projects to prepare LMP or Occupational Health and Safety (OHS) Plan. The project has prepared LMP that will guide in addressing specific issues captured under ESS2. A framework for the OHS Plan is an annex to this ESMF.
ESS3: Resource Efficiency and Pollution Prevention and Management	Existing environmental, energy and water conservation policies, laws and regulations do not require development projects to assess resource efficiency issues including issues related to climate change adaptation and resilience. The project will ensure that DMAP environmental and social assessments reports such as ESMPs, LMP are developed in line with the ESMF where gaps under ESS3 will be considered and handled.
ESS4: Community Health and Safety	The provisions related to ESS4 mainstreamed in the Environment Management Act (2017) and is among the issues emphasized during scoping stage of the ESIA process in Malawi. However, systems do not provide clear requirements for the development project and implementation.

WB ESF Standard	Gaps in Malawian Legislation
	The project will ensure that ESMP documents are developed in line with the ESMF where gaps under ESS4 will be considered and handled.
ESS5: Land Acquisition, Land Use Restriction, and Involuntary Resettlement	The Land Acquisition Act has provisions related to the ESS5 and key differences are the following: i. Does not require the preparation of RAP; ii. Does not provide compensation or assistance to those who do not have formal legal claim to the land; iii. Does not provide transitional allowances for restoration of livelihoods for informal settlers; iv. Relies on cash compensation, no developmental objectives; v. No provision to give special attention to the vulnerable groups. vi. Valuation of lost asset is not based on "replacement cost' standard. The project has developed RPF and where applicable, RAP will be prepared to guide procedures in addressing the identified gaps.
ESS6: Biodiversity, Conservation and Sustainable Management of Living Natural Resources	No equivalent requirements on: i. The application of hierarchy of measures. ii. The preparation of Biodiversity Management Plan. iii. Differentiated measures on types of habitats. iv. Conduct of due diligence on primary suppliers. The DMAP will ensure that ESMPs are developed in line with the ESMF where gaps under ESS6 will be considered and handled.
ESS8: Cultural Heritage	No equivalent requirements on: i. The application of hierarchy of measures. ii. The development of Cultural Heritage Management Plan. iii. The development and adoption of project-specific Change Find Procedures. iv. The engagement of cultural heritage experts. The DMAP will develop Chance Find Procedures through ESMPs be developed.
ESS10: Stakeholder Engagement and Information Disclosure	The ESIA guidelines recommends public consultations during scoping and the preparation of the ESIA report. However, there is no provision for any stakeholder engagements during project implementation. The DMAP has developed a SEP that will guide procedures in addressing the identified gaps.

Chapter 4. Environmental and Social Setting of the Project

4.1 Location and Size

Malawi is a sub-Saharan African country located south of the equator. Tanzania borders it to the north and northeast, Mozambique to the east, south, and southwest, and Zambia to the west and northwest. Malawi has a length of 901 kilometres and a width varying from 80 to 161 kilometres, covering a total area of approximately 118,484 square kilometres. Of this, 94,276 square kilometres is land, while Lake Malawi, covering about 20% of the country, dominates the remainder. Lake Malawi is the third-largest lake in Africa, stretching over 475 kilometres and serving as a significant physical and economic resource for the country. The country is geographically divided into the Rift Valley floor, escarpments, hills, plains, and plateaus. Fertile soils in the Rift Valley floor and plains, such as the Lilongwe-Kasungu and Phalombe Plains, support major agricultural activities. Typical crops include maize, tobacco, rice, pigeon peas, and groundnuts. Administratively, Malawi is divided into three regions (Northern, Central, and Southern) and 28 districts, with most of the population residing in rural areas that lack robust ICT infrastructure. The DMAP aims to bridge this gap, emphasising improving rural connectivity, which will benefit sectors such as agriculture through real-time access to information on inputs and market opportunities.

4.2 Malawi's Physical Environment

4.2.1 Climate

Malawi experiences a tropical continental climate that Lake Malawi heavily influences. The climate is characterised by two main seasons: the rainy season from November to April and the dry season from May to October. Between May and July, more excellent conditions prevail, especially in high-altitude areas, where occasional drizzles, known as "Chiperoni rains," occur.
Annual rainfall ranges from 725mm to 2,500mm, with notable regional variations. For example, Lilongwe receives an average of 900mm of rainfall annually, Blantyre 1,127mm, Mzuzu 1,289mm, and Zomba 1,433mm. The topography and proximity to Lake Malawi influence rainfall distribution. High-altitude areas such as Mulanje, Nyika, and Viphya Plateaus experience the highest rainfall, while low-lying areas, such as the Shire Valley, receive less. In recent years, climate variability has resulted in extreme weather events, such as the 2019 Cyclone Idai, which led to widespread flooding in southern Malawi.

Rainfall patterns are primarily driven by the Inter-Tropical Convergence Zone (ITCZ), which moves north and south across the country during the rainy season. Other contributing systems include the Zaire Air Boundary (ZAB), tropical cyclones, and easterly waves. The DMAP project must account for these climatic factors, especially in the design and installation of infrastructure in flood-prone or drought-affected areas.

4.2.2 Morphology, Relief, and Drainage

Malawi's landscape can be divided into four central physiographic units: Highlands, Plateaus, Rift Valley Escarpments, and Rift Valley Plains. These diverse terrains contribute to the country's complex drainage system, consisting of 17 water resource areas and 78 water resource units. Key rivers include the Shire, Bua, Linthipe, Songwe, and South Rukuru. Groundwater resources are also significant, particularly in the lakeshore plains and Lower Shire River, where aquifers provide critical water supplies for agriculture and domestic use.

4.2.3 Geology and Soils

Malawi's soils are highly variable, with alluvial soils in the Rift Valley being nutrient-rich and supporting agricultural production. Other soil types include:

- Latosols: Red-yellow soils found in areas like the Lilongwe Plain, which are fertile and suitable for maize, tobacco, and groundnut cultivation.
- Lithosols: Shallow, stony soils typically found on steep slopes.
- Hydromorphic soils: These are found in seasonally or permanently waterlogged areas such as dambos and floodplains.
- Calcimorphic soils: Present in riverine plains, they support agriculture in regions like the Lower Shire Valley.

Malawi also has a growing mining sector, with mineral resources including uranium, coal, gemstones, and rare earth minerals. These resources contribute to economic development and pose environmental risks such as deforestation, water pollution, and soil degradation.

4.3 Natural Resources

4.3.1 Vegetation

Malawi's vegetation includes diverse savannah woodlands, forests, and grasslands. Dry savannah woodland is the dominant vegetation type, particularly in the Rift Valley, where the DMAP project will be implemented. Key tree species of economic value include *Adansonia digitata* (baobab), *Faidherbia albida*, and *Khaya anthotheca* (African mahogany). However, deforestation and land degradation are significant concerns. Recent data indicates that Malawi's forest cover continues to decline. According to Global Forest Watch, Malawi had 1.38 million hectares of natural forest in 2010, which covered about 12% of the country's land area. By 2023, Malawi lost approximately 20.3 thousand hectares of natural forest. The National Forest Inventory conducted in 2018 also highlights the ongoing challenges with deforestation and the need for forest management strategies to conserve biodiversity and mitigate land degradation. This updated data emphasizes the importance of protecting Malawi's vegetation, which consists of savannah woodlands, forests, and grasslands, particularly in project implementation areas such as the Rift Valley.

Effective management of economically valuable tree species and protected areas remains crucial in combating deforestation and promoting sustainable land use.

4.3.2 Wildlife

Malawi has nine national parks and wildlife reserves, including Nyika National Park, Kasungu National Park, and Liwonde National Park. These areas provide habitats for endangered species such as the African elephant, African wild dog, and cheetah. The DMAP project, through its implementation in remote and rural areas, will need to take measures to mitigate potential impacts on wildlife habitats, especially in protected areas.

4.3.3 Water Resources

Lake Malawi is a dominant feature of the country's hydrology, with a surface area of approximately 22,490 square kilometres. Other significant water bodies include Lakes Chilwa and Chiuta, and major rivers such as the Shire. However, pollution from agriculture, untreated waste, and industrial runoff poses a significant threat to water quality. The DMAP project will need to ensure that its infrastructure, particularly in lakeshore areas, does not contribute to further degradation of water resources.

4.4 Socio-Economic Environment

4.4.1 Population Dynamics

According to the 2018 Malawi Population and Housing Census, Malawi's population was projected to be over 20 million in 2024 of which 50.1% male and 49.9% female). The population is predominantly rural, with principal ethnic groups include the Chewa, Yao, Tumbuka, and Lomwe. The official language is English, while Chichewa is the most widely spoken local language. The population density of Malawi is approximately 158 people per square kilometre, with the highest densities in urban areas such as Lilongwe and Blantyre. The country has one of the highest population growth rates in the world, with a fertility rate of 4.4 children per woman (NSO, 2022). This rapid population growth places significant pressure on natural resources, infrastructure, and services, which the DMAP project aims to address by improving access to ICT in underserved areas.

4.4.2 Economic Overview

Malawi's economy is predominantly agricultural, contributing about 30% to the country's gross domestic product and employing over 80% of the labour force. Tobacco remains the leading export crop, followed by tea, sugar, and coffee. However, the service sector, particularly telecommunications, has grown rapidly, driven by increased mobile phone and internet penetration. According to the 2022 World Bank report, Malawi's GDP growth was 1.2%, recovering from the economic impacts of the COVID-19 pandemic and ongoing climate-related

challenges. The DMAP project aims to boost economic growth by improving digital infrastructure and services, facilitating e-commerce, and promoting ICT in education, health, and agriculture.

4.4.3 Education

Malawi has made significant strides in improving access to education. According to the 2022 Malawi Education Statistics report, the primary school enrolment rate is over 90%, but secondary school enrolment remains low, particularly for girls. The DMAP project is expected to improve access to school digital resources, support e-learning initiatives, and bridge the education gap, particularly in rural areas.

4.4.4 Energy

Malawi's energy sector faces significant challenges, with only 14% of the population having access to electricity. Most rural areas rely on biomass for energy, contributing to deforestation. The DMAP project can potentially promote renewable energy solutions, such as solar power, to support ICT infrastructure in off-grid areas.

4.4.5 Tourism

Tourism in Malawi remains underdeveloped but offers significant potential, particularly in areas surrounding Lake Malawi and national parks. Expanding digital infrastructure under DMAP will enhance tourism by improving online marketing, booking systems, and access to information for tourists.

4.4.6 ICT Access in Malawi

Malawi's ICT landscape has experienced significant growth in recent years, but access to these technologies remains uneven, particularly between urban and rural areas. Mobile phone penetration stands at around 44.5%, while internet penetration is estimated at 14%, a significant improvement from less than 7% in 2015. However, access to ICT, particularly mobile internet, shows substantial disparities between urban and rural areas. Urban areas have better access due to expanded network infrastructure, whereas rural areas face limited network coverage, high costs, and lower digital literacy. There is also a gender disparity in mobile phone ownership and usage. Globally, women in low- and middle-income countries, including Malawi, are less likely to own mobile phones than men. This is due to factors like lower income levels and societal norms. However, the high cost of internet services and limited coverage in rural areas continue to be major barriers to widespread ICT access. The country's mobile communication market is dominated by two major service providers, Airtel Malawi and Telekom Networks Malawi (TNM). Both have made efforts to expand their 4G networks, and plans are underway to roll out 5G services in urban centres. Despite this, rural areas remain underserved, with poor network coverage and high data costs limiting digital inclusion.

4.4.7 Land Use Planning

Land use in Malawi is heavily dominated by agriculture, with over 80% of the population relying on farming as their primary source of livelihood. Most agricultural land is held under customary land tenure, with little formal registration or documentation. This creates land use planning and development challenges, especially in rural areas where informal landholding systems predominate. Rapid urbanisation has also increased pressure on land, especially in cities like Lilongwe, Blantyre, and Mzuzu. This urban expansion has been accompanied by the proliferation of informal settlements, leading to land management, infrastructure development, and service provision challenges. Rural land use remains predominantly agricultural, with limited infrastructure and services. The absence of formal land registration systems complicates development projects, as land acquisition can lead to disputes or displacement of communities. However, implementing projects like the DMAP, which focuses on improving rural connectivity, requires careful planning to ensure land use decisions do not negatively impact local communities. Sustainable land use planning, with a focus on protecting natural resources and ensuring equitable access to land, is crucial for the success of such projects.

4.4.8 E-Waste Management

Malawi faces a growing challenge with electronic waste (e-waste) due to the increasing use of electronic devices such as mobile phones, computers, and other digital equipment. As more people access these technologies, the volume of discarded electronics is rising, yet the country lacks a formal system for managing e-waste. Most e-waste in Malawi is improperly disposed of in local council's authorised dumpsites or incinerated, leading to environmental pollution and health risks. The toxic substances in e-waste, such as lead, mercury, and cadmium, pose significant risks to human health and the environment when not handled properly. There is limited public awareness on the dangers associated with e-waste, and the lack of proper disposal or recycling facilities exacerbates the problem. The DMAP offers an opportunity to address issue-waste management by promoting the establishment of e-waste collection points and recycling initiatives. Additionally, public awareness campaigns on the safe disposal of electronic devices could be incorporated into the project, helping to reduce the environmental impact of discarded electronics. Furthermore, partnerships with private sector companies involved in ICT could help establish more sustainable e-waste management practices, ensuring that obsolete devices are recycled or disposed of safely.

4.4.9 Health and Safety

The health and safety of workers in Malawi, especially in the construction and infrastructure sectors, remain a critical concern. Many workers, particularly those employed in informal settings, are exposed to hazardous working conditions due to the lack of proper safety measures and enforcement. Poorly maintained equipment, inadequate training, and limited access to personal protective equipment (PPE) increase the risk of accidents and injuries. Malawi's construction industry, which will be central to implementing the DMAP, is characterised by high-

risk activities such as working at heights, exposure to dust and chemicals, and handling heavy machinery. Safety protocols and regulations exist but are often poorly enforced, particularly on smaller or informal construction sites. The DMAP project will need to prioritise the health and safety of its workforce by ensuring that contractors adhere to safety standards. Regular training on health and safety practices, provision of PPE, and proper supervision of high-risk activities are essential to minimising accidents and ensuring worker safety. Monitoring mechanisms should be implemented to ensure compliance with health and safety standards throughout the project's implementation.

4.4.10 Working Conditions in the Construction Sector

The working conditions in Malawi's construction sector are characterised by a high degree of informality, with many workers lacking formal contracts, social protection, or access to fundamental rights such as safe working conditions. The construction sector employs many workers, particularly in urban areas, but most jobs are temporary, poorly paid, and involve unsafe working environments. Construction workers are often exposed to various hazards, including working at heights, handling heavy equipment, and exposure to dust and noise. Safety training is often inadequate, and many workers lack protective equipment to prevent injuries. Additionally, the lack of formal employment contracts leaves many workers without access to social security benefits or legal recourse in the event of injury or unfair treatment. In Malawi, the construction sector is male-dominated, reinforcing gender discrimination and creating conditions ripe for Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH). Women face limited access to skilled jobs, unequal pay, and a lack of training opportunities, which leaves them in more vulnerable positions. The hostile work culture, power imbalances, and insufficient reporting mechanisms further exacerbate the risk of SEA/SH. Additionally, economic pressures and the fear of job loss force women to tolerate inappropriate behaviour, perpetuating a cycle of discrimination. Effective interventions require promoting gender-sensitive policies, improving women's access to training and skilled roles, and establishing strong, confidential reporting systems to address SEA/SH in the sector.

4.4.11 Vulnerable Populations

In Malawi, vulnerable populations such as women, children, the elderly, persons with disabilities, and marginalised communities face distinct socio-economic challenges, often exacerbated by limited access to resources and services. Women, especially in rural areas, are vulnerable due to factors such as poverty, limited access to education, and unequal ownership rights. Many women are engaged in informal, low-income activities, and their access to technology is restricted, further marginalising them in a rapidly digitalising world. This limited access restricts their participation in economic and social advancements driven by ICT. Children, particularly those in rural and marginalised communities, are at risk of exploitation and face barriers to education due to poverty and lack of infrastructure. Children in these areas often engage in child labour to supplement household income, and limited access to educational resources hampers their future

opportunities. Furthermore, exposure to unsafe digital content or environments can disproportionately affect children, especially as digital access increases.

The elderly in Malawi, especially in rural settings, are often excluded from technological advancements due to their lack of familiarity with digital tools. They typically rely on traditional means of communication and often lack the support to engage with new digital platforms, leaving them vulnerable to isolation. Persons with disabilities encounter significant barriers to accessing education, employment, and public services. This is further compounded by inadequate infrastructure and digital resources that are not adapted to their needs. They are often excluded from mainstream social and economic activities due to a lack of accessible digital platforms and assistive technologies. Finally, marginalised communities in remote areas are disproportionately affected by a lack of access to essential services, including ICT. They often face higher levels of poverty, poor infrastructure, and fewer educational opportunities, which contribute to their ongoing exclusion from economic and social progress.

Chapter 5. Potential E & S Risk Impacts and Standard Mitigation Measures

This chapter identifies the potential impacts of the activities proposed under the project. The identified impacts apply to the socio-economic and bio-physical environments. These impacts can be positive or negative and direct or indirect.

5.1 Analysis of Project Activities with Potential Environmental and Social Impacts

The Digital Malawi Acceleration Project (DMAP) is designed to significantly enhance digital connectivity across Malawi, focusing on rural areas, government services, and digital infrastructure. While the project is poised to deliver substantial benefits regarding internet access and digital services, certain activities under its components pose potential environmental and social risks. The most significant risks are in components 1 and 2 of the project.

5.1.1 Expanding Rural Connectivity and Broadband Access

One of the core activities under DMAP is expanding broadband access in rural areas, particularly under Sub-component 1.1: Rural Connectivity. This initiative involves building new broadband towers to underserved regions, laying fibre-optic cables, and other telecommunications infrastructure to bring high-speed internet to underserved public offices and schools. While these developments are crucial for bridging the digital divide, they also present environmental and social challenges.

The construction activities required for expanding connectivity could lead to land acquisition issues, potentially resulting in the displacement of communities or the disruption of local land use patterns. Moreover, installing infrastructure in ecologically sensitive areas might adversely affect local biodiversity, disturbing wildlife habitats and ecosystems. There are also community health and safety concerns, as increased construction activity can pose risks to the well-being of local populations. To address these challenges, the project must employ careful site selection to avoid ecologically sensitive areas and minimise land acquisition impacts. Engaging with local communities and maintaining open lines of communication will be vital in mitigating these risks.

5.1.2 Enhancing Data Hosting Capacity and Transition to Cloud Computing

Another critical component of DMAP involves migrating government data to a secure data centre. as outlined in Sub-component 1.4: Data centres are essential for supporting the government's digital services. Still, they are also known for their high energy consumption, which can lead to increased greenhouse gas emissions if not managed properly.

In addition to the environmental impacts of energy use, data centres generate e-waste as older servers and IT equipment are replaced. Without proper e-waste management protocols, this waste can pose significant environmental hazards, including soil and water contamination. The

project must prioritise using energy-efficient technologies in data centres and explore renewable energy options where feasible. Additionally, establishing robust e-waste management systems will be crucial to minimise the environmental footprint of these facilities.

