



ENVIRONMENT AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Zimbabwe Idai Recovery Project (ZIRP)

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Abbreviations and Acronyms

CPU	Civil Protection Unit
CARE	Cooperative for Assistance and Relief Everywhere
CESMP	Contractor's Environmental and Social Management Plan
EA	Environmental Assessment
EMA	Environmental Management Agency
ESHS	Environmental, Social, Health and Safety
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
C-ESMP	Construction Environmental and Social Management Plan
ESF	Environmental and Social Framework
ESIA	Environment and Social Impact Assessment
GBV	Gender-Based Violence
GRM	Grievance Redress Mechanism
GoZ	Government of Zimbabwe
GDP	Gross Domestic Product
IDA	International Development Association
IVA	Independent Verification Agent
LMP	Labor Management Plan
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
OHP	Occupational Health Safety Plan
PDO	Project Development Objective
POM	Project Operation Manual
PIU	Project Implementation Unit
PSEA	Prevention of Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
UN	United Nations
UNICEF	United Nations Children's Fund
FAO	Food and Agricultural Organization of the United Nations
UNOPS	United Nations Office for Project Services
WFP	World Food Programme
WHO	World Health Organization
WASH	Water, Sanitation and Hygiene
ZIRP	Zimbabwe Idai Recovery Project

Executive Summary

For three days in March 2019, Cyclone Idai hit the eastern parts of Zimbabwe and devastated approximately 50,000 households or approximately 270,000 people. Idai brought heavy rains, causing flash floods and landslides, and damaged infrastructure, properties, schools, hospitals, farmlands and private houses and destroyed livelihoods. Hundreds of people were killed with approximately 344 missing¹, predominantly in the most affected districts of Chimanimani and Chipinge. Coping capacities to a shock such as a cyclone are very low and could have serious and lasting adverse socio-economic implications. The cyclone-affected areas where Region I (very productive, with abundant rain), and Region V (dry). Region V was already dealing with a drought when the cyclone hit, and many of the crops and livestock that had survived the drought succumbed to the cyclone.²

Description of the Project

The World Bank Idai Recovery Project is a four-year response to the devastation left by the cyclone, specifically to support livelihood recovery in worst affected areas. UNOPS has been designated as direct fund recipient and implementer, with the United Nations Children's Fund (UNICEF), Food and Agriculture Organization (FAO), World Health Organization (WHO), and World Food Programme (WFP) as sub-component technical lead agencies (herein referred to as Technical Leads). The Project Development Objective is to address the early and medium-term resilient disaster recovery needs of cyclone-affected peoples.

The project will take a multi-sectoral approach, which utilizes an integrated and holistic strategy by combining interventions across sectors, requiring active coordination and planning across organizations and components. Drawing on the consultative group, the ZIRP will sequence and integrate activities across UN and external partners, assuring coordinated and complementary investments, including the use of a central targeting mechanism. The ZIRP components details and anticipated activities are as follows:

The Project Development Objective (PDO) is to “address the early and medium-term resilient disaster recovery needs of cyclone-affected people.” This objective will be achieved through: (a) a surge of high-impact, immediate interventions for enhancing the coping capacity of the affected communities while humanitarian operations continue in tandem through other partners; (b) activities that transition toward medium-term recovery such as restoration of productive capacities of the communities and rehabilitation of critical community infrastructure across multiple sectors; and (c) interventions to reduce community hazard risk vulnerability through community level structural and non-structural mitigation.

Project Components are as follows:

Component 1: Providing Immediate Support for Cyclone Recovery: This component will provide immediate and integrated livelihoods and healthcare solutions to cyclone-affected people, including sub components such as:

- (a) Restoring livelihoods through conditional cash transfers to provide food assistance and through unconditional cash transfers for most vulnerable groups;
- (b) Restoring agricultural crop and livestock production, including distribution of agricultural inputs for small farmer households, and the re-stocking and treatment of livestock and poultry, and;
- (c) Accelerating the revitalization of basic health services, including the provision of a basic package of health services and referral pathways related to Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA), and child protection measures. All activities under this component will specifically target women and female-headed households.

¹ Report provided by the Provincial Civil Protection Committee in Mutare

² UNDP 2019

This component will also finance project management and overheads costs for the above activities, such as needs and beneficiary assessments, quality assurances of livelihood supports, etc.

Component 2: Enabling Medium-term Cyclone Recovery and Resilience-building: This component will support the rehabilitation of critical community infrastructure, such as water and sanitation systems, irrigation networks, community schools, and community roads, as well as community level structural risk reduction and mitigation efforts, such as slope protection and environmental rehabilitation. This component will also finance project management and overhead costs for the above activities, such as needs and beneficiary assessments, preparation of technical designs, technical quality control assurance, etc.

Component 3: Providing Project Management and Technical Assistance: This component will provide UNOPS Project Management support, for overall coordination and oversight functions and for centralized project services, across all components, such as monitoring and evaluation (M&E), managing and monitoring environmental and social performance, technical quality assurance, grievance redressal, GBV/SEA and referral and protection systems, and for engaging Independent Verification Agents (IVA) for beneficiary verification, technical quality assurances, project results validation; and Technical Assistance (TA) for a range of activities to be progressively determined on a needs basis, to facilitate strengthened implementation.

These could include, but are not necessarily restricted to: (a) social assessment; (b) supporting community risk assessments, monitoring and preparedness planning; (c) supporting community infrastructure damage assessments; (d) setting up the ZIRP Management information system (MIS); (e) developing health information and epidemic surveillance systems; (f) strengthening project strategic communications, media relations and citizen engagement; (g) building the capacity of the Project's environmental and social staff.

Component 4: Unallocated Fund: To allow flexibility and adaptability during implementation, the Project envisions an unallocated US\$3 million to be distributed midterm based on a set of agreed criteria such as performance of the various components, varying levels of support from other development partners, and associated financing gaps in the various components. Such allocation shall be decided by World Bank Management, based on recommendations from Task Team Leaders and in consultation with the Consultative Group being set up under the Project.

Project Duration: The financing instrument of the proposed Project is a grant-based Investment Project Financing, with a proposed operational life of 48 months. It will be financed through the IDA CRW Grant to UNOPS, as a recipient of the proposed Project. While the Project's immediate support activities are likely to take 9-12 months to complete, an overall 4-year project duration is proposed: (a) to allow the completion of community infrastructure schemes to building-back-better standards; and (b) for making the affected communities safer from future hazard risks through structural risk reduction interventions at the community level.

Purpose of the Environmental and Social Management Framework (ESMF)

This Environmental and Social Management Framework (ESMF) was selected as the most appropriate environmental and social instrument for assessing, managing and monitoring environmental and social risks and impacts of the Project, given that the full nature, scope and geographical locations of the sub-projects were not exactly known at the time of preparing the ESMF. The ESMF establishes screening processes and tools to be directly implemented by UNOPS, Technical Leads and contractors in assessing the risks and impacts of sub-projects. This will facilitate the recommendation of appropriate mitigation and monitoring measures for each sub-component and/or activity.

The main purpose of this ESMF³ is therefore to establish procedures and methodologies for environmental and social assessments, review, approval and implementation of investments to be financed under the Project, as the nature, scope and locations of activities become known during the implementation of the Project.

The ESMF describes the appropriate roles and responsibilities of UNOPS, Technical Leads, contractors and other stakeholders, and outlines the reporting procedures on social and environmental issues. It describes the managing and monitoring processes of environmental and social concerns related to the project investments.

It further determines the training, capacity building and technical assistance required for UNOPS and Technical Leads to successfully implement the provisions of the ESMF; and provides practical information resources for implementing the ESMF.

It also lays out the Project's staffing and institutional arrangements clarifying the relations between UNOPS as the key implementer, the World Bank, and the Technical leads, including their roles and responsibilities in view of the implementation of the ESMF.

Identified Environmental and Social Risks and Impacts

Based on initial scoping, the potential environmental risks and impacts of the Project are anticipated to be moderate, given that most of the interventions involve rehabilitation of existing community infrastructure. No new habitats or new ecosystems will be covered by infrastructure rehabilitation.

Minor environmental risks will likely be generated from activities associated with supplementary feeding and animal vaccinations, and their possible negative impacts on natural vegetation or existing agricultural produce. The reconstruction of storm drains and other water structures will likely impact rivers or lead to the degradation of soils. Gulleys and irrigated land will need to be investigated in terms of the efficiency of water use, and it needs to be ensured that actual practices in construction do not result in additional challenges. A forward-looking perspective will consider the life cycle of the new interventions and ensure that they are energy efficient and sustainable.

A broader perspective needs to consider the overall environmental context of the Eastern Highlands as a baseline and consider specific issues regarding waterways to prevent landslides and the blocking off of natural waterways. Furthermore, there is a risk that the removal of debris affects the new location in terms of aesthetics or safety of the community. There are further risks around waste management in medical mobile facilities.

Based on initial scoping, the social risk is anticipated to be moderate. The potential adverse risks and impacts on human populations and environment are not likely to be significant as the project activities are site-specific, without likelihood of impacts beyond the actual footprint of the project. Specific project activities are expected to have substantive positive impacts on beneficiary communities and not expected to have irreversible social risks related to land, community health and safety, or cultural heritage. The potential risks and impacts are related to i) inclusion and management of community expectations and relationships; ii) labor conditions and potential minor labor influx; iii) minor impacts on community health and safety (e.g. road safety, water borne diseases, etc.) and iv) gender-based violence (GBV) and sexual exploitation and abuse (SEA). The risk rating and project design also takes into consideration contextual factors such as the complex context of the post-emergency operation and aggravated vulnerabilities of intended beneficiary populations, including food insecurity, loss of life, community cohesion and displacement caused by the cyclone.

³ The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. It contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project risks and impacts, including on its capacity to manage environmental and social risks and impacts: (ESS1).

Legal and Policy Framework

The ESMF is guided by the relevant laws and policies of Zimbabwe, including the Environmental Impact Assessment Policy (1997), which lays out the requirement for stakeholder consultations among other issues; the Environment Management Act (CAP 20:70) of 2020, which defines the environmental management principles of the country; the Statutory Instrument 6 of 2007 on Water Pollution, Control and Waste Management; the Statutory Instrument 7 of 2007 on the Protection of Eco Systems; the Statutory Instrument 12 of 2007 on Hazardous Substances, Pesticides and Toxic Regulations; the Public Health Act (CAP 15:09) of 1996 that is applicable to WASH services; the Factories and Works Act (CAP 14:08) of 1996, which aims to reduce occupational accidents; the Water Act (CAP 20:24), which regulates water usage; the Land Acquisition (Disposal or Rural Land) Regulations from 1999 regulating land transfers; the National Museums and Monuments Act (CAP 25:11), regulating chance finds processes; and the Rural District Councils Act (29:13), defining the powers of the Rural District Councils.

World Bank's Environmental and Social Standards

Furthermore, the ESMF complies with the World Bank Environmental and Social Standards (ESSs) under the new Environmental and Social Framework (ESF), the World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines, and thematic/sectoral WBG EHS Guidelines. The ESS relevant for the Project are:

- ESS 1 (Assessment and Management of Environmental and Social Risks and Impacts) as it sets out the borrower's responsibility for assessing, managing and monitoring ES risks and impacts throughout the Project's life cycle;
- ESS 2 (Labor and Working Conditions) sets out the labor and working conditions, which the borrower is obliged to comply with through the development and implementation of labor management procedures, and which is relevant as the Project will employ community and contracted workers;
- ESS 3 (Resource Efficiency and Pollution and Management) sets out requirements in regards to addressing resource efficiency and pollution prevention and management with the objective to promote sustainable use of resources. It is applicable, as the Project needs to ensure appropriate waste management in some of the activities, and should aim for resource efficiency in the restoration of communal infrastructure;
- ESS 4 (Community Health and Safety) addresses the health, safety and security risks and impacts on project-affected communities, with the objectives to avoid adverse impacts on health and safety of community members. Although the Project aims to improve the lives of previously affected communities, it needs to be ensured that Project activities do not pose any unintended negative consequences on communities;
- ESS 5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement), aims to avoid involuntary resettlement, forced eviction, and aims to mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use. While the project activities are not expected to require land acquisition, restrictions on land use or involuntary resettlement. The ESMF will outline screening procedures and voluntary approaches to this effect;
- ESS 6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources) aims to protect and conserve biodiversity and habitats, promotes sustainable management of living natural resources, and supports livelihoods of local communities. The Project will implement activity-specific screening procedures for biodiversity risks and impacts likely to occur from the activity;
- ESS 8 (Cultural Heritage) aims to protect cultural heritage from the adverse impacts of project activities and support preservation, as well as promoted equitable sharing of benefits from the use of cultural heritage.

No major affection of any cultural heritage sites is anticipated under the Project; however, the Project may have to handle chance cultural findings, following Chance Find Procedures;

- ESS 10 (Stakeholder Engagement and Information Disclosure) recognizes the importance of open and transparent engagement vis-à-vis project stakeholders and ensures an inclusive process is conducted throughout the lifecycle of the Project. This process has already commenced through the Stakeholder Engagement Plan (SEP), laying out all the different types of stakeholders, timings and modes of communication and consultation.

Institutional Roles and Responsibilities for Implementing the ESMF

UNOPS is the proposed borrower, project implementer and Technical Lead for several sub-components. It will recruit and staff the PIU, based in Harare and undertake project management activities. As a Technical Lead, UNOPS will also maintain an office in Mutare, staffed to implement the respective sub-components under UNOPS' technical lead, under the lead of a Project Manager for Infrastructure.

Given the overall responsibility of the PIU for the ZIRP, an Environmental Specialist and a Social Specialist, based in the PIU, will oversee the implementation and monitoring of the ESMF. Both will operate under the responsibility of the PIU Project Manager for Infrastructure. Their main task will be to implement and monitor the ESMF, including the monitoring of the implementation of the SEP, LMP, GBV Action Plan, and the implementation of the Project GRM project-wide.

The PIU Environmental and Social staff will oversee the implementation of the monitoring plan. They will receive monthly updates from Technical Leads and the UNOPS Mutare Office. At least every two weeks they will further conduct field supervision visits to Technical Leads' implementation sites as well as the sites of UNOPS sub-component activities. The team will further receive all screening results of site-specific activities, site-specific ESIA and their associated ESMPs, will review them for compliance against the ESMF, and approve them prior to the commencement of activities by Technical Leads. It will then monitor the implementation of the ESMPs by Technical Leads.

Other Technical Leads will be responsible for direct implementation of their sub-components, including all screening activities, development and implementation of ESMPs, ensuring compliance to the approved ESMPs and the ESMF.

Procedures for Screening and Site-Specific ESIA and ESMPs

UNOPS will provide oversight of all Technical Leads on relevant screening processes. The Technical Leads are responsible for the screening of all their respective activities. The screening should be based on a site- or project-specific Social and Environmental Screening Process and Report (based on UNOPS *Form EM03 Social and Environmental Screening Report* (see ANNEX 12)) or on other appropriate tools by Technical Leads, if they are compatible with the UNOPS Form EM03. In such cases, UNOPS will assess the tool prior to the screening process and determine its reliance.

The outcome of the screening will determine whether a) the activity is high risk and will be screened out (see below for a negative activity list), b) site-specific ESMPs are required (based on partial site-specific ESIA – see ANNEX 16 for generic ESIA TOR). The Screening report will further help to determine which ESF standards are applicable and which steps need to be taken and which provisions or procedures apply, as laid out in the ESMF.

All sub-projects will be screened for environmental and social risk and impact by applying the UNOPS screening tool. The risk classification will be based on the following:

List A: minimal or no adverse environmental or social risk and/or impact is expected from activities that include communication and translation, small training and workshops, management of funds and grant, and management of social protection activities.

List B: Moderate adverse environmental or social risks and / or impacts are expected from projects that include small and medium scaled infrastructure (e.g. rural roads, schools, hospitals, housing, buildings, etc...), energy for small-scale development, water supply and sanitation, waste management, agriculture and irrigation, support and advice.

List C: High adverse environmental and social risk and/or impacts. Any activities that would be categorized as High Risk will be screened out (see a negative list under 6.3).

In the event that Technical Leads need to implement full or partial site- or activity-specific ESIAs and develop site-specific ESMPs, the costs are budgeted for in the budgets of the respective Technical Leads.

At this point, known activities and likely screening results are as follows (based on UNOPS Environmental and Social Screening Process). No activities with high adverse environmental or social risks and impacts are anticipated. The screening tool will be updated to be aligned with the WB ESF Environmental and Social Standards (ESS).

Environmental and Social Management Plan (ESMP)

MITIGATION MEASURES AND ESTIMATED COSTS				
Type of activity	E&S Risks and Impact	Mitigation Measures	Costs in USD (as part of the Technical Leads' budget) ⁴	Responsible Lead
Sub-Component 1.1: Restoring Livelihoods and Providing food and cash assistance for the most vulnerable				
Providing cash assistance	Delayed payment leading to complaints and conflict	Timely payment; Communication / awareness campaign of payment mechanisms (planning); Submission of reports to Money Transfer Agent, Implementing Agency and World Bank	0	WFP
	Utilization of money earned from the project, time women may spend outside of HH away from their usual duties can lead to domestic conflict	Implement GBV Action Plan (see Annex 6 for TOR)	20,000	
Removal of debris, desilting of weirs/dams, light reinforcement of river banks	Removal of debris affects new location aesthetically or poses a safety risk for the community at the new location.	Implement and monitor waste management procedures based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> ⁵	30,000	
	Soil Erosion during desilting of weirs/dams and reinforcement of river banks	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during desilting of weirs/dams and reinforcement of river banks	Implement noise control measures as described in mitigation measures above.	See above	
			See above	

⁴ These costs have been calculated based on estimates of costs of trainings or awareness raising sessions (travel, hire of experts, provision of location), costs of materials required (safety equipment, awareness and information materials, etc...). The detailed budget for the ESMP implementation will be provided in the site specific ESMPs.

⁵ World Bank Group, Environmental, Health, and Safety General Guidelines, April 30, 2007, accessed at: <https://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES>

	Air Pollution during desilting of weirs/dams and reinforcement of river banks	Implement air pollution control measures as described in mitigation measures above. Develop and implement OHS Plan for workers	20,000	
	Occupational Health and Safety risks during desilting of weirs/dams and reinforcement of river banks	Implement water pollution control measures as described in mitigation measures above.	See above	
	Water contamination from oil spills during desilting of weirs/dams and reinforcement of river banks.			
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	20,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection	Soil Erosion during construction of feeder roads and upstream watershed rehabilitation	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction of feeder roads and upstream watershed rehabilitation	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction of feeder roads and upstream watershed rehabilitation	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety during construction of feeder roads and upstream watershed rehabilitation	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during construction of feeder roads and upstream watershed rehabilitation	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of feeder	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	

	roads and upstream watershed rehabilitation			
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	
	Community Health and Safety e.g. construction traffic accidents; dust pollution; noise pollution etc.	Sensitization of communities: Cordoning construction sites; implementing traffic management plan	0	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)		
Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing	Soil Erosion during construction and rehabilitation of check dams, stone bunds and terraces	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction and rehabilitation of check dams, stone bunds and terraces	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction and rehabilitation of check dams, stone bunds and terraces	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety during construction and rehabilitation of check dams, stone bunds and terraces	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil during construction and rehabilitation of check dams, stone bunds and terraces	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during construction and			

	rehabilitation of check dams, stone bunds and terraces	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above		
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	See above	
	Community Health and Safety e.g. construction traffic accidents; dust pollution; noise pollution etc.	Sensitization of communities: Cordoning construction sites; implementing traffic management plan	10,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Dry fencing and live fencing for controlled grazing and relevant area closures	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	See above	
		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
	Grievances over communal or private land use	Identify required land readjustment through community processes; Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM	0 0	
Tree nurseries	Invasive species problem/proliferation	Ensure selection of local/native species only	0	
	Increased water demand depending on species chosen	During asset design, ensure proper choice of species and avoid invasive species. Use native species only.		

	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	See above	
		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
	Grievances over communal or private land use	Identify required land readjustment through community processes;	0	
		Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM)	0	
Sub-Component 1.2: Restoring Agricultural Crop and Livestock Production				
Supporting farmers with crop inputs (maize, sorghum and cowpeas); Use of pesticides and fertilizers	Improper use of crop chemicals leading to environmental contamination.	Conduct trainings on safe use of chemicals including pesticide risk reduction and Integrated Pest Management (IPM)	20,000	FAO
	Chemical use poses health risks to both users and consumers due to non-observance of withdrawal periods	Awareness raising and training of farmers on importance of following withdrawal periods	See above	
	Indiscriminate storage of fertilizers, chemicals and food	Training of farmers on safe and proper storage of fertilizers, chemicals and food	See above	
Establishment of community gardens	Disharmony arising from disruption of social fabric due to some farmers getting a piece of land in the community gardens	Train farmers on livestock husbandry and conflict resolution for community leadership Implement proper community participatory consultation process before selection of beneficiaries	20,000	
Restocking poultry, sheep and goats	Deforestation due to timber poles extraction to construct pens	Train farmers on Sustainable Forest Management and harvesting	20,000	

		Train farmers on establishment of woodlots and agroforestry for multi-purpose trees		
Distribution of stock feed	Poor storage and handling of stock feed might result in stock burn likely cause fire hazards	Training of farmers and awareness raising on proper handling of stock feed	20,000	
Vaccination and deworming of livestock	Increased concentration of livestock numbers at handling sites (e.g. dip tanks) may lead to excessive land/soil/vegetation disturbances	Train farmers in conservation measures around handling sites to avoid excessive land/soil/vegetation disturbances	20,000	
	Public health concerns from meat products if farmers ignore recommended withdrawal periods after administering veterinary drugs	Train farmers and veterinary attendants and raise awareness on veterinary drug procedures	See above	
	Potential occupational hazards to the farmers and technicians handling the veterinary drugs and animals	Train farmers and technicians and raise awareness on safe handling of drugs and animals	See above	
	Impacts associated with veterinary health care waste management and disposal (water pollution, soil pollution, impacts on faunal species) etc.	Develop and implement veterinary health care waste management plan	See above	
Rehabilitation of dip-tanks	Negative effect of acaricides to the ecosystem (e.g. beneficial insects)	Train farmers in use of recommended eco-friendly acaricides	See above	
<u>Sub-Component 1.3: Accelerating the revitalization of basic health service provision</u>				
Mobile clinics	Health Care Waste risks leading to contamination through medical waste that is not properly disposed (infections, pollution/contamination of the environment – air, land, water physical injuries, effect on domestic animals)	Implement and monitor health care waste management procedures based on <i>WBG Environmental, Health, and Safety General Guidelines</i> , including training of health care workers and auxiliary staff on how to safely handle health care waste.	30,000	WHO

		Provide adequate and appropriate protective clothing; use appropriate types of polythene bags and containers for waste; appropriate storage of health care waste until end of day; treat health care waste appropriately at central, provincial hospitals, etc....).		
Rehabilitation of community health posts (provision of power supply, provision of water supply including borehole drilling, expansion of mother's waiting homes, provision of energy sources).	Soil Erosion during construction/rehabilitation of health posts	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction/rehabilitation of health posts	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction/rehabilitation of health posts	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety during construction/rehabilitation of health posts	Develop and implement OHS Plan for workers	See above	
	Health Care Waste risks leading to contamination through medical waste that is not properly disposed (infections, pollution/contamination of the environment – air, land, water physical injuries, effect on domestic animals)	Implement and monitor health care waste management procedures based on <i>WBG Environmental, Health, and Safety General Guidelines</i> , including training of health care workers and auxiliary staff on how to safely handle health care waste. Provide adequate and appropriate protective clothing; use appropriate types of polythene bags and containers for waste; appropriate storage of health care waste until end of day; treat health care waste appropriately at central, provincial hospitals, etc....).	See above See above	

	Labor and working conditions of community don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	UNOPS (Mutare Office)
Component 2.1: Rehabilitating communal WASH services				
New water points (piped water schemes including solar pumps)	Soil Erosion during construction of piped water schemes	Implement soil control measures as described in mitigation measures above.	30,000	UNICEF
	Noise Pollution during construction of piped water schemes	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction of piped water schemes	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks - during construction of piped water schemes	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil during construction and rehabilitation of check dams, stone bunds and terraces	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of piped water schemes	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Electronic wastes from solar pumps (panels and batteries)	Develop and implement electronic waste management plan for solar pumps	See above	

	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
	Community Health and Safety e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implementation of GBV Action Plan	0	
Rehabilitation of boreholes, springs and deep-water wells	Soil Erosion during rehabilitation of boreholes, springs and deep -water wells	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during rehabilitation of boreholes, springs and deep -water wells	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during rehabilitation of boreholes, springs and deep -water wells	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks - during rehabilitation of boreholes, springs and deep -water wells	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during rehabilitation of boreholes, springs and deep -water wells	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during rehabilitation of boreholes, springs and deep -water wells	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	

		Develop and implement electronic waste management plan for solar pumps	See above	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
	Community Health and Safety e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implementation of GBV Action Plan	10,000	
Construction of toilets, latrines and hand-washing facilities	Soil Erosion during construction of toilets, latrines and handwashing facilities	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction of toilets, latrines and handwashing facilities	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction of toilets, latrines and handwashing facilities	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks - during construction of toilets, latrines and handwashing facilities	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during construction of toilets, latrines and handwashing facilities	Implement water pollution control measures as described in mitigation measures above	See above	

	Disturbance of flora and fauna (terrestrial) during construction of toilets, latrines and handwashing facilities	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	<p>The pit latrines and septic tanks if not well sited and maintained will be a source of foul smell that will affect those within the area.</p> <p>Faecal matter may lead to underground water contamination if the water table is high or in the case of pit latrines, when there is an overflow due to heavy rains. Contamination of water may lead to outbreak of diseases e.g. cholera, dysentery, typhoid, diarrhoea etc.</p> <p>Pit latrines can also be breeding grounds for flies and mosquitoes which are disease vectors.</p> <p>Super structures if poorly constructed and designed could lead to hazards including falling into the pit if the super structure floor/slab gives ways. This can lead to injury or loss of life.</p> <p>Common pests attracted to dirty environment are rats, cockroaches, flies. These animals are also disease vectors. They transport germs from the toilet to nearby human settlement.</p>	<p>Ensure proper siting of septic tanks and pit latrines in accordance with the MOH guidelines for siting and construction of pit latrines</p> <p>Ensure proper maintenance of sanitation facilities including cleaning and hygiene training Provide hand washing facilities and water in all the sanitation infrastructures</p> <p>Ensure proper cleaning of toilets</p> <p>Ensure super structures are well constructed including the slab with the required strength</p> <p>Ensure and provide training on cleaning of toilets Use biopesticides to manage pests</p>	<p>See above</p> <p>See above</p> <p>See above</p> <p>See above</p> <p>See above</p> <p>See above</p>	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards	20,000	

		Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response		
	Community Health and Safety e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implementation of GBV Action Plan	See above	
<u>Component 2.2.: Restoring communal irrigation schemes in support of agrarian livelihoods:</u>				
Reconstruction of storm drains	Soil Erosion during reconstruction of storm drains	Implement soil control measures as described in mitigation measures above.	30,000	FAO
	Noise Pollution during reconstruction of storm drains	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during reconstruction of storm drains	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks - during reconstruction of storm drains	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during reconstruction of storm drains	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during reconstruction of storm drains.	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers	20,000	

		Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	0	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Contours, Terraces	Soil Erosion during establishment of contours and terraces	Implement soil control measures as described in mitigation measures above.	See above	
	Occupational Health and Safety risks - during establishment of contours and terraces	Develop and implement OHS Plan for workers	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during establishment of contours and terraces	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above.	See above	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	20,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	

Waterways and water diversion structures	Soil Erosion during construction of water ways and water diversion structures	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction of water ways and water diversion structures	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction of water ways and water diversion structures	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks – during construction of water ways and water diversion structures	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during construction of water ways and water diversion structures	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of water ways and water diversion structures	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	<p>Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers</p> <p>Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i></p> <p>Initial training for all community workers on LMPs, H&S standards</p>	See above	

Reclamation gullies constructing gabions	of by	Soil Erosion during construction of gabions	Implement soil control measures as described in mitigation measures above.	See above	
		Occupational Health and Safety risks – during construction of gabions	Develop and implement OHS Plan for workers	See above	
		Water contamination during construction of gabions	Implement water pollution control measures as described in mitigation measures above	See above	
		Disturbance of flora and fauna (terrestrial and aquatic) during construction of gabions	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
		Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	See above	
		Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Desilting of weirs		Soil Erosion during desilting of weirs	Implement soil control measures as described in mitigation measures above.	30,000	UNOPS Mutare Field Office
		Noise Pollution during desilting of weirs	Implement noise control measures as described in mitigation measures above	See above	
		Air Pollution during desilting of weirs	Implement air pollution control measures as described in mitigation measures above	See above	
		Occupational Health and Safety risks – during desilting of weirs	Develop and implement OHS Plan for workers	See above	
		Water contamination from oil spills during desilting of weirs	Implement water pollution control measures as described in mitigation measures above	See above	
		Disturbance of flora and fauna (terrestrial and aquatic) during desilting of weirs	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	

		Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	20,000	
Revitalization of irrigated land	Labor and working conditions of community and don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	See above	
	Soil Erosion during revitalization of irrigated land	Implement soil control measures as described in mitigation measures above.	See above	
	Occupational Health and Safety risks – during revitalization of irrigated land	Develop and implement OHS Plan for workers	See above	
	Water contamination during revitalization of irrigated land	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during revitalization of irrigated land.	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
			See above	

	Water and soil contamination from use of pesticides during revitalization of irrigated land	Prepare and implement Integrated Pest Management Plan	0	
<u>Sub-Component 2.3: Rehabilitating damaged community schools</u>				
Rehabilitation of facilities	Soil erosion during construction/rehabilitation of schools	Implement soil control measures as described in mitigation measures above.	See above	UNOPS Mutare Field Office
	Noise pollution during construction/rehabilitation of schools	Implement noise control measures as described in mitigation measures above	See above	
	Air during construction/rehabilitation of schools	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks – during construction/rehabilitation of schools	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during construction of during construction/rehabilitation of schools	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna during construction/rehabilitation of schools	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	

	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera	10,000	
	Damage or loss of cultural heritage	Implement GBV Action Plan (See Annex 6 for TOR)	0	
<u>Sub-Component 2.4: Rehabilitating communal infrastructure and providing community risk mitigation solutions</u>				
Labor intensive work to support early recovery – community infrastructure (community workers, heavy equipment may be required to supplement work)				
Vegetation clearing and grass cutting along roads	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	UNOPS Mutare Field Office Overall Responsibility: UNOPS PIU
Clearing side drains and culvert inlets/outlets	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
Excavation of new drainage paths	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health,</i>	See above	

		<i>and Safety General Guidelines</i> including measures on emergency preparedness and response		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Earth filling of embankment and pavement repairs	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
Earthworks such as irrigation canal excavations	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Installation of cross drainage structures, lining of side drains	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	

Earthworks	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Protection works	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
Construction of retaining walls and gabion baskets	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
Concrete works and building repairs	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	See above	

		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
	Grievances over communal or private land use	Identify required land readjustment through community processes; Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM		
	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implement GBV Action Plan (See Annex 6 for TOR)		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)		

Public Consultations and Disclosure:

Project stage	Topic of consultation	Suggested Method (will be refined by implementer)	Timetable location and dates	Target stakeholders	Responsibilities
Project Design	Overall Project activities	Meetings, email	17.5-10.6.2019	Project Consultative Committee	UNOPS Team and Technical Leads
		Consultative community meetings	13.5.-22.5.2019	Directly and Indirectly Affected Parties	WB and UNOPS Team
		Consultative meetings	13.5.-31.5.2019	Interested Parties and Parties with Influence	WB and UNOPS Team
Project Implementation	Cash transfers	Community meetings, SMS, social media, FGDs	Wards selected for cash transfers Prior to commencement and throughout Project cycle	Community members that will receive cash transfers / with focus on women and vulnerable groups	PIU Fund Manager / WFP
		Meetings / FGDs	Prior to commencement and throughout Project cycle	CPU at District and Ward level / Ward Councilor and Village Chief	
	Food/cash for Work	Community meetings, SMS, social media, FGD	Wards selected for cash transfers Prior to commencement and throughout Project cycle	Ward members from which target groups for food for labor will be selected / with focus on women and vulnerable groups	PIU Fund Manager / WFP
		Meetings / FGDs	Districts/Wards selected	CPU at District and Ward level / Ward Councilor and Village Chief	

			Prior to commencement and throughout Project cycle		
	Support to small farmers	Community meetings, SMS, social media, FGD, surveys	Wards selected for support Prior to commencement and throughout Project cycle	Communities from which small farmer households are selected	PIU Fund Manager / FAO
		Meetings	Districts / Wards selected Prior to commencement and throughout Project cycle	CPU agricultural committee at District and Ward level / Ward Councilor and Village Chief	
	Livestock restoration	Community meetings, SMS, social media, FGD, surveys	Wards selected for support Prior to commencement and throughout Project cycle	Communities from which recipient households of livestock restoration activities will be selected	
		Meetings	Districts / Wards selected for support Prior to commencement and throughout Project cycle	CPU Environment and Ecology / Agriculture Committees at District and Ward levels / Ward Councilors and Village Chiefs	
	Health services	Community meetings, SMS, social media, FGD, surveys	Wards in all 9 Districts Prior to commencement	Communities in all 9 Districts / with particular focus on women and vulnerable groups	PIU Fund Manager / WHO

		meetings	Wards in all 9 Districts Prior to commencement and throughout Project cycle	CPU Health committees at District and Ward level / Ward Councilors and Village Chiefs	
	Rehabilitation of WASH services	Community meetings, SMS, social media, FGD, surveys	Wards of all selected communities Prior to commencement	Community members in communities selected for rehabilitation	PIU Fund Manager / UNICEF
		meetings	Districts/Wards of selected communities Prior to commencement and throughout Project cycle	CPU Water and Sanitation Committees at District and Ward Level / Ward Councilors and Village Chiefs	
	Restoration of irrigation schemes	Community meetings, SMS, social media, FGD, surveys	Wards selected Prior to commencement and throughout Project cycle	Communities selected for restoration	PIU Fund Manager
		meetings	Districts / Wards selected Prior to commencement and throughout Project cycle	CPU Water and Sanitation Committees at District and Ward level / Ward Councilors and Village Chiefs	
	Rehabilitation of risk mitigation infrastructure	Community meetings,	Wards selected Prior to commencement and	Communities selected	PIU Fund Manager

			throughout Project cycle		
		meetings	Districts / Wards selected Prior to commencement and throughout Project cycle	CPU s at District and Ward level	
	Sub-Project Specific ESMPs	Community meetings, FGDs	During drafting and throughout life cycle of sub-project	Communities selected for sub-project implementation	PIU Lead and respective technical leads

1 Introduction

After two decades of economic decline in Zimbabwe, poverty and food insecurity levels are high, particularly in rural areas. In 2017, about 70.9 percent of Zimbabweans (down only slightly from 72.3 percent in 2011/12) fell below the national Total Consumption Poverty Line (TCPL), and 29.3 percent (worryingly much higher than the 22.5 percent in 2011/12) below the Food Poverty Line (FPL).⁶ In 2017, Zimbabwe's per capita Gross National Income of US\$1,170 fell below the Southern African Development Community (SADC) median.⁷ Between 2014 and 2018, the country's Gross Domestic Product (GDP) growth averaged 2.7 percent, which is only marginally above population growth and insufficient to improve average per capita income. In 2019, the economy is heading into a recession because of severe drought, deepening shortages of fuel and foreign currency, and fast accelerating inflation.