5.1.3 Implementing Next-Generation Digital ID and Identity Verification Services

Under Sub-component 2.1: Next Generation Digital ID and Identity Verification Services, the project aims to implement biometric systems and digital identity verification infrastructure across Malawi. While this initiative will enhance the security and efficiency of government services, it also introduces privacy, data security, and social inclusion risks.

Collecting and storing biometric data carry inherent risks, particularly concerning breaches and unauthorised access. This could lead to the misuse of personal information, posing significant privacy concerns. Furthermore, there is a risk that marginalised populations, such as those without prior digital or biometric records, may be excluded from the benefits of these services. To mitigate these risks, the project must implement stringent data security measures to safeguard personal information against breaches. Additionally, inclusive policies and outreach programs will be necessary to ensure that all citizens, particularly vulnerable groups, can access and benefit from the new digital ID systems.

5.1.4 Managing E-Waste from Increased IT Equipment Usage

The project's focus on increasing access to affordable smart devices, particularly under Sub-component 3.2: Participation in the Regional Program on Device Affordability, is expected to significantly raise the circulation of smartphones, computers, and other IT devices in Malawi. While this initiative is essential for promoting digital inclusion, it raises concerns about managing electronic waste (e-waste).

E-waste contains hazardous materials such as lead, mercury, and cadmium, which can pose serious environmental and health risks if not disposed of properly. The improper handling of e-waste can contaminate soil and water sources, impacting both ecosystems and human health. The project must implement comprehensive e-waste management strategies to address these risks, including establishing collection and recycling programs. Public awareness campaigns will also be crucial in educating users about proper disposal practices to ensure that e-waste is managed environmentally.

5.2 Anticipated Environmental and Social Impacts for the proposed project

All the potential environmental and social risks and impacts anticipated are expected to be generated predominantly by two project components, particularly components 1 and 2 of the DMAP. Table 5-2 summarises anticipated environmental and social Impacts, proposed enhancement/mitigation measures and responsibilities associated with DMAP.

Table 5-2: Environmental and Social Risks and Mitigation Measures

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
Positive impacts				
Reduced need for travel thereby minimizing the emission footprint	Use of ICT will reduce the need for movement of people from one location to another which helps increase efficiency as potential time spent on movement is reduced.	• Promote the adoption of virtual meetings and e-services to reduce the need for physical travel. • Encourage investment in expanding ICT infrastructure to improve internet connectivity, especially in rural areas. This would facilitate more virtual meetings, e-governance services, and telemedicine, reducing the need for physical travel. • Launch a campaign to educate the public on the benefits of virtual interactions and encourage sustainable travel practices. • Develop guidelines for sustainable digital infrastructure to ensure energy efficiency and minimization of carbon footprint.	PPPC, MITA, MACRA, MAREN	Throughout the operation phase
De-materialization and reduction of resource needs in records storage	This refers to replacement of physical production and distribution of music, video, books, and software, etc., by the delivery of digital information over the network. De-materialization reduces resource consumption and waste generation.	• Promote digitization of government and institutional records to reduce paper use. • Implement e-learning platforms for educational institutions, reducing the need for physical textbooks. • Encourage cloud storage for institutions to reduce physical	PPPC, MAREN, MACRA MITA	Throughout the operation phase

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
		storage space needs and resource consumption.		
Improved education, health and other social systems and the new job categories that come with it	New ways of learning, e.g., interactive multi-media and virtual reality could mean schools would be able to undertake practical lessons in virtual laboratories, or even share virtual laboratories with training institutions overseas. ICT also provides new job and working opportunities, e.g. flexible and mobile working, virtual offices and jobs in the communications industry. *Improved access to healthcare services*: With ICT, a doctor in Malawi would easily consult a specialist colleague overseas when executing a complex medical procedure/ operation. *New tools, new opportunities:* The other big effect of ICT is that it gives access to new tools that did not previously exist. A lot of these are tied into the access to information mentioned above, but there are many examples of stand-alone ICT systems as well: *ICT can and will be used for processes that had previously been out of reach*	• Develop e-learning curriculums and virtual labs in schools and universities. • Implement specific ICT training programs to equip students with digital skills required for emerging job markets. • Provide incentives for the development of tech hubs and start-ups to create more digital jobs. • Encourage innovation in ICT by providing grants for projects that use digital tools to solve community issues. • Promote inclusivity by implementing assistive technologies (screen readers, magnifiers) for disabled individuals in educational institutions and workplaces. • Establish telemedicine programs to connect rural healthcare centres with specialists. • Provide ICT training for healthcare providers to enhance their ability to use digital health tools.	MAREN, Ministry of Education, Ministry of Health	Throughout the operation phase

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
	of most individuals, e.g. photography, where digital cameras, photo-editing software and high-quality printers have enabled people to produce results that previously required a photographic studio. *ICT can be used to help people overcome disabilities*, e.g., screen magnification or screen reading software enables partially sighted or blind people to work with ordinary text rather than Braille.	• Partner with international healthcare institutions to offer advanced virtual medical services.		
Creation of markets for raw materials	Some of the construction materials will be procured locally and this will provide revenue to the local economy. Some of the materials that will be procured locally will include wooden poles from certified sustainable forests in the country. The proceeds from the sale of the raw materials to the construction activities at the proposed project will boost the local economy in form of increased earnings.	• Ensure that local suppliers are prioritized during procurement processes. • Implement transparent bidding processes to promote fairness and economic inclusion. • Procure materials from tax compliant and licenced vendors.	PPPC, Contractors	Throughout the construction phase
Increased access to information	Possibly the greatest effect of ICT on individuals is the huge increase in access to information and services that has accompanied the growth of the Internet. Some of the positive	• Where possible meetings will be held online and soft copy will be encouraged rather than hard copies. • Implement information campaigns on the benefits of safe internet use	PPPC, MACRA, MITA	Throughout the operation phase

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
	aspects of this increased access are better, and often cheaper, communications, such as phone and Instant Messaging. In addition, use of ICT to access information has brought new opportunities for leisure and entertainment, make contacts and form relationships with people around the world, and the ability to undertake online transactions and obtain goods and services (e.g. online courses) from a wider range of suppliers outside Malawi without use of middlemen.	for education, healthcare, and economic activities. • Strengthen digital literacy programs to help people effectively navigate and utilize the internet. • Promote affordable internet access in rural and marginalized areas.		
Increased digital literacy service delivery	Proposed training will enhance the capacity of users especially local community and this will enhance ease of access and utilisation of e-service.	• Training material need to be designed for different category of users • Provide targeted digital skills training programs for communities, particularly women, youth, and marginalized groups. • Partner with schools, universities, and tech hubs to ensure continuous upskilling • Establish local resource centres equipped with computers and internet access for training. • Service providers need to be closer to the community and other users	PPPC, MAREN, MITA	Throughout the operation phase

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
Environmental Risks / Impacts				
Terrestrial habitat alteration	Terrestrial habitats may be altered primarily during the construction of communications infrastructure depending on the type of infrastructure component and proposed location. Potential impacts on habitat may be more significant during the construction and installation of linear infrastructure, such as long-distance fixed-line cables, as well as access roads to other types of infrastructure along previously undeveloped land.	• Exclude project sites with sensitive habitats to avoid the impact on habitat loss. • Limit vegetation clearance to essential areas as guided by EHS Guidelines on Biodiversity Conservation and Sustainable Management of Living Natural Resources. • Implement re-vegetation and habitat restoration activities post-construction. • Consider the use of alternative technologies, such as satellite and cellular on sites with high risk.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction phase
Loss of vegetation	Land clearing and excavations for installation of telecoms facilities during construction of linear optic fibre network along access roads and private land; and construction of mobile network towers may result in loss of vegetation.		PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction phase
Increased susceptibility to soil erosion	Land clearing, excavations, and trenching during installation of ICT infrastructure may cause soil erosion particularly on steep slopes and this may result in siltation of nearby streams and rivers.	• Implement erosion control measures (e.g., silt fences, retention basins, proper grading) following EHS Guidelines on Construction Site Management. • Minimize vegetation stripping and avoid steep slopes.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction phase

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
		• Use terracing or slope stabilization techniques in areas prone to erosion. • Implement soil conservation practices, including re-vegetation post-construction.		
Increased generation of general waste, hazardous waste and e-waste	The operation of certain types of switching and transmitting equipment may require the use of backup power systems comprising a combination of batteries (typically lead acid batteries) and diesel-fuelled backup generators for electricity. The operation of backup generators and service vehicles may also result in the generation of used tires, waste oils, and used filters. Transformer equipment may potentially contain polychlorinated biphenyls while cooling equipment may contain refrigerants (potential ozone-depleting substances).	• Develop and implement a comprehensive waste management plan in accordance with EHS Guidelines on Waste Management. • Segregate, store, and dispose of waste according to EHS standards with licensed waste handlers. • Ensure e-waste is properly collected, stored, and recycled/disposed of in an environmentally sound manner. • Include waste management training as part of worker induction programs. • Establish agreements with certified e-waste recycling facilities in line with EHS Guidelines on Waste Management. • Conduct sensitization campaigns to promote proper e-waste disposal. • Implement e-waste collection, transport, and recycling systems that comply with international best practices.	PPPC, MAREN, MACRA, MITA, Contractors, Local Councils	Throughout the construction and operational phases

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
Increased risk of air pollution from emissions to air.	Emissions may be primarily associated with the use of backup power generators, and the use of cooling and fire suppression systems. Cooling equipment may contain refrigerants (potential ozone-depleting substances).	• Utilize solar power, and other renewable sources of energy, to the maximum • Procure and install cooling systems using ozone and climate friendly refrigerants such as R600a and R290	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction and operational phases
Increased generation of noise and excessive vibration	The use of heavy machinery (gensets) and transportation of construction materials, and supplies during operation phase can elevate noise levels, impacting local communities, especially vulnerable groups like the elderly and children. It may also impact sensitive receptors.	• Implement noise control measures (e.g., sound barriers, mufflers on machinery) according to EHS Guidelines on Noise Management. • Limit construction activities to daylight hours. • Maintain equipment to minimize noise emissions. • Provide advance notice to communities about noisy activities.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction and operational phases
increased emission of dust particles	Construction activities can generate dust, potentially impacting air quality and the health of nearby communities	• Implement dust suppression techniques (e.g., regular watering, windbreaks, covering materials during transport) as per EHS Guidelines on Air Emissions and Ambient Air Quality. • Minimize exposed soil areas by phasing construction activities. • Use dust barriers/screens around construction sites. • Monitor air quality in sensitive areas and adjust practices as needed.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction phase

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
Increased risk of water pollution	Site preparation and trenching could lead to sediment-laden runoff impacting downstream watercourses, and poor human waste management could contaminate nearby water sources.	• Implement erosion and sediment control measures as per EHS Guidelines on Water Quality. • Provide adequate sanitation facilities for workers to prevent contamination of water sources. • Monitor water quality regularly and take corrective actions if pollution is detected.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction phase
Increased risk of exposure to Electromagnetic Radiation	The installation of relay antennas near schools, hospitals, and housing could expose the population to radio frequencies, posing long-term health risks.	• Ensure all installations comply with MACRA guidelines and EHS Guidelines on Electromagnetic Fields (EMF). • Conduct regular monitoring of EMF levels to ensure they remain within safe limits. • Implement public awareness campaigns to educate communities on EMF safety.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction and operational phases
Increased risk of collision of birds	Towers, antennas, and aerial cables may impact bird movement, potentially causing collisions and fatalities.	• Install bird diverters and flashing lights on towers and antennas as recommended by EHS Guidelines on Biodiversity Conservation. • Conduct bird monitoring and adjust mitigation measures as needed to prevent collisions.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the operational phases

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
Increased risk to climate change impacts	Infrastructure, particularly in vulnerable areas to climate change effects, may be at risk from extreme weather events due to climate change.	• Design infrastructure to be climate-resilient following EHS Guidelines on Climate Change Adaptation. • Use materials and techniques that enhance infrastructure durability against extreme weather events. • Incorporate renewable energy sources and sustainable practices to reduce the carbon footprint.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the planning, construction and operational phases
Social Risks and impacts				
Risk of non-compliance with labour laws and requirements by the project and contractors	Project and contract risk taking advantage of the existing labour market to flout labour laws and best international practices.	• Develop and implement LMP consistence with ESS2 and national labour legislations	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the planning, construction and operational phases
Risks related to unequal access to employment in local communities based on, gender, age, disability, rural and urban areas	The risk of discriminatory or unfair treatment in hiring practices, particularly for temporary construction jobs requiring both skilled and unskilled labour from local communities.	• Ensure fair and transparent hiring practices in line with EHS Guidelines for workers' rights. • Develop and enforce a worker code of conduct that prohibits discrimination. • Provide training on non-discrimination and equal opportunity principles.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the planning, construction and operational phases
Exclusion from project benefits	The risk that marginalized or vulnerable groups—such as women, people with disabilities, and those in	• Ensure inclusive access to all project benefits, including digital infrastructure, skills training, and	PPPC, MAREN, MACRA,	Throughout the planning, construction,

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
	rural areas—may not fully benefit from the project, beyond employment opportunities. This could include exclusion from accessing digital infrastructure, skills training, or services enabled by the project, particularly if these benefits are captured by more powerful individuals or groups.	public services, by targeting vulnerable and marginalized groups. • Conduct outreach and engagement campaigns to ensure underrepresented communities are informed about and can access project benefits. • Provide targeted training programs for marginalized groups, particularly women, youth, and people in rural areas, to help them benefit from digital services. • Establish monitoring systems to track access to project benefits and address any gaps in inclusion.	MITA, Contractors	and operational phases.
Gender-based violence (including sexual exploitation and abuse and sexual harassment (SEA/SH) for women and girls within communities and construction	Construction projects often employ fewer women, and those employed may face discrimination or unsafe working conditions. Women seeking work at construction sites may be sexually exploited with the promise of jobs.	• Provide separate sanitation facilities for men and women. • Mandate gender sensitivity training to all employees as part of their onboarding process and ensure periodic refresher sessions throughout the project. • Ensure women have access to the same protective measures as men, complying with EHS Guidelines on occupational health and safety. • Ensure all project workers sign and adhere to the code of conduct.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the planning, construction and operational phases

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
sites especially schools and hospital sites.		• Monitor compliance with labour standards and address grievances through an established GRM		
Increased risk of community livelihood disruption and loss of property.	The project activities may temporarily cause the disruptions to community businesses and property due to excavation works for transmission lines, particularly in urban and rural areas.	• Execute compensation in line with the Resettlement Action Plan (RAP) and EHS Guidelines on Land Acquisition and Involuntary Resettlement. • Communicate schedules and activities to affected communities in advance. • Ensure restoration of access routes post-construction and provide alternatives during construction. • Conduct construction activities on non-market days to minimize disruptions.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction and operational phases
Increased incidences of infectious and communicable diseases (AIDS, Cholera and COVID19 due to the influx of workers.	The coming together of project workers as could lead to the spread of communicable diseases such as HIV/AIDS, COVID 19 virus, Cholera among them and their families.	• Conduct sensitization meetings on prevailing communicable diseases • Provide personal protective equipment such as face masks, sanitiser to promote good hygiene practices. • Encourage workers to go for voluntary HIV and AIDS counselling and testing. • Ensure availability of condoms in active project sites	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the planning, construction and operational phases

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
Risk of child labour and forced labour.	The construction sites under project activities may attract people of all ages to come seek jobs on site.	• Encourage the use of national IDs to ensure that under aged children are not employed on site. • Develop and implement a Code of Conduct on prevention of the risk of child labour. • Provide Information, Education and Communication (IEC) materials and other media to sensitise the surrounding communities on the ills of child labour.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout construction and operational phases
Increased occurrences of safety hazards for local communities where construction is occurring.	The implementation of different activities during the installation of telecommunication equipment may result in community safety risks caused by the use of heavy machineries such as drills, excavators, and cranes. Leaving unattended land excavations trenched may cause trips and falls for the community bay-passer on the project site.	• Barricade open trenches and project sites to deny unauthorized access and use • Reflective tape and signs to demarcate areas that have open trenches. • Provide signage, traffic signs, and hand signals to slow down or redirect traffic as may be necessary. • Implement good housekeeping procedures to ensure proper storage of materials, equipment, and containment of loose cables.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction and operational phases
Impacts on Cultural Heritage/ Archaeological resources.	Construction operations may encounter or reveal cultural and archaeological resources, necessitating "salvage archaeology" or other protective measures.	• Implement a chance finds procedure as provided in Annex 10 consistent with EHS Guidelines on Cultural Heritage.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction phase

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
		• Train construction workers on the recognition and reporting of cultural heritage finds. • Suspend work and notify relevant authorities immediately if artefacts are discovered. • Ensure supervision by qualified personnel during excavations in culturally sensitive areas.		
Cybersecurity and Data Privacy Risks	The project's focus on digital connectivity and services introduces risks of cybersecurity breaches and data privacy violations.	• Implement cybersecurity measures consistent with EHS Guidelines on Information Security. • Conduct regular security audits and provide ongoing training for personnel. • Establish and enforce data privacy protocols with clear response procedures for breaches.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout operational phase
OHS risks and impacts				
Increased exposure of Workers to Health and Safety Risks	Implementation of DMAP activities may increase the threat of various occupational health and safety (OHS) accidents, injuries and in some cases fatality. Activities like the erection of towers and related telecommunication infrastructure such as excavation and trenching during installation of optic fibre cable on poles and during LAN installation,	• Conduct a detailed OHS risk assessment and implement all control measures. • Develop and enforce work permitting systems on height, electrical, excavation and confined space related works. • Ensure compliance with the World Bank EHSG	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction and operational phases

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
	electrical and height works and working in confined spaces such as ceilings where there is minimal manoeuvring space and no light are associated with OHS risks including injuries due to exposure to electric risks, accidents from power tools, accidents from working at height, tips and fall, cuts and bruises from sharp objects and ergonomic hazards due to lifting of heavy loads.	• Conduct a detailed OHS risk assessment and implement all control measures. • Ensure that workers are trained and or inducted on OHS related accidents and injuries, and on the appropriate use of machinery. • Ensure provision of well stocked first aid kit and presence of a well-trained first aid personnel.		
Electrocution Risks	During the installation of telecommunication equipment such as optic fiber cables and electrical works related to LAN installation, workers may be exposed to electrocution risks. This is especially relevant when working with electrical wiring, power systems, and electrical equipment without proper precautions.	• Ensure compliance with electrical safety standards and the World Bank Environmental, Health, and Safety Guidelines (EHSG). • Develop a Emergency Response Plan (with guidance provided in Annex 8) to manage emergencies related to electrical fires, electrocution, and other on-site accidents. • Develop and enforce work permitting systems for electrical works. • Provide Personal Protective Equipment (PPE) like insulated gloves, footwear, and tools for electrical workers. • Conduct regular electrical safety training and induction for all workers involved in electrical activities.	PPPC, MAREN, MITA, Contractors	Throughout the construction phase

Risk / Impact	Description of Risk / Impact	Enhancement/ Mitigation Measures	Responsible Institution	Schedule for implementation
Increased risk of traffic accidents	Project workers will be travelling extensively to project sites, trucks will be required to deliver project materials and equipment, and project workers may be required to work along the road reserves. These activities may result in increased risk of traffic related accidents.	• Develop and implement a traffic management plan aligning with EHS Guidelines on Traffic Safety. • Use proper signage and barriers, employ flag persons, and schedule transport during off-peak hours. • Engage local traffic authorities for coordination and public safety campaigns. • Conduct regular traffic safety audits and adjust measures as needed.	PPPC, MAREN, MACRA, MITA, Contractors	Throughout the construction and operational phases

5.3 Risks and Mitigation Measures Specific to Disadvantaged and Vulnerable Groups

The DMAP Stakeholder Engagement Plan identifies several disadvantaged and vulnerable groups as at risk of being negatively affected by project activities due to their vulnerabilities. Such groups often have limited access to information because of educational, linguistic, physical, social, cultural, and structural barriers. They include:

- **Women and Children:** Particularly vulnerable due to potential social, cultural, or economic barriers.
- **Elderly People:** These may face physical or social barriers in accessing information and benefits.
- **Disabled Individuals:** Their participation may be limited by physical or communication barriers.
- **Chronically Ill Individuals:** Who might face barriers in accessing information and project benefits.
- **Rural Communities:** Often face challenges related to geographical isolation, lower literacy rates, and lack of infrastructure, limiting their access to information and participation in the project.

To address these specific risks and ensure that the DMAP is inclusive, several tailored mitigation measures should be implemented:

- Ensure that project consultations and information dissemination actively involve all the disadvantaged and vulnerable, using accessible language and formats.
- Implement GBV prevention measures, including community awareness campaigns and support services for victims.
- Provide digital literacy training specifically targeting women and girls to bridge the gender digital divide.
- Offer training and support programmes aimed at helping disadvantaged and vulnerable groups bridge the gender digital divide and understand and use new digital technologies.
- Ensure all digital platforms and services are accessible, adhering to international standards for accessibility.
- Provide alternative communication methods, such as sign language interpretation or Braille, to ensure inclusive participation in project activities.
- Collaborate with organisations supporting disabled persons to tailor project interventions to their needs.
- Implement child protection measures, including safeguarding policies and training for project staff.
- Ensure that digital services and educational content are child-friendly and accessible, particularly for those in remote or underserved areas.
- Work with schools and community organisations to distribute devices and ensure internet access for children, reducing the digital divide.

5.4 Planning and Design Considerations for Avoidance of E&S Risks and Impacts

In the early stages of subproject planning and design under DMAP, several measures must be implemented to avoid and minimise potential environmental and social impacts. These measures focus on integrating environmental and social considerations into the design phase to prevent adverse effects and enhance the project's positive outcomes. The key measures include:

- Incorporate e-waste management strategies into the design, ensuring that facilities and processes are in place to safely collect, recycle, and dispose of electronic waste generated by the project. A generic e-waste management plan is provided in Annex 4 of this ESMP.
- Carefully select subproject sites to avoid environmentally sensitive areas such as wetlands, forests, and protected areas, as well as socially sensitive areas like communities with vulnerable populations. ESSF and ESMP checklist are provided in Annex 1 and 2 of this ESMP to guide this process.
- Align infrastructure routes, such as fibre optic cables, along existing roads and within road reserves to minimise/avoid land acquisition and disruption to communities. A separate RPF has been prepared to managed all land related risks and impacts.
- Incorporate design adaptations that minimise environmental disturbance, such as using above-ground cabling in areas prone to soil erosion or landslides and implementing noise and dust control measures.
- Design infrastructure to be resilient to climate change impacts, such as extreme weather

Chapter 6. Procedures and Implementation Arrangements

6.1 Environmental and Social Risk Management Procedures

The environmental and social risk management procedures will be implemented through the Project's subproject selection process. In summary, the procedures discussed in table 6.1 as follows:

Table 6-1: Project Cycle and E&S Management Procedures

Project Stage	E&S Stage	E&S Management Procedures
a. Assessment and Analysis: Subproject identification	Screening and Risk Classification	• During subproject identification, ensure subproject eligibility by referring to the ***Exclusion List in*** Table 6-2 below. • For all activities, use the ESSF in Annex 1 to identify and assess potential environmental and social risks and impacts, and identify the appropriate mitigation measures for the subproject. • The Project Implementation Unit (PIU) Environmental and Social (E&S) Specialists will review the ESSF and categorize subprojects into Low, Moderate, or Substantial risk based on potential E&S impacts. • Identify the documentation, permits, and clearances required under the government's Environmental Regulation. • The PIU will submit the E&S Screening report, including risk categorization and recommended E&S instruments, to the World Bank for review and endorsement. • Subprojects involving land issues will include additional screening based on specific templates provided. • Only subprojects categorized as Low or Moderate risk will be eligible for financing.
b. Formulation and Planning: Planning for subproject activities, including human and budgetary	Preparation of E&S Instruments	• Based on the risk classification, prepare and/or adopt appropriate E&S instruments such as ESMP, ESMP Checklists, and other relevant documents as necessary. • For activities requiring ESMPs, submit the ESMPs for prior review and no objection by the World Bank prior to initiating bidding processes (for

Project Stage	E&S Stage	E&S Management Procedures
resources and monitoring measures		subprojects involving bidding processes) and/or launching activities (for subproject activities not subject to bidding). • Ensure incorporation of environmental measures in the designs of subprojects. • Integrate E&S requirements into tender and bidding documents to ensure contractors are aware of their obligations. • Ensure that the contents of the ESMPs are shared with relevant stakeholders in an accessible manner and consultations are held with the affected communities in accordance with the SEP. • Complete all documentation, permits, and clearances required under the government's Environmental Regulation. • Train staff responsible for implementation and monitoring of plans. • Incorporate relevant environmental and social procedures and plans into contractor bidding documents; train contractors on relevant procedures and plans.
c. Implementation and Monitoring: Implementation support and continuous monitoring for projects	Implementation and Monitoring	• Ensure implementation of plans through site visits, regular reporting from the field, and other planned monitoring. • Conduct regular site visits, inspections, and reviews to monitor compliance with E&S management plans. • Monitor and report on compliance with the E&S management plans and national E&S regulations. • Utilize the Grievance Redress Mechanism (GRM) to track, address, and resolve grievances from affected parties. • Continue awareness raising and/or training for relevant staff, volunteers, contractors, communities. • The PIU will regularly report on ESMF, ESCP, and overall E&S compliance to the World Bank in semi-annual progress reports.
d. Review and Evaluation: Qualitative, quantitative,	Completion and Evaluation	• Assess whether plans have been effectively implemented. • Ensure that physical sites are properly restored.

Project Stage	E&S Stage	E&S Management Procedures
and/or participatory data collection on a sample basis		• Conduct a final review and evaluation of E&S performance for each subproject, ensuring all mitigation measures have been effectively implemented. • Ensure that any site restoration required is completed, and E&S measures are fully integrated into the project's closure phase. • Prepare a completion report summarizing the E&S performance, lessons learned, and recommendations for future projects. • Continue monitoring any residual impacts or risks post-project completion. • Evaluate the effectiveness of the Stakeholder Engagement Plan and GRM, documenting any improvements for future projects.

More detail for each stage is provided below.

a. Subproject Assessment and Analysis – E&S Screening

As a first step, all proposed activities should be screened to ensure that they are within the boundaries of the Project's eligible activities and that they are not considered activities listed on the E&S Exclusion List in the table 6-2.

Table 6-2: Exclusion List

• Support of production of any hazardous good and controlled substances • Any construction in protected areas or priority areas for biodiversity conservation, as defined in national law • Activities that have the potential to cause any significant loss or degradation of critical natural habitats, whether directly or indirectly, or which would lead to adverse impacts on natural habitats • Activities involving changing forestland into agricultural land or logging activities in primary forest • Purchase or use of banned/restricted pesticides, insecticides, herbicides, and other dangerous chemicals (banned under national law and World Health Organization (WHO) category 1A and 1B pesticides) • Any activity affecting physical cultural heritage, such as graves, temples, churches, historical relics, archaeological sites, or other cultural structures • Activities that may cause or lead to forced labour or child abuse, child labour exploitation or human trafficking, or subprojects that employ or engage children over the minimum age of 16 and under the age of 18 in connection with the project in a manner that is likely

to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral, or social development
- Any activity on land that has disputed ownership or tenure rights
- Any activity that will cause physical relocation of households or will require the use of eminent domain
- Any activity with significant environmental and social risks and impacts that require an Environmental and Social Impact Assessment (ESIA)

In the second step, the DMAP PIU will utilise the ESSF provided in Annex 1. This form is a key tool for identifying and assessing potential environmental and social risks associated with specific project activities. The ESSF is designed to guide the PIU through a comprehensive assessment process, enabling them to pinpoint potential risks and determine the necessary mitigation measures.

The ESMF includes a list of possible mitigation measures and management plans that may be required for specific activities. These measures and plans might include, but are not limited to, the following:

- **Environmental and Social Management Plan (ESMP):** A detailed plan outlining how identified environmental and social risks will be managed throughout the subproject lifecycle.
- **Labour Management Procedures (LMP):** Guidelines for managing labour-related risks, including fair treatment, non-discrimination, and safe working conditions for workers involved in the project.
- **Chance Find Procedures:** Procedures to manage and protect cultural heritage and archaeological resources that may be discovered during project activities.

In addition to these measures, the DMAP PIU will identify and document the specific permits, clearances, and approvals required under the Government of Malawi's environmental regulations. This might include obtaining impact assessment approvals, land use permits, or other relevant authorisations necessary for legal compliance.

The PIU will ensure that all required documentation is obtained and maintained and that all subprojects fully comply with national regulations and the World Bank's ESF. This systematic approach to E&S screening and assessment is essential for ensuring that all subproject activities are implemented in an environmentally and socially responsible manner, thereby contributing to the DMAP's sustainable development goals.

b. Subproject Formulation and Planning – E&S Planning

Based on the E&S Screening process and the completed Screening Form, the PIU within the implementing agency will adopt the necessary environmental and social management measures, as outlined in the ESMF's annexes (indicative outline ESMP (Annex 1), e-waste management plan (Annex 4), GBV/SEA/SH management plan (Annex 5), Child protection Plan (Annex 6), OHS plan (Annex 7), Communicable diseases management plan (Annex 8) and sample change find

procedure (Annex 10)). Other measures may include, but are not limited to LMPs, the SEP and other pre-defined management tools.

If site-specific ESMPs are required, the PIU will prepare these ESMPs and any other applicable documentation. The PIU will review, approve, and compile the ESMPs and other relevant forms. The contents of these ESMPs will be disseminated to relevant stakeholders in a clear and accessible manner. Furthermore, the PIU will ensure that consultations with the affected communities are held to discuss the identified environmental and social risks and the corresponding mitigation measures.

In cases where multiple subprojects or contracts are initiated simultaneously or within a specific geographic area, an overarching ESMP may be developed to cover these combined activities. Additionally, conducting a site-specific environmental and social assessment may be beneficial for certain moderate-risk subprojects before the ESMP is prepared.

The first five ESMPs (or the first five ESMPs within each category of the subproject, or a different number as agreed upon with the World Bank) will be submitted to the World Bank for prior review and no-objection. After these initial reviews, the World Bank and the PIU will reassess whether further ESMPs or specific categories of ESMPs (for example, those exceeding a certain budget or involving particular types of activities) will require prior review.

The PIU will also ensure that all documentation, permits, and clearances required under the government's Environmental Regulation are completed and approved before any project activities commence. At this stage, staff involved in the various subproject activities must receive appropriate training in their specific tasks' environmental and social management plans. The PIU will provide this training to field staff to ensure they are fully informed of their responsibilities and the necessary mitigation measures.

Furthermore, the PIU must ensure that all selected contractors, subcontractors, and vendors are fully aware of and incorporate the relevant environmental and social mitigation measures into their standard operating procedures for civil works. The PIU will train contractors to guarantee their understanding and compliance with these measures. Contractors will also be required to cascade this training to their subcontractors and vendors, ensuring that all parties involved in the project are aligned with the environmental and social requirements.

Finally, the PIU will ensure that the entities or communities responsible for the ongoing operation and maintenance of the investments have received adequate training on the environmental and social management measures applicable during the operations stage. This training will help ensure that the sustainability of the project's benefits is maintained and that any potential environmental and social risks during the operation phase are effectively managed.

c. Implementation and Monitoring – E&S Implementation

During the implementation phase, the PIU within the implementing agency will conduct regular monitoring visits to ensure that all environmental and social (E&S) mitigation measures are effectively implemented. The PIU will oversee the implementation of these measures and ensure that all contractors involved in subproject activities adhere to the E&S risk management plans specified in the project documents.

The PIU will establish a comprehensive monitoring mechanism that includes routine site visits, regular reporting, and the use of mobile devices for real-time monitoring, particularly given the project's nationwide coverage and numerous subprojects. The project will engage a third-party monitoring firm to enhance the effectiveness of tracking across the whole country. This firm will provide additional support for the implementation and monitoring process by conducting independent assessments, verifying compliance, and offering unbiased feedback to the PIU. This approach will facilitate timely data collection and reporting on implementing Environmental and Social (E&S) mitigation measures. Monitoring visits will be conducted monthly or more frequently if required by the nature of the subproject activities or if specific risks are identified. Contractors will be responsible for implementing the E&S risk management measures on the ground, under the direct oversight of the PIU and supplemented by the third-party monitor. Contractors must provide regular reports on compliance with E&S measures, including any incidents or deviations from the prescribed plans. Including a third-party monitoring mechanism ensures a more robust and transparent oversight framework, addressing the complexity of implementing and monitoring subprojects nationally.

51The PIU will ensure that all monitoring practices include a focus on the environmental and social risks identified in the ESMF. At a minimum, the reporting will include (i) the overall implementation of E&S risk management instruments and measures, (ii) any environmental or social issues arising as a result of project activities and how these issues will be remedied or mitigated, including timelines, (iii) Occupational Health and Safety performance (including incidents and accidents), (iv) community health and safety, (v) stakeholder engagement updates, in line with the SEP, (vi) public notification and communications, (vii) progress on the implementation and completion of project works, and (viii) summary of grievances/beneficiary feedback received, actions taken, and complaints closed out, in line with the SEP. Reports from the local levels will be submitted to the PIU at the national level, where they will be aggregated and submitted to the World Bank on a biannual basis.

Throughout the Project implementation stage, the PIU will continue to provide training and awareness raising to relevant stakeholders, such as staff, selected contractors, and communities, to support the implementation of the environmental and social risk management mitigation measures.

The PIU will also track grievances and beneficiary feedback as part of the monitoring process. This will be used to assess the effectiveness of the E&S mitigation measures and adjust as needed. The PIU will ensure that the GRM is functioning effectively and that all complaints are addressed promptly and satisfactorily.

Last, if the PIU becomes aware of a serious incident in connection with the project, which may have significant adverse effects on the environment, the affected communities, the public, or workers, it should notify the World Bank within 48 hours of becoming aware of such incident. A fatality is automatically classified as a serious incident, as are incidents of forced or child labour, abuses of community members by project workers (including gender-based violence incidents), violent community protests, or kidnappings.

d. Review and Evaluation – E&S Completion

Upon completion of Project activities, the PPPC will review and evaluate progress and completion of project activities, and all required environmental and social mitigation measures. Especially for civil works, the PPPC will monitor activities with regard to site restoration and landscaping in the affected areas to ensure that the activities are done to an appropriate and acceptable standard before closing the contracts, in accordance with measures identified in the ESMPs and other plans. The sites must be restored to at least the same condition and standard that existed prior to commencement of works. Any pending issues must be resolved before a subproject is considered fully completed. The PPPC will prepare the completion report describing the final status of compliance with the E&S risk management measures and submit it to the World Bank.

6.2 Technical Assistance Activities

The PIU will ensure that the consultancies, studies (including feasibility studies, if applicable), capacity building, training, and any other technical assistance activities under the Project are carried out in accordance with Terms of Reference acceptable to the Bank and consistent with the ESSs. They will also ensure that the outputs of such activities comply with the Terms of Reference.

6.3 Implementation Arrangements

The PIU at the Public Private Partnership Commission (PPPC) will lead and coordinate DMAP project activities and will be responsible for supervising the implementing partners and beneficiaries in the implementation of environmental and social standards. The PPPC, along with key stakeholders such as the Ministry of Information and Digitalization, MAREN, and other relevant government agencies, will be the main beneficiaries of capacity-building efforts.

The PIU will provide guidance and oversight in the creation and implementation of Environmental and Social (E&S) documents by the implementing partners and beneficiaries. The PIU will be accountable for reporting to both the World Bank and the Project Steering Committee (PSC) on all DMAP activities and progress.

The PIU's project management team will lead day-to-day project implementation, undertake fiduciary responsibilities such as financial management and procurement, monitor project progress, conduct monitoring and evaluation, ensure compliance with project social and environmental standards, prepare project reports, and coordinate and collect inputs from

relevant ministries and stakeholders. The project management team will include a project manager, procurement specialist, financial management specialist, experienced environmental expert, and experienced social expert, and may include additional experts for monitoring and evaluation, communication, and stakeholder engagement.

Table 6-3 summarises the roles and responsibilities regarding the implementation arrangements for environmental and social management.

Table 6-3: Implementation Arrangements

Level/ Responsible Party	Roles and Responsibilities
National (PPPC/PIU)	• Implement activities related to environmental and social policies and standards per the provisions of the loan agreement, ESCP, and ESF. • Ensure E&S compliance of both Component 1 and Component 2. • Supervise E&S screening, assessments, and preparation of appropriate E&S instruments. • Review screening questionnaires filled out by district council teams and prepare screening reports for each sub-project. • Ensure proper inclusion of EHS aspects in project bids and contracts. • Promptly notify the World Bank of any incident or accident related to the Project with significant adverse effects, including SEA/SH cases. • Develop internal incidents and accidents reporting procedures and prepare reports on incidents or accidents, proposing measures to address and prevent recurrence. • Require contractors and supervising firms to provide monthly monitoring reports on ESHS performance and submit these to the World Bank. • Support and supervise beneficiaries in preparing, disclosing, consulting upon, adopting, and implementing subproject-specific appropriate Environmental and Social Instruments. • Coordinate with beneficiaries on EHS mitigation and monitoring. • Ensure consultancies, studies, designs, and capacity-building activities under the Project comply with ESSs. • Provide specific training to contractor workers and beneficiaries on monitoring, reporting, waste management, GRM, and OHS as needed. • Demonstrate compliance of finalised works with the ESF. • Actively organize and coordinate SEP implementation activities. • Develop and manage the project GRM, ensuring complaint lodging and feedback channels are functional. • Develop a monitoring system of activities and maintain an updated database for relevant monitoring information.