By end 2017, about 29 percent of the population was living under the extreme poverty line (US\$1.9 a day), or 4.6 million people, of which 4.1 million are in rural areas. This is roughly double the 2012 figures and in 2019, the number of people in poverty is expected to increase. Recent economic and political events in late 2018/early 2019 may have led to further impoverishment of the population. Notably, rapid food inflation may have significantly increased the proportion of food insecure people in total population during the last lean season.

Due to recurrent droughts, seasonal food insecurity is also a major challenge. According to the ZimVAC 2018 Rural Livelihoods Assessment⁸, the number of severely food insecure people was expected to increase from about 567,000 people between April and June 2018 to 2.4 million between July 2018 and March 2019, translating to 28 percent of the rural population. The country receives substantial humanitarian food aid during most recession years with an estimated half a million chronically poor people requiring year-round assistance to meet their food needs.

Climate shocks are compounding the economic crisis in Zimbabwe. On average, southern Zimbabwe (300–500 mm/year) receives less rainfall than the northern (700–1000 mm/year) and eastern (above 1000 mm/year) parts of the country. Tropical cyclones are an important feature of Zimbabwe's rainfall season with the tropical cyclone season stretching from December to March. Depending on their proximity and relative position, tropical cyclones may induce an extended dry spell or give widespread and heavy rainfall within a very short space of time.

Zimbabwe's rural poor, heavily reliant on rain-fed agriculture for their livelihoods and food consumption, have been most impacted. The key sectors to boosting Zimbabwe's economy – including agriculture, water, energy, forestry, tourism, and industry, among others – are also susceptible to abrupt climate variability. Multi-model ensemble projects that northern and eastern parts of Zimbabwe are likely to experience above normal precipitation in the coming decades. Climate change is likely to adversely impact Zimbabwe's key economic sectors as well as its livelihoods. With climatic variability increasing, natural disasters are likely to occur more frequently and have the potential to hit the most vulnerable parts of the population, the poor, in a disproportionate way due to their hazard exposure and relatively weak coping mechanisms.

Cyclone Idai hit the eastern parts of Zimbabwe from 15th March 2019 to 17th March 2019. It affected ca. 50,000 households or 270,000 people. It brought along heavy rain, which caused flash floods and landslides, and damaged infrastructure, property, schools, hospitals, farmlands and private houses as well as eradicated people's livelihoods. 341 people were killed and 344 are still missing⁹, especially in the most affected districts of Chimanimani and Chipinge. Under the circumstances described above, the region already suffered from high levels of poverty, food insecurity and vulnerability. Coping capacities to a shock such as a cyclone were low and could have serious and lasting adverse socio-economic implications. The cyclone-affected areas were a combination of Region I (very

⁶ Government of Zimbabwe, ZIMSTATS, Zimbabwe Smallholder Agricultural Productivity. Survey 2017 Report, March 2019

⁷ World Bank's World Development Indicators.

⁸ Government of Zimbabwe, ZimVAC, Rural Livelihoods Assessment, 2018

⁹ Status Report provided by the Provincial Civil Protection Committee in Mutare in May 2019.

productive, with abundant rain), and Region V (dry) regions. Region V was already dealing with a drought when the cyclone happened, and many of the crops and livestock that had survived the drought, succumbed to the cyclone.¹⁰

The World Bank Zimbabwe Idai Recovery Project (ZIRP) is a 3-year response to the devastation of the cyclone to support livelihood recovery in the worst affected areas, with UNOPS as the borrower and as an implementer (technical lead for sub-components), and with the United Nations Children's Fund (UNICEF), the Food and Agriculture Organization (FAO), the World Health Organization (WHO), and the World Food Programme (WFP) as technical leads for subcomponents.

The project will take a multi-sectoral approach, which provides an integrated and holistic strategy by combining interventions across sectors, requiring active coordination and planning across organizations and components. Drawing on the consultative group, consisting of the World Bank, UN agencies, NGOs, relevant Government agencies and UNOPS, the ZIRP will sequence and integrate activities across UN and external partners, assuring coordinated and complementary investments, including the use of a central targeting mechanism.

¹⁰ UNDP, Rapid Assessment of the Socio-Economic Impact of Cyclone Idai on Zimbabwe, Draft Report, April 2019.

2 Project Description

The sectors proposed under the Project are based on the hierarchy and proportionality of needs established under the Rapid Impact and Needs Assessment (RINA). There are two broad components proposed under the Project: (i) immediate recovery and livelihood support to rural and displaced populations including the provision of food and nutrition, healthcare and disease control in the early recovery period, and; (ii) restoration of community infrastructure, social services and risk reduction infrastructure. No public infrastructure will be supported under the Project.

Furthermore, the Project will fully embrace build-back-smarter standards, assuring that all assets and services are designed to assure right-sizing, right-siting, structural improvements, improved quality control and service delivery regulation, strengthened operation and maintenance standards, and climate resilience. The Project Development Objective (PDO) is to “address the immediate needs of the cyclone-affected people and support resilient disaster recovery”.

This objective will be achieved through: (a) a surge of high-impact, immediate interventions for enhancing the coping capacities of affected communities while humanitarian operations continue in tandem through other partners; (b) activities that transition toward medium-term recovery such as restoration of productive capacities of the communities and rehabilitation of critical community infrastructure across multiple sectors; and (c) interventions to reduce community hazard risk vulnerability through community level structural and non-structural mitigation.

PDO Level Indicators:

- Number of People benefiting from conditional and unconditional cash transfers for food
- Number of Households benefiting from provision of agricultural Inputs and livestock support
- Number of People benefiting from rehabilitated community infrastructure and risk reduction interventions

2.1 Project Components

Component 1: Providing Immediate Support for Cyclone Recovery: This component will provide immediate and integrated livelihoods and healthcare solutions to cyclone-affected people, including sub components such as:

- (a) Restoring livelihoods through conditional cash transfers to provide food assistance and through unconditional cash transfers for most vulnerable groups;
- (b) Restoring agricultural crop and livestock production, including distribution of agricultural inputs for small farmer households, and the re-stocking and treatment of livestock and poultry, and;
- (c) Accelerating the revitalization of basic health services, including the provision of a basic package of health services and referral pathways related to Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA), and child protection measures. All activities under this component will specifically target women and female-headed households.

This component will also finance project management and overheads costs for the above activities, such as needs and beneficiary assessments, quality assurances of livelihood supports, etc.

Component 2: Enabling Medium-term Cyclone Recovery and Resilience-building: This component will support the rehabilitation of critical community infrastructure, such as water and sanitation systems, irrigation networks, community schools, and community roads, as well as community level structural risk reduction and mitigation efforts, such as slope protection and environmental rehabilitation. This component will also finance project management and overhead costs for the above activities, such as needs and beneficiary assessments, preparation of technical designs, technical quality control assurance, etc.

Component 3: Providing Project Management and Technical Assistance: This component will provide UNOPS Project Management support, for overall coordination and oversight functions and for centralized project services, across all components, such as monitoring and evaluation (M&E), managing and monitoring environmental and social performance, technical quality assurance, grievance redressal, GBV/SEA and referral and protection systems, and for engaging Independent Verification Agents (IVA) for beneficiary verification, technical quality assurances, project results validation; and Technical Assistance (TA) for a range of activities to be progressively determined on a needs basis, to facilitate strengthened implementation.

These could include, but are not necessarily restricted to: (a) social assessment; (b) supporting community risk assessments, monitoring and preparedness planning; (c) supporting community infrastructure damage assessments; (d) setting up the ZIRP Management information system (MIS); (e) developing health information and epidemic surveillance systems; (f) strengthening project strategic communications, media relations and citizen engagement; (g) building the capacity of the Project's environmental and social staff.

Component 4: Unallocated Fund: To allow flexibility and adaptability during implementation, the Project envisions an unallocated US\$3 million to be distributed midterm based on a set of agreed criteria such as performance of the various components, varying levels of support from other development partners, and associated financing gaps in the various components. Such allocation shall be decided by World Bank Management, based on recommendations from Task Team Leaders and in consultation with the Consultative Group being set up under the Project.

2.2 Project Beneficiaries

Direct beneficiaries of the Project are communities affected by Cyclone Idai in Zimbabwe's 9 districts. The Project generally attempts to target a majority of the 270,000 people affected directly or indirectly by the cyclone. Project beneficiaries are in the following districts: Chimanimani, Chipinge, Buhera, Mutare urban, Mutare rural, Bikita, Gutu, Mutasa, and Chikomba. Working with partners and other resources, UNOPS will establish targeting principles that the different sub-components will adhere to. A working group will be established where standard procedures and tools will be developed, reviewed, and lessons shared. Specific targeting will then be developed for each sub-component. Targeting will be done at two levels, geographic and household.

Beneficiary selection will use both geographic and community-based approaches, prioritizing vulnerable groups and drawing on the SCOPE database and UN Inter-Agency Joint Verification Assessment (May 2019) and based on the minimum food expenditure basket. A database on potential beneficiary targets will be developed by WFP to identify targeted beneficiaries in line with centralized project-specific targeting and information management systems.

ZIRP seeks to exclusively benefit highly vulnerable groups, as the cyclone has had a disproportionate impact on women, girls, children, elderly, and disabled people. Consultations will be carried out with vulnerable groups to identify and address their unique needs, including the use of sex-disaggregated surveys and focus groups, and vulnerability-based selection criteria to prioritize their inclusion as project beneficiaries. Therefore, project investments are anticipated to provide proportionally higher benefits to vulnerable groups (e.g., cash-for-work, food inputs, etc.) in most if not all purported activities.

Specific geographic locations would be drawn from the cyclone affected districts. A targeting framework developed by the Project Implementation Unit (PIU) will aim to support sub-components with an objective method to rank priority areas for interventions in the different districts. Specific indicators to be assessed at the different levels (district, ward, and village) as part of the geographic targeting would include impact of the cyclone, poverty rate, concentration of poor people, food insecurity, number of IDPs, presence of other partners, and lack of operating constraints. A project-targeting weighted index would be developed but with different project teams given the flexibility to assign different weights to indicators that are of particular importance to their interventions.

Community-based targeting will be used to select eligible households in each of the selected wards and villages. Communities will be selected on levels of cyclone impact, vulnerability, poverty, and food insecurity, informed by a vulnerability assessment and mapping, in collaboration with local authorities and WFP, where feasible. To prevent duplication of efforts and expedite implementation, the PIU will use existing data where possible. Where this is not available or not appropriate for the Project's use, enumerators will be selected from the community and trained on the household targeting criteria and household mapping undertaken to identify potential beneficiaries. The first list of eligible households will be validated through community consultations, and a final list of new households drawn up for biometric registration. Flexibility in the criteria will be maintained to facilitate responsiveness to changing dynamics on the ground based on on-going assessments (e.g., an influx of IDPs may require the Project to prioritize this group). Grievances related to inclusion/exclusion of beneficiaries and any other issues related to the targeting process will be addressed through the Grievance Redress Mechanism (GRM).

Engaging and coordinating with community beneficiaries. Special efforts will also be given to mitigating risks of targeting and strengthening local level cohesion and social unity through greater interaction and dialogue among diverse ethnicities in a community. This will be done through targeted social messaging, facilitated dialogue, community discussions on key social issues, and other related efforts identified on the ground, as appropriate. Efforts will also be made to detailing messages and actions to mitigate risks of targeting, which, if not undertaken properly in a conflict-sensitive manner, can escalate tensions among targeted and non-targeted households and result in conflict. The GRM, would be used to ensure that these dynamics are reported, actioned, and monitored in a timely and rigorous manner. To that end and to guide this effort, communication and social messaging materials will be developed, as part of the Community Engagement and Capacity Building Plan.

2.3 Purpose of the ESMF

This Environmental and Social Management Framework (ESMF) was selected as the environmental and social instrument for assessing, managing and monitoring environmental and social impacts of the Project given that the full nature, scope and geographical locations were not exactly known at the time of preparing the ESMF. The ESMF establishes the screening processes and tools to be directly implemented by UNOPS, Technical Leads and contractors in assessing the risks and impacts of the sub-projects. This will facilitate the recommendation of appropriate mitigation and monitoring measures for each subcomponent and/or activity.

The main purpose of this ESMF is, therefore, to establish procedures and methodologies for environmental and social assessments, review, approval and implementation of investments to be financed under the Project, as the nature, scope and locations of activities become known during the implementation of the Project.

The ESMF describes the appropriate roles and responsibilities of UNOPS, Technical Leads, contractors and other stakeholders, and outlines the reporting procedures on social and environmental issues. It describes the managing and monitoring processes of environmental and social concerns related to the project investments.

It further determines the training, capacity building and technical assistance required for UNOPS and the Technical Leads to successfully implement the provisions of the ESMF; and provides practical information resources for implementing the ESMF.

It also establishes the Project's staffing and institutional arrangements clarifying the relations between UNOPS and the key implementer, the World Bank, and the Technical leads, including their roles and responsibilities in view of the implementation of the ESMF.

2.4 Project Management Structure

Given that the proposed Project is funded through an IDA-CRW exceptional allocation, it will be implemented

through IDA grant provision directly to a selected UN Agency. In the case of this Project, it is proposed that UNOPS be designated as the Direct Recipient of the IDA Grant. Under the proposed arrangements, the World Bank will sign a Financing Agreement with UNOPS who will act both as the IDA Grant recipient and the project implementation unit (PIU) (see above). The proposed implementation arrangement is mirrored after traditional Bank-financed multi-sector operations that involve more than one line-ministry and require coordination amongst the implementing partners and a single coordinating PIU responsible for the overall project management and procurement.

The UNOPS Project management structure is divided into the Project Implementation Unit (PIU) based in Harare, and the UNOPS Management Office for Infrastructure, based in Mutare. While the PIU oversees and manages the entire Project, including Technical Leads and other partners, the Management Office for Infrastructure undertakes direct implementation of UNOPS-led sub-components.

The environmental and social issues of the ZIRP will be addressed by the following staff: a) the Environmental Specialist, b) the Social Specialist – both located in the PIU, b) the Health & Safety and Environmental Officer at the UNOPS Mutare Office, d) 3 Community Liaison Officer at the UNOPS Mutare Office, and e) respective environmental and social staff from the Technical Leads.

Given the overall responsibility of the PIU for the ZIRP, the Environmental Specialist and the Social Specialist, embedded in the PIU, oversee the implementation of the ESMF. The Environmental Specialist has responsibility of all environmental and social issues. He or she reports directly to the PIU Fund Manager. Their main task is the monitoring of this ESMF, including the monitoring of the implementation of the SEP, LMP, GBV Action Plan, and the implementation of the GRM project-wide. They will oversee the implementation of the monitoring plan. They will receive monthly updates from Technical Leads and the UNOPS Mutare Office. They will further conduct field supervision visits to Technical Leads' implementation sites as well as the sites of UNOPS sub-component activities at least every two weeks.

To ensure a smooth and effective implementation of the GRM, as well as the Stakeholder Engagement Plan (SEP), the PIU Environmental and Social staff will work closely with the three Community Liaison Officers, which are embedded in the UNOPS Infrastructure Management Office in Mutare.

The PIU Environmental and Social staff will work directly with a Health & Safety and Environmental Officer, embedded in the UNOPS Infrastructure Management Office in Mutare. The Health & Safety and Environmental Officer will cover social issues, including labor management procedures, and issues related to the GBV Action Plan. Land donations or involuntary land acquisition in the event where land cannot be acquired voluntarily will be overseen by the Social Specialist at the PIU, supported by consultant specialists. These tasks will be captured in the staff's ToR. The presence of a Health & Safety and Environmental Officer in the Mutare Office will ensure that environmental and social issues are adhered to on the ground on a daily basis. Furthermore, the Health & Safety and Environmental Officer will be responsible for the development and implementation of site-specific ESIAs and/or ESMPs; the implementation of the SEP, LMP and GRM - for all sub-component activities directly implemented by UNOPS. The Office will thereby engage support from internally in UNOPS to draw on expertise from UNOPS' Health, Safety and Environmental Team at HQ, or hire external consultants to avoid bottlenecks.

The Environmental Specialist and the Social Specialist in the PIU in Harare will both be a UNOPS ICS 10 local staff with an advanced university degree and at least 5-7 years of progressive experience in environmental / social issues, including public works, community infrastructure and social development. An assessment of E&S capacities of Technical Leads is currently underway, and it will be ensure that Technical Leads have appropriate capacity to implement the ESMF.

To ensure a smooth and effective implementation of the GRM, and Stakeholder Engagement Plan (SEP), the PIU Environmental and Safety staff will work closely with the three Community Liaison Officers, who will be embedded

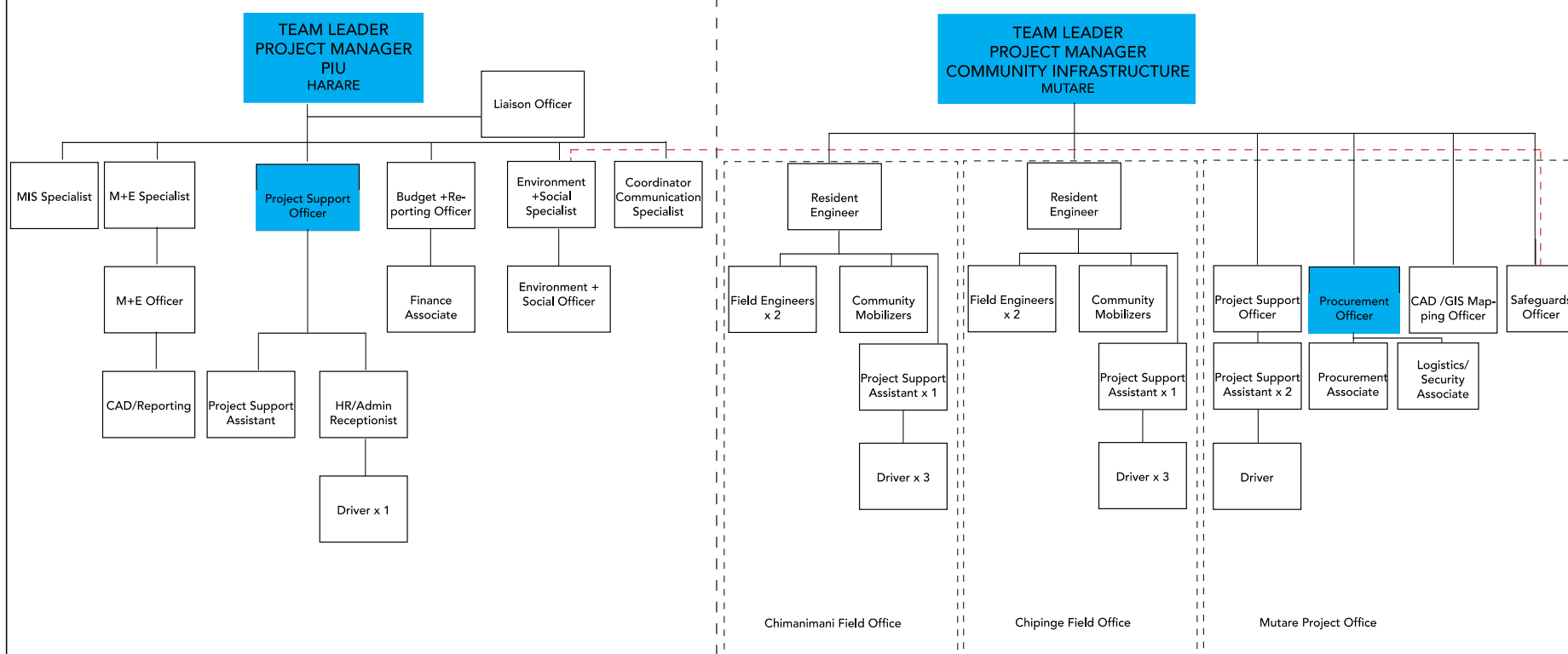
in the UNOPS Office in Mutare. The three Community Liaison Officers will work closely with various stakeholders (affected communities and interest parties) as well as with the GRM at various project /sub project locations.

ZIMBABWE IDA RECOVERY PROJECT (ZIRP)

WORLD BANK FUNDED PROJECT

PROJECT ORGANIZATION STRUCTURE

← (PIU) PROJECT IMPLEMENTATION UNIT - HARARE COMMUNITY INFRASTRUCTURE DISTRICTS - MUTARE/CHIPINGE/CHIMANIMANI →



International

2.5 Contractors and Implementing Partners

The PIU will manage the engagement and contracting of UN agencies, INGOs, NGOs, and private sector providers under Alternative Procurement Arrangements (APA). Localized and context-specific activities will be implemented through INGOs and NGOs.¹¹ UNOPS will also contract INGOs and/or NGOs to support specific project activities. Primarily INGOs/NGOs will be engaged on specific competencies, such as citizen engagement and community mobilization, where the UN agencies may not have a comparative advantage or presence on the ground.

UNOPS' responsibilities include the coordination and monitoring of compliance with the ESMF requirements across Project components and agreements (contracts) with the providers of goods, works, and services.

Each UN Lead Technical Agency for the various components and activities will enter into a "UN Agency to UN Agency Agreement" with UNOPS. The "UN Agency to UN Agency Agreement" template includes specific requirements related to social and environmental safety and due diligence, as defined in this ESMF.

Environmental and social requirements will be included in all relevant procurement and contracting process. UN Agency to UN Agency agreements, bidding documents for potential civil works, as well as procurement processes and contracts or subcontracts with INGOs, NGOs and private sector providers will specify these requirements. Codes of Conduct will be required from UN technical leads, other contractors and subcontractors and their staff.

Technical leads, contractors and subcontractors will further be responsible for the development and implementation of detailed ESIAs and/or ESMP, contractor ESMPs related to their sub-component specific activities. These have to be costed, with adequate budget allocations to mitigate environmental and social risks. They will further be responsible for the implementation of all other relevant aspects of this ESMF, including implementation of the SEP, LMP, and GRM and be contractually obliged to develop their own GRM to specifically address concerns of their employees.

¹¹ UNOPS has experience of working with INGOs such as Save the Children, Oxfam, MSF and Mercy Corp through a sub-contracting type of arrangements.

3 Policy and Legal Framework

In this chapter, relevant Zimbabwe regulations and policies are assessed that guide the environmental and social assessment for the ZIRP activities, as well as relevant World Bank Environmental and Social Standards and international conventions. The objective is to ensure that project activities and implementation processes are consistent with local laws and policies and World Bank Standards, and to point out possible gaps in local legislation in view of full compliance with World Bank standards.

3.1 Regulatory and Policy Framework

3.1.1 Environmental Management

The Environmental Management Act, Chapter 20:2 and the accompanying Regulations and the Environmental Impact Assessment Guidelines, 1997 form the legislative and policy framework guidelines for environmental management in Zimbabwe. The Environmental Management Act (EMA), 2002 forms the basis for all Environmental Management in Zimbabwe. The Act repeals the Natural Resources Act, Chapter 20:13, the Atmospheric Pollution Prevention Act, Chapter 20:03, the Hazardous and Articles Act, Chapter 15:05 and the Noxious Weeds Act. The Act translates the Environmental Policy Guidelines proposed in 1997 into a legally binding requirement for all specified developments under Part XI, section 97 and listed in the First Schedule, of the EMA. These include tourism developments. Failure to undertake an EIA for specified developments becomes an offence. The proponent becomes liable to pay a penalty or face 5 years imprisonment (Part XI, section 97, EMA, chapter. 20.27). This EIA is in fulfillment of section 97 of the Act. Section 106 of EMA (1) provides for the Environmental Management Agency to carry out periodic environmental audits on any projects for the purpose of ensuring that their implementation complies with the requirements of the Act.

Section 107 (1) states that “every developer shall take all reasonable measures to prevent or if prevention is not practicable to mitigate any undesirable effects on the environment that may arise from the implementation of his project” – To this end, this EIA report contains an Environmental Management and Monitoring Plan aimed at mitigating and managing potential environmental and social impacts resulting from the proposed development.

The Zimbabwe Environmental Management Act (13/2002, 5/2004, 6/2005) requires environmental impact assessments for specific types of Projects (97). Assessment proposals need to lay out the methodology for the assessment. The assessment results are submitted to the Director-General of the Environment Management Board may consult any authority, organization, community, agency or person that he considers may have an interest in the Project (100 (2)(c)).

3.1.2 Environmental Impact Assessment Policy Guidelines, (1997)

The purpose of these guidelines is to ensure that environmental consequences of any development proposals (mining, housing, industry etc.) are understood and adequately considered in the planning process of the project. The guidelines provide check lists to be considered during project development.

3.1.3 Environmental Management (EIA and Ecosystems Protection) Regulations, 2007

These regulations stipulate regulations for ecosystems protection, conditions for clay and sand extraction and lays out conditions for the submission and review of environmental impact prospectus and reports. Part III, states the period for review of a prospectus to be 20 working days, and 60 working days for an EIA report. According to Part III (4) the developer should carry out wide consultations with stakeholders, and the Director General has a right to verify whether full stakeholder participation was undertaken. Part II 3 (1) states that a permit is required for the extraction of clay and sand deposits for commercial purposes. Application for the permit is made to the Agency. The Agency considers each application with the local authority and a local inspector and ensure that the applicant together with the local authority develop a detailed excavation and environmental rehabilitation plan. Failure to

adhere to these regulations may result in a fine or imprisonment for a period not exceeding five years. Once issued, a permit for extraction is valid for a period of one year and is not transferable. The proposed contractor to obtain permits through the EMA for the extraction of clay and sand deposits for construction, and the extraction of gravel for the roads in accordance with requirements of these regulations. With regard to fire, any land user, owner or designated authority is required to put in place appropriate fire prevention measures on their land/premises. The regulations also prohibit (a) the deliberate lighting of fire that cannot be extinguished and causes damage to the environment, property or life and (b) the lighting of fire outside residential or commercial premises during 31 July to 31 October of each year.

3.1.4 Parks and Wildlife Act 20:14

The Parks and Wild Life Act should be read in conjunction to the Environmental Management Act, Part XII that advocates for the protection and conservation of the natural environment. The Parks and Wildlife Act, aims to establish (1) areas of wildlife conservation through the establishment of national parks, sanctuaries, safari areas and recreational parks, (2) areas of natural flora, natural landscape and scenery through the establishment of botanical reserves, gardens etc. The sixth and seventh schedules of the Parks and Wildlife Act highlight specially protected animals, and specially protected indigenous plants respectively.

3.1.5 National Museums and Monuments Act 25:01

The National Museums and Monuments Act Chapter 25:01 protects all areas of historical, architectural, archaeological and paleontological value predating 1890 and any other site so specified by the Executive Director of National Museums and Monuments of Zimbabwe (NMMZ). Such sites cannot be altered, excavated or damaged and material on them cannot be removed without the written consent of the Executive Director of the NMMZ. The recent SI updates the Act and reiterates the importance of these same principles in the context of any Impact Assessment. Several clauses of the National Museums and Monuments Act are of particular relevance to this project:

- Article 21 makes it mandatory for the immediate reporting of any “discovery of ancient monument or relic” to the NMMZ indicating location, description, and details of the discoverer and landowner/user thereof. Contravention is a proscribed offence.
- Article 24 specifies that excavation or alteration of any site of archaeological, cultural, historical and paleontological presence cannot be undertaken without the prior written consent of the Executive Director NMMZ. In addition, no artifacts or specimens from such sites may be removed from their original contexts without such permission. Only approved persons are entitled to undertake such work as directed by the Executive Director of the NMMZ. Contravention of any of these requirements is an offence.

All human actions have left behind material expressions that reflect their maker’s cultural and social values. These are the artifacts, features and other remains that are studied by archaeologists. It is important to stress that it is not just the artifacts themselves that are significant; rather it is the wider contexts within which they are discovered which provides archaeologists the basis of their interpretation. Any inadvertent damage to such associations would deprive us of our ability to understand the past. NMMZ and EMA now insist that heritage research is included in all impact management procedures. Only academics with a background in this research and approved by NMMZ are allowed to undertake the work.

3.1.6 Water Act 20:24

Under this Act discharging or disposing of effluent into public streams or any other surface water or ground water either directly or indirectly through seepage becomes an offence. This act also removes the onus for pollution control from the Government to the polluter. It introduces the ‘Polluter Pays Principle’ where the responsibility for pollution control and detection lies with the polluter. Under the new system a polluter has to apply for a permit to pollute. Part IV, section 32 states that any person wishing to abstract water for any purpose other than primary purposes should do so under a permit, issued through ZINWA. The Act does not specify the use of water for the generation of hydroelectric power.

The Water Act designates Catchment Areas to be administered by Catchment Council, an elected body of stakeholders that has been created through Statutory Instrument 209 of 2000, to control and administer water affairs in the catchment. Each Catchment Area is subdivided into sub catchments, to provide for water management by an elected sub catchment council within a more localized river subsystem. The Pungwe Sub catchment in Zimbabwe falls within the jurisdiction of the Save Catchment. The principal functions of the Catchment Council are:

- To prepare a Catchment Outline Plan (COP) for its river system.
- To determine and grant water use permits.
- To regulate and supervise the exercise of rights to the use of water.
- To ensure proper compliance with the Act and to supervise sub catchment councils (SCC). The SCC regulates and supervises the rights to water within the area for which it was established.

3.2 International Agreements and Treaties signed by the Government of Zimbabwe

The 1992 United Nations Framework Convention on Climate Change. The primary purpose of the Convention is to establish methods to minimize global warming and in particular the emission of greenhouse gases. The Convention was adopted in 1992 and came into force in 1994. Zimbabwe signed and ratified the Convention in 1993. The main authority for the implementation is the Ministry of Environment, Water and Climate.

United Nations Convention on Biological Diversity. The primary purpose of the Convention is to establish methods to minimize global warming and, in particular, the emission of greenhouse gases. Zimbabwe signed and ratified the Convention in 1995. Main authority responsible for the implementation is the Ministry of Environment, Water and Climate.

Convention on International Trade Against Endangered Species (CITES): The convention aims to ensure the conservation and sustainable use of biodiversity. The Government of Zimbabwe signed and ratified the Convention in 1981. The national CITES authority, responsible for the Convention is the Parks and Wildlife Management Authority.

Vienna Convention on the Protection of the Ozone Layer: The Vienna Convention was an intergovernmental negotiation for an international agreement to phase out ozone depleting substance in March 1985. It ended in the adoption of the Vienna Convention for the Protection of the Ozone Layer. The Convention encourages intergovernmental cooperation on research, systematic observation of the ozone layer, monitoring of CFC production, and the exchange of information. The Government of Zimbabwe signed the convention in 1992.

The Ramsar Convention for the Conservation and Sustainable Utilization of Wetlands: The Convention is an international treaty for the conservation and sustainable utilization of wetlands, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value. The Convention entered into force in Zimbabwe in 2013, and has currently 7 sites designated as wetlands.

Convention on the Rights of the Child: The Convention on the Rights of the Child from 1989 is the most comprehensive compilation of international legal standards for the protection of the human rights of children. It acknowledges children as individuals with rights and responsibilities according to their age and development, as well as members of a family or community. This includes non-discrimination, the best interest of the child, the right to life, survival and development and the right to participation. Zimbabwe signed and ratified the Convention in 1990.

Constitution of the International Labor Organization: The constitutional principle is that universal and lasting peace can be established if it is based on social justice. The ILO has generated such hallmarks of industrial society

as the eight-hour work day, maternity protection, child labor laws, and a range of other principles. Zimbabwe is an ILO member since 1980, and has ratified the ILO Conventions. Out of 26 Conventions and 1 Protocol, 25 are in force and 1 has been denounced.

Convention on the Elimination of all forms of Discrimination against Women. CEDAW places explicit obligations on states to protect women and girls from sexual exploitation and abuse. Zimbabwe ratified the Convention in 1991

3.2 World Bank's Environmental and Social Risk Classification

The Bank will classify all projects (including projects involving Financial Intermediaries (FIs)) into one of four classifications: High Risk, Substantial Risk, Moderate Risk or Low Risk. In determining the appropriate risk classification, the Bank will take into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs. Other areas of risk may also be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific project and the context in which it is being developed.

3.2.1 Component II Risk Classification-Moderate Risk

The component I and II of this project is classified as *Moderate Risk*. Specifically, due to the fact that:

- (i) The potential adverse risks and impacts on human populations and/or the environment are not likely to be significant. This is because the project is not complex and/or large, does not involve activities that have a high potential for harming people or the environment, and is located away from environmentally or socially sensitive areas. As such, the potential risks and impacts and issues are likely to have the following characteristics:
 - predictable and expected to be temporary and/or reversible
 - low in magnitude
 - site-specific, without likelihood of impacts beyond the actual footprint of the project
 - low probability of serious adverse effects to human health and/or the environment (e.g. do not involve use or disposal of toxic materials, routine safety precautions are expected to be sufficient to prevent accidents, etc.)
- (ii) Risks and impacts can be easily mitigated in a predictable manner

3.3 Comparison between ESF objectives and national requirements

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts			
<p>Objectives of ESS 1 are:</p> <p>To identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs.</p> <p>To adopt a mitigation hierarchy approach to:</p> <p>(a) Anticipate and avoid risks and impacts;</p> <p>(b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels;</p> <p>(c) Once risks and impacts have been minimized or reduced, mitigate; and</p> <p>(d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.</p> <p>To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project.</p> <p>To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development and implementation of projects, whenever appropriate.</p> <p>To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity.</p>	<p><u>Environment Management Act (CAP 20:27) OF 2022</u>¹² The Act defines the Environmental Management Agency (with the participation of all stakeholders) as the responsible agency for the implementation of the Act. It further defines the environmental management principles for the country, including the consideration of people and their needs. It sets out environmental standards that should be complied with, including waste management and hazardous substances management.</p> <p><u>Environmental Impact Assessment Policy (1997)</u> The Policy guides the implementation of environmental impact assessments and was designed to attract environmentally responsible investment and development in Zimbabwe; maintaining the long-term ability of natural resources to support human, plant and animal life; avoid irreversible environmental damage and minimize such environmental damage</p>	<p>No significant gaps between ESS 1 and national laws</p> <p>Forestry concerns are defined as conversion of forest land to other use, while the ZIRP will implement reforestation only.</p> <p>Drainage and irrigation systems will only be</p>	<p>Scoping of key environmental and social risks and impacts of the Project has been undertaken and appropriate mitigation measures identified, as laid out in this ESMF.</p> <p>The ESCP is already prepared and has been disclosed on 4 June 2019.</p> <p>This ESMF aims to address the biophysical and socio-economic issues associated with the Project and utilized broad stakeholder consultation in the preparation of the Project, and follows the implementation of the SEP. ZIRP further promotes sustainable development and prescribes the requirement of activity-specific ESMPs, where applicable.</p> <p>This Project will apply waste management guidelines in all relevant activities.</p> <p>Site-specific ESIAs will be conducted prior to the implementation of activities.</p> <p>Water supply systems will only be rehabilitated. These types of activities will be based on a screening process, as well as ESIAs and ESMPs, where applicable. The ESMF will be compliant with the Act.</p>

¹² The Act has the following Statutory Instruments (S.I) subsidiary to it: S.I 6 of 2007; S.I 7 of 2007.

	<p>where it cannot be avoided; conserving broad diversity of plants, animals and ecosystems and the natural processes that they rely on; conserving the social, historical and cultural values of people and their communities; meeting the basic needs of people affected or likely to be affected by development proposals, including food, water, shelter; health and sanitation.</p> <p>The first schedule of the Act stipulates the activities that are prescribed for full environmental impact assessments (EIA). This includes the drainage and irrigation, forestry and water supply.</p>	<p>rehabilitated with no new systems being constructed.</p> <p>There are no gaps between the EMA and World Bank procedures in the screening process.</p>	<p>Interventions are based on rehabilitation of existing community infrastructure with no new habitats or new ecosystems envisioned, which means that no EIA is compulsory prior to Project appraisal. Any other types of activities will be screened out.</p> <p>According to screening outcomes, some sub-component activities will require an activity-specific ESIA and/or ESMP.</p>
ESS 2: Labour and Working Conditions			
<p>The Objectives of ESS 2 are:</p> <p>To promote safety and health at work.</p> <p>To promote the fair treatment, non-discrimination and equal opportunity of project workers.</p> <p>To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.</p> <p>To prevent the use of all forms of forced labor and child labor.</p> <p>To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.</p> <p>To provide project workers with accessible means to raise workplace concerns.</p>	<p><u>Factories and Works Act (CAP 14:08) OF 1996 (S.I 168 of 2004)</u> The Act aims at reducing occupational accidents, by prescribing a comprehensive safety and health management system is required at all work places.</p> <p><u>Labour Relations Act (1984).</u> Sets out freedom of association, collective bargaining and industrial relations. Labour Relations (Specification of Minimum Wages) Notice from 1996 sets out minimum wages</p>	<p>There are gaps between national legislation and ESS 2. National legislation only applies for formal sector workers, who are engaged with contracts.</p> <p>While a minimum wages Act is in place, there is lack of enforcement of the Act.¹³</p> <p>There have been bans on protests, and limitations to the ability to organize.¹⁴</p>	<p>The Project includes low-scale construction work, including in rebuilding community infrastructure and irrigation systems.</p> <p>Sub-component activities will employ community workers and contracted workers.</p> <p>Both groups will be subject to the Project LMP, GRM and will apply the World Bank Group Environment, Health and Safety Guidelines. These are all in compliance with ESS 2.</p> <p>The Project will adhere to minimum wages.</p>

¹³ ILO, Complaint (article 26) – 2010 – ZIMBABWE – CO87, CO98, accessed at: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:50012:0::NO::P50012_COMPLAINT_PROCEDURE_ID,P50012_LANG_CODE:2508373,en

¹⁴ Ibid

			The Project will provide GRM for community and contracted workers
ESS 3: Resource Efficiency and Pollution Prevention and Management			
<p>The Objectives of ESS 3 are:</p> <p>To promote the sustainable use of resources, including energy, water and raw materials.</p> <p>To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities.</p> <p>To avoid or minimize project-related emissions of short and long-lived climate pollutants.</p> <p>To avoid or minimize generation of hazardous and non-hazardous waste.</p> <p>To minimize and manage the risks and impacts associated with pesticide use.</p>	<p><u>Environment Management Act (CAP 20:27) OF 2022</u>¹⁵ The Act defines the Environmental Management Agency (with the participation of all stakeholders) as the responsible agency for the implementation of the Act. It further defines the environmental management principles for the country, including the consideration of people and their needs. It sets out environmental standards that should be complied with, including waste management and hazardous substances management.</p> <p>Another area defined for EIAs is water supply, including where water is drawn from rivers or reservoirs.</p>	There are no significant gaps between ESS 3 and national laws	The Project aims for resource efficiency in the restoration of communal infrastructure. It will therefore improve the previous conditions.
	<p><u>Statutory Instrument 6 OF 2007 (water pollution control and waste management).</u> The instrument defines the EMA water pollution control and waste management objectives.</p>	There are no significant gaps between ESS 3 and national laws	<p>The Project will ensure appropriate waste management in some of the activities</p> <p>It is anticipated that the ZIRP will generate medical waste and will undertake removal of debris. Therefore, the project will utilize World Bank Group guidelines on waste management in order to be fully compliant with this statutory instrument.</p>
	<p><u>Statutory Instrument 12 of 2007 (Hazardous Substances, Pesticides and Toxic Substances Regulations)</u> This statutory instrument</p>	While the Instrument focuses on formal employers, ESS 3 – in line	The Project will develop and implement measures and procedures for managing

¹⁵ The Act has the following Statutory Instruments (S.I) subsidiary to it: S.I 6 of 2007; S.I 7 Of 2007.

	<p>provides the mandatory conditions employers must adhere to in the handling of hazardous substances in the workplace, conditions for transporting hazardous substances and procedures to be followed when there is an accidental spillage of the substance. In addition, any person whose substances affect the environment are liable to pay for the cost of restoring the environment.</p>	<p>with ESS 2- includes all workers (also community workers)</p>	<p>waste and hazardous materials during demolition, construction and disposal.</p> <p>Contractors will prepare a waste management plan as part of the CESMP.</p> <p>This is relevant for ZIRP sub-component activities that handle medical waste and animal vaccinations. The Project will strictly adhere to World Bank Group Environment, Health and Safety Guidelines to ensure full compliance with the law.</p> <p>All guidelines will apply for community workers and contracted workers</p>
	<p><u>Water Act (CAP 20:24)</u> The Water Act provides for the development and use of water resources of Zimbabwe, grants of permits for the use of water, control of use of water when water is in short supply, protection of the environment and the prevention and control of water pollution and for the matters incidental to or connected with the foregoing.</p>	<p>There are no significant gaps between ESS 3 and national laws</p>	<p>Water supply systems will only be rehabilitated. These types of activities will be based on a screening process, as well as ESIA's and ESMPs, where applicable. Activities will be compliant with the Act and with ESS 3.</p>
	<p><u>National Water Policy (2013)</u>. The Policy aims to ensure the availability of good quality and affordable water in adequate quantity for all at all times. It lays out a recovery phase with five main objectives (arrest the continued deterioration; develop fast-track strategies; re-establish confidence of users; clarify institutional functions).</p>	<p>There are no significant gaps between ESS 3 and national laws.</p>	<p>This Policy is relevant as communal water infrastructure will be rehabilitated. All activities will support the Policy and will be in line with it, as well as with ESS 3.</p>
	<p><u>The Zimbabwe National Sanitation and Hygiene Policy (2017)</u>. The Policy sets out safe or hygienic separation of human excreta and other waste from human contact. It covers processes and behaviors for establishing and managing domestic and</p>	<p>There are no significant gaps between ESS 3 and national laws.</p>	<p>This Policy is relevant, as one sub-component of ZIRP is entirely dedicated to WASH activities. Activities will comply with the Policy, and with ESS 3.</p>

	workplace and public facilities necessary for waste or excreta containment, collection, treatment and disposal		
ESS 4: Community Health and Safety			
<p>The Objectives of ESS 4 are:</p> <p>To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life-cycle from both routine and non-routine circumstances.</p> <p>To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams.</p> <p>To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials.</p> <p>To have in place effective measures to address emergency events.</p> <p>To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.</p>	<p><u>Statutory Instrument 6 OF 2007 (water pollution control and waste management).</u> The instrument defines the EMA water pollution control and waste management objectives.</p>	<p>ESS 4 also considers worker conduct.</p>	<p>Although the Project aims to improve the lives of previously affected communities, it needs to be ensured that Project activities do not pose any unintended negative consequences on communities, for example through increased GBV incidents. A dedicated GBV action plan will be developed.</p> <p>It is anticipated that the ZIRP will generate medical waste and will undertake removal of debris. Therefore, the project will utilize WBG guidelines on waste management in order to be fully compliant with this statutory instrument.</p> <p>Several measures will be undertaken by the ZIRP, including contractors will develop road safety management plan and a Health and Safety Plan as part of the CESMP to address the impacts on local communities of moving construction equipment; measures and actions developed to assess and manage specific risks and impacts outlined in the ESMF and subsequent ESMPs.</p>
	<p><u>Statutory Instrument 12 of 2007 (Hazardous Substances, Pesticides and Toxic Substances Regulations)</u> This statutory instrument provides the mandatory conditions employers must adhere to in the handling of hazardous substances in the workplace, conditions for transporting hazardous substances and procedures to be followed when there is an accidental spillage of the</p>	<p>While the Instrument focuses on formal employers, ESS 4 – in line with ESS 2- includes all workers (also community workers)</p>	<p>ZIRP sub-component activities handle medical waste and animal vaccinations. The Project will strictly adhere to World Bank Group Environment, Health and Safety Guidelines to ensure full compliance with the law – for both, community and contract workers</p>

	<p>substance. In addition, any person whose substances affect the environment are liable to pay for the cost of restoring the environment.</p> <p>Public Health Act (CAP 15:09) OF 1996 (S.I 639 of 1972.) The Act recognizes the role played by local authorities in provision of water and sanitation services. Local authorities thereby have to adhere to specified standards on drinking water and sanitation services. Zimbabwe uses WHO standards on drinking water, which are enforced by the Ministry of Health and Child welfare.</p>		
		There are no significant gaps between ESS 4 and national laws	This act is applicable to the sub-component activities that re-establish WASH services. The act requires that the contractors' camps be established with water supply and sanitation for the employees. This can also be achieved by setting up contractors' camps within already developed areas to avoid the need for own water supply and sanitation requirements.
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement			
<p>The Objectives of ESS 5 are:</p> <p>To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives.</p> <p>To avoid forced eviction.</p> <p>To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.</p> <p>To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure.</p> <p>To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant.</p>	<p><u>Land Acquisition (Disposal of Rural Land) Regulations 1999:</u> Subject to these regulations, the owner of any rural land, other than the State, a local authority or a statutory body, shall not sell the land unless he has offered to sell it to the Minister and—</p> <p>(1) If the owner of any rural land which was the subject of an offer in terms of section 3 rejects a price proposed by the Minister in terms of subsection (4) of section 5, the Minister shall, within ninety days after being notified of the rejection, commence negotiations with the owner in regard to the price to be paid by the President for the rural land concerned.</p> <p>(2) If negotiations referred to in subsection (1) conclude without an agreement being reached on the price to be paid for the rural land concerned, the Minister shall, within forty-five days after the conclusion of the negotiations- issue the owner of the land with a certificate of no present interest; or notify the owner, in writing, that it is intended to acquire the land compulsorily in</p>	<p>There are significant gaps in due process issues related to land acquisition in Zimbabwe. The Government can forcibly remove people from streambanks, forests. These are areas included in the Project areas. It thereby does not have to follow due process related to livelihood protection in ESS 5.</p>	<p>The legislation does affect the implementation of the project since there is no potential for resettlement. Where land is donated by private owners, for example for reforestation activities, a land donation agreement process is implemented</p> <p>Any activities that require resettlement of people will be screened out., and all livelihoods will be protected in accordance to ESS 5.</p>

<p>To ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected.</p>	<p>terms of this Act; or to resume ownership of the land in terms of any condition in the land's title deed.</p> <p>Negotiations shall be deemed to have concluded without agreement for the purposes of subsection (2) if no agreement is reached on the price payable for the rural land concerned within fourteen days from the commencement of the negotiations.</p>		
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources			
<p>The Objectives of ESS 6 are:</p> <p>To protect and conserve biodiversity and habitats.</p> <p>To apply the mitigation hierarchy⁴ and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity.</p> <p>To promote the sustainable management of living natural resources.</p> <p>To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities.</p>	<p><u>Statutory Instrument 6 of 2007 (water pollution control and waste management)</u>. The instrument defines the EMA water pollution control and waste management objectives.</p> <p><u>Statutory Instrument 7 of 2007 (protection of eco systems)</u> This Statutory Instrument compels all EIA consultants to be corporate, multi-skilled and registered with EMA and deliver a certain quality of work, defined in the regulation.</p>	<p>There are no significant gaps between ESS 6 and national laws</p> <p>There are no significant gaps between ESS 6 and national laws</p>	<p>It is anticipated that the ZIRP will generate medical waste and will undertake removal of debris. Therefore, the project will utilize World Bank Group guidelines on waste management in order to be fully compliant with this statutory instrument.</p> <p>The Project will comply with the Statutory Instrument when developing ToR and deployment of qualified consultants for EIAs. The monitoring requirements of the regulation will be articulated in the monitoring and evaluation chapter of the ESMF.</p> <p>The Project will implement activity-specific screening procedures for biodiversity risks and impacts likely to occur from the activity.</p>
ESS 7: Indigenous Peoples/Sub-Saharan African Historically underserved Traditional Local Communities			
<p>The Objectives of ESS 7 are:</p> <p>To ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities.</p> <p>To avoid adverse impacts of projects on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, or when</p>			

<p>avoidance is not possible, to minimize, mitigate and/or compensate for such impacts.</p> <p>To promote sustainable development benefits and opportunities for Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities in a manner that is accessible, culturally appropriate and inclusive.</p> <p>To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities affected by a project throughout the project's life-cycle.</p> <p>To obtain the Free, Prior, and Informed Consent (FPIC) of affected Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities in the three circumstances described in this ESS.</p> <p>To recognize, respect and preserve the culture, knowledge, and practices of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to provide them with an opportunity to adapt to changing conditions in a manner and in a timeframe acceptable to them.</p>			
ESS 8: Cultural Heritage			
<p>The Objectives of ESS 8 are:</p> <p>To protect cultural heritage from the adverse impacts of project activities and support its preservation.</p> <p>To address cultural heritage as an integral aspect of sustainable development.</p> <p>To promote meaningful consultation with stakeholders regarding cultural heritage.</p> <p>To promote the equitable sharing of benefits from the use of cultural heritage.</p>	<p><u>National Museums and Monuments Act (CAP 25:11)</u>: The Act protects all areas of archaeological, historical, architectural, geological and paleontological value or scientific interest. Such sites cannot be altered, excavated or damaged and material on them cannot be removed without the written consent of the Executive Director of the National Museums and Monuments of Zimbabwe. The law requires that any monument or relic discovered must be reported in writing to the Executive Director of the National Museums and Monuments</p>	<p>There are no significant gaps between ESS 8 and national laws</p>	<p>No major affection of any cultural heritage sites is anticipated under the Project; however, the Project may have to handle chance cultural findings, following Chance Find Procedures.</p>

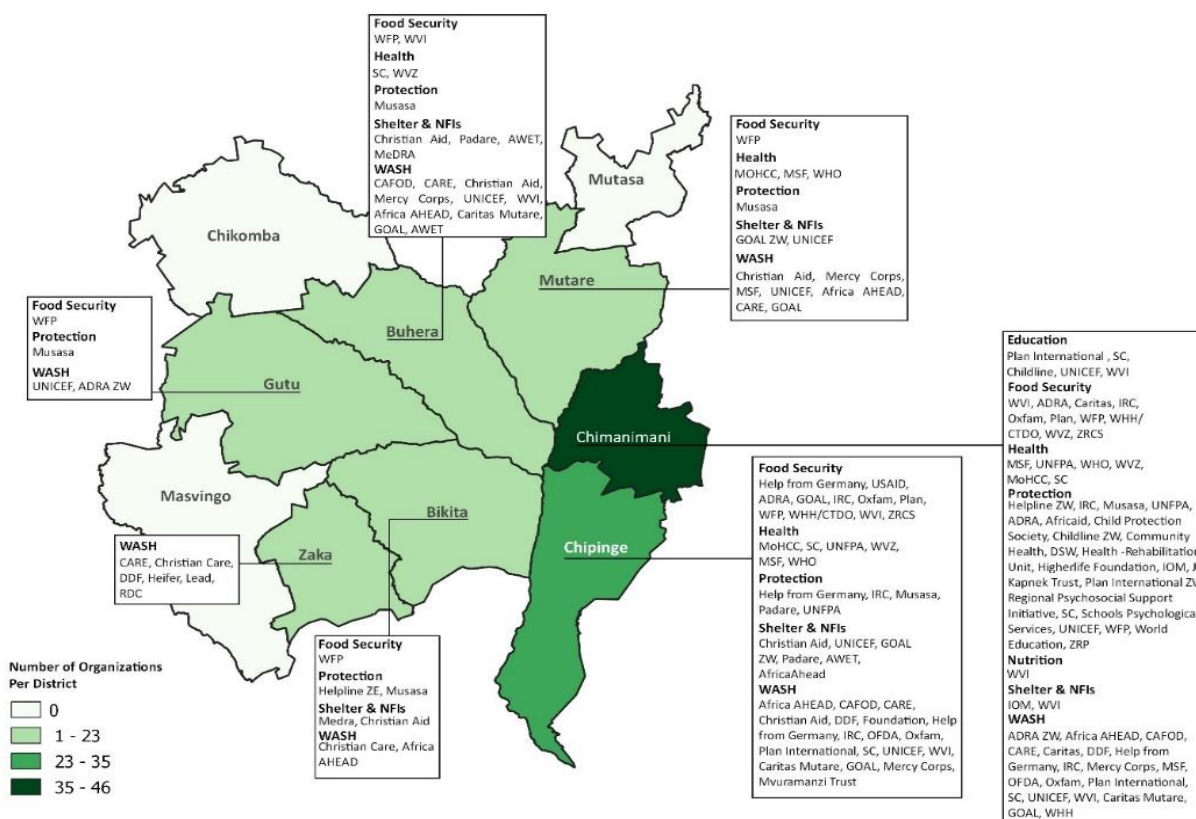
	of Zimbabwe by the discoverer and the owner of the land on which it is found.		
ESS 9: Financial Intermediaries			
The Objectives of ESS 9 are:	<u>n/a</u>	n/a	n/a
To set out how the FI will assess and manage environmental and social risks and impacts associated with the subprojects it finances.			
To promote good environmental and social management practices in the subprojects the FI finances.			
To promote good environmental and sound human resources management within the FI.			
ESS 10: Stakeholder Engagement and Information Disclosure			
The Objectives of ESS 10 are:	<u>Access to Information and Protection of Privacy Act (2002)</u> . The Act sets out that members of the public have a right to access information held by public bodies.	While the Act spells out right to information held by public bodies, the ESS recognizes the importance of open and transparent engagement vis-à-vis project stakeholders by the borrower	The Project commits to recognize the right to information, even where held by the borrower.
To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties.			
To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance.			This process has already commenced through the Stakeholder Engagement Plan (SEP), laying out all the different types of stakeholders, timings and modes of communication and consultation. The Plan further includes Project Grievance Redress Mechanisms. The Plan has been disclosed on 4 June 2019.
To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life-cycle on issues that could potentially affect them.			
To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.	<u>Rural District Councils Act (29:13)</u> , The Rural District Council has a variety of powers, including the conservation of natural resources, control of bush, animal diseases, sewerage works, pollution, and effluent or refuse selection, collection and disposal etc. It is also the Development and Planning authority within its jurisdiction. As development and planning authority, it is expected to be aware and guide all development activities carried out by	There are no significant gaps between ESS 10 and national laws	The SEP has defined members of the rural district councils as stakeholders in the Project, and has defined their involvement in the Project.
To provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances.			

	<p>governmental and non-governmental organizations and the private sector within their jurisdiction. Any development should therefore be carried out within the provisions of the council's priorities and approved development plans to allow for coordinated and collective approach to development. ZIRP and any appointed contractor will thus have to ensure that they comply with council laws, all implementing partners will work closely with the Rural District Councils in the sub-component activities.</p>		
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4 BASELINE ENVIRONMENT

4.1 Project Locations

Project beneficiaries and sub-component sites are spread across three Provinces: Manicaland, Masvingo and Mashonaland East, and nine districts therein: Chimanimani, Chipinge, Buhera, Mutare urban, Mutare rural, Bikita, Gutu, Mutasa, and Chikomba. A targeting framework developed by the Project Implementation Unit (PIU) will support sub-components through an objective method for ranking priority intervention areas in the different districts.¹⁶



4.2 Biophysical Environment

Zimbabwe is a landlocked country in Southern Africa and has a total surface area of 391 000 km². About 75% of the country is semi-arid, with low and sporadic rainfall, which makes it prone to unpredictable droughts. Land use varies from intensive cropping to extensive cattle ranching, subsistence and small-scale agriculture, wildlife production, and mineral extraction. Approximately 60% of the country's 12.9 million people live in rural areas.

It is nested within four major river systems, namely Zambesi in the north, Limpopo in the south, Save in the southeast, and Shashe in the southwest. About 49% of the total land area is under forests and woodlands while 27% is cultivated. The former contains a wide range of fauna and flora that includes 4,440 species of plants, 270 mammals, and 532 bird species. Biodiversity is found in all the country's land categories-namely state, communal and private lands.

¹⁶ Most Technical Leads for not have a long-term presence in the locations but are utilizing immediate emergency funds to operate there.

The country's ecosystems are formally protected under six categories of protected areas as follows: 11 national parks, 6 gazetted forests, 14 botanical reserves, 3 botanical gardens, 16 safari areas and 15 recreational parks and sanctuaries. National parks and gazette forests constitute 13% and 3% of the country's land area respectively.

Zimbabwe is globally renowned for its past visionary approach to natural resource management. It was the first African country to develop a noticeable alternative approach to the management of natural resources outside protected areas in 1975. This results in a proliferation of private game reserves and conservancies that occupied 10% of the country by 2000. The country has the second largest elephant population and third largest rhino her in Southern Africa (excluding South Africa). Furthermore, the country holds significant tracts of the African teak (*Baikiaea pluriuga*).

The country is mostly savannah, although the moist and mountainous eastern highlands support areas of tropical evergreen and hardwood forests. Trees found in these Eastern Highlands include teak, mahogany, enormous specimens of strangling fig, forest newtonia, big leaf, white stinkwood, chirinda stinkwood, knobthorn and many others. In the low-lying part of the country fever trees, mopane, combretum and baobabs abound. Much if the country is covered by miombo woodland, dominated by *bracgystegia* species and other. Among the numerous flowers and shrubs are hibiscus, flame lily, snake lily, spider lily, leonotus, cassia, tree wisteria and dombeya. There are around 350 species of mammals that can be found in Zimbabwe. There are also many snakes and lizards, over 500 bird species, and 131 fish species.

The Project area is particularly dominated by the Chimanimani Mountains, an area of high plant diversity and endemism. The mountains have been widely recognized as an important area for plant biodiversity.¹⁷ However, the forested eastern foot slopes of the mountains have been impacted by clearance for agriculture, frequent fires and subsequent invasion by the introduced shrub *Vernonanthura*.¹⁸

Environmental issues. Large parts of Zimbabwe were once covered by forests with abundant wildlife. Deforestation and poaching have reduced the amount of wildlife. Woodland degradation and deforestation, due to population growth, urban expansion and lack of fuel, are major concerns and have led to erosion and land degradation, which diminish the amount of fertile soil. Local farmers have also been criticized by environmentalists for burning off vegetation to heat their tobacco barns.