Level/ Responsible Party	Roles and Responsibilities
	• Prepare and submit regular monitoring reports on ESHS performance, implementation of E&S instruments, stakeholder engagement activities, and GRM functioning to the World Bank. • Maintain contact with the World Bank's environmental and social specialists and seek guidance on emerging challenges.
Local council staff (Environmental Officers)	• Ensure project activities do not fall under the Exclusion List. • Fill out Screening Forms for relevant subproject activities and submit forms to the PIU. • If relevant, complete site-specific ESMPs for subproject activities and submit forms to the PIU. • Oversee daily implementation and monitoring of environmental and social mitigation measures, and report progress and performance to the PPPC monthly. • Provide training to local contractors and communities on relevant environmental and social mitigation measures, roles, and responsibilities. • Actively organize and coordinate SEP implementation activities at district level. • Manage the GRM at district level, ensuring complaint lodging and feedback channels are functional. • If contracting is managed locally, ensure that all bidding and contract documents include all relevant E&S management provisions per screening forms, and ESMPs.
Local contractors	• Comply with the Project's environmental and social mitigation and management measures as specified in ESMPs, and contract documents, as well as national and local legislation. • Implement Waste Management Plans (WMP) to manage hazardous and non-hazardous wastes. • Take all necessary measures to protect the health and safety of workers and community members and avoid, minimize, or mitigate any environmental harm resulting from project activities. • Provide monthly monitoring reports on ESHS performance in accordance with the metrics specified in bidding documents and contracts. • Disseminate and create awareness within their workforce of environmental and social E&S risk management compliance for effective implementation. • Report on E&S compliance and any incidents to the PIU/district level teams and provide documentation as required. • Provide training and awareness to workers on environmental and social management measures and ensure adherence throughout project implementation.

6.4 Proposed Training and Capacity Building

The PPPC assumes overall responsibility for implementing the ESMP and RAP. However, contractors will be responsible for the actual implementation of mitigation measures. To ensure these measures are effectively implemented, all contractors, personnel, and District Environmental Officers involved in these tasks must be competent and have appropriate education, training, and experience. To achieve this, the PPPC will undertake comprehensive internal training and education activities to meet project expectations regarding environmental and social performance. This will include guiding contractors and District Environmental Officers on environmental and social impact management training, education, and competencies requirements. The environmental and social competencies will be tailored to the specific roles and responsibilities of the respective parties. District Environmental Officers will play a crucial role in monitoring and ensuring compliance at the district level and, as such, will receive specialised training to enhance their capacity to support the project's environmental and social objectives. To support this, the project will initially evaluate training needs related to overall Environmental and Social management.

Table 6-4: Proposed Training and Capacity Building Approach

Level	Responsible Party	Audience	Topics/Themes that May Be Covered
National level	World Bank	PPPC staff responsible for overall implementation of ESMF	ESMF and approach: • Understanding the ESMF and its application. • Identification and assessment of E&S risks • Selection and application of relevant E&S risk management measures/instruments • Incident and accident reporting • Application of LMP including Code of Conduct • SEA/SH incident reporting • Integration of Climate Change Resilience measures in project planning and implementation
Regional level	PPPC staff	Environmental Officers from Local Councils Contractors	ESMF and approach: • Key aspects of the ESMF and its implementation at the regional level. • Identification and assessment of E&S risks • Selection and application of relevant E&S risk management measures • E&S monitoring and reporting • Incident and accident reporting

Level	Responsible Party	Audience	Topics/Themes that May Be Covered
			• Application of LMP including Code of Conduct • SEA/SH incident reporting • Application of SEP and the grievance/beneficiary feedback mechanism • Environmental and Social Management Plan (ESMP) implementation • Handling of e-waste and other hazardous materials • Land Acquisition and Resettlement Planning (RAP) implementation • Community Health and Safety risk management
Local council /site level	PPPC staff	Local staff Local contractors	• Application of SEP and the grievance/beneficiary feedback mechanism • Application of LMP including Code of Conduct • Grievance redress • SEA/SH incident reporting • Application of ESMPs as relevant • Site-specific environmental monitoring • Waste management and recycling practices • Environmental awareness and conservation practices • Cultural Heritage preservation during construction • Gender equality and inclusion in project benefits
Community level	Environmental Officers	Community members	• Basic OHS measures and Personal Protective Equipment • Community health and safety issues • Worker Code of Conduct • SEA/SH issues prevention measures • Workers' grievance redress • Environmental awareness and conservation practices • Cultural Heritage preservation during construction

Level	Responsible Party	Audience	Topics/Themes that May Be Covered
			• Gender equality and inclusion in project benefits

6.5 Estimated Budget

The budget for implementing this ESMF will come from the project budget and will mainly consist of preparing safeguards tools. The specific cost for mitigation measures will be included in the ESIAs or ESMPs. Table 6-5 lists estimated cost items for the implementation of the ESMF, which have been included in the overall project budget.

Table 6-5: ESMF Implementation Budget

Item	Unit	Quantity	Unit Cost (US $)	Total Cost (US $)
Preparation of safeguards instruments				
ESMPs (where relevant)	Study	10	7,500	75,000
Subtotal 1				***75,000***
Capacity building				
Trainings for national staff and other project implementing institutions (venue, travel, refreshments etc.)	Training sessions	4	5,000	20,000
Trainings for local council staff and contractors (venue, travel, refreshments etc.)	Training sessions	4	10,000	40,000
Training of project beneficiaries and stakeholders and awareness	Training sessions	30	2,000	60,000
Subtotal 2				***120,000***
Implementation of site-specific ESMPs				
Mitigation measures	Number of ESMPs	10	15,000	150,000
Subtotal 3				***150,000***
Project Monitoring				
PPPC monthly monitoring mission allowances	Missions	60	2,500	150,000
District staff monitoring mission allowances	Missions	60	3,000	12,000
Subtotal 4				***162,000***
Environmental and Social Audits				
Consultants	Study	1	50,000	50,000
Subtotal 5				***50,000***
Grand Total				**557,000**

Chapter 7. Stakeholder Engagement, Disclosure, and Consultations

This chapter outlines the stakeholder engagement process undertaken by the DMAP to ensure the transparent and inclusive participation of all relevant stakeholders, mainly communities and government officials. The objective of the consultations was to gather input, identify concerns, and integrate feedback into the project's design and environmental and social management plans. A separate Stakeholder Engagement Plan (SEP) has been prepared for the Project, based on the World Bank's Environmental and Social Standard 10 on Stakeholder Engagement and Information Disclosure. The SEP can be found on PPPC Website.

7.1 Stakeholder Engagement Overview

The DMAP consultations were conducted at various stages of project preparation. Stakeholder engagement consultations were carried out from 26 August 2024 to 6 September 2024, targeting a broad range of stakeholders, including district councils, local communities, academic institutions, and relevant government ministries. The consultations were designed to gather input from these key stakeholders to ensure that their concerns and recommendations were incorporated into the relevant project documents including the ESMF . The consultations aimed to ensure that all parties had the opportunity to provide input on the project's environmental and social risks and mitigation measures.

The engagement process was documented with photos of participants from various stakeholder groups. These photos, included in Annex 9, show the active participation and engagement of the stakeholders engaged. Annex 9 also provides evidence of consultation in the form of participants' signatures. The objectives and justifications of stakeholder consultations were as follows:

- To provide stakeholders with a clear understanding of the DMAP project's objectives, components, and potential environmental and social risks.
- To gather insights on localised risks and mitigation measures, notably concerning vulnerable groups, including women, children, and persons with disabilities.
- To ensure that stakeholder concerns, particularly regarding e-waste management, child protection, and labour issues, are adequately addressed in the ESMF.

7.2 Stakeholder Engagement Details

The stakeholder engagement process is summarized in the table below.

Table 7-2. Summary of key issues raised from ESMF consultations.

SN	Comments / Issues Raised	Responses to Stakeholders	Who Provided Response?	Addressed in the ESMF
1	Concerns about the grievance mechanism.	The project will mainly use public/government	Consultant.	Addressed in the SEP under the Grievance

SN	Comments / Issues Raised	Responses to Stakeholders	Who Provided Response?	Addressed in the ESMF
		land; if personal property is affected, compensation procedures will follow.		Redress Mechanism (GRM) section.
2	Request for financial support for stakeholders involved in project screening and monitoring processes.	PPPC is flexible and willing to assist if stakeholders submit a budget.	PPPC member.	Stakeholder engagement budget included in the ESMF budget section.
3	Community engagement regarding risks and technology introduction fears in rural areas.	Sensitization and risk communication will be prioritized, and measures will be taken to address fears.	Consultant.	Addressed in the SEP.
4	Proper disposal of waste materials during project implementation.	Waste management will follow appropriate procedures, including disposal of electronic waste (e-waste).	Consultant.	E-waste management addressed in the E-Waste Management Plan in the ESMF.
5	Request for details on how inappropriate content (e.g., pornography) will be blocked in schools.	Firewalls will be created to block access to inappropriate websites.	PPPC member.	Addressed in the ESMF under the Online Safety mitigation measure.
6	Will district councils be involved in project monitoring?	Yes, different sectors at the district level will take part in monitoring.	Consultant.	Addressed in the ESMF under implementation arrangements.
7	Compensation for private land affected by tower construction.	Compensation procedures will follow Malawi's Lands Act and the World Banks ESS 5.	Consultant.	The project has developed a RPF to guide compensation.
8	Concerns about environmental impacts from clearing trees and vegetation	Environmental mitigation measures will be put in place to	Consultant.	Mitigation measures for the impact have been provided under the section for anticipated

SN	Comments / Issues Raised	Responses to Stakeholders	Who Provided Response?	Addressed in the ESMF
	for tower construction.	minimize the impacts of corridor clearing.		environmental and social impacts for the proposed project.
9	Emphasis on the inclusion of vulnerable groups, beyond women and children.	All vulnerable groups will be considered in assessments.	Consultant.	Addressed in the section of risks and mitigation measures specific to disadvantaged and vulnerable groups.
10	Security concerns about potential vandalism of infrastructure (towers).	Security measures will be implemented to protect infrastructure.	PPPC member and Consultant.	The project has included in the design recommendations.

Annexes

Annex 1: Environmental and Social Screening Form

PUBLIC PRIVATE PARTNERSHIP COMMISSION

DIGITAL MALAWI ACCELERATION PROJECT
(P505095)

Environmental and Social Screening Form

This form must be used to screen for the potential environmental and social risks and impacts of a proposed subproject. It will help the PIU establish an appropriate E&S risk rating for these subprojects and specify the environmental and social assessment required, including specific instruments/plans. This form must allow the PIU to form an initial view of a subproject's potential risks and impacts***. It is not a substitute for project-specific E&S assessments or specific mitigation plans.*** The environmental and social screening form will be filled out by the district council team or final beneficiary and sent to PIU for review.

A. General Project Information

Name of the project	
Name of the sub-project:	
Estimated Investment:	
Start/Completion Date	
Brief description of the sub-project activities (describe main project features and location of work execution): *Annexes for all additional information can be supplemented if necessary (e.g.) maps with the geographical location of the project*	

B. Screening Questionnaire

SN	Screening Questions	Yes	No	Not Known	Not Applicable	Additional Clarification	Significance Rating (Low/ Moderate/ High)	Proposed Mitigation Measures
1	***Project Compliance with National Requirements***							
1.1	Will the sub-project include civil works?							
1.2	Will the sub-project include new construction?							
1.3	If 'No' under the question 1.1: What type of works will be included?							
1.4	Is the activity listed in the World Banks exclusion list?							
1.5	According to national legislation does the subproject require ESIA?							
2	***Potential Positive Socio-Economic Impacts***							
2.1	Will the project create jobs for local communities?							
2.2	Will the project enhance access to services (e.g., education, healthcare, internet)?							
2.3	Will the project provide opportunities for local businesses and suppliers?							
2.4	Will the project help reduce inequality or provide benefits to vulnerable groups?							
2.5	Are there measures in place to enhance the positive socio-economic impacts (e.g., capacity building, local procurement)?							
3	***Project's siting: Is the project site adjacent to or within any of the following sensitive receptors?***							
3.1	Natural habitats and/ or legally protected areas (wetlands, forests, estuary, buffer zones, nature reserves); if yes, is there possibility of a critical habitat present?							
3.2	Cultural heritage site							
3.3	Fragmentation of habitat of flora and fauna (Avifauna and mammalian fauna)?							
3.4	Is the proposed site located on agricultural land?							
3.5	Is the proposed site located on area used by vulnerable groups							
3.6	Unique or aesthetically valuable land							

SN	Screening Questions	Yes	No	Not Known	Not Applicable	Additional Clarification	Significance Rating (Low/ Moderate/ High)	Proposed Mitigation Measures
3.7	Is the proposed site located nearby airport							
3.8	Is the proposed site located in migratory route of birds							
4	***Potential Environmental Impacts***							
4.1	Impacts on natural resources that constitute livelihoods of community (e.g. grazing or hunting grounds)?							
4.2	Disfiguration of landscape?							
4.3	Will the project produce negative impact to soil (erosion, contamination, etc.)?							
4.4	Increase in waste generation?							
4.5	Waste water from camping sites to be directly discharged to the surface water resources or not?							
4.6	Construction waste directly discharged to the surface water?							
4.7	Will the sub-project affect endangered flora or fauna?							
4.8	Will the sub-project affect some critical habitats (forest, wetlands, marshlands, aquatic ecosystems)?							
4.9	Loss or destruction of unique or aesthetically valuable land							
4.10	Disturbance of large areas due to material quarrying							
4.11	Disposal of large quantities of construction spoils							
4.12	Disposal of large quantities of construction spoils							
5	***Potential Community and Occupational Health and Safety Impacts***							
5.1	Will the construction works disturb other commercial/community/residential activities?							
5.2	Will the project create major noise/vibration?							
5.3	Will solar panels be installed close to residence?							

SN	Screening Questions	Yes	No	Not Known	Not Applicable	Additional Clarification	Significance Rating (Low/ Moderate/ High)	Proposed Mitigation Measures
5.4	Will telecommunication towers/antennas be installed close to residence?							
5.5	Will it create dust problem around the sites?							
5.6	Will project's construction cause disturbance to the transportation in the project's site?							
5.7	Will batteries be removed/disposed (lead-acid or nickel-cadmium batteries) from battery-powered or battery-backup items?							
5.8	Will there be social conflict in case of workers hired from outside project location?							
6	***Potential Social Impacts***							
6.1	Permanent land acquisition (specify type of land)							
6.2	Temporary land acquisition (specify type of land)							
6.3	Loss of productive land							
6.4	Impacts on livelihoods/ economic displacement?							
6.5	Do any households need to be relocated?							
6.6	Is the resettlement site environmentally and/or culturally sensitive?							
6.7	Project's construction will cause any damage to the existing local roads system?							
6.8	Will project need to open new access roads?							
6.9	Will project cause encroachment on historical/cultural/religious areas?							
6.10	Acquisition of private land leading to loss of shelter and livelihood							
6.11	Involuntary land taking resulting in loss of income, livelihood, sources of livelihood, loss of access to common property resources and/or private residential and/or property resources							
6.12	Adverse impact to women including economic and safety concerns							

SN	Screening Questions	Yes	No	Not Known	Not Applicable	Additional Clarification	Significance Rating (Low/ Moderate/ High)	Proposed Mitigation Measures
6.13	Possible conflicts with and/or disruption to local communities							
6.14	Significant issues raised by the stakeholders during consultation							
6.15	Uncontrolled human migration into the area, made possibly by the subproject activities							
6.16	Disproportionate impacts on the poor, children and other vulnerable groups							
6.17	Community health and safety risks due to the transport, storage, and use and/or disposal of materials likely to create physical, chemical and biological hazards							
6.18	Risks to community safety due to both accidental and natural hazards during project construction and operation							

C. Screening Evaluation

	Description	Comment
What is categorization of the sub-project	High Risk (Large-scale, significant, and potentially irreversible impacts.)	
	Moderate Risk (Site-specific, reversible, and manageable impacts.)	
	Low Risk (Minimal or no impacts)	
Will there be need for resettlement/compensation?		
What tool must be prepared in environmental and social risk management?	ESIA (High Risk Project Sub-Project)	
	ESMP (Moderate Risk Sub-Project)	
	ESMP Checklist (Low Risk)	
	Abbreviated RAP (for projects requiring compensations)	

D. Certification

We certify that we have thoroughly examined all the potential adverse impacts of this subproject as described in the subproject brief. To the best of our knowledge, the associated safeguard instruments (ESIA, ESMPs, RAP), if any, will be adequate to avoid or minimise all adverse environmental and social impacts.

	Assessor 1	Assessor 2
Name		
Signature		
Designation		
Phone Number		
Date		

Annex 2: Indicative Outline of the ESMP

An ESMP consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels.

The ESMP also includes the measures and actions needed to implement these measures. The Borrower will

a) identify the set of responses to potentially adverse impacts;
b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and
c) describe the means for meeting those requirements.

Depending on the project, an ESMP may be prepared as a stand-alone document or the content may be incorporated directly into the ESCP.

The content of the ESMP will include the following:

a) Mitigation

The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The plan will include compensatory measures, if applicable. Specifically, the ESMP:

(i) identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);
(ii) describes—with technical details—each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
(iii) estimates any potential environmental and social impacts of these measures; and
(iv) takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement or cultural heritage).

b) Monitoring

The ESMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP.

Specifically, the monitoring section of the ESMP provides

a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and
b) monitoring and reporting procedures to;
    i. ensure early detection of conditions that necessitate particular mitigation measures, and

ii. Furnish information on the progress and results of mitigation.

c) Capacity Development and Training

- To support timely and effective implementation of environmental and social project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level.
- Specifically, the ESMP provides a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).
- To strengthen environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of monitoring during project implementation provides information about key environmental and social aspects of the project, particularly the environmental and social impacts of the project and the effectiveness of mitigation measures. Such information enables the Borrower and the Bank to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

d) Implementation Schedule and Cost Estimates

- For all three aspects (mitigation, monitoring, and capacity development), the ESMP provides
    - an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and
    - the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.

e) Integration of ESMP with Project

- The Borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP (either stand alone or as incorporated into the ESCP) will be executed effectively. Consequently, each of the measures and actions to be implemented will be clearly specified, including the individual mitigation and monitoring measures and actions and the institutional responsibilities relating to each, and the costs of so doing will be integrated into the project's overall planning, design, budget, and implementation.

Annex 3: ESMP Checklist Template

The template presented below will be revised for specific sub-projects to reflect scope of works and E&S concerns. The ESMP Checklist provides "pragmatic good practice," and it is designed to be user-friendly and compatible with World Bank safeguard requirements. The checklist-type format attempts to cover typical mitigation approaches to common civil works contracts with localized impacts. This document will help assess potential environmental impacts associated with the proposed subproject, identify potential environmental improvement opportunities, and recommend measures for prevention, minimization, and mitigation of adverse environmental and social impacts.

ESMP Checklist is a document prepared and owned by the final beneficiary.

The checklist has one (1) introduction section and three (3) main parts:

Introduction or foreword part consisted of following sections:

- *Introduction* (sub-project description),
- *Environmental and social risk category* (environmental and social category is defined),
- *Potential environmental and social impacts* (potential impacts are defined)
- *ESMP Checklist* (concept and application of Checklist are explained),
- *Monitoring and reporting* (brief description of the monitoring and reporting process including responsibilities of involved stakeholders)

Part 1 - constitutes a descriptive part ("site-passport") that describes the project specifics in terms of physical location, the institutional and legislative aspects, the project description, inclusive of the need for a capacity building program and description of stakeholder engagement and the public consultation process.