Over-reliance on wood energy. Biomass, mainly in the form of wood, accounts for most of the primary energy needs of Zimbabweans. It provides 61% of the total energy supply. Firewood is the main source of energy for heating and cooking with an annual household consumption of 4.2 tons. Deforestation is also increasing due to the rise in tobacco farmers who clear forestland for planting and use wood for curing.

Illegal wildlife trade. In 2008, the country had 744 rhinos of which 144 were poached. Corresponding figures for 2012 were 710 and 93 respectively. Although the exact number of elephants in the country is unknown, the species is not considered threatened compared to other African countries. With the third and fifth largest elephant and rhino population in the world respectively, it is not surprising that Zimbabwe finds itself at the center of international ivory and rhino horn trafficking by sophisticated and well-resourced poaching syndicates and networks.

Climate change. Zimbabwe is dealing with significant climate change. Global Climate Models (GCM) indicate that most of Southern Africa, including Zimbabwe, is likely to experience higher temperatures (2-40C higher than the 1961-1990 baseline) in the coming decades, but the picture for rainfall is less clear. While average annual rainfall appears to have changed little over the last 50 years, adverse weather conditions have been increasing with droughts and floods having become more frequent and severe and the onset of the rains less dependable. Zimbabwe ranks 9

¹⁷ KEW, IIAM, Fundacao Micaia, Critical Ecosystem Partnership Fund, Arex, Chimanimani Mountains: Botany and Conservation, 2016, p.6

¹⁸ KEW, IIAM, Fundacao Micaia, Critical Ecosystem Partnership Fund, Arex, 2016, p.7

out of 16 countries on the Climate Change Vulnerability Index (CCVI)¹⁹. Climate models predict that Zimbabwe's climate will be warmer than the 1961-1990 baseline with warming rates of 0.5-2.0°C by 2030.²⁰

The climate change predictions for Zimbabwe are that the country will become hotter and drier, with an increase in violent storms. Floods are thereby the most frequent and dangerous hazard for the country, mostly hitting the northern and southeastern lowlands (along the path of cyclones). The El Nino phenomenon has had ample impacts in the past, an estimated 4.1 million people in Zimbabwe experienced food insecurity in 2016 due to the phenomenon.²¹

The Project areas are part of Region I, which is classified as being very productive with abundant rainfall, and Region V, which consists of drylands. The parts under Region V were already affected by a severe drought prior to the cyclone. Specifically, in the Project areas, the significant amount of rainfall impacts the fragile ecosystem (steep slopes cleared of vegetation for subsistence and cash crops).²²

Cyclone Impacts. In the recent disaster, Chimanimani and Chipinge Districts were most severely hit by the cyclone. They are part of the climatic region I, which receive heavy rainfalls generally.²³ This makes these areas usually prone to floods. Especially Rusitu Valley and Nangu were among the hardest hit areas. Ca. 54,000 households were hit by the floods and landslides in Chimanimani and Chipinge, causing a wide array of destruction and costing human lives. In the cause of the cyclone, landslides occurred in the areas with shallow solid profiles overlaying rock. The increased amounts of water triggered soil movement and reduced traction between the soil mass and the rock surface beneath resulting in mud slides and huge deposits of sand and silt on confluences of rivers. Sedimentary rocks were exposed.²⁴

According to the post-disaster assessment conducted by UNDP, the deep cut slopes and landform contributed to rock and debris rolling down the slopes, causing significant destruction of anything in their path. Given the significant amount of rainfall on the steep slopes, excessive overland flow carried a lot of debris as a result. This caused river banks to burst, especially in the areas of the floodplains of Nyahode-Rusitu Rivers to the east and Biriri Umvumvu Rivers to the west.²⁵ The massive rockfalls were thereby, despite some early warning, not anticipated. People, who had moved to higher grounds, on the basis of early warning messages, were the first to be hit by rockfalls coming down from the mountains. In the meantime, the valleys were flooded.²⁶

Mining in the Eastern Highlands. Despite being a protected area, Chimanimani Mountains have been invaded by many thousands of illegal small-scale miners, who dug into stream beds looking for alluvial gold; nearly all on the Mozambique side. Conservationists express fears over the possible impacts of these miners on the flora, vegetation and wildlife.²⁷ Gold mining, diamond and coal mining has ample effects on the water ecosystem, as well as on the populations of larger mammals in the region.²⁸

The illegal mining activities in Manicaland have caused the contamination of water sources and have partly been responsible for the destruction of vital ecosystems through the use of mercury. Mercury and ferro-silicon-contaminated water has created health hazards to humans and animals (waterborne and skin diseases). This has already, pre-cyclone, caused significant degradation of the area. This is in addition to the fact that it has caused the

¹⁹ Maplecroft, Climate Change Vulnerability Index 2018, accessed at <https://www.maplecroft.com/solutions/environment-climate-change/>

²⁰ UNDP Human Development Report, 2017

²¹ UNDP Human Development Report, 2017

²² UNDP Rapid Assessment of the Socio-Economic Impact of Cyclone Idai on Zimbabwe, April 2019, p. 69-70

²³ UNDP, 2019, p. 8

²⁴ UNDP, 2019, p. 8.

²⁵ UNDP 2019, p. 69-70

²⁶ UNDP 2019, p. 8

²⁷ KEW, IIAM, Fundacao Micaia, Critical Ecosystem Partnership Fund, Arex, 2016, p.5

²⁸ KEW, IIAM, Fundacao Micaia, Critical Ecosystem Partnership Fund, Arex, 2016, p.7

change of agricultural land use. The artificial diversion of water, required for the mining activities, has caused the erosion of mountainsides. Furthermore, surface mining is an extreme land use practice, as it causes significant environmental damage, and significantly affects agricultural practices. The environmental degradation has, in particular, affected the usage of water in the area. Issues such as excavations, unsuitable land use for agriculture, illegal settlements and mining activities expose people to significant risks.²⁹

4.3 Socio-Economic Environment³⁰

Zimbabwe Economic Outlook and Macroeconomic performance. The economy performed better than expected in 2018, expanding by an estimated 3.5%, driven by agriculture, supported by relatively peaceful elections. Cash shortages and the three-tier pricing system coupled with foreign exchange shortages continued to constrain the goods and factor markets.

The fiscal deficit was an estimated 10.7% of GDP in 2018, compared with 12.5% of GDP in 2017, financed mainly through domestic borrowing. In 2018, the government proposed addressing the unsustainable budget deficit with strong fiscal consolidation measures. The fiscal deficit was driven mainly by election-related spending, civil servant salary increases, and transfers to the agricultural sector. Total external debt was an estimated 45.3% of GDP in 2018, down from 53.8% in 2017. The current account deficit was an estimated 3.7% of GDP in 2018, with merchandise imports continuing to exceed exports, putting pressure on the supply of urgently needed foreign exchange and making it critical to diversify exports.

The country's protracted fiscal imbalances have constrained development expenditure and social service provision, undermining poverty reduction efforts. Unemployment pressures have been mounting as employment opportunities continue to dwindle.³¹

When the country was hit by cyclone Idai in March 2019, it was already grappling with serious socio-economic challenges. Economic growth has declined over the past few years and the International Monetary Fund (IMF) estimates economic growth in 2018 at 3.6%, with the expectation of growth of -5.2% in 2019.³² Individual poverty was at 70% at the national level and at 86% in the rural areas. Manicaland Province, as one of the hardest hit areas under the cyclone, has had consistent poverty rates of 70% of people living under the national poverty line since 1990. In Chipinge District, poverty was estimated at 80% in 2016.³³ The level of poverty is reflected in health and education as well, with high levels of stunting and low levels of access to hygiene enabling facilities.³⁴

Economic growth is estimated to have slowed down in 2018 as negative effects of foreign currency and fuel shortages and weaker agriculture weighed on domestic demand and exports. These effects are likely to be more pronounced in 2019 when the GDP is projected to decline. Prospects for donors' re-engagement are hinged on credible political and economic reforms. Poverty levels are likely to increase due to weak economic growth and high inflationary pressures.³⁵

Human Development. Zimbabwe's Human Development Index value for 2017 is 0.535— which put the country in the low human development category—positioning it at 156 out of 189 countries and territories. Between 1990 and 2017, Zimbabwe's HDI value increased from 0.491 to 0.535, an increase of 8.9 percent. Between 1990 and 2017, Zimbabwe's life expectancy at birth increased by 3.8 years, mean years of schooling increased by 3.6 years and

²⁹ UNDP 2019, p. 69-70

³⁰ This section will be further updated, based on the findings for the planned Social Assessment (TOR currently under development).

³¹ Africa Economic Outlook 2019, accessed at: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/2019AEO/AEO_2019-EN.pdf

³² UNDP 2019, p. 13

³³ UNDP Rapid Assessment 2019, p.15

³⁴ UNDP Rapid Assessment 2019, p.16

³⁵ World Bank, Zimbabwe, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices, accessed at: <http://pubdocs.worldbank.org/en/750841492188177908/mpo-zwe.pdf>

expected years of schooling increased by 0.5 years. Zimbabwe's GNI per capita decreased by about 29.3 percent between 1990 and 2017.³⁶

Zimbabwe has amongst the highest HIV prevalence and maternal mortality rates in the region. The country's high mortality and morbidity rates are a result of an under-resourced health delivery system, which is overstretched by the high burden of HIV, tuberculosis (TB), malaria, and maternal and childhood illnesses. A decade of worsening economic conditions and rising costs have eroded a once vibrant health system, which now functions largely due to donor assistance. The health sector has produced notable results in the areas of HIV; TB; malaria; maternal, newborn and child health (MNCH); and family planning/reproductive health (FP/RH). The national response to the HIV epidemic has scaled up prevention and treatment interventions, resulting in an estimated 290,000 lives saved through antiretroviral treatment (ART) since 2009 and a 50 percent decrease in the number of new HIV infections over the last ten years. The TB treatment success rate increased from 67 percent in 2006 to 80 percent in 2015, which meets the National TB program objective and World Health Organization recommendations. Malaria incidence declined by 79 percent, from 136/1,000 in 2000 to 29/1,000 in 2015. Although the maternal mortality rate declined significantly from 960 deaths per 100,000 live births in 2010/11 to 614 deaths per 100,000 live births in 2014, this rate remains too high by regional standards. The contraceptive prevalence rate increased from 60 percent in 2006 to 67 percent in 2014. These are noteworthy gains given the general economic decline and political context and speak to the technical and financial support provided by the donor community. Sustaining these gains will require both continued donor engagement and collaboration with the Ministry of Health and Child Care (MOHCC) to improve the systems and implementation of policies that surround the delivery of health services.

The cyclone has had a series of other impacts in addition to contributing further to economic decline. Where livelihoods were lost, and assets damaged, people are further impoverished, suffer from food insecurity, lack of education, or they are subjected to health challenges. Women and girls are put in a more vulnerable situation, exposing them to greater risks of sexual exploitation or other SGBV incidents. Psychosocial and health-related issues have grown in the affected communities as impacts of the disaster.

Local Governance. What is mostly intact and has been functioning throughout the period of the crisis are the formal and quasi-formal governance institutions, which are partly geared to establish social protection, and to respond to emergencies.

Generally, in an emergency, the National Civil Protection Unit (CPU) structure responds. The CPU is located in the Ministry of Local Government, and the line Ministries are fitted into this structure. The structure is repeated at the Provincial level, where again the line Ministries are represented in the CPU, which is led by the Provincial Administrator (Ministry of LG). 22 thematic sub-committees feed into main provincial CPU committee.

At the district level, the District Administrator (Ministry of Local Government) chairs the District-level CPU, which also integrates the different line Ministries (which lead the thematic sub-committees). The same structure is replicated at the Ward level, in the Ward Civil Protection Unit, next to the Ward Development Committee. The Ward Councilor, however, who chairs the Ward CPU, is an elected political position.

At the village level (ca. 100 households), the smallest unit within administrative structures, the Village Civil Protection Unit and the Village Development Committee is led by one of the traditional chiefs in the area. The Village Heads are not elected, they often draw their legitimacy from their family history. Their main tasks comprise the allocation of land, administration of village courts, and brokering development programs. They work with senior kinsmen in conflict resolution activities. While they are the main address in the village, they are at times accused of bias and abuse of power.³⁷

³⁶ World Bank, Zimbabwe, Human Development Indices and Indicators, 2018 Statistical Update, accessed at: http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/ZWE.pdf

³⁷ Kate Baldwin, Shylock Muyengwa and Eric Mvukiyehe, Reforming Village-Level Governance via Horizontal Pressure. Evidence from an Experiment in Zimbabwe, Policy Research Working Paper, World Bank, 7941, 2017, p. 10

The Ward is led by a Councilor, who is politically elected. The Chiefs and Village Heads originate from the traditional authority structure. The Village Development Committee, led by chiefs and village heads, is embedded in the informal traditional structures.

Humanitarian actors have formed a parallel structure, through which emergency responses are coordinated by humanitarian actors, UN agencies, civil society, and donor agencies. All agencies coordinate in the inter-agency clusters (sector-specific, e.g. food security, WASH etc.) at the national level. The same structure is replicated at the province and district level. At the District level, it inks with CPU structures.

Given Zimbabwe's legacy of poor governance, inadequate capacity and corruption, humanitarian aid partners, consisting of INGO's, UN agencies, donors and civil society, have created a parallel structure through which emergency assistance is provided and coordinated. Emergency coordination is undertaken at the national level in inter-agency sector-specific clusters (e.g. food security, WASH, etc.) with similar structures replicated at the provincial and district levels although at the district level, they also align with CPU structures.

Social Structure. Societies in the three Provinces are largely members of the Shona ethnic group, with a few members of the Ndebele and Shangani ethnic groups. The Shona language is part of the Bantu language family, and is divided into several dialects. The Shona ethnic group consists of five major clans. Ain subsistence is agriculture-based, with sorghum, maize, yams, beans and bananas as main crops. The Shona also cattle and goats, and have historically also been transhumant herders. The Ndebele speakers constitute about 16% of Zimbabwe's population. Ndebele is also part of the Bantu language family. Traditional subsistence of the Ndebele speakers was more cattle-centered. The Shangani are also a Bantu speaking group.

There are some migrant workers in the Project area, which have been attracted by commercial mining, farming, and commercial forestry. However, it is not clear how many 'miners' are arriving from outside, and how many are recruited from the Districts and Provinces that contain the mines. The initial project assessment has shown that not many persons displaced by the cyclone have sought refuge in camps. Most of them appear to reside with other residents.

Social protection has declined through the cyclone in the affected areas. Declining incomes, economic opportunities high costs to rebuild properties have devastating effects on the population. Children have been orphaned, and heading their households after they have lost a parent. In Chimanimani, 9.6% of households indicated they had children orphaned as a direct consequence of the cyclone.³⁸

Main livelihoods. The three provinces have a significantly large rural population and according to a 2012 census, Manicaland had a 72,809 HH in urban areas and 341345 HH in rural areas; Masvingo had 37,364 HH in urban areas and 293,692 HH in rural areas. Mashonaland East had 45,763 HH in urban areas and 277,871 HH in rural areas³⁹

The Eastern Highlands are generally a high potential zone for crops production (fruit, vegetables, flowers, tea and coffee), as well as timber. This accounts for important labor opportunities through commercial farms and sawmills.⁴⁰ The Eastern Highlands' high potential mountain zone is intensively farmed through small plots or mixed foods and cash crops. While Maize is primary, cereals, root crops, fruits, tea/coffee are also produced. Poor farmers can find deployment in commercial agriculture and forestry.

³⁸ UNDP 2019, p. 65-66

³⁹ ZIMStat, Zimbabwe Smallholder Agricultural Productivity. Survey 2017 Report, March 2019, p. 13

⁴⁰ UNDP 2017, p. 40

The area covers three main livelihood zones (as defined by the Zimbabwe Vulnerability Assessment Committee, ZIMVAC): In the Eastern Highlands commercial farming and prime communal farming, and in Manicaland smallholder farming is predominant.⁴¹ Generally, livelihood activities in the country are centered on agriculture (crop production, livestock and fisheries). Parts of Mashonaland provinces and Manicaland have the highest incomes, as they also have the highest concentration of commercial farms and resettlement communities. In Masvingo, crop production is low and livestock is more important.⁴²

Masvingo and Manicaland are mostly based on cereal agriculture and cash crops (groundnuts, round nuts and cotton), but also include animal husbandry and migratory labor remittances. Poor farmers also sell wild fruits or are involved in gold mining or panning activities, as well as fishing.⁴³

The Eastern Highlands high potential mountain zone is intensively farmed through small plots or mixed foods and cash crops. While maize growing is the primary agricultural activity, cereals, root crops, fruit, tea/coffee are also produced. Poor farmers often find additional employment in the commercial agriculture and forestry sectors.

The most affected districts, Chimanimani and Chipinge produce several export crops, including tea, coffee, pineapple, macadamia nuts, and others. While tea and coffee remain largely unaffected, the wind, rain, and floods damaged other crops. Agricultural commodity exports are therefore expected to drop.⁴⁴ An early UNDP Rapid Assessment indicates that the post-disaster outlook is not favorable: the GDP may reduce by 0.6% and a further 0.2% in 2020.⁴⁵

The cyclone has had significant impact on food security, and therefore on household nutrition, mostly among women and children. Since crops were destroyed and irrigation infrastructure destroyed, most subsistence farmers in the region will face significant food insecurity. Poor households will face challenges recovering their assets or restocking lost goods during the destruction of their homes. A post-disaster survey administered by UNDP shows a 30% decline in the consumption of regular dietary components.⁴⁶

Health. Under the ESMF, post-disaster health issues consisting mainly of cyclone-related injuries will be of particular focus to ensure community health. To date, there are no reports of waterborne diseases, such as cholera or typhoid. However, since these two diseases have been reported in the cyclone-affected areas in neighboring Mozambique, a heightened risk for the three Provinces in Zimbabwe should be considered. Cholera vaccination campaigns have commenced in Chimanimani and Chipinge and UNDP reports that the Ministry of Health and Child Care in Manicaland Province has effectively managed disease control thus preventing an outbreak of water-borne diseases.⁴⁷

Rivers and streams have become the main source of domestic water, with UNDP reporting that 32.2% of the population in the affected areas utilizing these sources. However, river and stream water is not safe and the MoH through its health surveillance system diseases, has determined that Acute Respiratory Infections (ARI), malaria, dysentery and diarrheal diseases have been reported at health facilities. Health education has included cholera prevention messages, information on diarrheal diseases, HIV and AIDS, STIs, and malaria.⁴⁸

⁴¹ UNDP 2017, p. 38

⁴² UNDP 2017, p. 40

⁴³ UNDP 2017, p. 40

⁴⁴ UNDP 2019, p. 41

⁴⁵ UNDP 2019, p. 41:

⁴⁶ UNDP 2019, p. 47:

⁴⁷ UNDP 2019, p. 47

⁴⁸ UNDP 2019, p.47

Business. The cyclone has affected businesses significantly with an estimated 87% of businesses affected by the cyclone.⁴⁹ The decline in assets through the cyclone was significant. According to the UNDP survey, an average 45% decline in asset ownership was registered and included decline in ownership of sanitation facilities, which is likely to have health implications.⁵⁰

The cyclone has had a series of other impacts in addition to contributing further to economic decline. Where livelihoods were lost, and assets damaged, people have become further impoverished, suffer from food insecurity, lack education, or subjected to further health challenges. Women and girls suffer from heightened vulnerability, being further exposed to greater risks of sexual exploitation and SGBV. In general, psycho-social and health related challenges have increased in the affected communities.

Labor and Employment. With regards to labor and employment, it is estimated that of 7 million economically active persons, approximately 11.3% are broadly unemployed. The largest labor force at 52.3%, are 'own account' workers, being communal, peri-urban and resettlement farmers, working in agro-based businesses.⁵¹

Crime and Violence. While crime, violence and conflict have not been predominant issues in the affected areas in the past, the lack of livelihoods, increased poverty and insecurity in general could potentially contribute to a rise in crime, violence and conflict. The unraveling of social fabric, as people are exposed to different stresses, can have ample effects on the traditional social protection systems. Where members of households have died or been injured, family-based protection systems may not be functioning anymore; or support through extended families may not be granted anymore, as many households have lost their livelihoods and assets. Many of these 'new' vulnerabilities and stresses have not been assessed yet. The Project hopes to gain further insights into these issues through a dedicated vulnerability assessment during the commencement phase of the Project.

Coping strategies. Zimbabwe scored 5.7 on the Coping Capacity Index, indicating 'lack of coping capacity'.⁵² Reasons cited for this are infrastructure and institutional challenges, including limited physical connectivity, access to health care, and communication. In addition, corruption, government ineffectiveness and poor governance exacerbate the already fragile situation where socio-economic challenges are linked to multi-dimensional poverty, deprivation and inequality.⁵³

In the cyclone affected areas, social protection has also been adversely affected where declining incomes, lack of economic opportunities and high reconstruction costs have devastated the population. Children have been orphaned, and are often forced to head households after the loss of one or both parents. In Chimanimani, 9.6% of households indicated they had children orphaned as a direct consequence of the cyclone.⁵⁴

The un-managed mining has also led to a disintegration of social fabric with increasing levels of diseases such as HIV/AIDS, declining livestock due to lack of grazing land, and relocation of communities without due diligence to the socio-economic implications.⁵⁵

Remittances. As Zimbabwe has a large Diaspora, remittances are a significant source of income in Zimbabwe. Zimbabwe has received \$ 1.85 billion from its Diaspora 2016-2018.⁵⁶ The average household in Zimbabwe receives

⁴⁹ UNDP 2019, p. 60

⁵⁰ UNDP 2019, p. 59

⁵¹ UNDP 2017, p. 28

⁵² UNDP 2017, p 21:

⁵³ UNDP 2017, p. 21:

⁵⁴ UNDP 2019, p. 65-66:

⁵⁵ UNDP 2019, p. 69-70

⁵⁶ In: New Zimbabwe, Zimbabwe. Diaspora Remittances Stagnant at US\$ 1.85 bln – World Bank, accessed at: <https://allafrica.com/stories/201812200007.html>

2,000 USD per year from overseas. However, it is difficult to determine the exact amounts, as there are informal systems through which money is transmitted.⁵⁷ And while through remittances, livelihood security is increased, it is differential.⁵⁸ These issues will be critical in the selection of beneficiary households for the ZIRP.

Land Issues. Land issues in Zimbabwe are complex and based on a long history, which includes Government-sanctioned land restoration and a lack of enforcement of land planning. This lack of enforcement has enabled environmental degradation, for example through streambank farming and productive uses of land that is under conservation.

Disadvantaged / Vulnerable Individuals and Groups. Since the Project considers all communities in the cyclone-affected 9 districts as 'affected parties', a lot will rely on the identification and selection of the most disadvantaged and vulnerable individuals, households and other groups as beneficiaries. A Vulnerability Assessment in the early implementation phase of the project will deliver more insights into what constitutes vulnerability, as well as the tools applied by different implementing partners to identify disadvantaged and vulnerable groups and beneficiaries. Furthermore, approaches from Technical Leads to the identification of vulnerable individuals or groups will be taken into account. The SEP will be updated accordingly

General categories of vulnerable groups in the two Provinces include⁵⁹:

Disadvantaged / Vulnerable Group	Remarks
Women	Women may be mostly affected through the destruction of agricultural and water-related infrastructure, since they are very involved in agricultural productivity. Furthermore, as main caretakers of family members and given their reproductive health needs, women have particular needs in agricultural, water management, as well as access to health. However, women can often be excluded from political life and from communal decision-making processes, due to the patrilineal socio-political structures.
Youth	Zimbabwe has 62% ⁶⁰ of the population under the age of 25, which is a significantly high percentage. However, young community members are often excluded from decision-making processes under traditional authority structures, in which power is often based on factors such as age. The youth unemployment rate in Zimbabwe was 5.16% in 2017. ⁶¹ Since young people are particularly capable in conducting work activities and are crucial in the rebuilding of their communities and infrastructure, they need to be included in decision-making processes through forums that particularly include the young population.
Women-Headed Households	While female-headed households existed prior to the cyclone (in 2015, 41 percent of all households in Zimbabwe are female headed) ⁶² , their

⁵⁷ Zimbabwe: Diaspora Remittances Stagnant at US\$ 1.85 bln – World Bank, All Africa, accessed at: <https://allafrica.com/stories/201812200007.html>

⁵⁸ Ncube, G and G.M. Gomez, Remittances in rural Zimbabwe: From Consumption to Investment, In: International Journal of Development and Sustainability, Volume 4.2, p.181-195.

⁵⁹ This section will be updated based on the findings from the planned Social Assessment.

⁶⁰ UNFPA, Young People, accessed at: <https://zimbabwe.unfpa.org/en/topics/young-people-2>

⁶¹ Trading Economics, Zimbabwe unemployment rate, accessed at: <https://tradingeconomics.com/zimbabwe/unemployment-rate>

⁶² GOZ 2016

	number may have increased following the disaster and they need specific support.
Children	Children are often detrimentally affected in disasters, including through the recent destruction of schools and health systems.
Children-Headed Households	In 2015, 17 percent of children in rural areas were orphans. In Manicaland alone, only 38.3 of children percent lived with both parents, 27.7 did not live with a biological parent, and 18.1 percent of kids reported either one or both parents dead. The recent disaster is likely to have increased the numbers of orphans and children-headed households. ⁶³
Minority Ethnic Groups	The large majority of residents in the affected Districts are Shona speakers, albeit different dialects. However, there may be members of some ethnic minorities residing in the project area, such as Ndebele and Shangani. However, while these groups may be excluded on a structural basis from decision-making and from selection process for beneficiary selection, they are not distinct social groups in accordance with ESS7. It will need to be assessed whether these groups, if they exist, have specific language needs
Disabled Persons	The disaster may have caused the number of disabled community members to rise. Disabled persons may face difficulties in participating in rebuilding activities, but may also face difficulties in physically accessing meetings for reconstruction and decision-making at the community level. Furthermore, infrastructure to be rebuild should take their special needs into account, for example in view of access (e.g. to water sources). Furthermore, disabled persons may not be able to participate in works activities
Relocated Persons	The majority of persons and households that have been relocated as a result of the cyclone do live in private households and in camps. Initial consultations led to an estimate that there are only very few people in camps.

⁶³ Ibid

5 Potential Impacts and Mitigation Measures

Based on initial scoping activities, the potential environmental risks and impacts of the Project are anticipated to be moderate, given that most of the interventions are rehabilitation of existing community infrastructure. No new habitats or new ecosystems will be covered by community infrastructure rehabilitation.

The purpose of the ESMF is to set out the action plan of environmental and social management measures to be implemented by the technical leads and contractors. These will be partly based on site-specific ESIA and ESMP that will be carried out (see below). These measures aim to achieve the avoidance, minimization or mitigation, including offset or compensation, of adverse environmental and social impacts of the Project and to ensure compliance with the ESSs. Risks and impacts, as well as mitigation measures will be refined once site-specific environmental and social assessments have been conducted.

5.1 Beneficial Impacts

Component 1: Providing Immediate Support for Cyclone Recovery: This component will provide immediate and integrated livelihoods and healthcare solutions to cyclone-affected people, including: (a) restoring livelihoods through conditional cash transfers to provide food assistance, and through unconditional cash transfers for most vulnerable groups; (b) restoring agricultural crop and livestock production, including distribution of agricultural inputs for small farmer households, and the re-stocking and treatment of livestock and poultry, and; (c) accelerating the revitalization of basic health services, including the provision of a basic package of health services and referral pathways related to Gender-Based Violence (GBV)/Sexual Exploitation and Assault (SEA), and child protection measures. All activities under this component will specifically target women and female-headed households. This component will also finance project management and overheads costs for the above activities, such as needs and beneficiary assessments, preparation of technical designs and technical quality control, etc.

Component 2: Enabling Medium-term Cyclone Recovery and Resilience-building: This component will support the rehabilitation of critical community infrastructure, such as water and sanitation systems, irrigation networks, community schools, and community roads, as well as community level structural mitigation efforts for risk reduction, such as slope protection and environmental rehabilitation. This component will also finance project management and overheads costs for the above activities, such as needs and beneficiary assessments, preparation of technical designs and technical quality control, etc.

Direct beneficiaries of the Project are the people affected by Cyclone Idai in Zimbabwe's nine districts. The Project generally attempts to target a majority of the 270,000 people affected directly or indirectly due to the cyclone. Project beneficiaries are in the following districts: Chimanimani, Chipinge, Buhera, Mutare urban, Mutare rural, Bikita, Gutu, Mutasa, and Chikomba.

ZIRP seeks to exclusively benefit highly vulnerable groups, as the cyclone has had a disproportionate impact on women, girls, children, the elderly, and disabled people. Consultations will be carried out with vulnerable groups to identify and address their unique needs, including the use of sex-disaggregated surveys and focus groups, and vulnerability-based selection criteria to prioritize their inclusion as project beneficiaries. Therefore, project investments are anticipated to provide higher benefits to vulnerable groups (e.g., cash-for-work, food inputs, etc.) in most if not all proposed activities.

The Project will seek to benefit women,⁶⁴ as the cyclone has had a disproportionate impact on vulnerable groups on them. While female-headed households existed prior to the cyclone, their number has increased following the disaster. Through Component 1, immediate and integrated livelihoods and healthcare solutions will be provided to vulnerable communities and more specifically to women and female-headed households affected by the cyclone.

⁶⁴ Actions relevant to addressing the gender gap are discussed in each relevant interventions of the PAD but are summarized in this section.

These activities include: (a) restoring their livelihoods through conditional cash transfers to provide food assistance, and through unconditional cash transfers; (b) restoring agricultural crop and livestock production, including distribution of agricultural inputs for small farmer households, and the re-stocking and treatment of livestock and poultry; and (c) accelerating the revitalization of basic health services, including the provision of a basic package of health services and referral pathways related to GBV/ SEA and child protection measures.

5.2 Adverse Impacts

The proposed project is expected to have moderate impacts on the biophysical and socio-economic environment specifically during the construction phase. This is because the Project is not complex and/or large, does not involve activities that have a high potential for harming people or the environment. As such, the potential risks and impacts and issues are likely to have the following characteristics: (i) predictable and expected to be temporary and/or reversible; (ii) low in magnitude; (iii) site-specific, without likelihood of impacts beyond the actual footprint of the Project; and (iv) low probability of serious adverse effects to human health and/or the environment. The Project's risks and impacts can be easily mitigated in a predictable manner.

5.2.1 Air Quality

Construction activities using motorized equipment including materials delivery, excavation, concrete works will generate air emissions and dust. Vehicular traffic emissions will bring about air pollution by increasing the fossil fuel emissions into the atmosphere. However, the construction activities are mainly going to be through manual labour and use of hand-held equipment with limited use of mechanized machines whenever necessary.

Activities in Sub Component 1.1, 1.3, 2.1, 2.2, 2.3 and 2.4, as shown below are likely to lead to air quality impacts.

- Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection
- Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing
- Rehabilitation of community health posts
- New water points
- Rehabilitation of boreholes, springs and deep- water wells
- Revitalize design and operations of irrigation schemes
- Reconstruction of conservation structures (storm drains, contours, terraces, waterways and water diversion structures
- Reclamation of gullies by constructing gabions and supporting structures
- Desilting of weirs
- Revitalization of irrigated land
- Rehabilitation of school facilities
- Vegetation clearing and grass cutting along roads
- Clearing side drains and culvert inlets/outlets
- Excavation of new drainage paths
- Earth filling of embankment and pavement repairs
- Earthworks such as irrigation canal excavations

Mitigation:

- ☐ Use personal protective clothing like dust masks on construction crew.
- ☐ Construction sites to be water-sprayed on regularly up to three times a day, especially if these sites are in sensitive receptors, such as residential areas or institutions (hospitals, schools etc.).
- ☐ All the vehicles and construction machinery should be operated in compliance with relevant vehicle emission standards and manufacturer's specification to minimize air pollution.
- ☐ Use non-mechanised (motorised) equipment as much as possible

5.2.2 Noise and Vibration

Noise and vibration will be generated during construction especially when using motorised equipment. In order to create employment, the project will use manual forms of labour and equipment hence the impacts associated with noise and vibration is expected to be low in nature. Generally, construction noise exceeding a noise level of 70 decibels (dB) has significant impacts on surrounding sensitive receptors within 50m of the construction site.

Activities in sub component 1.1, 1.3, 2.1, 2.2, 2.3 and 2.4, as shown below are likely to lead to noise quality impacts due to the use of construction equipment like excavators, trucks, generators etc.

- Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection
- Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing
- Rehabilitation of community health posts
- New water points
- Rehabilitation of boreholes, springs and deep- water wells
- Revitalize design and operations of irrigation schemes
- Reconstruction of conservation structures (storm drains, contours, terraces, waterways and water diversion structures
- Reclamation of gullies by constructing gabions and supporting structures
- Desilting of weirs
- Revitalization of irrigated land
- Rehabilitation of school facilities
- Vegetation clearing and grass cutting along roads
- Clearing side drains and culvert inlets/outlets
- Excavation of new drainage paths
- Earth filling of embankment and pavement repairs
- Earthworks such as irrigation canal excavations

Mitigation:

- ☐ Avoid night time construction when noise is loudest. Avoid night-time construction using heavy machinery, from 22:00 to 6:00 near residential areas.
- ☐ No discretionary use of noisy machinery within 50m of residential areas and near institutions, manual labour can be used at this point.
- ☐ Good maintenance and proper operation of construction machinery to minimize noise generation.
- ☐ Where possible, ensure non-mechanized construction to reduce the use of machinery
- ☐ Undertake regular maintenance of generator

5.2.3 Impacts on Flora and Fauna

Removal of vegetation during excavation works is likely to lead to loss of plants and animal habitats. The biodiversity that may be affected includes insects, small mammals, reptiles and birds. This impact is expected to be insignificant in view of the fact that most of the proposed activities are rehabilitation works and not new works and therefore the project sites are unlikely to be pristine or having ecological sensitive flora and fauna.

Activities in sub component 1.1, 1.3, 2.1, 2.2, 2.3 and 2.4, as shown below are likely to lead to flora and fauna impacts through disturbance and clearings due to the use of construction equipment like excavators, trucks, generators etc.

- Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection
- Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing
- Rehabilitation of community health posts

- New water points
- Rehabilitation of boreholes, springs and deep- water wells
- Revitalize design and operations of irrigation scheme
- Reconstruction of conservation structures (storm drains, contours, terraces, waterways and water diversion structures)
- Reclamation of gullies by constructing gabions and supporting structures
- Desilting of weirs
- Revitalization of irrigated land
- Rehabilitation of school facilities
- Vegetation clearing and grass cutting along roads
- Clearing side drains and culvert inlets/outlets
- Excavation of new drainage paths
- Earth filling of embankment and pavement repairs
- Earthworks such as irrigation canal excavations

Mitigation:

- ☐ Re-plant vegetation as much as possible once work is completed.
- ☐ Spare the vegetation that must not necessarily be removed such as or replace the trees.
- ☐ Minimize the amount of destruction caused by machinery by promoting non-mechanized methods of construction.
- ☐ The Contractor should ensure that the employees on site are aware of the company procedures for dealing with spills and leaks from oil storage tanks e.g. using dispersants or adding biological agents to speed up the oil breakdown for the construction machinery through induction and safety training (the contractor will propose a method of clean-up which will be subject to approval);
- ☐ Provide a waste management plan
- ☐ Provision of dustbin and sanitation facilities to prevent seepage into the natural environment.

5.2.4 Site Related Oil Spills

During construction and specifically where motorized equipment (excavators, trucks etc.) may be used, oil spills may result from construction site equipment and storage, which may affect the flora, fauna, soils, and water ways in the area.

Activities in sub component 1.1, 1.3, 2.1, 2.2, 2.3 and 2.4, as shown below are likely to lead to flora and fauna impacts through disturbance and clearings due to the use of construction equipment like excavators, trucks, generators etc.

- Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection
- Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing
- Rehabilitation of community health posts
- New water points
- Rehabilitation of boreholes, springs and deep- water wells
- Revitalize design and operations of irrigation scheme
- Reconstruction of conservation structures (storm drains, contours, terraces, waterways and water diversion structures)
- Reclamation of gullies by constructing gabions and supporting structures
- Desilting of weirs
- Revitalization of irrigated land
- Rehabilitation of school facilities
- Vegetation clearing and grass cutting along roads

- Clearing side drains and culvert inlets/outlets
- Excavation of new drainage paths
- Earth filling of embankment and pavement repairs
- Earthworks such as irrigation canal excavations

Mitigation Measures

- ☐ The Contractor should ensure that the employees on site are aware of the company procedures for dealing with spills and leaks from oil storage tanks e.g. using dispersants or adding biological agents to speed up the oil breakdown for the construction machinery through induction and safety training.
- ☐ Ensure limited use of motorised equipment during the construction with construction work mainly through manual hand-held equipment.
- ☐ In case of spillage the Contractor should isolate the source of oil spill and contain the spillage to the source of leakage before it makes it leaves the affected area, using sandbags, sawdust, absorbent material and/or other materials;
- ☐ All vehicles and equipment should be kept in good working order, serviced regularly in accordance to the manufacturers specifications and stored in an area approved by the Resident Engineer;

5.2.5 Soil Erosion

Construction activities using motorized equipment (septic tanks) including materials delivery, excavation, concrete works are likely to lead to soil erosion. Specifically, activities related to the following may exacerbate soil run off during construction.

- Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection
- Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing
- Rehabilitation of community health posts
- Removal of debris, desilting of weirs/dams, light reinforcement of river banks
- Construction of new water points
- Rehabilitation of boreholes, springs and deep- water wells
- Revitalize design and operations of irrigation scheme
- Reconstruction of conservation structures (storm drains, contours, terraces, waterways and water diversion structures)
- Reclamation of gullies by constructing gabions and supporting structures
- Desilting of weirs
- Revitalization of irrigated land
- Rehabilitation of school facilities
- Vegetation clearing and grass cutting along roads
- Clearing side drains and culvert inlets/outlets
- Excavation of new drainage paths
- Earth filling of embankment and pavement repairs
- Earthworks such as irrigation canal excavations

5.2.6 General Construction Waste Impacts

During construction phases of the different projects under the sub components mentioned below, general construction wastes will be generated including among others cement bags, used wrapping materials, wood, glass etc. If improperly disposed, general wastes could result in pollution of water bodies, soil and impact on flora and fauna.

Activities in sub component 1.1, 1.3, 2.1, 2.2, 2.3 and 2.4, as shown below are likely to lead to the generation of construction wastes and associated impacts.

- Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection
- Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing
- Rehabilitation of community health posts
- New water points
- Rehabilitation of boreholes, springs and deep- water wells
- Revitalize design and operations of irrigation scheme
- Reconstruction of conservation structures (storm drains, contours, terraces, waterways and water diversion structures
- Reclamation of gullies by constructing gabions and supporting structures
- Desilting of weirs
- Revitalization of irrigated land
- Rehabilitation of school facilities
- Vegetation clearing and grass cutting along roads
- Clearing side drains and culvert inlets/outlets
- Excavation of new drainage paths
- Earth filling of embankment and pavement repairs
- Earthworks such as irrigation canal excavations

Mitigation Measures	
<input type="checkbox"/>	Develop waste management plan for construction wastes
<input type="checkbox"/>	Provide waste disposal receptors on site (bins)
<input type="checkbox"/>	Provide training and orientation to workers on waste management.
<input type="checkbox"/>	Reduce-Re-use and Recycle wastes whenever possible

5.2.7 Hazardous Health Care Waste Impacts

Sub component 1.3 entails accelerating the revitalization of basic health services and will including provision of essential medicine, establishment of mobile clinics and rehabilitation of community health posts. These facilities will once operational generate health care wastes, which may impact on the environment through contamination of soils, water bodies as well as flora and fauna if inadequately disposed. Health care wastes may also lead to occupational risks (workers) and community health and safety if improperly disposed.

Mitigation Measures	
<input type="checkbox"/>	Develop health care waste management plan for disposal of health care wastes
<input type="checkbox"/>	Provide PPE to workers within the health facilities
<input type="checkbox"/>	Provide waste disposal receptors on site (bins)
<input type="checkbox"/>	Provide training and orientation to workers on health care waste management
<input type="checkbox"/>	Provide health care waste management facilities (incinerators, sharp boxes) etc

5.2.8 Veterinary Hazardous Health Care Waste Impacts

Sub component 1.2 includes activities that will entail restoration of livestock production by undertaking vaccination and deworming of livestock. This will lead to the generation of veterinary related health care wastes including used syringes, vials, swabs, containers which may impact on the environment through contamination of soils, water bodies as well as flora and fauna if inadequately disposed due to their hazardous nature. Veterinary health care wastes may also lead to occupational risks (workers) and community health and safety if improperly disposed.

Mitigation Measures

- | |
|---|
| <input type="checkbox"/> Develop veterinary health care waste management plan for disposal of health care wastes
<input type="checkbox"/> Provide PPE to workers undertaking vaccinations and deworming
<input type="checkbox"/> Provide waste disposal receptors
<input type="checkbox"/> Provide training and orientation to workers on veterinary health care waste management
<input type="checkbox"/> Provide veterinary health care waste management facilities (incinerators, sharp boxes) etc |
|---|

5.2.9 Electronic Wastes Impacts

The provision of solar driers and maize shellers to the local communities will over time lead to the accumulation of electronic wastes especially when the solar driers get spoilt or when battery shelf life is reached. Electronic wastes improperly disposed may impact on the environment through contamination of soils, water bodies as well as flora and fauna due to their hazardous nature.

Mitigation Measures

- | |
|--|
| <input type="checkbox"/> Develop electronic waste management plan for disposal of the e-wastes |
|--|

5.2.10 Pesticide Contamination

The restoration of communal irrigation schemes in support of agrarian livelihoods under sub component 2.2. may entail application of pesticides and fertilisers. In the absence of an Integrated Pest Management Plan (IPMP) to guide use (judicious) of pesticides, contamination of water bodies, soils, flora and fauna may be experienced. The improper use and application of pesticides is likely to lead to workers health and safety risks as well as community health and safety risks through exposure.

Mitigation Measures

- | |
|--|
| <input type="checkbox"/> Develop Integrated Pest Management Plan to guide pesticide application
<input type="checkbox"/> Provide training to farmers on pesticide application
<input type="checkbox"/> Provide PPE to farmers for use during pesticide application |
|--|

5.2.11 Invasive Tree Species

Under sub component 1.1, tree nurseries will be established by the project as part of livelihood restorations and providing food and cash assistance for the most vulnerable. Inadequate selection of tree species for the nurseries could lead to proliferation of invasive tree species which could have adverse impacts on the environment.

Mitigation Measures

- | |
|--|
| <input type="checkbox"/> Ensure trees selected for the nurseries are local species approved by Forestry Department |
|--|

5.2.12 Community Health and Safety Risks

Construction workers and the general public will be exposed to safety hazards arising from construction activities with respect to the various construction activities under the sub components .1, 1.3, 2.1, 2.2, 2.3 and 2.4. The construction works will expose workers to occupational risks due to handling of machinery, construction noise and manual handling, etc. Construction activities of vegetation clearing, excavation, materials delivery may generate dust that will pollute the air and this may affect the respiratory system. Construction sites may be a source of both liquid and solid wastes. Similarly, the construction activities may lead to community health and safety risks.

Mitigation:

- ☐ Contractor to risk assess the project activities, develop and implement relevant C-ESMP which will include but not limited to:
 - An Occupational Health and Safety Management Plan
 - Management and Safety of Hazardous Materials
 - Traffic and Road Safety Plan
 - Labour influx strategy
 - GBV and Child Protection Action Plan
 - Employment plans
 - GRM;
 - Stakeholders engagement and communication plan;
 - Emergency Preparedness and Response Plan
- ☐ Ensure through routine training and induction to all workers and the community on the project risk and the controls developed to manage them;
- ☐ Ensure that all construction machines and equipment are in good working conditions and to manufacturer's specifications to prevent occupational hazards.
- ☐ Cordon off working areas with a reflective tape to ensure safety of pedestrians and provide crossing areas for access to cut off businesses and structures.
- ☐ Appointing experienced and trained occupational health and safety staff, first aiders and fire marshal on-site for the duration of the construction work. (both supervising engineer and contractor)
- ☐ Provide workers with appropriate personal protective equipment (PPE).
- ☐ Provide a waste management plan
- ☐ Fence off the site with security to avoid unauthorized access to the project site (s) and hence potential injuries.
- ☐ Provide clean toilets for workers

5.2.13 Odour from Communal WASH Facilities

The establishment of sanitation system and infrastructure in schools will be mostly beneficial to the local community and the design of these facilities should consider disability inclusion and must provide separate facilities for girls and boys (female and male) where required. However, the following impacts associated with such facilities may be experienced including: The pit latrines and septic tanks if not well sited and maintained will be a source of foul smell that will affect those within the area.

Mitigation:

- ☐ Ensure proper siting of septic tanks and pit latrines in accordance with the Zimbabwe's MOH guidelines for siting and construction of pit latrines
- ☐ Ensure proper maintenance of sanitation facilities including cleaning and hygiene training
- ☐ Provide hand washing facilities and water in all the sanitation infrastructures
- ☐ Consider disability inclusion and provide separate facilities for girls and boys where required

5.2.14 Water Contamination from Communal WASH Facilities

Faecal matter may lead to underground water contamination if the water table is high or in the case of pit latrines, when there is an overflow due to heavy rains. Contamination of water may lead to outbreak of diseases e.g. cholera, dysentery, typhoid, diarrhoea etc.

Mitigation:

- ☐ Ensure proper siting of septic tanks and pit latrines in accordance with the Zimbabwe's MOH guidelines for siting and construction of pit latrines

- | |
|--|
| <input type="checkbox"/> Ensure proper maintenance of sanitation facilities including cleaning and hygiene training.
<input type="checkbox"/> Provide hand washing facilities and water in all the sanitation infrastructures |
|--|

5.2.15 Disease Spread from Communal WASH Facilities

The area above the slab (i.e., pedestal for sitting or squatting slab) and the pit may contain substantial amounts of pathogens, which vary based on the toilet use, geographical location, and incidence of infectivity. Within the pit, the highest number of pathogens are often found in the top section of the accumulated sludge because it has the most recently delivered excrement; however, pathogens may migrate downwards in the pit or percolate with urine and thus lower parts should not be considered risk-free. Pit latrines can also be breeding grounds for flies and mosquitoes which are disease vectors. Emptying and transportation of faecal matter when pit latrines are full could also lead to pathogen exposure.

Mitigation:

- | |
|--|
| <input type="checkbox"/> Ensure proper siting of septic tanks and pit latrines in accordance with the Zimbabwe's MOH guidelines for siting and construction of pit latrines
<input type="checkbox"/> Ensure proper maintenance of sanitation facilities including cleaning and hygiene training.
<input type="checkbox"/> Provide hand washing facilities and water in all the sanitation infrastructures
<input type="checkbox"/> Ensure super structures are well constructed and lead to privacy so as to ensure use by family members. Super structures poorly constructed can lead to embarrassment and non-use. |
|--|

5.2.16 Hazards

Super structures if poorly constructed and designed could lead to hazards including falling into the pit if the super structure floor/slab gives ways. This can lead to injury or loss of life.

Mitigation:

- | |
|---|
| <input type="checkbox"/> Ensure super structures are well constructed including the slab with the required strength |
|---|

5.2.17 Pest Outbreak

Common pests attracted to dirty environment are rats, cockroaches, flies. These animals are also disease vectors. They transport germs from the toilet to nearby human settlement. When they come into contact with human food they cause food spoilage and spread of diseases. Dirty environment also offer a perfect breeding ground for these pests to multiply.

Mitigation:

- | |
|---|
| <input type="checkbox"/> Ensure proper cleaning of toilets
<input type="checkbox"/> Ensure and provide training on cleaning of toilets
<input type="checkbox"/> Use biopesticides to manage pests |
|---|

5.2.18 Labour Influx

The Project is expected to stimulate minimal in-migration. Several features of the Project could prompt in-migration. Construction works are also likely to act as a magnet for people and are likely to attract some in-migrants. The following restorative measures are agreed upon.

- Preparation of Influx Management Plan by contractor
- Preparation of Labour and Recruitment Plan by contractor
- Preparation of a "code of conduct for workers.

5.2.19 HIV & AIDS Impacts

In migration of people from different regions may lead to behavioural influences which may increase the spread of diseases such as Human Immuno-Deficiency Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS) and other Sexually Transmitted Infections (STIs).

Mitigation:

- ☐ Sensitize workers and the surrounding communities on awareness, prevention and management of HIV/AIDS through staff training, awareness campaigns, multimedia and workshops or during community barazas. Provide information, education and communication about safe uses of drinking water.
- ☐ Provide an on-site clinic to provide Voluntary Counselling and Testing (VCT) services to construction crew

5.2.20 Gender Equity, Sexual Harassment

The construction of the septic tanks will be in schools and the risk of sexual harassment by workers on the school going children is likely to be high. Construction workers are predominantly younger males. Those who are away from home on the construction job are typically separated from their family and act outside their normal sphere of social control. This can lead to inappropriate and criminal behavior, such as sexual harassment of women and girls, exploitative sexual relations, and illicit sexual relations with minors from the local community. Influx of male labor may also lead to an increase in exploitative sexual relationships and human trafficking whereby women and girls are forced into sex work.

Mitigation:

- ☐ Ensure all workers sign code of conduct
- ☐ Training on GBV
- ☐ Implementation of GBV Action Plan (see annex 6 for TOR)

Environmental and Social Management Plan (ESMP)

MITIGATION MEASURES AND ESTIMATED COSTS				
Type of activity	E&S Risks and Impact	Mitigation Measures	Costs in USD (as part of the Technical Leads' budget) ⁶⁵	Responsible Lead
<u>Sub-Component 1.1: Restoring Livelihoods and Providing food and cash assistance for the most vulnerable</u>				
Providing cash assistance	Delayed payment leading to complaints and conflict	Timely payment; Communication / awareness campaign of payment mechanisms (planning); Submission of reports to Money Transfer Agent, Implementing Agency and World Bank	0	WFP
	Utilization of money earned from the project, time women may spend outside of HH away from their usual duties can lead to domestic conflict	Implement GBV Action Plan (see Annex 6 for TOR)	20,000	
Removal of debris, desilting of weirs/dams, light reinforcement of river banks	Removal of debris affects new location aesthetically, or poses a safety risk for the community at the new location.	Implement and monitor waste management procedures based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> ⁶⁶	30,000	
	Soil Erosion during desilting of weirs/dams and reinforcement of river banks	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during desilting of weirs/dams and reinforcement of river banks	Implement noise control measures as described in mitigation measures above.	See above	
			See above	

⁶⁵ These costs have been calculated based on estimates of costs of trainings or awareness raising sessions (travel, hire of experts, provision of location), costs of materials required (safety equipment, awareness and information materials, etc...). The detailed budget for the ESMP implementation will be provided in the site specific ESMPs.

⁶⁶ World Bank Group, Environmental, Health, and Safety General Guidelines, April 30, 2007, accessed at: <https://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES>

	Air Pollution during desilting of weirs/dams and reinforcement of river banks	Implement air pollution control measures as described in mitigation measures above. Develop and implement OHS Plan for workers	20,000	
	Occupational Health and Safety risks during desilting of weirs/dams and reinforcement of river banks	Implement water pollution control measures as described in mitigation measures above.	See above	
	Water contamination from oil spills during desilting of weirs/dams and reinforcement of river banks.			
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	20,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection	Soil Erosion during construction of feeder roads and upstream watershed rehabilitation	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction of feeder roads and upstream watershed rehabilitation	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction of feeder roads and upstream watershed rehabilitation	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety during construction of feeder roads and upstream watershed rehabilitation	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during construction of feeder roads and upstream watershed rehabilitation	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of feeder	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	

	roads and upstream watershed rehabilitation			
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	20,000	
		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response		
	Community Health and Safety e.g. construction traffic accidents; dust pollution; noise pollution etc.	Sensitization of communities: Cordoning construction sites; implementing traffic management plan	0	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)		
Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing	Soil Erosion during construction and rehabilitation of check dams, stone bunds and terraces	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction and rehabilitation of check dams, stone bunds and terraces	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction and rehabilitation of check dams, stone bunds and terraces	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety during construction and rehabilitation of check dams, stone bunds and terraces	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil during construction and rehabilitation of check dams, stone bunds and terraces	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during construction and			

	rehabilitation of check dams, stone bunds and terraces	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above		
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	See above	
	Community Health and Safety e.g. construction traffic accidents; dust pollution; noise pollution etc.	Sensitization of communities: Cordoning construction sites; implementing traffic management plan	10,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Dry fencing and live fencing for controlled grazing and relevant area closures	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	See above	
		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
	Grievances over communal or private land use	Identify required land readjustment through community processes; Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM	0 0	
Tree nurseries	Invasive species problem/proliferation	Ensure selection of local/native species only	0	
	Increased water demand depending on species chosen	During asset design, ensure proper choice of species and avoid invasive species. Use native species only.		

	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	See above	
		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
	Grievances over communal or private land use	Identify required land readjustment through community processes;	0	
		Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM)	0	
Sub-Component 1.2: Restoring Agricultural Crop and Livestock Production				
Supporting farmers with crop inputs (maize, sorghum and cowpeas); Use of pesticides and fertilizers	Improper use of crop chemicals leading to environmental contamination.	Conduct trainings on safe use of chemicals including pesticide risk reduction and Integrated Pest Management (IPM)	20,000	FAO
	Chemical use poses health risks to both users and consumers due to non-observance of withdrawal periods	Awareness raising and training of farmers on importance of following withdrawal periods	See above	
	Indiscriminate storage of fertilizers, chemicals and food	Training of farmers on safe and proper storage of fertilizers, chemicals and food	See above	
Establishment of community gardens	Disharmony arising from disruption of social fabric due to some farmers getting a piece of land in the community gardens	Train farmers on livestock husbandry and conflict resolution for community leadership Implement proper community participatory consultation process before selection of beneficiaries	20,000	
Restocking poultry, sheep and goats	Deforestation due to timber poles extraction to construct pens	Train farmers on Sustainable Forest Management and harvesting	20,000	

		Train farmers on establishment of woodlots and agroforestry for multi-purpose trees		
Distribution of stock feed	Poor storage and handling of stock feed might result in stock burn likely cause fire hazards	Training of farmers and awareness raising on proper handling of stock feed	20,000	
Vaccination and deworming of livestock	Increased concentration of livestock numbers at handling sites (e.g. dip tanks) may lead to excessive land/soil/vegetation disturbances	Train farmers in conservation measures around handling sites to avoid excessive land/soil/vegetation disturbances	20,000	
	Public health concerns from meat products if farmers ignore recommended withdrawal periods after administering veterinary drugs	Train farmers and veterinary attendants and raise awareness on veterinary drug procedures	See above	
	Potential occupational hazards to the farmers and technicians handling the veterinary drugs and animals	Train farmers and technicians and raise awareness on safe handling of drugs and animals	See above	
	Impacts associated with veterinary health care waste management and disposal (water pollution, soil pollution, impacts on faunal species) etc.	Develop and implement veterinary health care waste management plan	See above	
Rehabilitation of dip-tanks	Negative effect of acaricides to the ecosystem (e.g. beneficial insects)	Train farmers in use of recommended eco-friendly acaricides	See above	
<u>Sub-Component 1.3: Accelerating the revitalization of basic health service provision</u>				
Mobile clinics	Health Care Waste risks leading to contamination through medical waste that is not properly disposed (infections, pollution/contamination of the environment – air, land, water physical injuries, effect on domestic animals)	Implement and monitor health care waste management procedures based on <i>WBG Environmental, Health, and Safety General Guidelines</i> , including training of health care workers and auxiliary staff on how to safely handle health care waste.	30,000	WHO

		Provide adequate and appropriate protective clothing; use appropriate types of polythene bags and containers for waste; appropriate storage of health care waste until end of day; treat health care waste appropriately at central, provincial hospitals, etc....).		
Rehabilitation of community health posts (provision of power supply, provision of water supply including borehole drilling, expansion of mother's waiting homes, provision of energy sources).	Soil Erosion during construction/rehabilitation of health posts	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction/rehabilitation of health posts	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction/rehabilitation of health posts	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety during construction/rehabilitation of health posts	Develop and implement OHS Plan for workers	See above	
	Health Care Waste risks leading to contamination through medical waste that is not properly disposed (infections, pollution/contamination of the environment – air, land, water physical injuries, effect on domestic animals)	Implement and monitor health care waste management procedures based on <i>WBG Environmental, Health, and Safety General Guidelines</i> , including training of health care workers and auxiliary staff on how to safely handle health care waste. Provide adequate and appropriate protective clothing; use appropriate types of polythene bags and containers for waste; appropriate storage of health care waste until end of day; treat health care waste appropriately at central, provincial hospitals, etc....).	See above See above	

	Labor and working conditions of community don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	UNOPS (Mutare Office)
Component 2.1: Rehabilitating communal WASH services				
New water points (piped water schemes including solar pumps)	Soil Erosion during construction of piped water schemes	Implement soil control measures as described in mitigation measures above.	30,000	UNICEF
	Noise Pollution during construction of piped water schemes	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction of piped water schemes	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks - during construction of piped water schemes	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil during construction and rehabilitation of check dams, stone bunds and terraces	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of piped water schemes	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Electronic wastes from solar pumps (panels and batteries)	Develop and implement electronic waste management plan for solar pumps	See above	

	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
	Community Health and Safety e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implementation of GBV Action Plan	0	
Rehabilitation of boreholes, springs and deep-water wells	Soil Erosion during rehabilitation of boreholes, springs and deep -water wells	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during rehabilitation of boreholes, springs and deep -water wells	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during rehabilitation of boreholes, springs and deep -water wells	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks - during rehabilitation of boreholes, springs and deep -water wells	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during rehabilitation of boreholes, springs and deep -water wells	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during rehabilitation of boreholes, springs and deep -water wells	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	

		Develop and implement electronic waste management plan for solar pumps	See above	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
	Community Health and Safety e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implementation of GBV Action Plan	10,000	
Construction of toilets, latrines and hand-washing facilities	Soil Erosion during construction of toilets, latrines and handwashing facilities	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction of toilets, latrines and handwashing facilities	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction of toilets, latrines and handwashing facilities	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks - during construction of toilets, latrines and handwashing facilities	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during construction of toilets, latrines and handwashing facilities	Implement water pollution control measures as described in mitigation measures above	See above	

	Disturbance of flora and fauna (terrestrial) during construction of toilets, latrines and handwashing facilities	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	<p>The pit latrines and septic tanks if not well sited and maintained will be a source of foul smell that will affect those within the area.</p> <p>Faecal matter may lead to underground water contamination if the water table is high or in the case of pit latrines, when there is an overflow due to heavy rains. Contamination of water may lead to outbreak of diseases e.g. cholera, dysentery, typhoid, diarrhoea etc.</p> <p>Pit latrines can also be breeding grounds for flies and mosquitoes which are disease vectors.</p> <p>Super structures if poorly constructed and designed could lead to hazards including falling into the pit if the super structure floor/slab gives ways. This can lead to injury or loss of life.</p> <p>Common pests attracted to dirty environment are rats, cockroaches, flies. These animals are also disease vectors. They transport germs from the toilet to nearby human settlement.</p>	<p>Ensure proper siting of septic tanks and pit latrines in accordance with the MOH guidelines for siting and construction of pit latrines</p> <p>Ensure proper maintenance of sanitation facilities including cleaning and hygiene training Provide hand washing facilities and water in all the sanitation infrastructures</p> <p>Ensure super structures are well constructed including the slab with the required strength</p> <p>Ensure proper cleaning of toilets</p> <p>Ensure and provide training on cleaning of toilets Use biopesticides to manage pests</p>	<p>See above</p> <p>See above</p> <p>See above</p> <p>See above</p> <p>See above</p> <p>See above</p>	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards	20,000	

		Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response		
	Community Health and Safety e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implementation of GBV Action Plan	See above	
<u>Component 2.2.: Restoring communal irrigation schemes in support of agrarian livelihoods:</u>				
Reconstruction of storm drains	Soil Erosion during reconstruction of storm drains	Implement soil control measures as described in mitigation measures above.	30,000	FAO
	Noise Pollution during reconstruction of storm drains	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during reconstruction of storm drains	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks - during reconstruction of storm drains	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during reconstruction of storm drains	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during reconstruction of storm drains.	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers	20,000	

		Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	0	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Contours, Terraces	Soil Erosion during establishment of contours and terraces	Implement soil control measures as described in mitigation measures above.	See above	
	Occupational Health and Safety risks - during establishment of contours and terraces	Develop and implement OHS Plan for workers	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during establishment of contours and terraces	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above.	See above	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	20,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	

Waterways and water diversion structures	Soil Erosion during construction of water ways and water diversion structures	Implement soil control measures as described in mitigation measures above.	See above	
	Noise Pollution during construction of water ways and water diversion structures	Implement noise control measures as described in mitigation measures above	See above	
	Air Pollution during construction of water ways and water diversion structures	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks – during construction of water ways and water diversion structures	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during construction of water ways and water diversion structures	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of water ways and water diversion structures	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	<p>Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers</p> <p>Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i></p> <p>Initial training for all community workers on LMPs, H&S standards</p>	See above	

Reclamation gullies constructing gabions	of by	Soil Erosion during construction of gabions	Implement soil control measures as described in mitigation measures above.	See above	
		Occupational Health and Safety risks – during construction of gabions	Develop and implement OHS Plan for workers	See above	
		Water contamination during construction of gabions	Implement water pollution control measures as described in mitigation measures above	See above	
		Disturbance of flora and fauna (terrestrial and aquatic) during construction of gabions	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
		Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	See above	
		Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Desilting of weirs		Soil Erosion during desilting of weirs	Implement soil control measures as described in mitigation measures above.	30,000	UNOPS Mutare Field Office
		Noise Pollution during desilting of weirs	Implement noise control measures as described in mitigation measures above	See above	
		Air Pollution during desilting of weirs	Implement air pollution control measures as described in mitigation measures above	See above	
		Occupational Health and Safety risks – during desilting of weirs	Develop and implement OHS Plan for workers	See above	
		Water contamination from oil spills during desilting of weirs	Implement water pollution control measures as described in mitigation measures above	See above	
		Disturbance of flora and fauna (terrestrial and aquatic) during desilting of weirs	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	

		Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	<p>Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers</p> <p>Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i></p> <p>Initial training for all community workers on LMPs, H&S standards</p>	20,000	
Revitalization of irrigated land	Labor and working conditions of community and don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	<p>Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers</p> <p>Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i></p> <p>Initial training for all community workers on LMPs, H&S standards</p>	See above	
	Soil Erosion during revitalization of irrigated land	Implement soil control measures as described in mitigation measures above.	See above	
	Occupational Health and Safety risks – during revitalization of irrigated land	Develop and implement OHS Plan for workers	See above	
	Water contamination during revitalization of irrigated land	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna (terrestrial and aquatic) during revitalization of irrigated land.	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
			See above	

	Water and soil contamination from use of pesticides during revitalization of irrigated land	Prepare and implement Integrated Pest Management Plan	0	
<u>Sub-Component 2.3: Rehabilitating damaged community schools</u>				
Rehabilitation of facilities	Soil erosion during construction/rehabilitation of schools	Implement soil control measures as described in mitigation measures above.	See above	UNOPS Mutare Field Office
	Noise pollution during construction/rehabilitation of schools	Implement noise control measures as described in mitigation measures above	See above	
	Air during construction/rehabilitation of schools	Implement air pollution control measures as described in mitigation measures above	See above	
	Occupational Health and Safety risks – during construction/rehabilitation of schools	Develop and implement OHS Plan for workers	See above	
	Water contamination from oil spills during construction of during construction/rehabilitation of schools	Implement water pollution control measures as described in mitigation measures above	See above	
	Disturbance of flora and fauna during construction/rehabilitation of schools	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	See above	
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	

	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implement GBV Action Plan (See Annex 6 for TOR)	10,000	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
<u>Sub-Component 2.4: Rehabilitating communal infrastructure and providing community risk mitigation solutions</u>				
Labor intensive work to support early recovery – community infrastructure (community workers, heavy equipment may be required to supplement work)				
Vegetation clearing and grass cutting along roads	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	20,000	UNOPS Mutare Field Office Overall Responsibility: UNOPS PIU
Clearing side drains and culvert inlets/outlets	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
Excavation of new drainage paths	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health,</i>	See above	

		<i>and Safety General Guidelines</i> including measures on emergency preparedness and response		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Earth filling of embankment and pavement repairs	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
Earthworks such as irrigation canal excavations	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Installation of cross drainage structures, lining of side drains	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	

Earthworks	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	0	
Protection works	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
Construction of retaining walls and gabion baskets	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	See above	
Concrete works and building repairs	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	See above	

		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	0	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)		
	Grievances over communal or private land use	Identify required land readjustment through community processes; Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM		
	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implement GBV Action Plan (See Annex 6 for TOR)		

6 REVIEW, COORDINATION & IMPLEMENTATION ARRANGEMENTS

6.1 Screening Process and Impact Assessments

UNOPS will provide oversight of all Technical Leads on relevant screening processes.