Part 2 - includes the environmental and social screening in a simple Yes/No format followed by mitigation measures for any given activity.

Part 3 - is a monitoring plan for activities during project construction and implementation. It retains the same format required for standard World Bank ESMPs.
ESMP Checklist implementation report will be submitted to WB semi-annually if not agreed differently.

The workers' code of conduct will be part of bidding documentation and contracts with Contractors. The code of conduct will also extend to subcontractors and be part of Contractors' contractual agreements.

Part I - General Project and Site Description

INSTITUTIONAL & ADMINISTRATIVE	
Project title	
Scope of project and activity	
SITE DESCRIPTION	
Name of site	
Describe site location	
Who owns/uses the land?	
Valid operating permit, licenses, approvals etc.	
LEGISLATION	
Identify national &local legislation & permits that apply to sub-project activity(s)	
PUBLIC CONSULTATION	
Identify when / where the public consultation process took place and what were the comments received from the consulted stakeholders and responses by the responsible entities	
INSTITUTIONAL CAPACITY BUILDING	
Will there be any capacity building?	**[] N or []Y**
ATTACHMENTS	
Attachment 1: Site plan / photo Attachment 2: Agreement for waste disposal Other permits/agreements – as required	

Part II - Environmental/Social screening

PART 2: ENVIRONMENTAL /SOCIAL SCREENING			
Will the site activity include / involve any of the following potential issues / risks:	**Activity**	**Status**	**Additional references**
	A. General conditions and social risk management		See Section **A**
	B. Construction/reconstruction Increase in dust from construction/reconstruction activities Transport of materials Increase noise level Increase in sediments loads in water bodies Changes of water flow Pollution of water/soil due to temporary waste, fuel, lubricants storage or spill leakage	[ ] Yes [ ] No	If “Yes”, See Section A, B, F below
	C. Cultural and historical heritage Risk of damage to known/unknown historical buildings/cultural and historical area Chance finds are encountered	[ ] Yes [ ] No	If “Yes”, See Section C below
	D. Biodiversity Vicinity of recognized protection area or ecological network Disturbance of protected animal habitats Cutting of trees/forest	[ ] Yes [ ] No	If “Yes”, See Section D below
	E. Waste generation and management Generation of waste	[ ] Yes [ ] No	If “Yes”, See Section E below
	F. Traffic disturbance Site specific vehicular traffic Site is in a populated area	[ ] Yes [ ] No	If “Yes”, See Section A, B, F below

Part III - Environmental and social mitigation measures

Mitigation Measure	Parameter	Mitigation measures checklist
A - General conditions and social risk management	Site organization, occupational and health safety, permits and certificates	• Construction Work Plan has to be available at the construction site (in case that two or more contractors perform construction activities), • A person responsible for communication and receiving requests/complaints of the local population has been appointed • Avoid construction activities at night, • All legally required permits has to be acquired and kept on site, • Contractor/subcontractors have valid operating licenses, • All work must be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment, • Mandatory use of protective equipment, workers' personal protective equipment and safety procedures comply with legislation and international good practice (e.g. Wearing protective helmets, masks and safety glasses, harnesses and safety boots, etc.), • Appropriate informative and warning signposting of the sites inform workers of key rules and regulations to follow, • The construction location must be fenced and marked, • Public is informed on the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works), • Entry for unemployed person within the project location is prohibited (within the warning tapes and fences when/where deem needed), • Open pits must be covered and clearly marked when not worked on, • The surrounding area near the project must be kept clean, • Machines must be handled only by experienced and appropriately trained personnel, thus reducing the risk of accidents. • No fires are allowed on site under any circumstance.

Mitigation Measure	Parameter	Mitigation measures checklist
		• Devices, equipment and fire extinguishers must always be functional, so in case of need they could be used rapidly and efficiently. The contractor shall always have operational fire-fighting equipment available on site. Their position is communicated to workers and marked. The level of fire-fighting equipment must be assessed and evaluated through a typical risk assessment. There is an appointed person on the site responsible for the fire protection. Procedures in the case of fire are well known to all employees. • First aid kits must be available on the site and personnel trained to use it, • Staff should be properly trained for the positions and work performed, workers must hold valid workers certificates for e.g. Certificates for electrical safety (for li-censed electrician), etc, • Procedures for cases of emergency (including spills, accidents, etc.) must be available at the site, • Adequate lavatory facilities (toilets and washing areas) in the work site with adequate supplies of hot and cold running water, soap, and hand drying devices has to be provided • Purchased equipment must be installed and used respecting all safety measures prescribed by the producer of equipment and best practices, • In the case of construction/reconstruction activities, if construction site is of such a nature that it is not possible, in line with construction practice, to disable access to the construction site to anyone except work site workers, then it is necessary to provide adequate replacement nearby, • There should be no temporary storage of construction materials and waste occurs within any type of private property, • Suitable arrangements for all necessary welfare and hygiene requirements and for the prevention of covid-19 epidemics (regular delivery of PPE, ensure protocols for regular disinfection of rooms, equipment, tools, are in place and followed, ensure handwashing and other sanitary stations are always supplied with clean water, soap, and disinfectant, etc.) should be ensured • Trainings for workers on hygiene and other preventative measures against covid-19 should be carried out.
	Notification, workers and community safety	• Emergency Preparedness and Response Plan should be prepared and updated accordance with national legislation. • OHS implementation Plan should be prepared and updated in accordance with national legislation (part of the plan of works) and ESMF (ESMP Checklist).

Mitigation Measure	Parameter	Mitigation measures checklist
		• The local construction and environment inspectorates and communities should be notified of upcoming activities. • Workers code of conduct must be a part of contracting documentation and training to all workers to manage Sexual Exploitation and Abuse / Sexual Harassment risks in the sub-projects will be provided • All legally required permits must be acquired for construction and/or rehabilitation. • All work must be carried out in a safe and disciplined manner designed to minimize impacts on students, staff, neighboring residents and environment. • Workers should be well trained in using potentially dangerous equipment. • Any health and safety incidents should be reported to project manager immediately and to WB within 48 hours. This should be well communicated to the construction staff. • Workers' PPE will comply with international good practice (obligatory wearing of hardhats at all times, masks and safety glasses as needed and prescribed, harnesses and safety boots). • Appropriate signposting of the sites will inform workers of key rules and regulations to follow. • All construction sites must be equipped with appropriate sanitary facilities and resting places for workers. • Construction sites shall be fenced off or protected by properly designed barricades or tape- marked. • Material stockpiles or stacks, such as pipes, must be made stable and well secured to avoid collapse and possible injury to site workers. • Potentially hazardous areas (e.g. trenches, manholes, excavations) must be clearly marked.
	Stakeholder Engagement	• The MSE will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a time frame that enables meaningful consultations with stakeholders on project design and implementation. • Availability of an effective, responsive and accessible GRM
B - Construction	Air Quality	• Sprinkle water to limit dust emissions in the area near the construction materials and non-asphalted roads. Use water with all land clearing, grubbing, scraping, excavation, land levelling, grading, cut and fill and demolition activities which may cause dusting and particles emissions, • Cover surfaces with plastic coverings during material storage and transportation, • Adequate locations for storage, mixing and loading of construction materials should be established,

Mitigation Measure	Parameter	Mitigation measures checklist
		• Limit vehicles speed (30 km/h) in the area and access roads, • Periodically clean location and access roads from debris, • Use modern attested construction machinery to minimize emissions, provided with mufflers and maintained in good and efficient operation condition, • Additionally, to minimize dust (mainly pm10) from construction material collection, material retention time at the site should be reduced to a minimum, in order to minimize exposure to wind. • In the case works are taking place while the research institutions or universities are in operation, the works must be separated/sealed off by screens and similar to prevent spreading of dust and other emissions.
	Noise	• Maximum permissible noise level for the construction site is 65db. It is allowed to exceed that level for additional 5 db in the period from 8 to 18 hours. It is desirable to carry out works in the period from 8 to 18 hours and not to carry works during the nights, • Community should be informed in advance of any work activities to occur outside of normal working hours or on weekends, • All equipment must be maintained in good operating condition and be attested, • Employees have to be asked to use personal hearing protection equipment, • During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible. • In the case works are taking place while the research institutions are in operation, the works must be separated/sealed off by screens and similar to prevent noise pollution and disturbance of staff. Particularly noisy works will take place outside of institutions working hours.
	Water quality	• Responsibly handle the liquid waste, • Adding oil activities carry out on the part of the construction site that is derived from an impermeable working surface, • Handle all materials in accordance with instructions included in material safety data sheets (MSDS) which have to be available at the construction site,

Mitigation Measure	Parameter	Mitigation measures checklist
		• In the case of an accident, any hazardous liquid removes from the soil using adsorption materials such as sand, sawdust or mineral adsorbents. Such waste material you have to collect in tanks, store in the space provided for hazardous waste storage and hand over to authorized companies, • Ensure that water pumped back to natural waterways never exceeds the regulatory water quality standards • Prevent hazardous spillage coming from tanks, containers (mandatory secondary containment system, e.g. Double walled or bunded containers), construction equipment and vehicles (regular maintenance and check-ups of oil and gas tanks, tend to park (manipulate) machinery and vehicles only on asphalted or concrete surfaces with surface runoff water collecting system, • Organize and cover material storage areas, • Isolate wash down areas of concrete and other equipment from watercourse by selecting areas for washing that are not free draining directly or indirectly into watercourse, • Do not extract groundwater on unregulated way, nor discharge cement slurries, or any other contaminated waters into the ground or adjacent streams or rivers on uncontrolled way, • Ensure proper storm water drainage systems installed and take care not to silt, pollute, block or otherwise negatively impact natural streams, rivers, ponds and lakes by repair / rehabilitation activities.
	Soil	• Regularly maintain and service the construction machines, • Adhere the measures and standards for construction machinery, • Try to avoid fuel and lubricant storage on construction site, • If installation of fuel storage tanks will be needed, they should have secondary tanks with sufficient volume to contain a spill from the largest fuel tank in the structure. The containment area has to have a device (pump) to remove accumulated water, • The containers with hazardous substances should be kept in a leak-proof container to prevent spillage and leaking. This container should possess secondary containment system such as bunds (e.g. Bunded-container), double walls, or similar. Secondary containment system must be free of cracks, able to contain the spill, and be emptied quickly, • The containers with hazardous substances must be kept closed, except when adding or removing materials/waste. They must not be handled, opened, or stored in a manner that may cause them to leak.

Mitigation Measure	Parameter	Mitigation measures checklist
	Materials management	• Construction material must originate from the licensed companies (e.g. company has to be able to present licenses for excavation of natural minerals, stone, lime, clay, etc.). The company has to present a proof of conformity with all national environmental and H&S legislation. • Organization of works is such that construction materials is kept at the site in minimal quantities and for minimal amount of time. • Sand and gravel used in construction works should be traceable to licensed companies with valid concessions. • Quality of sand and gravel has to fulfil technical requirements and be unpolluted with oils, toxic, corrosive or hazardous substances and free of impurities. • Producer of concrete has to obtain/hold all required working and emission permits and quality certifications. • Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested. • Water used for production of concrete can be technical water, but free of hazardous and toxic pollutants, heavy metals and other substances hazardous to human health and environment.
	Labor Management	• Mitigation of labor related risks will follow the labor management procedures, which will also be included in the contractor ESMP. • Contractors will ensure that workers are hired, compensated and managed in adherence to national legislation and ESS2. This includes issues of contracts, labor rights, access to workers GRM without retaliation, prevention of SEA/SH including an accessible channel in the GRM to lodge related complaints, adherence to OHS and community health and safety measures.
	Transportation of Materials	• Construction routes are clearly defined. • Safety measures to prevent accidents are taken. • All materials prone to dusting are transported in closed or covered trucks or wagons. • All materials prone to dusting and susceptible to weather conditions are protected from atmospheric impacts either by windshields, covers, watered or other appropriate means • Roads are regularly swept and cleaned at critical points. Spilled materials are immediately removed from a road and cleaned. Access roads are well maintained.

Mitigation Measure	Parameter	Mitigation measures checklist
		• Access of the construction and material delivery vehicles are strictly controlled, especially during the wet weather. • Topsoil and stockpiles are kept separate. • Stockpiles are located away from drainage lines, natural waterways and places susceptible to land erosion. • All loads of soil are covered when being taken off the site for reuse/disposal • Stockpiles do not exceed 2m in height to prevent dissipation and risk of fall.
C - Cultural and historical heritage	Cultural heritage and Chance find	• If the building is located in a protected cultural and historical area or it is about buildings designated and protected as cultural heritage, notify and obtain approval/permits from competent authorities and address all construction activities in line with legislation, • If during excavations some archaeological finds are encountered, works have to be stopped immediately and the competent authority informed. Works should be resumed only after appropriate measures have been taken as required by relevant authority and after it confirms that works may continue for all cases where the cultural heritage and its fundamental values can be protected at the existing location with special protection measures protect the cultural heritage on the spot.
D - Biodiversity	Biodiversity	• Limit work to the visible part of the day, • Restrict the movement of heavy machinery to the road corridor, • Professionally and carefully handle of equipment and machinery to try to break out accidents such as fires or spills of large amounts of harmful substances into the environment, and thus adversely impact on the present flora and fauna, • Limit work along watercourses and on watercourses and canals to as small an area as possible, • Avoid, where possible, cutting of trees and other natural vegetation, • In the case of removing vegetation, to prevent unnecessary loss of vegetation in the project area, clearly marked the areas where vegetation will be removed, • For the restoration of the removed natural vegetation cover, use only autochthonous plant species that occur in the vegetation communities present in the wider area of the sub-project,

Mitigation Measure	Parameter	Mitigation measures checklist
		• The potential removal of vegetation plan for the period when birds do not nest. All birds that nest they need to protect until their birds can fly. In case of finding the nests of endangered bird species, prevent their disturbance, and inform about the discovery the central state body responsible for nature protection, • Where possible, the area under construction/reconstruction fence to lessen even occasional disturbance and dust on habitats and biodiversity. If noise barriers need to be constructed, they should be opaque or with a design and density of stickers that will prevent birds from entering the barriers as much as possible.
E - Waste generation and Management	Waste management	• Each type of generated waste on the location has to be temporary stored in separate waste containers which have to be labelled with waste type name and waste code and located at the solid surface foreseen for that purpose on the construction site, • Records of waste streams and amounts has to be kept for each type of generated waste at the location • All waste has to be handed over with appropriate documentation to the companies authorized for the waste management (companies that have adequate waste permit), • In the case of hazardous waste information on handing over waste to the final destination must be obtained, • Whenever feasible the contractor should reuse and recycle appropriate and viable materials (except asbestos), • Mineral (natural) construction and demolition waste has to be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and temporarily stored in appropriate containers. Depending of its origin and content, mineral waste has to be reapplied to its original location or reused, • Burning or illegal dumping of waste is strictly prohibited.
	Hazardous waste	• The Containers Holding Ignitable Or Reactive Wastes Must Be Located At Least 15 Meters (50 Feet) From The Working Facilities • All hazardous wastes, including liquids, contaminated packaging and solids are transported by specially licensed carriers and disposed in a licensed facility. • Temporary storage of liquid toxic or hazardous waste on site; all hazardous or toxic liquid substances will be kept in safe containers labelled with appropriate classification code in accordance with the regulation on categories, types and classification of waste with a hazardous waste catalogue. These containers should be leak-proof to prevent spillage and leaching. The containers should pose secondary containment system such

Mitigation Measure	Parameter	Mitigation measures checklist
		as bunds (e.g. bunded-container), double walls, or similar. Secondary containment system must be free of cracks, able to contain the spill and be emptied quickly. • Solid hazardous waste should be kept in safe containers labelled appropriately. These containers should be leak-proof to prevent spillage and leaching. These containers should be covered and protected from weather impact (rain and other) • Oils, grease and sludge from the oil and grease collecting pits must be removed from the pits, transported and disposed/recovered by a licensed company only and at the licensed landfills or other licensed facilities. • Regular checks of containers containing toxic and hazardous wastes should be performed.
F - Traffic disturbance	Traffic disturbance	• Traffic management must be conducted in accordance with provisions of traffic legislation (e.g., appropriate lighting, traffic safety signs, barriers and flag persons that are seen easily or are easy to follow, road speed should be clearly posted), • It is desirable to avoid transport on access roads during rush hours.
G - Emergency preparedness Procedures	Prepare for safety of project workers during an emergency	• Check if procedures have been developed and workers are informed

Part IV Monitoring plan template

Risk / Impact	Monitoring Indicator	Frequency	Responsible Party	Timeline
Terrestrial habitat alteration	• Area of habitat affected (sq. m). • Number of re-vegetated areas.	Quarterly or as required	District Council Team	Throughout construction phase
Loss of vegetation	• Area cleared (sq. m). • Number of trees replanted.	Monthly	District Council Team	Throughout construction phase
Increased susceptibility to soil erosion	• Erosion control measures in place. • Erosion levels on site.	Quarterly of as required	PPPC, District Council Team	Construction phase
Increased generation of hazardous and e-waste	• Amount of e-waste collected and properly disposed of.	Monthly	PPPC, District Council Team	Construction and operational phases
Increased risk of air pollution	• Emission levels (CO2, etc.). • Number of renewable energy sources used.	Monthly or as required	PPPC, District Council Team	Construction and operational phases
Increased noise and vibration	• Noise levels (dB). • Number of noise complaints.	Weekly	PPPC, District Council Team	Construction and operational phases
Increased dust particles	• Air quality levels (PM2.5/PM10). • Number of dust suppression actions.	Weekly	PPPC, District Council Team	Construction phase
Increased risk of water pollution	• Water quality levels (sediment, contaminants). • Number of sanitation facilities.	Monthly or as required (based on incident).	District Council Team	Construction phase
Increased risk of electromagnetic radiation	• EMF levels. • Number of public awareness campaigns conducted.	Quarterly	District Council Team, MACRA	Construction and operational phases

Risk / Impact	Monitoring Indicator	Frequency	Responsible Party	Timeline
Increased risk of bird collisions	• Number of bird collisions. • Number of diverters installed.	Monthly	District Council Team	Construction and operational phases
Increased risk of climate change impacts	• Climate-resilient materials used. • Amount of renewable energy generated.	Quarterly	MITA, PPPC	Throughout the project phases
Risk of non-compliance with labor laws	Number of worker grievances. Number of labor audits conducted.	Monthly	PPPC, District Council Team	Throughout project phases
Risks related to unequal access to employment	Gender and age breakdown of hired workers. - Number of equal opportunity trainings.	Monthly	PPPC, District Council Team	Throughout project phases
Exclusion from project benefits	Number of marginalized groups benefiting.	Monthly	PPPC, MACRA, MITA	Throughout project phases
Gender-based violence (GBV) and SEA/SH	Number of GBV/SEA incidents reported. Number of training sessions held.	Monthly	District Council Team	Throughout project phases
Increased risk of community livelihood disruption	Number of compensations made. Number of community grievances.	Monthly	District Council Team	Construction phase
Risk of child labor and forced labor	Number of underage workers identified.	Monthly	District Council Team	Construction and operational phases
Increased safety hazards for local communities	Number of safety incidents reported. Number of safety measures in place.	Monthly or as necessary.	District Council Team	Construction and operational phases
Impacts on cultural heritage and archaeological resources	Number of chance finds reported.	As needed	District Council Team	Construction phase

Risk / Impact	Monitoring Indicator	Frequency	Responsible Party	Timeline
Cybersecurity and data privacy risks	Number of cybersecurity breaches. Number of personnel trained on security.	Quarterly	Contractors, MACRA, MITA	Throughout operational phase

Annex 4: E-Waste Management Plan

A4.1 Introduction

The Digital Malawi Acceleration Project (DMAP) will expand digital connectivity, improve government services, and upgrade digital infrastructure across Malawi. These activities involve the procurement and use of large quantities of electronic equipment, such as computers, servers, mobile phones, and batteries. Once outdated, this equipment will become e-waste, which, if not managed properly, can pose environmental, health, and safety risks. E-waste contains hazardous substances like lead, mercury, cadmium, and brominated flame retardants that can harm both the environment and human health. When improperly disposed of, e-waste can contaminate soil and water, cause air pollution, and lead to serious health issues like respiratory problems and organ damage. Thus, managing e-waste responsibly is a crucial part of the environmental and social sustainability of DMAP. This E-Waste Management Plan (EWMP) will ensure the proper management, storage, collection, transportation, and disposal of all electronic waste generated by the DMAP, following national regulations and the World Bank Environmental and Social Framework (ESF).