The Technical Leads will be responsible for the screening of all their respective activities. The screening will be based on a site- or project-specific Social and Environmental Screening Process and Report (based on UNOPS *Form EM03 Social and Environmental Screening Report* (see ANNEX 12)) or on other appropriate tools by Technical Leads, if they are compatible with the UNOPS Form EM03. In such cases, UNOPS will assess the tool prior to the screening process and determine its reliance.

The outcome of the screening will determine whether a) the activity is high risk and will be screened out (see below for a negative activity list), b) site-specific ESMPs are required (based on partial site-specific ESIA – see ANNEX 17 for generic ESIA TOR). The Screening report will further help to determine which ESF standards are applicable and which steps need to be taken and which provisions or procedures apply, as laid out in the ESMF.

The Technical Leads will report the screening outcomes to the Environmental Specialist and Social Specialist in the PIU for quality control, monitoring and reporting purposes.

According to the UNOPS screening tool, minimal or no adverse environmental or social risk and/or impact is expected from activities that include communication and translation, small training and workshops, management of funds and grant, and management of social protection activities. Moderate adverse environmental or social risks and / or impacts are expected from projects that include small and medium scaled infrastructure (e.g. rural roads, schools, hospitals, housing, buildings, etc....), energy for small-scale development, water supply and sanitation, waste management, agriculture and irrigation, support and advice. Any activities that would be categorized as High Risk will not be considered as eligible for funding under the project).

The Technical Lead is responsible for the implementation of the appropriate steps: If the activity is classified as 'moderate', an activity-specific ESMP has to be prepared. In the event that an ESMP is developed without an ESIA, the baseline and impact sections of the ESMP have to be stronger than in an ESMP typically included in an ESIA (for site-specific ESMPs see UNOPS form EM 01, available in ANNEX 11). The PIU will exert quality control in compliance with World Bank ESSs. It will review environmental and social instruments proposed and applied by Technical Leads to ensure that these instruments are in compliance with the applicable ESSs objectives and requirements.

The ESMPs⁶⁷ will summarize the context, interested parties, compliance requirements, checks for compliance, risks and opportunities, activity-specific environmental and social objectives and specific targets, training plans, inspections, peer reviews and other monitoring actions and incidents. They will inform the actions expected from Technical Leads and other implementing partners and the monitoring of their performance through the PIU, as well as the performance of UNOPS.

In the event that Technical Leads need to implement full or partial site- or activity-specific ESIA and develop site-specific ESMPs, the costs are budgeted for in the budgets of the respective Technical Leads. The results of the assessment shall be reported in the UNOPS Environmental and Social Risks and Opportunities form EM 04 (see ANNEX 10) or in similar formats (which have been assessed as appropriate by UNOPS). The results of the assessments could change the assumptions made in this ESMF, and thus also the justifications for some of the interventions as having moderate impact.

⁶⁷ Environmental and Social Management Plan (ESMP) is an instrument that details (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts or to reduce them to acceptable levels; and (b) the actions needed to implement these measures: (ESS1)

The Technical Lead is further responsible for the public disclosure of site-specific ESIAs and ESMPs, as defined in the SEP.

At this point, known activities and likely screening results are as follows (based on UNOPS Environmental and Social Screening Process). No activities with high adverse environmental or social risks and impacts are anticipated. The screening tool will be updated to reflect any aspects of ESS5.

In the case of UNOPS-led sub-component activities, the UNOPS Office in Mutare will develop and implement screening processes, ESIAs and ESMPs. They will thereby be able to draw on UNOPS' in-house expertise at the Health, Safety and Environmental Unit at HQ, and will be able to draw on support for the hiring of consultant experts to avoid bottlenecks.

6.2 Zimbabwe's ESIA Process

The Environmental Management Act defines an Environmental Impact assessment as 'an evaluation of a project to determine its impact on the environment and human health and to set out the required environmental monitoring and management procedures and plans'. The EIA is thus a tool that enhances sustainable development where environmental, economic and social pillars are mainstreamed in the project in a balanced manner.

Purpose of an Environmental Impact Assessment

- To determine the potential and known effects of proposed projects on the cultural, social, economic and ecological health of an area affected and put in place measures to avoid negative impacts while enhancing the positive ones.
- To ensure that adequate environmental information is available to decision makers,
- Identification of cultural, social, economic and ecological monitoring and management requirements during construction, operation and decommissioning,
- To improve public participation in government decisions by involving the public at all stages of the EIA.

In Zimbabwe, the projects that need Environmental Impact Assessments are listed in the first Schedule of the Environmental Management Act (Cap 20:27) and they include mining, quarrying, housing developments and ore processing, among others. The EIA is based on the "precautionary principle" a process which directs project studies and addresses environmental impacts before they occur. EIA is a tool to achieve the desired balance between development and environmental protection. EMA plays a facilitative role in the EIA process.

All the sub projects that require preparation of EIA in accordance with the EMA for Zimbabwe, will be subjected to the full EIA process and such projects will not be implemented until approval is given by EMA. This will be for projects listed in the first schedule.

Anticipated Screening Results				
Type of Activity	Description of activity	Likely screening result – risks and impacts	Next Steps	Responsible partner
<u>Sub-component 1.1: Restoring livelihoods and providing food and cash assistance⁶⁸ for the most vulnerable</u>				
Providing cash assistance	Selection of beneficiaries, modalities of payment	Low risk	0	WFP
Removal of debris, desilting of weirs/dams, light reinforcement of river banks		Moderate risk	Additional assessment necessary	WFP
Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection		Moderate risk	Additional assessment necessary	WFP
Rehabilitation and creation of check-dams, stone bunds, biological measures (trees and grasses), terracing		Moderate risk	Additional assessment necessary	WFP
Dry fencing and live fencing for controlled grazing and relevant area closures		Moderate risk	Additional assessment necessary	WFP
Tree nurseries		Moderate risk	Additional assessment necessary	WFP
Provision of solar driers, maize shellers and installing model granary for smallholder farmers		Moderate risk	Additional assessment necessary	WFP
Capacity building for maintenance of community assets		Low risk	0	WFP

⁶⁸ WFP defines food assistance as either in-kind or cash transfers to cover the cost of a minimum food basket (determined as per the market functionality assessment). Best practice indicates that in-kind food transfers should only be utilized where markets are not functional, otherwise they could risk suppressing demand for local agricultural production and trade.

<u>Sub-component 1.2: Restoring agricultural crop and livestock production</u>				
Supporting of farmers with crop inputs	Procurement of crops, sensitization of stakeholders, implementation through NGOs, training of targeted farmers on agronomic aspects of maize, sorghum and cowpeas, pest management and post-harvest management	Moderate risk	Additional assessment necessary	FAO
Establishment of community gardens	Sensitize beneficiaries, procure and distribute vegetable seeds and garden tools,	Moderate risk		FAO
Distribution of stock feed	Procurement and distribution of stock feed, training of farmers on appropriate feed for cattle	Moderate risk		FAO
Vaccination and deworming of livestock and rehabilitation of sip-tanks	Rehabilitation of dip tanks, procurement of drugs and chemicals, livestock vaccination campaign	Moderate risk	Additional assessment necessary	FAO
<u>Sub-component 1.3: Accelerating the revitalization of basic health services</u>				
Essential medication, nutrition commodities and consumables	Procurement and distribution	Low risk	0	UNICEF
Mobile clinics	Recruitment of doctors, nurses, environmental health technicians, laboratory technicians, drivers, provision of fuel, vehicles	Moderate risk	Additional assessment necessary	WHO

Recruitment of Village Health Workers	Recruitment of volunteers, provision of bicycles and allowances,	Low risk	0	UNICEF
Strengthening surveillance system and response for early and timely detection of epidemic prone diseases	Integrated disease surveillance response training, procurement of devices to strengthen surveillance system	Low risk	0	WHO
Strengthening of health information systems	Establishment of electronic health record system, recruitment of epidemiologist	Low risk	0	WHO
Rehabilitation of community health posts	Rehabilitation of posts, water and power supply, energy sources, expansion of mothers' waiting homes	Moderate risk	Additional assessment required	UNOPS
<u>Sub-component 2.1: Rehabilitating communal WASH services</u>				
New water points	Rehabilitate or construct piped water schemes, including solar pumps	Moderate risk	Additional assessment required	UNICEF
Rehabilitation of boreholes, springs and deep-water wells		Moderate risk	Additional assessment required	UNICEF
Education on hygiene practices	Training and establishment of community health clubs	Low risk	0	UNICEF
Toilets, latrines, hand-washing facilities	Construction of facilities, subsidy for latrine construction material that cannot be sourced locally	Moderate risk	Additional assessment required	UNICEF
Water safety plans	Development of plans, strengthen community water	Low risk	0	UNICEF

	point committees, sanitation action groups etc..			
<u>Sub-component 2.2: Restoring communal irrigation schemes in support of agrarian livelihoods</u>				
Revitalize design and operations of irrigation schemes	Assessment	Moderate risk		FAO and UNOPS
Reconstruction of conservation structures (storm drains, contours, terraces, waterways and water diversion structures)		Moderate risk	Additional assessment required	FAO
Reclamation of gullies by constructing gabions and supporting structures	FAO to organize farmers to carry out work, training and capacity building of farmers to ensure sustainability of work	Moderate risk	Additional assessment required	FAO
Environmental awareness education for communities, facilitation of market linkages for farmers		Low risk	o	FAO
Desilting of weirs		Moderate or unknown	Additional assessment required	UNOPS
Revitalization of irrigated land		Moderate or unknown	Additional assessment required	UNOPS
<u>Sub-component 2.3: Rehabilitating damaged community schools</u>				
Teaching and learning materials	Procurement and restocking of materials	Low risk	0	UNICEF
Rehabilitation of school facilities		Moderate risk	Additional assessment required	UNOPS
<u>Sub-component 2.4: Rehabilitating damaged community infrastructure and providing risk mitigation solutions</u>				
Labor intensive work to support early recovery – community infrastructure=				

Vegetation clearing and grass cutting along roads	Community workers, based on direct assessment and priorities reports Use of heavy equipment may be required to supplement the work	Moderate risk	Additional assessment required	UNOPS
Clearing side drains and culvert inlets/outlets		Moderate risk	Additional assessment required	UNOPS
Excavation of new drainage paths		Moderate risk	Additional assessment required	UNOPS
Earth filling of embankment and pavement repairs		Moderate risk	Additional assessment required	UNOPS
Earthworks such as irrigation canal excavations		Moderate risk	Additional assessment required	UNOPS
Drainage and improvements works				
Installation of cross drainage structures, lining of side drains		Moderate risk	Additional assessment required	UNOPS
Earthworks		Moderate risk	Additional assessment required	UNOPS
Protection works		Moderate risk	Additional assessment required	UNOPS
Construction of retaining walls and gabion baskets		Moderate risk	Additional assessment required	UNOPS
Concrete works and building repairs		Moderate risk	Additional assessment required	UNOPS
Works requiring engineering inputs				
Rehabilitation and improvement works to improve accessibility, climate resilience and support local livelihoods	Work is to be carried out with local construction contractors and/or	Moderate risk	Additional assessment required	UNOPS

Work on DDF and RDC roads,	plant hire contractors and using low skilled labour from the communities.	Moderate risk	Additional assessment required	UNOPS
irrigation schemes		Moderate risk	Additional assessment required	UNOPS
protection works		Moderate risk	Additional assessment required	UNOPS

6.3 Activities to be Screened Out

There are restrictions to financing high and substantial risk sub-component activities. Following is a negative list of activities that will not be funded under the Project, and that will be screened out.

- Activities leading to involuntary resettlement, land acquisition and restrictions to land use
- Large infrastructure projects
- Dams
- Power stations
- Industrial installations (refineries, chemical installations)
- Long distance roads, rail, transmission lines (water, power)
- Waste treatment and disposal installations
- Large water and wastewater treatment plants
- River basin or land development
- Large-scale irrigation
- Activities involving significant quantities of hazardous substances

6.4 World Bank Approval of ESMPs

The ESIA/ESMPs prepared and submitted to the EMA for approval will also be submitted to the Bank for review and clearance.

6.5 ESMF Disclosure

The World Bank disclosure standards require that ESMF report for the project is made available to project affected groups, local NGOs, and the public at large. Public disclosure of ESIA/ESMP document is also a requirement of EMA's environmental procedures. ZIRP/PIU will make available copies of the ESMF and ESIA/ESMPs on strategic locations and offices of the ministries, according to the SEP.

7 Monitoring Plan

7.1. Regular Monitoring and Inspection for Compliance

Adequate institutional arrangements, systems and resources will be put in place to monitor the ESMF. The goals of monitoring will be to measure the success rate of the activities, determine whether interventions have handled negative impacts, and whether further interventions are required or monitoring is to be extended in some areas. The goal of inspection activities is to ensure that sub-component activities comply with the plans and procedures laid out in the ESMF.

The main monitoring responsibilities and inspection activities will be with the PIU, which will administer the overall project-related environmental and social monitoring and implementation as laid out in this ESMF, as well as the SEP and general GRM. The PIU Team Leader/Fund Manager will be overall responsible for the implementation of the environmental and social mitigation measures, as well as for monitoring and inspections for compliance. The Environmental Specialist and the Social Specialist in the PIU will be handling the day-to-day tasks in regards to the implementation of the ESMF.

The ESMF is the overall document that guides the development of site specific ESMPs. While the ESMF, laying out expectation from Technical Leads – Technical Leads will be responsible for their own site/activity specific screening, impact assessments, development of site/activity-specific ESMPs, monitoring of impacts, and administration of mitigation measures in regards to their respective sub-component activities. These activities may follow the internal processes of the Technical Leads, where applicable. They further commit to integrate stakeholder inputs into their regular monitoring and reporting activities.

The Technical Leads are committed to report all screening result (based on UNOPS *Form EM03 Social and Environmental Screening Report* - see ANNEX 9), results of impact assessments (based on UNOPS Environmental and Social Risks and Opportunities form EM 04 - see ANNEX 10), site/activity-specific ESMPs (activity-specific Environmental and Social Management Plan, UNOPS form EM 01 - see ANNEX 11), to the PIU Environmental Specialist and Social Specialist.

The PIU Environmental Specialist and Social Specialist will assess the compliance of Technical Leads' activities against the ESMF and their subsequent ESMPs, and will report possible non-compliance to the PIU Team Leader/Fund Manager. Indicators are identified in both documents, and used as a baseline for assessing progress on implementation. The PIU will also independently conduct its own monitoring, verification and inspection of the activities of Technical Leads to ensure they are in compliance with this ESMF. Monitoring indicators will depend on specific activity contexts.

Independent Verification Agent (IVA) will be engaged by UNOPS on a competitive basis to provide independent operational review of project implementation, as well as verification of all project results. This will include assessing adherence at all implementation levels to the procedures set out in the Project Operations Manual and other relevant project documents, and in verifying outputs of all project activities. It will serve as a management tool to provide UNOPS with timely third-party information on weaknesses in implementation that require corrective actions to keep the Project on track. The scope and methodology of the IVA will be agreed with the World Bank, and quarterly monitoring reports will be shared by UNOPS.

The World Bank will equally supervise and assess the environmental and social performance through review of the quarterly monitoring reports and through regular⁶⁹ site visits.

⁶⁹ Frequency will be determined by the need but expected to be more frequent at early stages of project implementation

The GRM will further help track complaints and effectiveness of interventions, including those with environmental and social impacts.

Upon completion of the Project, UNOPS shall undertake an assessment of the success of the ESMF and include relevant information in the Implementation Completion Report (ICR). This ICR will be followed by the Bank's own ICR. If either of these assessments reveals that any key objectives of the ESMF were not achieved, follow-up measures shall be developed to remedy the situation. This is also applicable for site-specific ESMPs

Environmental and Social Management Plan and Monitoring Plan

Type of activity	E&S Risks and Impact	Mitigation Measures	Monitoring Indicators	Frequency of Monitoring	Responsibility for Monitoring
High-level			<p>LMP has been observed and implemented by all relevant actors,</p> <p>Environmental, Health and Safety Guidelines have been observed and implemented by all relevant actors</p> <p>All complaints filed through the GRM have been addressed in a timely manner</p>		UNOPS PIU
<u>Sub-Component 1.1: Restoring Livelihoods and Providing food and cash assistance for the most vulnerable</u>					
Providing cash assistance	Delayed payment leading to complaints and conflict	Timely payment; Communication / awareness campaign of payment mechanisms (planning); Submission of reports to Money Transfer Agent, Implementing Agency and World Bank	Tbd, based on GBV Action Plan	WFP: monthly monitoring through Technical Lead throughout the activity period	WFP Overall: UNOPS PIU
	Utilization of money earned from the project, time women may spend outside of HH away from their usual duties can lead to domestic conflict	Implement GBV Action Plan (see Annex 6 for TOR)	Number of grievances reported related to delayed payments	PIU: Quarterly Monitoring through PIU	
Removal of debris, desilting of weirs/dams, light reinforcement of river banks	Removal of debris affects new location aesthetically, or poses a safety risk for the community at the new location	Implement and monitor waste management procedures based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> ⁷⁰	Number of community workers trained in waste management procedures	WFP: monthly monitoring through Technical Lead throughout the activity period	
	Soil Erosion during desilting of weirs/dams and reinforcement of river banks	Implement soil control measures as described in mitigation measures above.	tbd	PIU: Quarterly Monitoring through PIU	

⁷⁰ World Bank Group, Environmental, Health, and Safety General Guidelines, April 30, 2007, accessed at: <https://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES>

	Noise Pollution during desilting of weirs/dams and reinforcement of river banks	Implement noise control measures as described in mitigation measures above.	tbd		
	Air Pollution during desilting of weirs/dams and reinforcement of river banks	Implement air pollution control measures as described in mitigation measures above.	tbd		
	Occupational Health and Safety risks during desilting of weirs/dams and reinforcement of river banks	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil spills during desilting of weirs/dams and reinforcement of river banks.	Implement water pollution control measures as described in mitigation measures above	tbd		
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
Rehabilitation of feeder roads, light upstream watershed rehabilitation through slope protection	Soil Erosion during construction of feeder roads and upstream watershed rehabilitation	Implement soil control measures as described in mitigation measures above.	tbd	WFP: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	
	Noise Pollution during construction of feeder roads and upstream watershed rehabilitation	Implement noise control measures as described in mitigation measures above	tbd		

	Air Pollution during construction of feeder roads and upstream watershed rehabilitation	Implement air pollution control measures as described in mitigation measures above	tbd		
	Occupational Health and Safety during construction of feeder roads and upstream watershed rehabilitation	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil spills during construction of feeder roads and upstream watershed rehabilitation	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of feeder roads and upstream watershed rehabilitation	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	tbd		
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS		
	Community Health and Safety e.g. spread of diseases	Sensitization on preventing common diseases (planning) like cholera	Percentage of beneficiaries trained in communities		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
Rehabilitation and creation of check-dams, stone bunds, biological	Soil Erosion during construction and rehabilitation of check dams, stone bunds and terraces	Implement soil control measures as described in mitigation measures above.		WFP: monthly monitoring through Technical Lead throughout the activity period	

measures (trees and grasses), terracing	Noise Pollution during construction and rehabilitation of check dams, stone bunds and terraces	Implement noise control measures as described in mitigation measures above	tbd	PIU: Quarterly Monitoring through PIU	
	Air Pollution during construction and rehabilitation of check dams, stone bunds and terraces	Implement air pollution control measures as described in mitigation measures above	tbd		
	Occupational Health and Safety during construction and rehabilitation of check dams, stone bunds and terraces	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil during construction and rehabilitation of check dams, stone bunds and terraces	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna (terrestrial and aquatic) during construction and rehabilitation of check dams, stone bunds and terraces	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	tbd		
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS		
	Community Health and Safety e.g. spread of diseases	Sensitization on preventing common diseases (planning) like cholera	Percentage of beneficiaries trained in communities		

	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
Dry fencing and live fencing for controlled grazing and relevant area closures	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	WFP: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	
	Community Health and Safety e.g. spread of diseases	Sensitization on preventing common diseases (planning) like cholera	Percentage of beneficiaries trained in communities		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
	Grievances over communal or private land use	Identify required land readjustment through community processes; Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM	Number of land grievances reported to GRM		
Tree nurseries	Invasive species problem/proliferation Increased water demand depending on species chosen	Ensure selection of local/native species only During asset design, ensure proper choice of species and avoid invasive species. Use native species only.	Percentage of species chosen that is not invasive and have no high water-demand	WFP: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG</i>	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP		

		<i>Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Number of trainings for community workers held in OHS		
	Grievances over communal or private land use	Identify required land readjustment through community processes; Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM	Number of land grievances reported to GRM		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
<u>Sub-Component 1.2: Restoring Agricultural Crop and Livestock Production</u>					
Supporting farmers with crop inputs (maize, sorghum and cowpeas)	Improper use of crop chemicals leading to environmental contamination	Conduct trainings on safe use of chemicals including pesticide risk reduction and Integrated Pest Management (IPM)	Number of farmers trained in pesticide risk reduction and IPM	FAO: monthly monitoring through Technical Lead throughout the activity period	Overall: UNOPS PIU FAO
	Chemical use poses health risks to both users and consumers due to non-observance of withdrawal periods	Awareness raising and training of farmers on importance of following withdrawal periods	Number of farmers trained in the importance of following withdrawal periods	PIU: Quarterly Monitoring through PIU	
	Indiscriminate storage of fertilizers, chemicals and food	Training of farmers on safe and proper storage of fertilizers, chemicals and food	Number of farmers trained in safe and proper storage of fertilizers, chemicals and food		
Establishment of community gardens	Disharmony arising from disruption of social fabric due to some farmers getting a piece of land in the community gardens	Train farmers on livestock husbandry and conflict resolution for community leadership	Number of farmers trained in livestock husbandry and conflict resolution for community leadership	FAO: monthly monitoring through Technical Lead throughout the activity period	
		Implement proper community participatory consultation process before selection of beneficiaries	Percentage of beneficiary selection processes that were based on participatory process	PIU: Quarterly Monitoring through PIU	
Restocking poultry, sheep and goats	Deforestation due to timber poles extraction to construct pens	Train farmers on Sustainable Forest Management and harvesting	Number of farmers trained on Sustainable Forest Management and harvesting	FAO: monthly monitoring through Technical Lead	

		Train farmers on establishment of woodlots and agroforestry for multi-purpose trees	Number of farmers trained on the establishment of woodlots and agroforestry for multi-purpose trees	throughout the activity period PIU: Quarterly Monitoring through PIU	
Distribution of stock feed	Poor storage and handling of stock feed might result in stock burn likely cause fire hazards	Training of farmers and awareness raising on proper handling of stock feed	Number of farmers trained on proper handling of stock feed	FAO: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	
Vaccination and deworming of livestock	Increased concentration of livestock numbers at handling sites (e.g. dip tanks) may lead to excessive land/soil/vegetation disturbances	Train farmers in conservation measures around handling sites to avoid excessive land/soil/vegetation disturbances	Number of farmers trained in conservation measures around handling sites to avoid excessive land/soil/vegetation disturbance	FAO: monthly monitoring through Technical Lead throughout the activity period	
	Public health concerns from meat products if farmers ignore recommended withdrawal periods after administering veterinary drugs	Train farmers and veterinary attendants and raise awareness on veterinary drug procedures	Number of farmers and veterinary attendants trained on veterinary drug procedures	PIU: Quarterly Monitoring through PIU	
	Potential occupational hazards to the farmers and technicians handling the veterinary drugs and animals	Train farmers and technicians and raise awareness on safe handling of drugs and animals	Number of farmers and technicians trained on safe handling of drugs and animals		
	Impacts associated with veterinary health care waste management and disposal (water pollution, soil pollution, impacts on faunal species) etc.	Develop and implement veterinary health care waste management plan	tbd		
Rehabilitation of dip-tanks	Negative effect of acaricides to the ecosystem (e.g. beneficial insects)	Train farmers in use of recommended eco-friendly acaricides	Number of farmers trained in recommended eco-friendly acaricides	FAO: monthly monitoring through Technical Lead throughout the activity period	

				PIU: Quarterly Monitoring through PIU	
<u>Sub-Component 1.3: Accelerating the revitalization of basic health service provision</u>					
Mobile clinics	Health Care Waste risks leading to contamination through medical waste that is not properly disposed (infections, pollution/contamination of the environment – air, land, water physical injuries, effect on domestic animals)	Implement and monitor waste management procedures based on <i>WBG Environmental, Health, and Safety General Guidelines</i> , including training of health care workers and auxiliary staff on how to safely handle health care waste. Provide adequate and appropriate protective clothing; use appropriate types of polythene bags and containers for waste; appropriate storage of health care waste until end of day; treat health care waste appropriately at central, provincial hospitals, etc...).	Number of health care workers trained in universal precaution Number of pieces of adequate clothing provided	WHO: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	WHO Overall responsibility: UNOPS PIU
Rehabilitation of community health posts (provision of power supply, provision of water supply incl. borehole drilling, expansion of mother's waiting homes, provision of energy sources)	Soil Erosion during construction/rehabilitation of health posts	Implement soil control measures as described in mitigation measures above.	tbd	UNOPS Mutare Office monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	UNOPS(Mutare Office) Overall Responsibility: UNOPS PIU
	Noise Pollution during construction/rehabilitation of health posts	Implement noise control measures as described in mitigation measures above	tbd		
	Air Pollution during construction/rehabilitation of health posts	Implement air pollution control measures as described in mitigation measures above	tbd		
	Occupational Health and Safety during construction/rehabilitation of health posts	Develop and implement OHS Plan for workers	tbd		

	Health Care Waste risks leading to contamination through medical waste that is not properly disposed (infections, pollution/contamination of the environment – air, land, water physical injuries, effect on domestic animals)	Implement and monitor health care waste management procedures based on <i>WBG Environmental, Health, and Safety General Guidelines</i> , including training of health care workers and auxiliary staff on how to safely handle health care waste. Provide adequate and appropriate protective clothing; use appropriate types of polythene bags and containers for waste; appropriate storage of health care waste until end of day; treat health care waste appropriately at central, provincial hospitals, etc....).			
	Labor and working conditions of community don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS		
<u>Component 2.1: Rehabilitating communal WASH services</u>					
New water points (piped water schemes including solar pumps)	Soil Erosion during construction of piped water schemes	Implement soil control measures as described in mitigation measures above.	tbd	UNICEF: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	UNICEF Overall Responsibility: UNOPS PIU
	Noise Pollution during construction of piped water schemes	Implement noise control measures as described in mitigation measures above	tbd		
	Air Pollution during construction of piped water schemes	Implement air pollution control measures as described in mitigation measures above	tbd		

	Occupational Health and Safety risks -during construction of piped water schemes	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil during construction and rehabilitation of check dams, stone bunds and terraces	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of piped water schemes	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	tbd		
	Electronic wastes from solar pumps (panels and batteries)	Develop and implement electronic waste management plan for solar pumps	tbd		
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community and contractual workers that have received a copy of the LMP Number of community and contractual workers trained in LMP Number of trainings for community and contractual workers held in OHS		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
	Community Health and Safety e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implementation of GBV Action Plan	Percentage of beneficiaries trained in communities Tbd, GBV Action Plan		
Rehabilitation of boreholes, springs and deep water wells	Soil Erosion during rehabilitation of boreholes, springs and deep - water wells	Implement soil control measures as described in mitigation measures above.	tbd	UNICEF: monthly monitoring through Technical Lead throughout the activity period	

Noise Pollution during rehabilitation of boreholes, springs and deep -water wells	Implement noise control measures as described in mitigation measures above	tbd	PIU: Quarterly Monitoring through PIU	
Air Pollution during rehabilitation of boreholes, springs and deep -water wells	Implement air pollution control measures as described in mitigation measures above	tbd		
Occupational Health and Safety risks - during rehabilitation of boreholes, springs and deep -water well	Develop and implement OHS Plan for workers	tbd		
Water contamination from oil spills during rehabilitation of boreholes, springs and deep -water wells	Implement water pollution control measures as described in mitigation measures above	tbd		
Disturbance of flora and fauna (terrestrial and aquatic) during rehabilitation of boreholes, springs and deep -water wells	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	tbd		
Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards	Percentage of community and contractual workers that have received a copy of the LMP Number of community and contractual workers trained in LMP		
	Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Number of trainings for community and contractual workers held in OHS		
Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		