A4.2 Objectives of the E-Waste Management Plan

The objectives of the EWMP are to:

- Identify types of e-waste generated by the project.
- Establish processes for the collection, storage, transport, and disposal of e-waste.
- Promote recycling and reuse of electronics where possible.
- Mitigate environmental and health risks associated with improper e-waste handling.
- Ensure compliance with national regulations and the World Bank's Environmental and Social Standards (ESS).
- Build capacity among stakeholders to manage e-waste responsibly.

A4.3 Scope of the Plan

The EWMP applies to all subprojects under DMAP, covering:

- Procurement and use of ICT equipment in schools, government institutions, and data centers.
- Replacement or upgrading of telecommunications equipment (4G/5G towers, servers).
- The expected increase in the circulation of smart devices and IT equipment, generating e-waste at the end of their useful life.

A4.4 Legislative and Policy Framework

Although Malawi currently does not have a specific E-Waste Management Strategy, several existing laws and policies provide a foundation for regulating the handling and disposal of e-waste. These laws indirectly address various aspects of waste management, pollution prevention,

and environmental protection, which can be applied to the Digital Malawi Acceleration Project (DMAP). The table below is a description of how these legislative and policy frameworks are relevant to the e-waste management context of the project.

Legislative / Policy Framework	Description	Relevance to E-Waste Management in DMAP	Compliance Measures for DMAP
Environment Management Act (2017)	Governs the management of hazardous substances and pollution prevention.	Provides the legal basis for managing hazardous materials found in e-waste (e.g., lead, mercury).	DMAP will follow hazardous waste management procedures by contracting licensed e-waste handlers for safe disposal.
National Environment Policy (2004)	Guides sustainable development, pollution prevention, and cleaner technologies.	Promotes waste reduction, reuse, and recycling practices applicable to e-waste management.	DMAP will integrate recycling practices and prevent environmental pollution from improper e-waste disposal.
Occupational Safety, Health, and Welfare Act (1997)	Regulates safety measures for workers exposed to hazardous substances.	Ensures worker safety when handling hazardous e-waste materials.	DMAP will ensure contractors and workers handling e-waste are provided with appropriate PPE and training in line with the Act.
Malawi Communications Act (2016)	Regulates the ICT and telecommunications sectors.	Mandates sustainable management of ICT infrastructure, including disposal of telecommunications equipment.	DMAP will work with licensed recyclers to manage e-waste generated from telecommunications equipment upgrades.
Local Government Act (1998)	Empowers local authorities to manage waste disposal and environmental health.	District councils are responsible for overseeing e-waste management at the local level, particularly from schools and government offices.	DMAP will engage district councils to coordinate the collection and storage of e-waste, ensuring it is managed by licensed handlers.
Draft National ICT Policy (2020)	Promotes the sustainable use of ICT infrastructure.	Provides guidance on the responsible disposal and recycling of ICT equipment.	DMAP will follow the policy's guidelines for sustainable e-waste disposal, ensuring proper recycling and reducing environmental harm from obsolete ICT.

A4.5 Types and Sources of E-Waste

The following table provides a detailed breakdown of the types of e-waste that will be generated during the DMAP implementation:

Type of E-Waste	Source	Examples
ICT Equipment	Schools, Government institutions, Data Centre	Desktops, Laptops, Tablets, Printers, Routers
Telecommunications Equipment	Telecom operators	Mobile phones, Modems, Servers, 4G/5G towers
Backup Power Supplies (Batteries)	Data Centre, Offices	Lead-acid batteries, Lithium-ion batteries
Other Electronic Devices	Various subproject locations	Keyboards, Monitors, Cables, Chargers

A4.6 Roles and Responsibilities

Successful implementation of the EWMP depends on clear roles and responsibilities for all parties involved:

A4.6.1 Public Private Partnership Commission (PPPC)

- Overall responsibility for coordinating e-waste management across the project.
- Ensure compliance with national and World Bank requirements on waste management.
- Develop the e-waste strategy and ensure its dissemination to all stakeholders.
- Oversee contractor performance regarding e-waste management.
- Engage licensed e-waste recyclers to handle collection, transport, and disposal.

A4.6.2 Local Council Level

- Ensure compliance with e-waste guidelines at the district level.
- Conduct training and awareness activities for local stakeholders.
- Coordinate collection points for e-waste and oversee its safe storage.
- Liaise with licensed recyclers for the transportation and recycling/disposal of e-waste.

A4.6.3 Contractors and Suppliers

- Ensure all equipment procured and used adheres to eco-design standards (i.e., less hazardous materials, more recyclable components).
- Provide detailed plans for e-waste disposal after project implementation.
- Ensure proper labelling and segregation of e-waste and arrange safe transport to recycling centre.

A4.6.4 Licensed E-Waste Handlers

- Responsible for the safe collection, transport, and recycling of e-waste.

- Ensure compliance with international standards for hazardous waste management.
- Provide regular reports on the amounts of e-waste processed and recycled.

A4.7 E-Waste Management Processes.

A4.7.1 E-Waste Collection and Storage

- Establish dedicated e-waste collection points at schools, government institutions, and project offices.
- E-waste should be segregated into categories (e.g., ICT equipment, batteries, telecommunications equipment).
- E-waste should be stored in secure, covered locations with proper ventilation to avoid hazardous vapors.

A4.7.2 E-Waste Recycling and Disposal

- Where feasible, ICT equipment should be refurbished and reused (e.g., redeployed to other schools or institutions).
- Work with licensed recyclers to recover metals, plastics, and other materials safely.
- Non-recyclable hazardous waste (such as lead-acid batteries) must be disposed of in licensed hazardous waste facilities.

A4.7.3 Safe Transport of E-Waste

- Licensed hazardous waste handlers should transport all e-waste.
- E-waste must be properly labelled to ensure that hazardous materials are easily identified and handled carefully.

A4.8 Monitoring and Reporting

Monitoring will occur through regular audits and inspections to ensure proper implementation of the EWMP. The PPPC and District Environmental Officers will monitor compliance with e-waste guidelines.

Monitoring Task	Frequency	Responsible Party
On-site inspections of e-waste storage	Monthly	District Environmental Officers
Collection and transport audits	Quarterly	Licensed E-Waste Handlers
Monitoring of recycled/disposed e-waste	Semi-annually	PPPC
Reporting to the World Bank	Semi-annually	PPPC Environmental Specialist

KPIs for monitoring:

- Amount of e-waste collected and recycled.

- Number of training sessions conducted.
- Compliance with storage and transport guidelines.

A4.9 Budget Estimate

The estimated budget for the implementation of the EWMP will include costs for:

- E-waste collection and transport services.
- Storage facilities and inventory management systems.
- Training and capacity building for stakeholders.
- Recycling and disposal services, including hazardous waste management.

An estimated budget for these activities will be determined based on site-specific assessments during the project's implementation phase.

Annex 5: GBV, SEAH Management Plan

A5.1 Introduction and Context

The Digital Malawi Acceleration Project (DMAP), funded by the World Bank, aims to accelerate digital development in Malawi by improving broadband access, enhancing data platforms, and promoting digital services. Despite the anticipated positive impacts, there is a potential risk of SEAH due to power imbalances, labour influx, and other vulnerabilities that could arise during project implementation, particularly in rural and marginalized communities.

SEAH refers to harmful acts perpetrated against a person's will, often based on gender, and includes sexual exploitation, abuse, and harassment. This SEAH Prevention and Response Plan outlines operational measures to mitigate SEAH risks and ensure that the project environment is safe, inclusive, and free from SEAH. The key objectives of the plan are as follows:

- Prevent and address all forms of SEAH linked to DMAP project activities.
- Ensure a clear GRM is in place to report SEAH incidents.
- Provide safe and confidential support to SEAH survivors.
- Establish clear disciplinary measures for violating the project's Code of Conduct (CoC).
- Ensure all project workers and stakeholders are trained on SEAH prevention and response.

A5.2 The Concept of SEAH

SEAH can be a confusing concept because its discussion is often done in the context of culture rather than the facts of aggression and intrusion. Cultural lenses on SEAH imply that aggressions and intrusions could be considered offensive in one culture and excused in another as part of usual and normal social interaction. The Inter-Agency Standing Committee (IASC) defines gender-based violence as “an umbrella term for any harmful act that is perpetrated against a person’s will, and that is based on socially ascribed (gender) differences between males and females. GBV broadly encompasses physical, sexual, economic, psychological/emotional abuse/violence, including threats and coercion, and harmful practices occurring between individuals, within families and in the community at large. These include sexual violence, domestic or Intimate Partner Violence (IPV), trafficking, forced and/or early marriage, and other traditional practices that cause harm.

The United Nations1 defines “sexual exploitation” as any actual or attempted abuse of a position of vulnerability, differential power, or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially, or politically from the sexual exploitation of another. Sexual abuse

[1] *UN (2020) United Nations protocol on allegations of sexual exploitation and abuse involving implementing partners, page 1-2.*

on the other hand is "the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. "SEA" is therefore a form of gender-based violence and generally refers to acts perpetrated against beneficiaries of a project by staff, contractors, consultants, workers, and Partners. Sexual harassment2 is defined as any unwelcome sexual advance, request for sexual favour, verbal or physical conduct or gesture of a sexual nature, or any other behaviour of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation to another, when such conduct interferes with work, is made a condition of employment, or creates an intimidating, hostile, or offensive work environment. It occurs between personnel/staff and involves any unwelcome sexual advance or unwanted verbal or physical conduct of a sexual nature.

A5.3 Guidance by the World Bank on SEAH

The WB Guidance Note3 defines four key areas of SEA risks:

a) **SEA** - exploitation of a vulnerable position, use of differential power for a sexual purpose; actual or threatened sexual, physical intrusion;
b) **Workplace sexual harassment** - unwanted sexual advances, requests for sexual favours, sexual physical contact;
c) **Human trafficking** - sexual slavery, coerced transactional sex, illegal transnational people movement, and
d) **Non-SEA** - physical assault, psychological or physical abuse, denial of resources, opportunities, or services and IPV.

DMAP will establish and implement a GBV and SEAH Prevention and Response Plan in response to the potential risks implied in discussing the concepts above. The Plan details the operational measures that will be put in place to mitigate the project-related risks of SEAH, including ensuring that project-established GMs are in place to receive reports and safely and confidentially refer survivors for further support.

A5.4 Policy, Legal and Institutional Context

1) ***The Constitution of Malawi (1995):*** Article 20 and 24 of the Malawi Constitution guarantee equality and non-discrimination, underscoring the illegality of SEAH by acknowledging the dignity and worth of each individual. These constitutional guarantees provide a robust legal framework for addressing and penalizing acts of SEAH.

[2] WB (2020) Good Practice Note on Addressing Gender Based Violence in Investment Project Financing involving Major Civil Works, page 7.
[3] WB 2018, page 3.

2) ***Prevention of Domestic Violence Act (2006):*** This Act provides mechanisms for the prevention and relief of domestic violence, which encompasses forms of sexual and gender-based violence. It offers a legal basis for the protection and support of victims, ensuring that measures are in place to handle cases of SEAH effectively.
3) ***Employment Act (2000):*** This Act sets out to prevent and remedy any form of discrimination or abuse in the workplace, including sexual harassment. It mandates that employers put measures in place to ensure a safe working environment free from sexual harassment, providing a clear legal pathway for workers to report and address instances of SEAH.
4) ***The Penal Code:*** The Penal Code of Malawi includes provisions that criminalize acts of rape, sexual assault, and other forms of violence that can be considered under SEAH. These legal provisions are crucial for the prosecution and deterrence of sexual exploitation and abuse.
5) ***Gender Equality Act (2013):*** This policy is aimed at enhancing gender equality and women's empowerment and addresses issues related to sexual harassment and discrimination, both in public and private sectors. It provides a comprehensive approach to address, prevent, and respond to gender-based violence (GBV) and SEAH, promoting equal rights and opportunities across genders.
6) ***Child Care, Protection and Justice Act (2010):*** This legislation provides a framework for the protection, care, and justice for children. It includes provisions specifically designed to combat sexual exploitation and abuse, reinforcing the country's commitment to protecting its most vulnerable populations.
7) ***Disability Act (2012):*** This Act emphasizes the need for inclusive protection and non-discrimination, ensuring that persons with disabilities are protected from sexual exploitation and abuse, aligning with their rights for dignity and respect.

A5.5 Screening for SEAH Risks in the DMAP

Projects like the DMAP can change social dynamics within communities and institutions, including schools, potentially increasing the risk of SEAH for vulnerable groups, such as women, girls, and boys. DMAP must take proactive measures to mitigate SEAH risks that may arise due to project activities, particularly in educational settings. Some of the factors that contribute to vulnerability of women and girls to SEAH in the project areas include:

i. ***Power Asymmetry:*** In Malawi's rural and urban areas, power imbalances between workers and beneficiaries can create opportunities for exploitation, placing women, girls, and female learners at heightened risk. Project staff, contractors, or supervisors may misuse their authority in schools or communities, increasing the vulnerability of female learners to SEAH, especially where they interact with male-dominated project teams.

ii. ***Poverty and Inequality:*** Poverty and social inequality may heighten vulnerability to SEAH, particularly when project activities involve distributing resources like ICT equipment and digital services in schools. Female learners from economically disadvantaged households could be more susceptible to exploitation when seeking access to these resources.

iii. ***Societal Norms and Gender Inequality:*** In Malawi, societal norms often perpetuate gender imbalances, reinforcing SEAH risks. The cultural acceptance of male dominance, particularly in educational institutions, can create environments where female learners face increased risks of SEAH from male staff or project workers.

iv. ***Low Levels of Education and Literacy:*** Female learners, especially in rural or under-resourced schools, may have lower levels of education and literacy. This not only limits their understanding of their rights but also increases their vulnerability to exploitation, harassment, and abuse by project workers or teachers.

v. ***Vulnerability of Female Learners in Schools:*** Female students in primary and secondary schools are particularly at risk of SEAH. The introduction of project workers or ICT trainers into school environments may inadvertently increase opportunities for SEAH, as these individuals may have direct or indirect authority over learners. This is especially concerning where there is inadequate supervision or protective measures in place for female students.

In the DMAP project, SEAH risks could take various forms, including transactional sex, inappropriate touching, use of degrading language, and exploitation of power dynamics within school environments. Female students may also face risks of sexual harassment from both project workers and existing school staff, who may use the opportunity of the project's presence to exploit power asymmetries. Other forms of SEAH include physical and emotional abuse, rape, and coerced sexual activity through abuse of power or authority in educational settings. In addition to risks in formal work environments, DMAP activities in schools present SEAH risks for female learners. The absence of clear protective measures, such as gender-segregated sanitation facilities or proper supervision, may increase these risks. Schools may also lack effective feedback mechanisms where female students can report SEAH incidents without fear of reprisal, further exacerbating their vulnerability.

A5.6 GBV and SEA Management Measures

Risk/Impact	Mitigation Measures	Responsible Party	Timeline
Abuse of trust, power, and exchange of	Develop and implement a Code of Conduct (CoC) for all workers, contractors, and staff prohibiting SEAH.	Contractors, PPPC	Prior to construction and

Risk/Impact	Mitigation Measures	Responsible Party	Timeline
favours by staff, consultants, or contractors	Conduct regular training on the CoC for all project personnel.		continuously during the project
SEAH incidents involving project staff, contractors, and community members	Establish a confidential and accessible Grievance Mechanism (GM) for reporting SEAH cases.	PPPC, Contractors	Throughout project
	Ensure the GM includes multiple reporting options, including phone lines and in-person reporting.		
	Handle all SEAH cases with strict confidentiality.		
Vulnerability of women and girls, especially in schools	Conduct awareness campaigns in schools and communities on SEAH risks, rights, and reporting mechanisms.	PPPC, Contractors, Local NGOs	During project awareness activities
	Engage women and vulnerable groups in culturally appropriate consultations to ensure their voices are heard.		
Unsafe working environments for women and vulnerable groups	Ensure gender-sensitive working conditions, including separate washrooms for men and women.	PPPC, Contractors, Safety Auditors	During construction phase
	Conduct regular safety audits to assess and mitigate SEAH risks in project settings.		
Lack of access to support services for SEAH survivors	Establish partnerships with local service providers for referral pathways.	PPPC, Local service providers	Ongoing throughout project duration
	Ensure survivors have access to health, legal, and psychosocial support services.		
Risk of SEAH during community consultations and engagement	Ensure consultations are held in safe and gender-sensitive environments.	PPPC, Contractors	Prior to and during community engagement activities
	Implement SEAH sensitivity training for community engagement teams.		
SEAH incidents due to labour influx	Minimize labour influx by employing local workers wherever possible.	PPPC, Contractors	Throughout project
	Monitor interactions between external workers and community members to mitigate SEAH risks.		
Risk of under-reporting of SEAH cases	Provide multiple, anonymous reporting channels in the GM.	PPPC, Contractors, Local NGOs	Throughout project duration
	Conduct regular training and awareness sessions to encourage SEAH reporting.		

A5.7 Response Plan for SEAH Incidents

When incidents of are reported within the project, a clear and structured response plan will be activated to ensure appropriate and effective handling of the situation. The response will be driven by principles of confidentiality, survivor-centered care, and accountability.

1. ***Survivor-Centered Response***

   The immediate and primary concern in responding to SEAH incidents is the safety and well-being of the survivor. The response will be guided by the following principles:

   - *Confidentiality:* All information related to the SEAH incident will be treated with the utmost confidentiality to protect the identity of the survivor and prevent stigma or retaliation.
   - *Informed Consent*: The survivor's needs and wishes will dictate the course of action, and their informed consent will be obtained at every response stage. Survivors will have full autonomy over whether and how to pursue justice or access services.
   - *Safety:* Measures will be taken to ensure the survivor's physical and emotional safety, including relocation to safe environments, if necessary, protection from retaliation, and access to security services if required.
   - *Support Services*: Access to medical care, psychosocial counselling, and legal services will be prioritised and facilitated immediately.

2. ***Referral Pathway***

   Survivors of SEAH will be referred to a comprehensive network of specialised service providers who can address their immediate and long-term needs:

   - *Health Care:* Survivors will be referred to medical facilities that offer services such as post-rape care, emergency contraception, and testing and treatment for sexually transmitted infections (STIs).
   - *Legal Assistance*: Legal aid will be provided for survivors seeking justice, including support for filing police reports, pursuing legal cases, and understanding their rights.
   - *Psychosocial Support*: Trained counsellors will provide trauma-informed care to help survivors cope with the psychological effects of SEAH. Long-term counselling services will be made available as needed.

3. ***Investigation and Disciplinary Actions***

   Upon receiving a SEAH report, an investigation will be promptly launched following the principles of confidentiality and fairness:

   - *Investigation Process*: A qualified and independent team will conduct investigations in collaboration with local authorities and in line with national laws and World Bank SEAH guidelines.

- *Disciplinary Measures*: Depending on the outcome of the investigation, perpetrators will face appropriate disciplinary actions. These may include termination of employment or contracts, blacklisting from future work opportunities, and, where necessary, legal prosecution in accordance with Malawi's legal framework.
- *Survivor Feedback*: Throughout the process, the survivor will be informed of the investigation's progress and outcomes, with respect for their safety and wishes.

A5.8 Monitoring and Reporting on SEAH

SEAH prevention activities will be continuously monitored and integrated into the broader monitoring framework of the DMAP project. This will ensure that SEAH risks are identified early and appropriate actions are taken. A variety of monitoring methods will be employed to track the implementation of SEAH prevention measures:

- PPPC and independent monitors will conduct regular site visits to assess the adherence to SEAH protocols, particularly in schools and communities where project activities are implemented.
- SEAH focal points will submit monthly reports detailing any incidents or concerns raised. They will also track the use of grievance mechanisms and the outcomes of reported cases.
- Data from the GM will be used to assess the effectiveness of SEAH awareness campaigns and identify areas where additional interventions may be needed.

The PPPC will compile quarterly SEAH monitoring reports and submit them to the World Bank. These reports will include data on SEAH incidents, response times, survivor feedback, and any corrective actions taken. A comprehensive annual evaluation will be conducted to assess the effectiveness of SEAH prevention and response mechanisms and recommend improvements in training, reporting, and incident management protocols.

Annex 6: Annex 6: Child Protection Plan

A6.1 Introduction

The DMAP will be implemented across various locations in Malawi, including schools, public institutions, and rural and urban communities. Given the project's scale and the likelihood of interaction with children, it is crucial to establish a comprehensive Child Protection Plan (CPP). The CPP is designed to protect children during project implementation and create a culture of respect and safety around children at every project site. It is crucial to ensure that all project workers and stakeholders adhere to the principles and procedures laid out in the plan. This plan ensures that children's rights are safeguarded and that they are protected from any form of abuse, exploitation, or neglect during project implementation. The CPP outlines the specific measures and guidelines that all project stakeholders, including workers, contractors, consultants, and community members, must follow to create a safe environment for children. The objectives of the CPP are:

To ensure that children are protected from all forms of abuse, exploitation, neglect, and violence during DMAP implementation.

To provide clear child protection procedures for all project workers, contractors, and stakeholders to follow at each site.

To raise awareness among project stakeholders, including school authorities and community members, about child protection issues and their roles in safeguarding children.

A6.2 Principles of the Child Protection Plan

The following principles guide the implementation of the CPP for the DMAP. These principles ensure that every action taken by project staff, contractors, and stakeholders prioritises the safety and well-being of children who project activities may directly or indirectly impact:

Best Interest of the Child: The well-being, safety, and developmental needs of children must take precedence in all project-related decisions, actions, and activities. Every worker, contractor, and stakeholder must ensure that their interactions, decisions, and actions do not harm or negatively impact children in any way and that the best interest of the child is the primary consideration at all times.

Zero Tolerance: The DMAP has a strict zero-tolerance policy toward any form of child abuse, exploitation, neglect, or harmful practices. This includes physical, emotional, and sexual abuse or any form of exploitation. Any suspected or reported incidents will be taken seriously and dealt with swiftly through established procedures. Individuals found violating this policy will face immediate disciplinary actions, including termination of employment or contract and legal prosecution where applicable.

Confidentiality: Any issue related to child protection, including the reporting and handling incidents, must be managed with the utmost confidentiality. This means that only authorized individuals involved in investigating and addressing the issue should have access to sensitive information. Information about the children involved should be shared on a strict need-to-know basis to protect their privacy and dignity and to prevent any further harm.

Non-Discrimination: All children must be protected equally, regardless of gender, socio-economic status, disability, ethnicity, religion, or family background. The plan must ensure that

no child is discriminated against or excluded from protection due to their circumstances. Every child must receive equal treatment to ensure that all are safe and secure throughout the project implementation.

A6.3 Child Protection Risks in DMAP

The project involves various activities that may expose children to specific risks. Below are the key risks identified and the necessary considerations to mitigate those risks during DMAP implementation.

Construction and Civil Works: During construction activities associated with DMAP, such as laying cables or installing infrastructure, children living nearby or passing through construction sites could be at risk of physical harm, accidents, or exploitation. To mitigate these risks, strict measures must be implemented, including securing construction sites with fencing and warning signs to prevent unauthorized access by children. Workers should be trained to maintain safe, child-friendly practices when operating near areas frequented by children.

Digital Connectivity and Internet Access: The expansion of internet access in schools and public institutions presents risks associated with children's exposure to cyberbullying, inappropriate online content, online predators, and cyber exploitation. To mitigate these risks, the project must ensure that internet access is accompanied by appropriate safeguards, such as implementing content filters, monitoring online activities, and educating students, teachers, and parents about online safety. Schools should also incorporate digital literacy and cyber-safety training into their curricula.

Interaction with Non-Local Workers: The presence of non-local contractors and workers within communities could expose children to a heightened risk of exploitation, abuse, or inappropriate interactions. Clear guidelines must be in place to manage interactions between children and workers. Workers must undergo child protection training and sign a Code of Conduct that prohibits any inappropriate interaction with children. Monitoring of workers' behaviour around children should be strict, and any breach of conduct must be reported and addressed immediately.

Proximity to Schools: Project activities conducted near schools may result in unregulated and potentially harmful interactions between project staff, contractors, and children. Specific measures should be implemented to reduce this risk to ensure that project sites near schools are monitored closely. These could include limiting non-essential access to school premises by project staff, scheduling work outside of school hours, and having designated child protection officers oversee the interactions between project workers and children. Any unauthorised or unsafe interactions should be reported and investigated immediately.

A6.4 Roles and Responsibilities

Public Private Partnership Commission (PPPC):

Oversee the implementation of child protection procedures at all project sites.
Ensure that child protection is integrated into all project activities.
Monitor and report on compliance with child protection measures.

Contractors and Subcontractors:

Ensure that workers adhere to the Child Protection Code of Conduct.

Implement safety measures to prevent child labour and protect children from exposure to risks on-site.
Train all staff on child protection procedures before commencing any work.

District Environmental and Social Welfare Officers:

Conduct regular site visits to monitor child protection compliance.
Support in raising awareness and responding to child protection concerns in the local community.

School Authorities:

Ensure that children are supervised in the school environment and are aware of online safety risks.
Report any child protection concerns to the relevant authorities promptly.

A6.5 Child Protection Procedures at Each Site During Project Implementation

The table below outlines the child protection procedures to be followed at each site during the implementation of the DMAP. These procedures are designed to ensure the safety and well-being of children in communities where project activities are conducted, including before, during, and after project implementation.

Child Protection Procedures of the DMAP

SN	Procedure	Details
1	**Before Project Activities Begin:**	
1.1	*Risk Assessment*	Conduct a child protection risk assessment for each site, identifying potential risks based on the site, community, and type of work.
1.2	*Training and Awareness*	Provide child protection training to all contractors, workers, and staff involved in the project. Raise awareness in the local community and schools about child protection policies and reporting mechanisms.
1.3	*Child Protection Code of Conduct*	Ensure all project workers sign a Child Protection Code of Conduct outlining expected behaviour, including zero tolerance for abuse, exploitation, or child labour.
1.4	*Engage with Local Authorities and Schools*	Coordinate with local schools, social welfare officers, and community leaders to ensure shared responsibility for child safety.
2	**During Project Implementation**	
2.1	*Restricted Access to Project Sites*	Enforce restricted access to all construction or civil works sites using proper fencing and barriers. Post clear warning signs to indicate the area is unsafe for children.
2.2	*Supervision and Monitoring*	Assign trained staff to supervise interactions with children, especially at schools. Ensure a child protection focal point is on-site to monitor compliance.
2.3	*Online Safety in Schools*	Work with schools to implement online safety protocols and train teachers and students on how to report online abuse. Supervise internet use.

SN	Procedure	Details
2.4	*Health and Safety Protocols*	Enforce strict health and safety measures, including PPE for workers. Prohibit child labour and ensure children are not involved in project activities.
2.5	*Reporting and Incident Management*	Establish confidential reporting channels for child protection concerns. Assign child protection focal points to respond to incidents and coordinate with social welfare authorities. Implement an immediate response procedure for any identified issues.
3	**After Project Completion**	
3.1	*Site Clean-Up and Restoration*	Safely restore project sites and clear hazards that may pose risks to children.
3.2	*Post-Implementation Monitoring*	Conduct follow-up visits to monitor whether any child protection risks remain after project completion, particularly in schools with new internet connectivity.
3.3	*Lessons Learned and Reporting*	Evaluate the effectiveness of child protection measures through community feedback. Submit reports summarising incidents, training, and monitoring results to the PPPC.

A6.6 Child Protection Code of Conduct

The Child Protection Code of Conduct is a formal agreement outlining the behaviour and responsibilities expected of all workers, contractors, and staff engaged in DMAP activities. It is crucial for maintaining a safe environment for children and preventing any form of abuse or exploitation. To ensure full accountability, every individual involved in the project must sign it. Key elements of the Child Protection Code of Conduct include:

Commitment to avoid any form of child abuse, exploitation, or violence: All workers and staff must commit to never engage in any behaviour that may harm or exploit children, whether physically, emotionally, or psychologically.

Obligation to report any incidents of child abuse or exploitation: If any worker or staff member witnesses or becomes aware of an incident involving child abuse or exploitation, they are required to report it immediately to the designated child protection focal point or supervisor. Confidentiality will be maintained to protect all parties involved.

Prohibition of the use of child labour in any project activities: As per national and international laws, the use of children in any form of labour related to the project is strictly prohibited. Any breach of this rule will result in severe penalties, including termination of contracts and possible legal action.

Respect for children's rights, privacy, and dignity in all interactions: All workers must treat children with the utmost respect, ensuring their rights and privacy are protected. This includes refraining from inappropriate physical contact, verbal abuse, or taking photos of children without the proper consent.

A6.7 Monitoring and Reporting

Effective Monitoring and Reporting are critical to ensure that child protection measures are implemented consistently and that any incidents or risks are addressed promptly. This section

outlines how monitoring will be carried out, the frequency of reporting, and the responsible parties for overseeing these processes. The table below helps provide a clear framework for monitoring child protection activities during the DMAP implementation, ensuring accountability and proper reporting at every level.

Monitoring Indicators	Means of Verification	Monitoring Frequency	Responsible Parties
Number of reported child protection incidents	Incident reports filed at each project site	Monthly	PPPC, District Environmental Officers, Child Protection Focal Points
Number of workers and staff trained on child protection	Attendance records of training sessions	Monthly	PPPC, Contractors, Child Protection Focal Points
Compliance with restricted access to project sites	Site inspections and reports	Monthly	PPPC, Contractors, Child Protection Focal Points
Implementation of child protection measures	Monitoring reports from child protection focal points	Monthly (or more frequent in high-risk areas)	PPPC, District Environmental Officers, Child Protection Focal Points
Submission of signed Child Protection Codes of Conduct	Copies of signed codes of conduct	Before project activities commence	Contractors, PPPC
Follow-up actions taken for child protection breaches	Records of actions taken in response to reported incidents	As incidents occur	PPPC, Contractors, Child Protection Focal Points
Engagement with local schools and community authorities	Meeting minutes and community engagement records	Ongoing throughout project implementation	PPPC, District Environmental Officers, Child Protection Focal Points

Annex 7: Occupational Health and Safety Management Plan

A7.1 Introduction

This Occupational Health and Safety (OHS) Plan is developed for the Digital Malawi Acceleration Project (DMAP) to ensure the safety and health of all workers, contractors, and surrounding communities during project activities. The plan outlines the necessary precautions, responsibilities, and procedures for managing risks associated with construction and operational activities, aligning with Malawi's health and safety laws and the World Bank Environmental and Social Standards (ESS2: Labor and Working Conditions). The objectives of the OHS Plan are as follows:

To protect all workers and community members from potential hazards and risks.

To comply with Malawi's Labour Regulations and World Bank Health and Safety Guidelines.

To provide clear safety procedures and ensure all workers follow the correct practices to prevent accidents.

To establish procedures for emergencies and quick response to accidents.

To regularly monitor the work environment and provide continuous training on health and safety for all workers.

A7.2 Key Laws and Standards

The project will comply with both national laws and international guidelines including:

- Malawi Occupational Safety, Health, and Welfare Act (1997)
- Environmental Management Act (2017)
- Malawi National Construction Safety Guidelines (2015)
- World Bank Environmental and Social Standards (ESS2: Labor and Working Conditions)
- World Bank General Environmental Health and Safety (EHS) Guidelines

A7.3 Roles and Responsibilities

Different groups are responsible for ensuring that the OHS Plan is followed:

PPPC: Responsible for overseeing the entire project, making sure the OHS Plan is followed, and ensuring that contractors comply with safety standards.

Local Council Team: Monitor and report on safety measures at local levels.

Contractors: Responsible for ensuring the safety of workers on-site, providing necessary equipment, and following safety rules.

Workers: Follow safety guidelines, use protective equipment, and report unsafe conditions.

A7.4 Key Health and Safety Risks and Management

This section identifies the main health and safety risks related to the project and the actions to manage them.

A7.4.1 General Risks

Accidents from Heavy Machinery: Operating heavy machines like cranes or excavators can lead to serious accidents.

Ensure that all operators are trained, and that machinery is inspected regularly. Set up clear signs and restrict access to areas where machines are operating.

Falls and Injuries from Working at Heights: Workers may fall from high structures like towers. Workers should use safety harnesses and other equipment. Train workers on how to work safely at heights and regularly inspect their equipment.

Dust and Air Pollution: Dust from construction can affect the health of workers and nearby communities. Water down dusty areas, use dust barriers, and make sure workers wear masks or other protective equipment to prevent respiratory problems.

A7.4.2 Site-Specific Hazards

Traffic Hazards: Construction near roads may increase traffic accidents.

Develop a Traffic Management Plan, including signs and traffic controllers to direct vehicles safely. Avoid working during peak traffic hours.

Handling Hazardous Materials: Some materials, like fuel and chemicals, may cause accidents if not handled properly.

Store hazardous materials away from high-traffic areas, train workers on proper handling, and create containment areas to catch spills.

Noise Pollution: Machinery may create noise that disturbs workers and nearby communities.

Limit noisy work to daytime hours, provide workers with earplugs, and inform nearby residents of noisy activities in advance.

Waste Disposal: Construction activities can generate a lot of waste, including electronic and hazardous waste.

Develop a Waste Management Plan. Ensure that waste is properly separated and disposed of, especially hazardous materials like old electronics or fuel.

A7.5 Preventive Measures

The following are key preventive measures to ensure the safety of workers and communities:

Personal Protective Equipment (PPE): Workers must be provided with proper safety equipment, such as helmets, gloves, masks, and safety boots. All workers must be trained on how to use their PPE correctly.

Training: Workers will receive safety training before starting work. This includes training on:

- Proper lifting techniques to avoid injuries
- Working safely with heavy machinery
- Preventing falls from heights
- Handling hazardous materials safely
- Emergency response, such as first aid and fire safety

Hazardous Material Storage: Dangerous materials, such as chemicals or fuel, should be stored safely, away from areas where people work or live. Storage areas must be equipped with spill containment systems to prevent accidents.

Safe Traffic Management: Ensure clear road signs are installed where there is construction, and that barriers are in place to protect workers from vehicles. Use flag persons to direct traffic when necessary.

Good Housekeeping: To prevent accidents, keep the worksite clean and free from debris. All tools and materials must be stored properly when not in use.

Structural Design for Safety: Incorporating guardrails, handrails, and barriers in design plans to prevent falls from heights. Additionally, designing secure scaffolding systems can protect workers operating at elevated levels.

A7.6 Emergency Preparedness and Response

Emergency Response Plan: There will be a clear plan for responding to accidents like fires or chemical spills. Workers will be trained on emergency response, including fire extinguishers and first aid kits.

Spill Prevention Plan: A spill prevention plan will include portable spill kits and instructions on responding to spills of hazardous materials like fuel or chemicals.

A7.7 Training and Awareness

All workers, contractors, and district officials will be trained on health and safety protocols. This training will include:

Induction Training: Before starting work, every worker will undergo a safety briefing that explains all risks and protective measures.

Ongoing Training: Continuous training sessions, including toolbox talks, will remind workers about the importance of following safety procedures.

Specialised Training: Contractors and district environmental officers will receive additional training in hazardous material handling, emergency response, and safe machinery use.

A7.8 Monitoring and Reporting

Daily Inspections: Supervisors will inspect the worksite daily to ensure that all safety procedures are followed and report any unsafe practices.

Weekly Reporting: Contractors will submit weekly safety reports to the PPPC, outlining safety performance and any incidents.

Quarterly Audits: PPPC will conduct safety audits every three months to assess compliance and identify any areas needing improvement.

Accident Reporting: All accidents and incidents must be reported immediately. A full investigation will be conducted to identify the cause and prevent future accidents.

Annex 8: Emergency Response Plan (ERP) for DMAP

A8.1 General Overview

This Emergency Response Plan (ERP) guides contractors involved in the Digital Malawi Acceleration Project (DMAP) in adequately preparing for potential emergencies during project implementation. Contractors must develop specific emergency response procedures tailored to their subprojects, which must be approved before work begins.

The DMAP ERP outlines the necessary steps, actions, and procedures to handle emergencies that may occur during the construction and operational phases of the project. This plan focuses on preventing and managing emergencies related to construction activities, including electrical hazards, fire, accidents, and environmental incidents. It is designed to protect the safety of workers, the public, and the environment while ensuring a coordinated response to emergencies. The critical emergencies covered include the following: electrical hazards and fires, injuries and medical emergencies, chemical spills, environmental pollution (e.g., water or soil contamination), and fire incidents at project sites. The objectives of this ERP are:

- To provide a structured and coordinated response to emergencies.
- To ensure the safety and well-being of workers, community members, and the environment.
- To minimise damage to property and project infrastructure.
- To outline the steps, contractors must create a tailored ERP for their subprojects.