	Community Health and Safety e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implementation of GBV Action Plan	Percentage of beneficiaries trained in communities Tbd, GBV Action Plan		
Construction of toilets, latrines and hand-washing facilities	Soil Erosion during construction of toilets, latrines and handwashing facilities	Implement soil control measures as described in mitigation measures above.	tbd	UNICEF: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	
	Noise Pollution during construction of toilets, latrines and handwashing facilities	Implement noise control measures as described in mitigation measures above	tbd		
	Air Pollution during construction of toilets, latrines and handwashing facilities	Implement air pollution control measures as described in mitigation measures above	tbd		
	Occupational Health and Safety risks - during construction of toilets, latrines and handwashing facilities	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil spills during construction of toilets, latrines and handwashing facilities	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna (terrestrial) during construction of toilets, latrines and handwashing facilities	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	tbd		
	The pit latrines and septic tanks if not well sited and maintained will be a source of foul smell that will affect those within the area	Ensure proper siting of septic tanks and pit latrines in accordance with the MOH guidelines for siting and construction of pit latrines	tbd		
	Faecal matter may lead to underground water contamination if the water table is high or in the case of pit latrines,		tbd		

when there is an overflow due to heavy rains. Contamination of water may lead to outbreak of diseases e.g. cholera, dysentery, typhoid, diarrhoea etc.	Ensure proper maintenance of sanitation facilities including cleaning and hygiene training Provide hand washing facilities and water in all the sanitation infrastructures			
Pit latrines can also be breeding grounds for flies and mosquitoes which are disease vectors.	Ensure proper cleaning of toilets	tbd		
Super structures if poorly constructed and designed could lead to hazards including falling into the pit if the super structure floor/slab gives ways. This can lead to injury or loss of life.	Ensure super structures are well constructed including the slab with the required strength	tbd		
Common pests attracted to dirty environment are rats, cockroaches, flies. These animals are also disease vectors. They transport germs from the toilet to nearby human settlement	Ensure and provide training on cleaning of toilets Use biopesticides to manage pests	tbd		
Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community and contractual workers that have received a copy of the LMP Number of community and contractual workers trained in LMP Number of trainings for community and contractual workers held in OHS		
Community Health and Safety e.g. spread of diseases, including	Sensitization on preventing common diseases (planning) like cholera	Percentage of beneficiaries trained in communities		

	SGBV in relation to worker influx into communities	Implementation of GBV Action Plan	Tbd, GBV Action Plan		
<u>Component 2.2.: Restoring communal irrigation schemes in support of agrarian livelihoods:</u>					
Reconstruction of storm drains	Soil Erosion during reconstruction of storm drains	Implement soil control measures as described in mitigation measures above.	tbd	FAO: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	FAO Overall: UNOPS PIU FAO
	Noise Pollution during reconstruction of storm drains	Implement noise control measures as described in mitigation measures above	tbd		
	Air Pollution during reconstruction of storm drains	Implement air pollution control measures as described in mitigation measures above	tbd		
	Occupational Health and Safety risks - during reconstruction of storm drains	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil spills during reconstruction of storm drains	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna (terrestrial and aquatic) during reconstruction of storm drains	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	tbd		
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS		

	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
Contours, Terraces	Soil Erosion during establishment of contours and terraces	Implement soil control measures as described in mitigation measures above.	tbd	FAO: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	
	Occupational Health and Safety risks - during establishment of contours and terraces	Develop and implement OHS Plan for workers	tbd		
	Disturbance of flora and fauna (terrestrial and aquatic) during establishment of contours and terraces	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above.	tbd		
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers	Percentage of community workers that have received a copy of the LMP		
		Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i>	Number of community workers trained in LMP		
		Initial training for all community workers on LMPs, H&S standards	Number of trainings for community workers held in OHS		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
Waterways and water diversion structures	Soil Erosion during construction of water ways and water diversion structures	Implement soil control measures as described in mitigation measures above.	tbd	FAO: monthly monitoring through Technical Lead throughout the activity period PIU: Quarterly Monitoring through PIU	
	Noise Pollution during construction of water ways and water diversion structures	Implement noise control measures as described in mitigation measures above	tbd		

	Air Pollution during construction of water ways and water diversion structures	Implement air pollution control measures as described in mitigation measures above	tbd		
	Occupational Health and Safety risks – during construction of water ways and water diversion structures	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil spills during construction of water ways and water diversion structures	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of water ways and water diversion structures		tbd		
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers	Percentage of community workers that have received a copy of the LMP		
		Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i>	Number of community workers trained in LMP		
		Initial training for all community workers on LMPs, H&S standards	Number of trainings for community workers held in OHS		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures		
Reclamation of gullies by constructing gabions	Soil Erosion during construction of gabions	Implement soil control measures as described in mitigation measures above.	tbd	FAO: monthly monitoring through Technical Lead throughout the activity period	

	Occupational Health and Safety risks – during construction of gabions	Develop and implement OHS Plan for workers	tbd	PIU: Quarterly Monitoring through PIU	
	Water contamination during construction of gabions	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna (terrestrial and aquatic) during construction of gabions	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above.	tbd		
	Labor and working conditions of community and contracted workers don’t comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers	Percentage of community workers that have received a copy of the LMP		
		Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i>	Number of community workers trained in LMP		
		Initial training for all community workers on LMPs, H&S standards	Number of trainings for community workers held in OHS		
Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds that were not processed through the Chance Find Procedures			
Desilting of weirs	Soil Erosion during desilting of weirs	Implement soil control measures as described in mitigation measures above.	tbd	UNOPS Mutare Office: monthly monitoring throughout the activity period	UNOPS Mutare Field Office Overall Responsibility: UNOPS PIU
	Noise Pollution during desilting of weirs	Implement noise control measures as described in mitigation measures above	tbd		
	Air Pollution during desilting of weirs	Implement air pollution control measures as described in mitigation measures above	tbd	PIU: Quarterly Monitoring through PIU	
	Occupational Health and Safety risks – during desilting of weirs	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil spills during desilting of weirs	Implement water pollution control measures as described in mitigation measures above	tbd		

	Disturbance of flora and fauna (terrestrial and aquatic) during desilting of weirs	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	tbd		
	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS		
Revitalization of irrigated land	Labor and working conditions of community and don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers Implement Health and Safety Management Plan, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> Initial training for all community workers on LMPs, H&S standards	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	UNOPS Mutare Field Office Overall Responsibility: UNOPS PIU
	Soil Erosion during revitalization of irrigated land	Implement soil control measures as described in mitigation measures above.	tbd		
	Occupational Health and Safety risks – during revitalization of irrigated land	Develop and implement OHS Plan for workers	tbd		
	Water contamination during revitalization of irrigated land	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna (terrestrial and aquatic) during revitalization of irrigated land.	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above	tbd		

	Water and soil contamination from use of pesticides during revitalization of irrigated land	Prepare and implement Integrated Pest Management Plan	Percentage of beneficiaries trained in communities		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
<u>Sub-Component 2.3: Rehabilitating damaged community schools</u>					
Rehabilitation of facilities	Soil erosion during construction/rehabilitation of schools	Implement soil control measures as described in mitigation measures above.	tbd	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	UNOPS Mutare Field Office Overall Responsibility: UNOPS PIU
	Noise pollution during construction/rehabilitation of schools	Implement noise control measures as described in mitigation measures above	tbd		
	Air during construction/rehabilitation of schools	Implement air pollution control measures as described in mitigation measures above	tbd		
	Occupational Health and Safety risks – during construction/rehabilitation of schools	Develop and implement OHS Plan for workers	tbd		
	Water contamination from oil spills during construction of during construction/rehabilitation of schools	Implement water pollution control measures as described in mitigation measures above	tbd		
	Disturbance of flora and fauna during construction/rehabilitation of schools	Implement measures to protect against disturbance of flora and fauna as described in mitigation measures above.	tbd		
	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards	Percentage of community and contractual workers that have received a copy of the LMP Number of community and contractual workers trained in LMP		

		Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Number of trainings for community and contractual workers held in OHS		
	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implement GBV Action Plan (See Annex 6 for TOR)	Percentage of beneficiaries trained in communities Tbd, GBV Action Plan		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
<u>Sub-Component 2.4: Rehabilitating communal infrastructure and providing community risk mitigation solutions</u>					
Labor intensive work to support early recovery – community infrastructure (community workers, heavy equipment may be required to supplement work)					
Vegetation clearing and grass cutting along roads	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	UNOPS Mutare Field Office Overall Responsibility: UNOPS PIU
Clearing side drains and culvert inlets/outlets	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP	UNOPS Mutare Office: monthly monitoring throughout the activity period	

	occupational health and safety risks	all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Number of trainings for community workers held in OHS	PIU: Quarterly Monitoring through PIU	
Excavation of new drainage paths	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
Earth filling of embankment and pavement repairs	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	

		on emergency preparedness and response			
Earthworks such as irrigation canal excavations	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
Drainage and improvements works					
Installation of cross drainage structures, lining of side drains	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	UNOPS Mutare Field Office Overall Responsibility: UNOPS PIU
Earthworks	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP	UNOPS Mutare Office: monthly monitoring throughout the activity period	

		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Number of trainings for community workers held in OHS	PIU: Quarterly Monitoring through PIU	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
Protection works	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
Construction of retaining walls and gabion baskets	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
Concrete works and building repairs	Labor and working conditions of community workers don't comply	Implement Labor Management Procedures (LMP) (See ANNEX 8),	Percentage of community workers that have received a copy of the LMP	UNOPS Mutare Office: monthly	

	with WB and Zimbabwe legislation – including occupational health and safety risks	including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Number of community workers trained in LMP Number of trainings for community workers held in OHS	monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
Works requiring engineering inputs (carried out with local construction contractors, plant hire contractors and low skilled labor from community)					
Rehabilitation and improvement works to improve accessibility, climate resilience and support local livelihoods	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community and contractual workers that have received a copy of the LMP Number of community and contractual workers trained in LMP Number of trainings for community and contractual workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period	UNOPS Mutare Field Office Overall Responsibility: UNOPS PIU
	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implement GBV Action Plan (See Annex 6 for TOR)	Percentage of beneficiaries trained in communities Tbd, GBV Action Plan		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
Work on DDF and RDC roads	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation –	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and	Percentage of community and contractual workers that have received a copy of the LMP	UNOPS Mutare Office: monthly monitoring throughout the activity period	

	including occupational health and safety risks	contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Number of community and contractual workers trained in LMP Number of trainings for community and contractual workers held in OHS	PIU: Quarterly Monitoring through PIU	
	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implement GBV Action Plan (See Annex 6 for TOR)	Percentage of beneficiaries trained in communities Tbd, GBV Action Plan		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
	Grievances over communal or private land use	Identify required land readjustment through community processes; Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM	Number of land grievances reported to GRM		
irrigation schemes	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community and contractual workers that have received a copy of the LMP Number of community and contractual workers trained in LMP Number of trainings for community and contractual workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	

	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implement GBV Action Plan (See Annex 6 for TOR)	Percentage of beneficiaries trained in communities Tbd, GBV Action Plan		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
	Grievances over communal or private land use	Identify required land readjustment through community processes; Implement process for voluntary land agreements (see ANNEX 2 and 3); Refer to general GRM	Number of land grievances reported to GRM		
protection works	Labor and working conditions of community and contracted workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers and contractual workers, including initial training for all community and contracted workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>World Bank Group Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community and contractual workers that have received a copy of the LMP Number of community and contractual workers trained in LMP Number of trainings for community and contractual workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
	Community Health and Safety, e.g. spread of diseases, including SGBV in relation to worker influx into communities	Sensitization on preventing common diseases (planning) like cholera Implement GBV Action Plan (See Annex 6 for TOR)	Percentage of beneficiaries trained in communities Tbd, GBV Action Plan		
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		

Clearing side drains and culvert inlets/outlets	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
Excavation of new drainage paths	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		
Earth filling of embankment and pavement repairs	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP	UNOPS Mutare Office: monthly monitoring throughout the activity period	

		Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Number of trainings for community workers held in OHS	PIU: Quarterly Monitoring through PIU	
Earthworks such as irrigation canal excavations	Labor and working conditions of community workers don't comply with WB and Zimbabwe legislation – including occupational health and safety risks	Implement Labor Management Procedures (LMP) (See ANNEX 8), including GRM for community workers, including initial training for all community workers on LMPs, H&S standards Implement occupational, health and safety (OHS) measures, based on <i>WBG Environmental, Health, and Safety General Guidelines</i> including measures on emergency preparedness and response	Percentage of community workers that have received a copy of the LMP Number of community workers trained in LMP Number of trainings for community workers held in OHS	UNOPS Mutare Office: monthly monitoring throughout the activity period PIU: Quarterly Monitoring through PIU	
	Damage or loss of cultural heritage	Implement chance find procedure (see ANNEX 1)	Number of chance finds in which procedures were not applied		

7.2. Quarterly Monitoring and Reporting

Technical Leads will report the results of their screening processes, site/activity-specific ESMs, activity impacts, monitoring results, and GRM outcomes where applicable, to the PIU on a monthly basis.

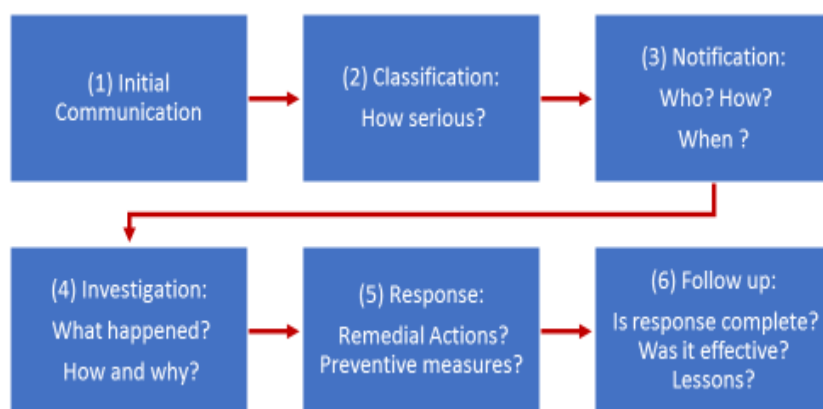
The PIU will digest all reporting by Technical Leads, and its own findings, and produce an overall environment and social progress report, which will be provided to the World Bank. The Project will follow a quarterly reporting cycle. These quarterly reports will further be shared with all stakeholders, as defined in the SEP. Quarterly reports provide brief updates on environmental and social issue activities, identified in screening; mitigation actions undertaken; capacity building implemented; stakeholders engaged; results of site/activity-specific ESIs and ESMs; non-compliance with ESMs or ESMF; and they will flag possible challenges and allow for immediate adjustments and assistance in the implementation of the ESMF, including the GRM.

Furthermore, the PIU will provide an annual review of ESMF implementation, (see ANNEX 12 for reporting template) with the aim to: (a) assess the project performance in complying with ESMF procedures, learn lessons, and improve future performance; and (b) assess the occurrence of, and potential for, cumulative impacts due to project-funded activities. In addition, data from the GRM will be analyzed and presented. These reports will be the main source of information for the World Bank supervision missions, UNOPS and national authorities, as needed.

7.3. Emergency Reporting

For all environmental or social incidences, ZIRP PIU staff will report within 24 hours to the country office after which the country office will do the same to the Regional Office and Head Office. In case of any serious environmental or social incident (Class 1 Incidents, ⁷¹), UNOPS will report within 48 hours to the World Bank, followed by a root cause analyses and related corrective actions after that. Generally, incident reports will be captured in UNOPS' Form HSE09 - *Incident Report Form* (see ANNEX 13). Any material incident will be reported to the World Bank.

Technical Agencies will report to the PIU within 24 hours and the PIU will report to the World Bank within 48 hours. The below steps and procedures for incident management and reporting will be employed for all types of incidents.



Steps and procedures for incident management and reporting

⁷¹ Class one incidents are major incidents which are fatal, may result to lost time or major environmental issues will class two are those which may cause minor damage e.g. reportable social, minor environmental and or minor injuries.

7.4. Roles and Responsibilities

UNOPS is the borrower, project implementer and a Technical Lead for several sub-components. It will staff the PIU and implement project management activities. The PIU will be based in Harare. As a Technical Lead, UNOPS will also maintain an Office in Mutare, staffed to implement the respective sub-components under UNOPS' technical lead (see above Project Organizational Structure), under the lead of a Project Manager for Infrastructure.

Given the overall responsibility of the PIU for the ZIRP, the Environmental Specialist and the Social Specialist, embedded in the PIU, oversee the monitoring of the ESMF. Both operate under the responsibility of the PIU Fund Manager. Their main task is the monitoring of this ESMF, including the monitoring of the implementation of the SEP, LMP, Gender Action Plan, and the implementation of the GRM project-wide.

To ensure a smooth and effective implementation of the GRM, as well as the Stakeholder Engagement Plan (SEP), the PIU Environmental and Social staff will work closely with the three Community Liaison Officers, which are embedded in the UNOPS Infrastructure Management Office in Mutare.

The PIU Environmental and Social staff will oversee the implementation of the monitoring plan. They will receive monthly updates from Technical Leads and the UNOPS Mutare Office. They will further conduct field supervision visits to Technical Leads' implementation sites as well as the sites of UNOPS sub-component activities at least every two weeks.

Site-specific ESIAs and ESMPs will be developed and implemented by the UNOPS Mutare Office. The Office will thereby engage support from internally in UNOPS to draw on expertise from UNOPS' Health, Safety and Environmental Team at HQ, or hire external consultants to avoid bottlenecks.

The PIU team will receive all screening results of site-specific activities and ESMPs, will check them with compliance against this ESMF, and will approve them prior to the commencement of activities by Technical Leads. It will then monitor the implementation of the ESMPs by Technical Leads.

Other Technical Leads will be responsible for direct implementation of their sub-components, including all screening activities, development and implementation of ESMPs, ensuring compliance to the approved ESMPs and the ESMF. Technical leads will develop the relevant instruments and the PIU will provide quality assurance.

The Health & Safety, Environmental and Social Officer at the UNOPS Infrastructure Management Office in Mutare, and the respective personnel embedded in the Technical Leads (UNICEF, FAO, WHO and WFP) carry the responsibility to monitor all environmental and social issues in their respective sub-component activities on a daily basis and according to the above monitoring plan. They will report all ESMF-related activities and monitoring results to the PIU Environmental and Social Specialist on a monthly basis, as well as in an overall report on a quarterly basis.

The PIU Environmental Specialist and Social Specialist are responsible for the detection of correctional activities required, on the basis of monitoring activities. They will report such to the PIU Fund Manager and will, in an appropriate timely manner, send a request for correction to the Technical Lead's Manager and Environmental and Social staff. Requests for corrections will then be added by the PIU staff to the monitoring schedule.

8 Grievance Redress Mechanism (GRM)

This section lays out the contours of a Project GRM. A framework for the GRM has been included as part of the SEP and been disclosed on 4 June and updated on 17 June. However, detailed GRM mechanisms will be developed through an assessment of existing systems, including in a joint meeting with all Technical Leads prior to commencement of activities. In this meeting, all Technical Leads will lay out their existing GRM, and assess the functionality of their systems. Jointly the Team will assess how to synthesize the different systems and link them to an overall Project GRM. The GRM will be updated accordingly in the SEP and the ESMF.⁷² These GRM will be finalized and ready for implementation prior to effectiveness.

UNOPS will implement a dedicated GRM as part of the ZIRP. The GRM will take into account and build on the different existing GRMs, which are currently already implemented by most of the Technical Leads, and they will fill gaps where no GRM exists, or where people wish to report grievances vis-à-vis UNOPS or one of the Technical Leads bypassing the GRM of the respective Technical Lead. Furthermore, a GBV-related grievance redress structure will be developed, which will mostly be based on existing mechanisms by Technical Leads, as well as a dedicated ZIRP GBV Action Plan (see ANNEX 6). A workers' GRM will be set up as part of the LMP, and will be open for labor-specific issues of community and contract workers (see LMP, ANNEX 8).

The general GRM mechanisms will be administered by the PIU, including a coverage of all sub-components implemented by the other Technical Leads. The latter, however, are encouraged to implement their own GRM as well, and share analysis of the reported cases and other insights with the PIU. The PIU Fund Manager will have overall responsibility of the Project GRM. The GRM will be overseen and implemented by the PIU's Environmental Specialist and Social Specialist, with help of the field-based Community Liaison Officers, and the Health&Safety and Environmental and Social Officer.

The general Project GRM mechanism follows a basic set-up:



8.1 Assess and Clarify

Through social media channels and information centers, sufficient information about the Project and its sub-component activities – as implemented by UNOPS and the Technical Leads - will be provided. The main channels for information are defined in the SEP. The type of information disclosed includes details about the Project structure, activities, budgets, consultation and information disclosure plans (SEP), ESCP, ESMF, and other documentation. Based on the information made available, aggrieved parties can decide whether they have a case to report or whether the available information clarifies their concern. The information disclosed will also include a detailed description of the GRM, contact points, hotline numbers, instruments and general processes. This will allow the aggrieved party or person to decide on the appropriate next step in order to report a grievance, comment, or provide feedback to the Project.

8.2 Report

Suggestion boxes, letters or oral reports to local ZIRP help desks or appeals committees at local information centers will be the main means of reporting. These will be set up in all project sites, including at the ward and district levels. They will be mainly run by the PIU and UNOPS Infrastructure field personnel. Where Technical Leads have similar points of contacts in place, and where they are the main implementers in a specific community or ward, the GRM

⁷² Detailed GRM for direct project workers, including contracted and community workers will be developed as part of the LMP. They will be operational prior to engaging project workers.

instruments of the Technical Lead will apply. In these cases, the UNOP/PIU will only maintain a local information center and a suggestion box at the District level, in case an aggrieved party wishes to report directly to UNOPS, circumventing the Technical Lead for grievance-related purposes.

If the aggrieved individual or group decides on direct reporting, the Community Liaison Officers and the Health & Safety Environmental and Social Officer will receive their reports through the Ward and District level information offices or suggestion boxes. These Officers are based in the UNOPS Mutare Office, and visit Districts, wards and villages on a regular basis, at least bi-weekly. These Officers will administer the suggestions boxes and receive letters or oral reports.

However, other reporting channels will be provided, in order to allow different social groups to report adequately. For example, reporting through hotlines will allow those that are physically not able to report in person to report their grievance. While most Technical Leads have hotlines in place, the PIU will install a ZIRP-specific hotline through which reporting directly to the PIU Office in Harare will be made possible. This allows for grievance reports to bypass the staff in the Mutare Office, or the staff of Technical Leads. This can be important in cases where those individuals are implicated in the grievance, or where the grievance is directed against a Technical Lead or the UNOPS Project Management Office in Mutare.

Other channels are provided by Technical Leads directly. For example, WFP provides community feedback mechanisms, through which feedback or concerns regarding WFP programmes can be reported. This can be done through direct interface, suggestion boxes and tollfree helplines. The help desk is constituted by WFP, cooperating partners, chiefs/headmen, ward councillors, district drought relief members and 3 ex-officio members (co-opted members) of which 2 should be women or members of minority groups. The help desk is chaired by the chief or his appointee (headman or senior village head). The help desk committee is available at every registration/distribution point and they sit at a designated spot/table and are responsible for receiving and recording complaints and feedback from members of the community. WFP describes suggestion box as a free and easy way to collect real experiences and honest suggestions from anyone. The suggestion box is located at a strategic, secluded and convenient place so that people are not afraid to use it. It is lockable, and the keys are kept with the cooperating partner M&E focal person for the district. The box is opened in the presence of the district project coordinator or at the end of distributions/registrations by the help desk team. All feedback is documented and categorized for reporting and/ or follow-up if necessary.

The tollfree hotline is accessible throughout the country. People can call or text their suggestions and complaints related to WFP assistance. The hotline number is shared at the distribution point during registrations/distributions. WFP also ensures that they visibly display banners with hotline through use of posters. The number is also available on WFP SCOPE cards. The management of the toll-free is done by a third party, an accounting firm. All calls that come in are documented and categorized and transmitted to WFP. Immediate response can be given depending on the type of feedback/complaint.

8.3 Acknowledge and Follow-Up

If reports are provided to the UNOPS Community Liaison Officers at the local helpdesks, these will be the first decision-makers on how to follow up on a grievance. They will be able to decide whether the grievance can be solved locally, with local authorities or implementers, or whether it should be passed on to the PIU. Community Liaison Officers will have in-depth knowledge of communal socio- political structures and will therefore be able to address the appropriate individuals for assistance, if the case can be solved at the local level.

In any case, the Community Liaison Officer need to file the case and report it to the PIU. The PIU will file all cases in the MIS. Case management systems should include the name of the person providing feedback, their village, ward, district, potential implementing partner, programme, and the nature of the feedback. Where grievances are directly

reported to the PIU, the Environmental Specialist or the Social Specialist will acknowledge the case and decide on the follow-up.

Cases reported through the GRM of Technical Leads will be filed by the responsible staff in the Technical Lead's Office. For example, WFP captures its GRM data in an excel spreadsheet.

8.4 Verify, Investigate and Act

The Community Liaison Officers and / or the Environmental Specialist or Social Specialist will verify the claims, investigate and decide over the actions that will lead to solving the grievance. Most importantly, they will provide feedback on the case within one week, if the case was not filed anonymously. If a case requires investigations, an Incident Management Protocol is followed, which will be developed by the PIU. After deciding a case, the PIU has to provide an appeals mechanism to the aggrieved party through the PIU Team Leader/Fund Manager. Incidents of urgent nature, as defined in the Incident Management Protocol, will be reported to the PIU Fund Manager within 24 hours.

8.5 Monitor and Evaluate and Feedback

The PIU or the Community Liaison Officers are further responsible to provide direct feedback to the complainant on decisions within one week. Most importantly, all cases filed need to be logged and monitored in the MIS. While Technical Leads will not need to provide reports on every case that has been filed with their GRM, urgent or grave cases, as will be defined in the Incident Management Protocol will have to be brought to the attention of the PIU. Otherwise, Technical Leads are expected to provide monthly reports and analysis of the cases and feedback that has been filed in their specific GRMs to the UNOPS PIU. The Environmental Specialist or Social Specialist will be compiling those reports and how they were addressed and produce a general analysis. These reports will be analyzed and shared on a quarterly basis with the PIU Fund Manager, with Technical Leads and with the World Bank. They will feed into monitoring mechanisms of the Project.

8.6 Information Disclosure and Consultations

ESS 10 makes it essential to identify and consult Project stakeholders and to disclose all relevant information to stakeholders and the public. Direct and indirect Project stakeholders have been identified in the Stakeholder Engagement Plan (SEP), which was disclosed in Mutare on 3 June 2019, and on the UNOPS website on 4 June 2019. Comments and inputs were gathered from the disclosure meeting in Mutare and were integrated into the Plan. The SEP will be continuously updated, specifically in accordance to the identified needs of each Technical Lead and their respective sub-component. All relevant information needs to be made available to stakeholders in a timely manner, including about planned sub-components of the Project, management measures and monitoring activities. This EMSF will be disclosed on UNOPS' website on 13 July 2019, and the public will be invited for comments.

8.7 GBV and Sexual Exploitation and Abuse (SEA)

Cases of GBV or SEA can be reported through the general Project GM but mainly through other avenues such as available toll-free numbers and counseling services available in the project area, as laid out in the GBV Action Plan. The GRM officers and all relevant staff will be trained on how to handle such sensitive cases and on the referral pathway.⁷³ In such cases, the officer receiving such reports has to report the case within 24 hours to the PIU Fund Manager and Environmental Specialist or Social Specialist. However, GBV and SEA reporting mechanisms go beyond the Project grievance mechanisms. Most Technical Leads have dedicated reporting mechanisms for such cases in place, which should be applied in their project locations and beyond. UNOPS will build on these reporting mechanisms and will add a UNOPS-specific mechanism, which will be defined in the GBV/SEA Action Plan. The Environmental Specialist or Social Specialist will hereby act as the dedicated GBV/SEA focal point. Any staff of UNOPS

⁷³ In addition to the GBV Action Plan, the existing referral pathway will be assessed and recommendations for improvement will form part of the project design.

or a Technical Lead who observes or has any concerns or reasonable suspicions that a colleagues or counterpart is involved in any act of SEA, has a duty to report any concerns or reasonable suspicions regarding SEA to the UNOPS PIU Environmental Specialist and Social Specialist, the PIU Funds Manager or the UNOPS Kenya Multi Country Director.

Other Technical Leads are rolling out training on SEA. For example, WFP is training partners and counterpart organizations on a rolling basis. These are held as part of inception training workshops or dedicated training sessions for WFP staff, NGO partners and Government counterparts. Plans that are more detailed are laid out in the GBV Action Plan.

8.8 WB's Grievance Redress Service (GRS)

Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

9 Capacity Development and Training Schedule

This schedule will be updated once site-specific ESMPs have been developed.