A8.2 Contractor's Responsibility

The contractor must develop a subproject-specific ERP that is consistent with the DMAP ERP and tailored to the specific risks of their activities. The ERP must:

- Identify potential hazards and emergency scenarios.
- Assign roles and responsibilities for emergency response (to be submitted before commencement of works).
- Provide site-specific emergency contact details (fire, police, medical, and local authorities).
- Ensure that all workers are familiar with the plan and know how to respond to emergencies.

A8.3 Potential Emergencies and Response Measures

A8.3.1 Electrical Hazards and Fires

Potential emergencies include electrical fires, electrocution, and electrical equipment failure.

Response Measures:

- Immediately disconnect the power supply in the event of an electrical fire or electrocution.
- Use a Class C fire extinguisher (designed for electrical fires) to extinguish the fire.
- Evacuate personnel from the area and call local fire services immediately.
- Administer first aid to the affected individual (if safe to do so) and seek emergency medical help.

- Prevent re-entry into the area until a qualified technician confirms it is safe.

A8.3.2 Injuries and Medical Emergencies

Injuries such as falls, burns, cuts, or severe medical conditions may occur on-site.

Response Measures:

- Provide first aid immediately, using site first aid kits. Ensure the presence of trained first aid personnel.
- Call local emergency medical services for serious injuries.
- Transport the injured worker to the nearest healthcare facility if emergency medical services are unavailable.
- Complete an incident report and assess what led to the injury to prevent future occurrences.

A8.3.3 Chemical Spills

If hazardous materials or chemicals are spilt during construction, they pose risks to workers and the environment.

Response Measures:

- Contain the spill using appropriate spill kits to prevent it from spreading.
- Use protective gear (gloves, masks, etc.) to avoid exposure.
- Report the spill immediately to the site supervisor and environmental authorities.
- Evacuate the area if necessary and restrict access until the area is decontaminated.
-

A8.3.4 Environmental Incidents

Accidental discharges from construction activities, soil contamination, or air pollution into water bodies.

Response Measures:

- Stop the source of contamination or discharge.
- Notify environmental authorities immediately.
- Implement clean-up and containment measures as specified in the environmental management plan.
- Conduct post-incident monitoring and restoration activities.

A8.3.5 Fire Incident

Fires can result from faulty equipment, flammable materials, or electrical faults.

Response Measures:

- Evacuate the area immediately following the fire alarm.
- Use appropriate fire extinguishers based on the type of fire (Class A, B, or C).
- Call the local fire department.
- Follow evacuation plans, ensuring fire exits are used and no individuals are left behind.

A8.4 Evacuation Plan

In the event of a severe emergency, personnel evacuation will be required. The evacuation plan must be communicated to all staff, including designated assembly points, evacuation routes, and who to report to once at the assembly point. Key Steps in the Evacuation Plan:

1. **Raise the Alarm**: Use the emergency alarm system to notify all workers of an evacuation.
2. **Evacuate the Area**: Workers must follow designated escape routes to safe assembly points.
3. **Roll Call**: Conduct a roll call at the assembly point to account for all personnel.
4. **Report Missing Personnel**: If any personnel are missing, report immediately to the site supervisor or emergency coordinator.
5. **Re-entry**: Only after clearance by emergency services may workers return to the site.

A8.5 Emergency Communication Protocols

Effective communication is critical during an emergency. Contractors must ensure the following:

- **Emergency Contact Information**: Display emergency contacts in prominent locations on-site.
- **Internal Communication**: Equip supervisors with radios or phones to communicate with workers during emergencies.
- **External Communication**: Ensure clear communication with local authorities (fire, police, and medical services).

A8.6 Training and Drills

Contractors are responsible for providing workers with emergency preparedness training. This includes:

- Regular safety and emergency response training sessions.
- Monthly emergency drills for common scenarios (electrical fires, evacuation, etc.).
- First aid training for key personnel.
- Documentation of all training sessions and drills.

A8.7 Incident Reporting and Documentation

All incidents, regardless of severity, must be documented. The contractor will:

- Complete an incident report form immediately after an incident.
- Provide a detailed analysis of what caused the incident and steps taken to mitigate risks.
- Submit reports to the project management team and relevant authorities for review.

A8.8. Emergency Equipment

Contractors must ensure that all necessary emergency equipment is available and functional on-site. This includes:

- Fire extinguishers (Class A, B, and C).
- First aid kits.
- Spill containment kits.
- Protective equipment (PPE).
- Emergency lighting and alarms.

A8.9 Provision of Emergency Contact Information by Contractor

Before the commencement of works, the **Contractor** will be required to provide a comprehensive list of emergency contact information. This includes:

- Local Fire Department: [To be provided by Contractor]
- Local Medical Services: [To be provided by Contractor]
- Local Police: [To be provided by Contractor]
- Site Supervisor: [To be provided by Contractor]
- Emergency Response Coordinator: [To be provided by Contractor]

This information must be prominently displayed at the project site and easily accessible to all workers.

Annex 9: Evidence of Stakeholder Consultations



THE DIGITAL MALAWI PROGRAM PHASE I: DIGITAL FOUNDATIONS PROJECT

ESS DOCUMENTS (ESMF, RPF, LMP) PREPARATION STAKEHOLDER CONSULTATION

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THE DIGITAL MALAWI PROGRAM PHASE I: DIGITAL FOUNDATIONS PROJECT

ESS DOCUMENTS (ESMF, RPF, LMP) PREPARATION STAKEHOLDER CONSULTATION

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THE DIGITAL MALAWI PROGRAM PHASE I: DIGITAL FOUNDATIONS PROJECT

ESS DOCUMENTS (ESMF, RPF, LMP) PREPARATION STAKEHOLDER CONSULTATION

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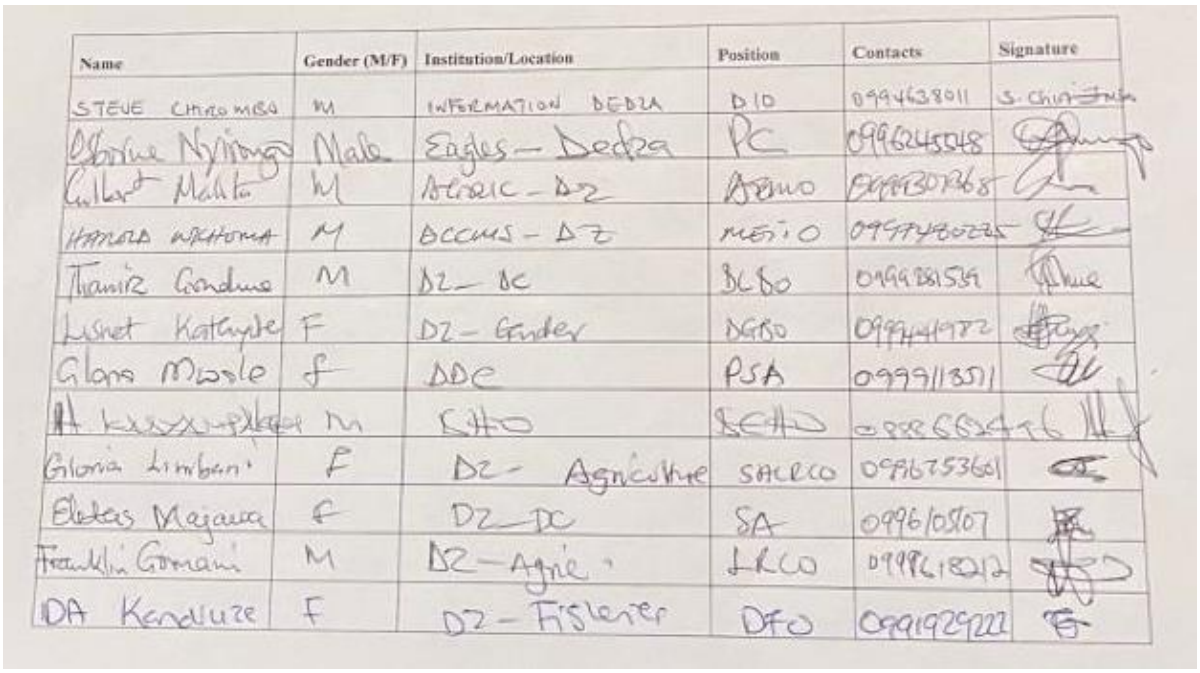
Rhoda Kamsonkho M ZDC Gender offic 0771422286

STAKEHOLDER CONSULTATION SIGNING SHEET

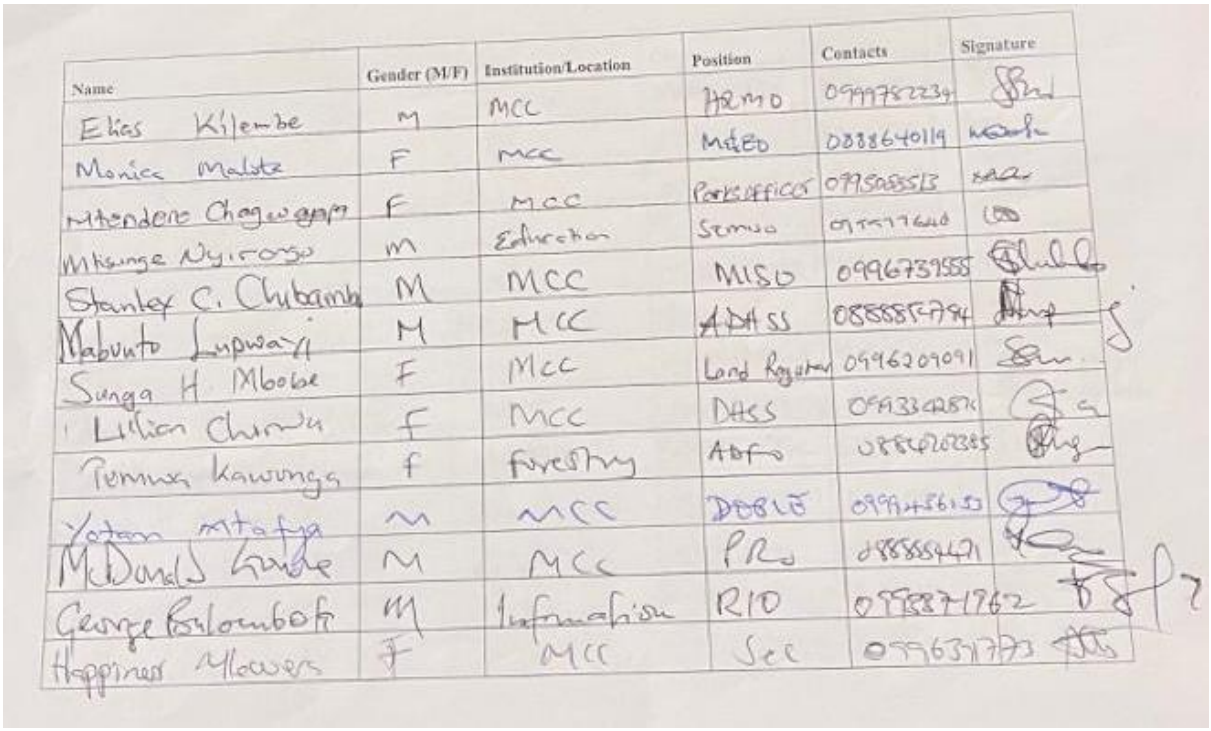
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Annex 10: Sample Chance Find Procedures

Chance finds procedures will be an integral part of the project ESMP and civil works contracts. If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:	
Step 1	Stop the construction activities in the area of the chance find;
Step 2	Delineate the discovered site or area;
Step 3	Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Department of Antiquities take over;
Step 4	Notify the supervisory Project Environmental Officer and Project Engineer who in turn will notify the Director of Antiquities in the Department of Antiquities immediately (within 24 hours or less);
Step 5	Responsible local authorities and the Department of Antiquities would then be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the Department of Antiquities. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, namely the aesthetic, historic, scientific or research, social and economic values.
Step 6	Decisions on how to handle the finding shall be taken by the Director of Antiquities. This could include changes in the layout (such as when finding irremovable remains of cultural or archeological importance) conservation, preservation, restoration and salvage.
Step 7	Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities.
Step 8	Construction work may resume only after permission is given by Director of Antiquities concerning safeguard of the heritage

Annex 11: Environmental and Social Rules for Contractors

These Environmental Rules for Contractors are prepared for all contractors engaged in DMAP construction activities. The rules include provisions for proper site management, safe storage of construction materials, and safe disposal of waste.

General Considerations

In all his activities, the contractor shall ensure maximum protection of the environment and the socio-economic well-being of the people affected by the project, whether within or outside the physical boundaries of the project area.

Before any construction works begin, the contractor shall ensure that the relevant environmental and land acquisition certificates of authorization for the works have been obtained from the MEPA and/or the Commissioner for Lands.

Generally, the contractor shall familiarize himself with the ESMF and the RPF for the DMAP. Specifically, the contractor shall make every effort to follow and implement the recommendations and mitigation measures of the ESMP and the RAPs to the satisfaction of the PPPC and the MEPA, or any such persons or agencies appointed by the PPPC or the MEPA, to inspect the environmental and social components of the DMAP.

The contractor shall work in cooperation and in coordination with the Project Management Team and/or any other authority appointed to perform or to ensure that the social and environmental work is performed according to the provisions of the ESMF and RPF for the DMAP, along with any specific RAP and/or ESMP.

The contractor shall always keep on-site and make available to Environmental Inspectors or authorized persons copies of the ESMPs, RAPs, and any other relevant documents for monitoring and evaluating environmental and social impacts and the level or progress of their mitigation.

Acquisition of Construction Materials

The contractor shall ensure that construction materials such as sand, quarry stone, soils or any other construction materials are acquired from approved suppliers and that the production of these materials by the suppliers or the contractor does not violate the environmental regulations or procedures as determined by the MEPA.

Movement and Transportation of Construction Materials

The movement and transportation of construction materials to and within the construction sites shall be done to generate minimum impacts on the environment and the community, as required by the ESMP and/or the RAP.

Fencing of Construction sites

Construction sites refer to all areas required for construction purposes, including staff/employee living quarters. The site's boundaries shall be demarcated before any work commencing. It is the

responsibility of the contractor to decide on an appropriate system of protective fencing for the site. The site boundary demarcation fence shall be removed when the site is decommissioned and full or almost fully restored to its original state. The Contractor shall ensure that all their plants, labour and materials remain within the boundaries of the site, and he shall ensure that materials used for construction on the site do not blow on or move outside the site.
Storage of Construction Materials and Equipment

Construction materials shall be stored in a manner to ensure that:

- There is no obstruction of service roads, passages, driveways and footpaths;
- Where it is unavoidable to obstruct any of the service paths, the contractor shall provide
- temporary or alternate by-passes without inconveniencing the flow of traffic or pedestrians;
- There is no obstruction of drainage channels and natural water courses;
- There is no contamination of surface water, groundwater or the ground;
- There is no access by public or unauthorized persons, to materials and equipment storage areas; and
- Staff have no access to materials and equipment storage areas without appropriate protective clothing.

Solid Waste Management

The Contractor shall institute a waste control and removal system for the site. All wastes shall be disposed of offsite at an approved landfill site in consultation with the District Council. Burning of any waste on any construction site is forbidden. The Contractor shall supply waste bins throughout the site at locations where construction personnel are working. The bins shall be provided with lids and an external closing mechanism to prevent their contents blowing out and shall be scavenger-proof to keep out and other animals that may be attracted to the waste. The Contractor shall ensure that all personnel immediately deposit all waste in the waste bins for removal by the Contractor. Bins shall be emptied on a daily basis and waste removed to a temporary storage site where it shall be properly contained in water and windproof containers until disposed of. The bins shall not be used for any purposes other than waste collection.

In performing his activities, the contractor shall use the best practical means for preventing emissions of noxious or offensive substances into the air, land and water. He shall make every effort to render any such emissions (if unavoidable) inoffensive and harmless to people and the environment. The means to be used for making the emissions harmless or for preventing the emissions shall be in accordance to the RAP and/or the ESMP, and with the approval of the relevant Local Authority or the Environmental Affairs Department. The contractor shall, in particular, comply with the regulations for disposal of cement pipes, construction/demolition wastes, wastewater, combustion products, dust, metals, rubble and timber. Hazardous wastes shall be treated and disposed of in conformity with the national regulations and where applicable, with the supervision of qualified personnel.

Wastewater Management

The Contractor shall construct and operate the necessary collection and waste treatment facilities for waste water to prevent pollution. In case where water is mixed with oil/waste, separators shall be installed. The oil should be stored in tanks or drums as hazardous waste and disposed of in approved manner. The Contractor shall dispose of collected waste water in a manner agreed with the respective councils and Environmental Affairs Department.

Site Restoration

The Contractor shall ensure that all temporary structures, equipment, materials, and facilities used for construction activities are removed upon completion of the project. Any oil and fuel contaminated soil shall be removed and buried in waste disposal areas. Soak pits and septic tanks shall be covered and effectively sealed off and the sites shall be grassed and all the sites shall be restored to a similar condition to that prior to the commencement of the works or to a condition agreed to with council officials. The ESMP will also specify occupational health and safety measures to be followed during project construction including measures to raise awareness and to prevent the spread of HIV/AIDS and other sexually transmitted diseases.

Health and Safety of Workers

The contractor shall protect the health and safety of workers by providing the necessary and approved protective clothing and by instituting procedures and practices that protect the workers from dangerous operations. The contractor shall be guided by and shall adhere to the relevant national Labour Regulations for the protection of workers. In addition, the contractors should indicate specific measures they will take during construction to prevent HIV-AIDS transmission by the work force, in relation or in addition to those indicated in the ESMP

Natural Habitats

In all relevant civil works projects, the contractor shall locate project facilities (permanent and temporary) so as to avoid or minimize the clearing of natural vegetation. The contractor shall enforce a strict prohibition on the washing of vehicles or changing of lubricants in waterways or wetlands.

Chance Finds Procedures for Physical Cultural Resources

If, during project construction, the contractor or project workers encounter archaeological relics, fossils, human remains, or other items of historical or other cultural value, the Contractor shall (i) temporarily suspend any works which might damage these items and (ii) notify the Client who then notifies the competent authority for instructions or guidance regarding the appropriate next steps to evaluate, salvage, recover, protect, and/or document the items found.

Worker Behavior

To help ensure that good environmental and social practices are consistently followed throughout project construction and operation, all workers, operational staff, and contract personnel shall be prohibited from (i) hunting, (ii) fishing, (iii) wildlife capture, (iv) bush-meat purchase, (v) plant collection, (vi) unauthorized vegetation burning, (vii) speeding, (viii) weapons possession (except by security personnel), (ix)working without Personal Protection Equipment

(PPE), (x) inappropriate interactions with local people, (xi) disrespecting local customs and traditions, (xii)littering of the site and disposing trash in unauthorized places, (xiii) Use of alcohol by workers during working hours, (xiv) sexual harassment, or (xv)Building fires outside camp areas without being authorized