Capacity Building and Training Plan

Objectives	Issues for engagement	Method of engagement	Stakeholders/Target population and area	Responsible person	Time frame
ESMF	Training of all Technical Leads in the ESMF	Training	ZIRP Technical Leads / relevant staff responsible for the implementation of E&S instruments.	UNOPS PIU	Prior to commencement of activities
GBV Action Plan	Training of all Technical Leads in the ESMF	Training	ZIRP Technical Leads / relevant staff responsible for the implementation of E&S instruments.	UNOPS PIU	Prior to commencement of activities
Project GRM	Consultation on different GRMS mechanisms in place, development of overall GRM, and Training with all Technical Leads	Consultations and Training	ZIRP Technical Leads / relevant staff responsible for the implementation of E&S instruments.	UNOPS PIU	Prior to commencement of activities
GBV Procedures for Reporting and Prevention	Training and monitoring during project implementation to prevent GBV and support reporting of cases	Training, monitoring,	Community members / vulnerable groups	Coordinated with UNFPA (Lead of GBV sub cluster)	Prior to commencement of activities
Mitigate impact of workers on local communities (LMP and GBV Action Plan)	Implement training of contracted Project Workers designed to heighten awareness of risks and to mitigate impacts on local communities and on their rights	Training	Contracted workers and community workers in Project locations	all Technical leads	Prior to deployment
H&S standards	H&S Standards for workers	Training	Contracted workers and community workers in Project locations	Technical leads	Prior to deployment

Create awareness of LMP and H&S Standards for community workers	LMP and H&S Standards	Training	Community workers in Project locations	Technical leads	Prior to deployment
Support Emergency Response Measures	Communication of Emergency Response Measure (ERM) to communities	Information, training	Communities in Project areas	PMU	Prior to commencement of activities
Community Health & Safety	Road Safety Awareness	Training	Communities in Project areas, with particular focus on vulnerable communities	PIU and Technical Leads	Prior to commencement of activities
Community Health & Safety	Sensitization on preventing common diseases (planning) like cholera	Training, information disclosure	All Communities in Project areas	PIU and Technical Leads	Prior to commencement of activities
Community Health & Safety	Communicable diseases/HIV-AIDS/STI awareness and prevention	Training	Communities in Project areas	PIU and technical leads	Prior to commencement of activities
Community Health & Safety	GBV, as per Action Plan	Training and awareness raising	All Communities in Project areas	PIU and technical leads	Prior to commencement of activities
GRM	Project GRM as described in the SEP	Information disclosure and training	Communities in Project areas, with particular focus on vulnerable communities	PIU and Technical Leads	Prior to commencement of activities
Waste management procedures (IWorld Bank Group Environmental, Health, and Safety General Guidelines)	Waste Management Procedures – Hazardous Waste	Training	Nurses and village health workers Veterinary attendant in the community	Technical Leads (WHO) Technical Leads (FAO)	Prior to commencement of activities
Agriculture	Raise awareness on veterinary drug disposal	Training	Farmers	FAO	Prior to commencement of activities

Agriculture	Raise awareness on proper handling of stock feed	Training	Farmers	FAO	Prior to commencement of activities
Agriculture	Safe use of chemicals including pesticide risk reduction and integrated pest management	Training	farmers	FAO	Prior to commencement of activities
Animal husbandry	Awareness on veterinary drugs procedures	Training	Vet assistants, farmers	FAO	Prior to commencement of activities
Animal husbandry	Awareness on safe handling of drugs and animals	trainings	Vet assistants, farmers	FAO	Prior to commencement of activities
agriculture	Awareness on importance of following withdrawal periods	trainings	farmers	FAO	Prior to commencement of activities
Agriculture	Safe and proper storage of fertilizers and chemicals	training	farmers	FAO	Prior to commencement of activities
Health care	Handling of health care waste	Trainings	Care workers and auxiliary staff	WHO	Prior to commencement of activities
GBV	Response to domestic issues in a non-gender biased manner	Training	Local leaders (as detailed in the GBV Action Plan)	UNOPS, UNICEF	Prior to commencement of activities

10 Implementation Schedule and Cost Estimates

Management measure	Overall phase of project implementation	Timing, duration, frequency	Budget and source of funding (initial and recurring) – in USD
Training of Technical Leads on ESMF	Preparation	Once, prior to commencement of activities	5.000 Project budget / PIU
Workshop with Technical Leads on GRM	Early Implementation	Once, during project launch workshop	5.000 Project Budget / PIU
GBV/Social Protection Assessment Task 1	Preparation	Once, Prior to effectiveness	10.000 Project Budget / PIU
GBV/Social Protection Assessment Task 2	Early implementation phase	Once, finalized by 30 September	50.000 Project Budget / PIU
Training of Technical Leads on GBV Action Plan	Preparation	Once, prior to commencement of activities	5.000 Project budget / PIU
Implementation of GBV Action Plan	Implementation	Throughout Project Cycle	100.000 Project Budget / PIU
Vulnerability Assessment – update of SEP (jointly with targeting strategies)	Early implementation	Once, finalized by 30 September	50.000 Project Budget / PIU
Technical Leads Monitoring of sub-components	Implementation	continuous	See above cost estimates in Monitoring of mitigation measures – costs included in budgets of respective technical leads
PIU monitoring of sub-component E&S indicators	Implementation	Monthly	See above Project budget / PIU
PIU supervision of Technical Leads' implementation of ESMF	Implementation	Every two weeks	40.000 (travel, staff costs not included) Project budget / PIU
Detailed activity E&S report from Technical Leads to PIU	Implementation	Monthly (last working day of every month)	costs included in budgets of respective technical leads

Comprehensive monitoring E&S report from Technical Leads to PIU	Implementation	Quarterly (last working day of each quarter)	costs included in budgets of respective technical leads
Comprehensive E&S report from PIU to World Bank	Implementation	Quarterly	No costs (staff time not included)
Annual overview E&S report from PIU to World Bank	Implementation	Annual	No costs (staff time not included)
Emergency reporting	Implementation	Any time	No cost

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Annex 1. Archaeological Chance Find Procedure

This procedure is included as a standard provision in the implementation of ZIRP Public Works contracts to ensure the protection of cultural heritage (Archaeological and Historical Sites). All Technical Leads and contractors will be required to observe this procedure as documented hereafter.

Where historical remains, antiquity or any other object of cultural or archaeological importance are unexpectedly discovered during construction in an area not previously known for its archaeological interest, the following procedures should be applied:

- Stop construction activities;
- Delineate the discovered site area;
- Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a full-time guard should be present until the responsible authority takes over;
- Notify the responsible foreman/archaeologist, who in turn should notify the responsible authorities, the concerned;
- Responsible authorities will be in charge of protecting and preserving the site before deciding on the proper procedures to be carried out;
- An evaluation of the finding will be performed by the concerned officers. The significance and importance of the findings will be assessed according to various criteria relevant to cultural heritage including aesthetic, historic, scientific or research, social and economic values;
- Decision on how to handle the finding will be reached based on the above assessment and could include changes in the project layout (in case of finding an irrevocable remain of cultural or archaeological importance), conservation, preservation, restoration or salvage;
- Implementation of the authority decision concerning the management of the finding;
- Construction work could resume only when permission is given from the concerned officers from the Ministry of Youth, Culture & Sports after the decision concerning management of environmental and social risks and impacts related to heritage are fully executed;
- In case of delay incurred in direct relation to archaeological findings not stipulated in the contract (and affecting the overall schedule of works), the contractor may apply for an extension of time. However, the contractor will not be entitled for any kind of compensation or claim other than what is directly related to the execution of the archaeological findings works and protections.

Annex 2. Voluntary Land Readjustment Guidelines

- Land to be exchanged (for alternative livelihoods/developments) must be identified by the community through a public, participatory process. Local traditional and formal leaders and community members should be well informed about principles, approaches, and documentation requirements to ensure that the land which is exchanged is not reused by other community members during or subsequent to the project;
- EMA establishes that the land to be donated is free of encumbrances or encroachment. This includes land which will host the new garden activities that must be screening for resettlement and livelihood impact following the Project's ESMF screening template;
- There shall be no loss of income when people transferred to other land;
- The impacts of and extent of the proposed activities must be fully explained to the land custodian;
- For family lands, family members (including spouses) must be aware of the land readjustment, in order to minimize the risks of cross-generational conflicts;
- The public participation further seeks to establish that the land custodian is:
 - the legitimate holder/user of such land;
 - fully informed of the purpose of the land readjustment;
 - aware that refusal is an option, and that right of refusal is specific in the donation document the land custodian will sign
 - aware of the implication of exchanging the land and does so without coercion, manipulation or any form of threat of retribution.
- Readjustment of land cannot occur if it requires any physical household relocation;
- Verification must be obtained from each person readjusting land and confirmation by witnesses;
- Any readjusted land that is not used for its agreed purpose by the project is returned to the donor;
- All people involved should have easy access to information and complaint mechanism;
- All people who transfer to other land shall agree to not go back to the land they were prior to the transfer;
- The land readjustment can only occur with the consent of individuals using or occupying the land. For verification, each land custodian involved in the project must sign the agreement provided in Appendix x
- No relocation is required

Voluntary land readjustments should only be authorized for activities if they can clearly document (a) Informed Consent and (b) Power of Choice. Any land readjustment has to be approved by the World Bank.

Each instance of voluntary land readjustment in the Project must be documented. This requires written notification indicating the location and amount of land that is sought and its intended use for the activity, and requires a formal statement of readjustment, establishing informed consent and signed by each owner or user involved. Taxes to be paid by the land donator for registration of the land transfer, if applicable, should be covered in full by the implementation agency. The implementation agency maintains a record with documentation for each instance of land readjustment. The documentation is made available for review in any grievance that may arise, and is provided to the World Bank upon request.

The project must specify means by which land donors (and, potentially, persons whose use or occupancy was not recognized in the transfer of land) may raise grievances, and measures to ensure consideration of, and timely response to, grievances raised. The grievance process includes participation of reviewers not directly affiliated with

the project implementing agency. Grievances may be referred to customary conflict mediation arrangements where they are not directly affiliated with traditional leaders who are a party to the donation process. Alternatively, grievances may be referred to the GRM of the Project. The grievance process imposes no cost upon those raising grievances, and participation in the grievance process does not preclude pursuit of legal remedies under the laws of Zimbabwe.

All family members (including spouses) must be aware of the readjustment, in order to minimize the risks of women users of the land to be readjusted being passed over in decision-making on land readjustment and the risks of cross-generational conflicts. Individuals using or occupying community or collective lands must also be aware of the readjustment to minimize risks of settlers or migrants being passed over in decision-making on land readjustment. The prior assessment of an activity shall also take into consideration temporary users of lands and/or eventual access issues for them, including to water sources and in such cases ensure agreement on the activity with such groups.

Annex 3. Land Readjustment Consent Form / Land Use Agreement

The following form will be translated into local languages, so that a dual-language form will be used.

The following agreement has been made on day of between Mr./Ms., aged, resident of zone, district (the land custodian being transferred) and (the Village Head).

1. That the land under village head..... is a part of, is surrounded from eastern side by....., western side by....., northern side by, and southern side by.....
2. That the custodian holds the transferable rights of land (area in square meters), in.....village, at the above location (include a copy of the certified map, if available).
3. That the land the custodian is being transferred to is free of squatters, no people with customary rights or no legal title are using it, no household relocation will be needed and that there is no dispute on ownership or any other encumbrances in regards to the land.
4. That the custodian maintains or increases his/her land size with only a maximum of a 10% reduction being allowed to maintain the farmer's livelihood at current levels.
5. That the custodian has been appropriately informed and consulted about the project and the choices available (including refusal) as well as possible ways to address grievances.
6. That the custodian, Mr/Mrs/Miss.....(name of farmer) agrees to be transferred from current horticultural land in.....village to.....village to comply with the Environmental Management Act (CAP 20:27) as read with SI7 of 2007 which prohibits stream bank cultivation.
7. That the custodian will continue with farming activities on the new piece of land without any obstruction.
8. That the village head(name of village head) agrees to accept this transfer with and observes the conditions laid above.

Name and Signature of the custodian

.....

(Signature, name and village)

Name and Signature of Village Head

.....

(Signature, name and village)

Name and Signature of Witnesses 1:

.....

Signature, name and village)

Name and Signature of Witnesses 2:

.....

(Signature, name and village)

Approved by Paramount Chief

.....

(Signature, name and village)

Annex 4. Previous Stakeholder Engagement Activities

A joint World Bank and UNOPS team went to a field visit to the Province of Mutare, specifically Chimanimani and Chipinge districts from 17 May – 19 May 2019. The team consisted of 14 World Bank members and 5 UNOPS members. The team undertook consultations with a variety of stakeholders. It consulted with cluster coordinators and different humanitarian partners, Government representatives, members of the Civil Protection Unit (CPU) at different levels, and relevant CPU committee chairpersons and members, as well as with members of the business community. It further undertook site visits into affected sites and communities.

The team further undertook consultations in Harare with the relevant government offices and Ministries, as well as all potential implementing UN partners, international NGOs, and bilateral donors.

Engagements have been conducted with some of the UN technical leads, including OCHA, WFP and UNICEF. These meetings will be continued until the 31st of May 2019.

The mission visit to Mutare Provincial CPC and to Chimanimani and Chipinge district CPCs had the objective to appraise the stakeholders at the different levels about the proposed ZIRP as well as provide an opportunity for the WB and UNOPS mission team to visit the two most affected districts to appreciate the situation on the ground as well as the impact of the cyclone.

The meetings started by giving the stakeholders the details of the proposed project, timelines, budget, parameters of implementation including restrictions, collaboration mechanisms and possible interventions among other things. After that opportunity was given to the committees at the different levels to appraise the mission team on the status of the responses already taking place, as well as the gaps in each sector.

Feedback from the meetings and visits included:

- In the cluster meeting it was revealed that there is significant need for coordination and collaboration so as not to duplicate efforts and hence have value for money;
- The CPCs at the different levels appraised the mission of the gaps in responses and the resulting plans of the government.
- It was indicated that not much had been done in terms of assistance to the affected communities, except for assessments, and that there was still significant need.
- The stakeholders also indicated the need for housing and support to the CPC structures, but the team explained that this would not be possible since the grant will only support community infrastructure.

From the meetings and field visits the key outcomes were:

- Full understanding of the modalities of the proposed project by the stakeholders
- Improved understanding of the status of the different responses and gaps, based on the presentations, which were done by the different CPC sub committees and the bilateral meetings, which were done with the different sub committees.
- Improved appreciation of the mission team on the impact of the cyclone as well as actors who are on the ground, and understanding of what was exactly being done, gaps etc.
- Key contacts with the stakeholders at the different levels were established and this led to continued engagement and consultations, part of which was there disclosure of the ESCP and SEP on the 4th of June 2019

Annex 5. Permits, Consents and authorizations from relevant authorities

Each Technical Leads and the UNOPS Infrastructure Management Office in Mutare will be responsible for the following:

- Obtain or assist in obtaining, as appropriate, the permits, consents and authorizations that are applicable to the Project from relevant national authorities.
- Comply or cause to comply, as appropriate, with the conditions established in these permits, consents and authorizations throughout Project implementation.
- This will be handled specific as per component, and according to the Zimbabwe EMA Act
- Obtain Environmental Compliance Certificate from EMA in line with the Zimbabwe Environmental Management Act.

Annex 6. TOR Gender-Based Violence, Sexual Exploitation and Abuse, and Child Protection Assessment

1. Introduction

Emergency and post-emergency operations are implemented in a context of exacerbated risk for gender-based violence (GBV), sexual exploitation and abuse (SEA) and decreasing rights for children. Activities linked to development projects may compound the broader contextual risks present at community level. Project-related risks include the size and scale of a project, the scale of labor influx, the extent to which a community has capacity to absorb labor influx or requires separate camp facilities, and the geographic location of project activities (e.g., whether project activities occur in urban environments or in isolated rural areas where mechanisms for prevention and redress may be less available). Income in the hands of migrant workers can also create or worsen existing power imbalances between workers and members of the community, in particular for women and children. Identifying and understanding project-related risk factors as they interact with contextual risk factors is critical for development of appropriate prevention measures in project design.

2. Objectives

The objectives of the GBV Action Plan (Action Plan) are to:

1. Develop operational project mitigation activities for GBV, gender equality, and child protection in the Project area, including detailed procedures for grievances related to abuse.
2. Based on the existing referral pathways that provide protection to victims of abuse, develop recommendations for project interventions that can sustainably enhance the existing pathways.

Task 1: Operational project mitigation activities

Assess the existing GBV risk management systems in place by UN technical leads under the project as well as activities developed by the GBV sub-cluster and child protection cluster. Assess the adequacy of existing procedures and develop gap-filling measures to adhere to World Bank standards. This should result in a detailed operational work plan to enhance social inclusion and gender quality, as well as mitigate GBV, SEA and promote child protective measures. The measures should strengthen the operations/sectors overall ability to manage cases of abuse. The work plan activities should, as a minimum:

- **Consultations.** Assess the need for a set of additional consultations with women, children and other vulnerable groups to take place during upcoming implementation support missions, in order to understand potential risks and the best ways to make project benefits accessible.
- **Worker Code of Conduct and associated training.** Support the development or adaptation of Codes of Conduct (CoC)/training modules for workers based on good practice, as well as an implementation plan/ToRs for staff at the level of contractor or PIU to oversee SEA/GBV and child protective prevention or responses. Support the PIU in rolling out the CoC, including training PIUs or workers as needed, and document the process of implementation including challenges and lessons learned.
- **Grievance.** Identify all currently functioning channels available to lodge GBV or child protective complaints and whether they provide services that are confidential and free of risks of stigmatization and reprisal (e.g. staffed by suitably trained female staff; available for 24 hours; operators equipped with information on GBV service providers to make timely referrals to these services, as needed etc.). Assess the feasibility of other response options, such as mobile response teams or contracting with a GBV specialist service provider. Convene discussion with potential stakeholders to estimate the number of cases that may be reported within the project areas, to determine the feasibility and likely cost of putting in place such a response system and support the project in putting it in place. Develop or adapt the existing Standard Operating Procedures for a Grievance Mechanism (GM) based on good practices in

order to effectively collect information on instances of GBV/SEA and child protection in coordination with the project PIU. Support the PIU in rolling out the GM, including training PIUs or workers as needed, and document the process of implementation including challenges and lessons learned.

- **Community awareness.** Provide recommendations and costing for the implementation of community awareness raising activities that include the risk of SEA related to the project, the code of conduct for workers, the GM and the ways in which the community members can safely report concerns.
- **Staff training.** Provide recommendations and support for training of PIU and technical lead staff on GBV, on developing ToRs for a GBV expert to be hired by the PIU (if relevant) and on promoting the inclusion of women, girls, children or other vulnerable groups in the project.
- **Schools.** Assess feasibility, mechanism and costing for integrating a GBV prevention and child protective interventions in schools focusing on changing social norms using a whole of community approach
- **Health posts.** Assess feasibility, mechanism and costing for integrating a GBV prevention and child protective interventions via community health workers focusing on changing social norms using a whole of community approach

Task 2: Sustainable project investments in referral pathway

Conduct a quality assessment of the current GBV and child protective referral pathway service providers make available in the project-affected communities using good practice standards of care. Assess their capabilities to provide quality services. Assess if currently available GBV and child protective referral system, if any, is functional meeting the following key elements: at least one service provider for health, psychosocial, safety and protection and, as appropriate and feasible, legal and other support, in a given geographical area; services are delivered in a manner consistent with the GBV guiding principles; GBV service providers understand how and to whom to refer survivors for additional services; GBV service providers demonstrate a coordinated approach to case management, including confidential information sharing and participation in regular case management meetings to ensure that survivors have access to multi-sector services; GBV data collection, including standardized intake and referral forms, is undertaken in a safe and ethical manner; referral pathways identify all available services and are documented, disseminated and regularly updated, in a format that can be easily understood.

The assessment should seek the following questions: what services exist? Are they safe, accessible and adequately staffed? Are minimum standards of GBV or child protective service delivery met or is further capacity building required? Identify already existing directories of service providers to create a fuller picture of all relevant stakeholders on the ground. Based on the assessment, develop recommendations for project interventions that can sustainably enhance the existing pathways. The assessment should, as a minimum:

- **Shelters.** Identify all currently functioning, accessible shelters for the GBV or child abuse survivors and assess their quality, availability and accessibility; identify basic services they provide; their staffing; define their eligibility criteria for admission; identify how long they have been in service; number of residents being served; type of the facilities and their sources and sustainability of funding. As with all other activities, collect only secondary data from the management of shelters so as not to increase distress to the survivors and to protect their privacy - in line with the ethical recommendations of the WHO regarding research on violence against women and children.
- **Health providers.** Pay special attention to health care providers since high quality, confidential and integrated healthcare service is a critical component of a multi-sector response to GBV and child abuse, including psycho-social support. Map if and which healthcare providers provide quality health care that ensures implementation of the Minimum Initial Services Package for reproductive health (including post rape treatment supplies and other relevant clinical supplies). Also, assess if services are age-sensitive, e.g. for boys and for girls. Assess if health care providers offer services that are appropriate to male survivors of GBV.

- **Barriers.** Identify barriers to survivors accessing multi-sector services: e.g. transport, language, literacy; fear of discrimination; knowledge of services, etc. Particularly focus on the barriers faced by minorities, e.g. displaced women or children, women or children living in particularly difficult to reach areas, transgender, etc. Reflect these barriers into the design of the referral pathway and complaints channels.

3. Methodology

a. Desk review and analysis of relevant project documents

- Project documents, ESF instruments
- Systems put in place by the relevant operations. This will include Incident Reporting Procedures; Terms of Reference or existing Codes of Conduct for Contractors, Supervising Engineer; monitoring reports by contractors, GM manual and reports as well as fact finding reports on any previous allegations of GBV/SEA or child abuse. This could include examining processes for implementing and monitoring COCs, collecting and analyzing information on actual/potential risk factors for vulnerability to sexual exploitation and abuse and elaborating measures to address them.
- Analyze the systems currently in place against the four-pillar framework on Protection from Sexual Exploitation and Abuse (PSEA) on developed in 2008 by the UN/NGO PSEA Task Force. This was the framework used for a similar assessment carried out in Tanzania for the Southern African Trade and Transport Facilitation Project in July 2017.
- Good practices for accountability measures, including CoCs, GMs and GBV/SEA risk, child abuse mitigation and prevention measures relevant to the project.

b. Key informant interviews

- Semi-structured interviews with key stakeholders (Government Counterparts/implementing/technical leads, NGO staff, relevant WB Program Leaders, Task Teams and Social specialists, other WB staff providing oversight in terms of GBV/SEA prevention/response). The primary purpose of these interviews is to fully understand the set of measures put in place to address GBV/SEA or child abuse in key sectors and the extent to which they meet global best practice requirements, as well as to understand the feasibility of initially proposed retrofitting recommendations.
- Meet with the technical leads in order to review prevention and response processes, including staff training and monitoring, existence of complaints mechanisms, including community awareness raising such as making a complaint, and availability/provision of survivor-centered services for an alleged survivor.
- Assess comprehensiveness of clear and confidential protocols to be followed if cases of GBV/SEA or child abuse are reported (linking survivors to services and avoiding re-victimization). If gaps are identified make recommendation to, i) strengthen the reporting response framework outlining procedures and guidelines targeting government partners and contracting firms associated with the project; ii) develop recommendations to strengthen the referral pathway for survivors that should be implemented as soon as a case is reported, verified or not.

4. Deliverable and Timeline

Gap assessment of GBV/SEA/Child Protection risks and impacts and a resulting Action Plan	Prior to Project effectiveness (20 July 2019)
An assessment of the current GBV and child protective referral pathway service providers available in the project-affected communities and quality of care using good practice standards of	<i>30 August 2019</i>

care.	
Code of Conduct and Standard Operating Procedures for GRM focusing on complaints regarding SEA/GBV, including trainings	<i>30 August 2019</i>

Required Expertise

- Minimum of 5 years of relevant experience on gender, with a particular focus on gender-based violence.
- Proven skills and demonstrated expertise with qualitative design, methods, and data analysis.
- Proven experience with social assessments or other participatory research methodologies.
- Excellent knowledge of guiding principles and best practices pertaining the collection of information related to GBV, including the WHO 2007 Guidelines
- Expertise in the development of technical papers and report as well as programmatic guidance related to violence against women and children, in particular sexual violence, gender and child protection
- Experience at country/regional level
- Good understanding of the World Bank's Environmental and Social Framework and/or UN Gender Equality and Women's Empowerment strategies

Annex 7. Procedures for Managing Contractors

Bidders receive key documentation outlining the requirements of the ESMF and relevant ESMPs, as well as UNOPS Health & Safety requirements (see UNOPS Health & Safety Management Plan). The selected contractor shall comply with all UNOPS Social & Environmental as well as Health & Safety requirements for the duration of the contract. These requirements equally apply to sub-contractors. It is the contractor's responsibility to ensure that subcontractors comply and to demonstrate such compliance in submittals and during verification processes by UNOPS.

If pre-bid meetings, site visits and / or contract commencement meetings are carried out, the Social & Environmental and Health & Safety requirements and submittals should be discussed, both for day-to-day work and for Social and Environmentally critical stages or activities.

In the event that security personnel is used for the sub-projects, the contractor shall develop and implement measures and actions to assess and manage the risks to human security of project-affected communities and project workers that could arise from the use of security personnel.

- Codes of conduct are required of contractors and subcontractors and their workers;
- Preparation of a detailed contractor ESMP (C-ESMP) that is costed, with sufficient budget to mitigate E&S risks
- Monitor contractor commitment and compliance
- Ensure contractors provide details on contractor's oversight on environmental, social, health and safety (ESHS) performance
- Contractor to develop a grievance mechanism to handle concerns of their employees
- Contractor shall prepare a Labor Management Plan (LMP)

Annex 8. Labor Management Procedures - Outline

The Labor Management Procedures will be completed prior to effectiveness of the Project.

Overview of Labor Use on the Project

Number of Project Workers:

An estimate of xx Project workers will be deployed in the duration of the Project. Project workers will consist of contracted workers and community workers.

Characteristics of Project Workers:

Workers will be mostly recruited from local communities, including contracted workers, who will be recruited by local contractors. Workers will be male and female and will not be under the minimum age.

Timing of Labor Requirements:

Labor requirements will be all throughout Project implementation. Exact numbers and timing are unknown at this point. Types of jobs and skills required are listed below.

Contracted Workers: It is not known yet how many numbers and types of contractors/subcontractors and likely project workers will be employed or engaged by each contractor/subcontractor. Only UNOPS will be deploying contractors. WHO and UNICEF will employ community workers.

Assessment of Key Potential Labor Risks

Project activities:

Project activities will be implemented across three Provinces (Manicaland, Masvingo, and Mashonaland East), and nine following districts: Chimanimani, Chipinge, Buhera, Mutare urban, Mutare rural, Bikita, Gutu, Mutasa, Chikomba.

The main activities for community workers will be: debris removal, replanting vegetation, collecting debris for reconstruction, setting up of tree nurseries, rehabilitation of community health posts, toilets, latrines, boreholes, small piped schemes fed by boreholes or springs, ancillary infrastructure, solid waste facilities (landfill, dump sites, public bins, composting)

The main types of activities for contracted workers will be: reconstruction of storm drains, contours, terraces, waterways and water diversion structures; reclamation of gullies by constructing gabions; desilting of weirs; revitalization of irrigated land; rehabilitation of facilities; removal of debris and damaged trees; rehabilitation of simple infrastructure; more complicated civil works (heavy equipment), stabilize solid and large boulders; rationalize and formalize river beds; rehabilitate retaining walls, culverts, gullies, buffer zones, embankments, small reservoirs, storm-water drainage, and other; solid retaining and drainage structures; debris removal.

Key Labor Risks: The key labor risks that may be associated with the project (see, for example, those identified in ESS2 and the GN). These could include, for example:

Since the labor mostly concerns rehabilitation of community infrastructure, no heavy machinery, work in heights, or any other potential risks associated with heavy construction activities are anticipated.

The following moderate risks have been identified:

- Risks of labor influx or gender based violence
- Risk of domestic violence due to money-influx
- Possible accidents or emergencies, with reference to the sector or locality

- General understanding and implementation of occupational health and safety requirements

Brief Overview of Labor Legislation: Terms and Conditions

This section sets out the **key aspects** of national labor legislation with regards to term and conditions of work, and how national legislation applies to different categories of workers identified in Section 1. The overview focuses on legislation that relates to the items set out in ESS2, paragraph 11 (i.e. wages, deductions and benefits).

Brief Overview of Labor Legislation: Occupational Health and Safety

This section sets out the **key aspects** of the national labor legislation with regards to occupational health and safety, and how national legislation applies to the different categories of workers identified in Section 1. The overview focuses on legislation that relates to the items set out in ESS2, paragraphs 24 to 30.

Responsible Staff

This section identifies the functions and/or individuals within the project responsible for (as relevant):

- engagement and management of project workers
- engagement and management of contractors/subcontractors
- occupational health and safety (OHS)
- training of workers
- addressing worker grievances

In some cases, this section will identify functions and/or individuals from contractors or subcontractors, particularly in projects where project workers are employed by third parties.

Policies and procedures

This section sets out information on OHS, reporting and monitoring and other general project policies. Where relevant, it identifies applicable national legislation.

Where significant safety risks have been identified as part of Section 2, this section outlines how these will be addressed. Where the risk of forced labor has been identified, this section outlines how these will be addressed (see ESS2, paragraph 20 and related GNs). Where risks of child labor have been identified, these are addressed in Section 7.

Where the Borrower has stand-alone policies or procedures, these can be referenced or annexed to the LMP, together with any other supporting documentation.

Age of Employment

This section sets out details regarding:

- The minimum age for employment on the project
- The process that will be followed to verify the age of project workers
- The procedure that will be followed if underage workers are found working on the project
- The procedure for conducting risk assessments for workers aged between the minimum age and 18

See ESS2, paragraphs 17 to 19 and related GNs.

Terms and Conditions

This section sets out details regarding:

- Specific wages, hours and other provisions that apply to the project

- Maximum number of hours that can be worked on the project
- Any collective agreements that apply to the project. When relevant, provide a list of agreements and describe key features and provisions
- Other specific terms and conditions

Grievance Mechanisms

This section sets out details of the grievance mechanism that will be provided for direct and contracted workers and describes the way in which these workers will be made aware of the mechanism.

Where community workers are engaged in the project, details of the grievance mechanism for these workers is set out in Section 11.

Contractor Management

This section sets out details regarding:

- The selection process for contractors, as discussed in ESS2, paragraph 31 and GN 31.1.
- The contractual provisions that will put in place relating to contractors for the management of labor issues, including occupational health and safety, as discussed in ESS2, paragraph 32 and GN 32.1
- The procedure for managing and monitoring the performance of contractors, as discussed in ESS2, paragraph 32 and GN 32.1

Community Workers

Where community workers will be involved in the project, this section sets out details of the terms and conditions of work, and identifies measures to check that community labor is provided on a voluntary basis. It also provides details of the type of agreements that are required and how they will be documented. See GN 34.4.


This section sets out details of the grievance mechanism for community workers and the roles and responsibilities for monitoring such workers. See ESS2, paragraphs 36 and 37.

Primary Supply Workers

Where a significant risk of child or forced labor or serious safety issues in relation to primary suppliers has been identified, this section sets out the procedure for monitoring and reporting on primary supply workers.

Annex 9. UNOPS Form EM03 Social and Environmental Screening Report

The existing tools will be updated to be aligned with the requirements of the WB ESF.

 UNOPS	Social and Environmental Screening Report - ZIRP <i>based on © UNOPS 2017, v 2.0</i>
<p>Projects are screened for their inherent social and environmental risks regardless of planned mitigation and management measures. It is necessary to identify potential inherent risks in the event that mitigation measures are not implemented or fail. This means that risks should be identified as if no mitigation or management measures were to be put in place.</p>	
SECTION A: General Information	
Date of screening	
Project title	
Proposed project budget	
Proposed project duration	
Implementing BU	
Project manager/ Developer	
Officer responsible for social & environmental screening	
Brief outline of the project scope	
Service line	
Role	
Site/No site	
Does the project need to screen?	

SECTION B: Is the level of Social/Environmental risk already known?
Section B.1: To which list does the project belong?

Please select the relevant List; if the project type is not listed, please specify. The lists are indicative and provide examples of projects that are normally falling into list A, B or C.

List A: Minimal or no adverse environmental or social risks and/or impacts	List B: Moderate or unknown adverse environmental or social risks and/or impacts	List C: High adverse environmental or social risks and/or impacts
<ul style="list-style-type: none"> - Communication and translations - Small training and workshops - Management of funds and grants - Management of social protection activities 	<ul style="list-style-type: none"> - All projects which are not included in lists A or C. <p><i>Typical examples are small and medium scaled infrastructure (e.g. rural roads, schools, hospitals, housing, buildings, etc.), energy for small-scale development, water supply and sanitation, waste management, agriculture and irrigation, support and advice, etc.</i></p> <p>Other: _____</p>	<ul style="list-style-type: none"> - Large infrastructure projects - Long distance roads, rail, transmission lines (water, power) - Waste treatment and disposal installations - Large water and wastewater treatment plants - Large-scale irrigation - Projects involving significant quantities of hazardous substances <p>Other: _____</p>
Select List:		

Section B.2: Has an Environmental/Social Assessment that covers the project already been completed?

Has an environmental/social assessment (ESR or ESIA) that covers the project already been completed by the government, donors or other partners and is available?

Section B.3: Does the Environmental and/or Social Assessment completed by Donor meet UNOPS requirements substantively?

What to look for?	Yes	No
Description of the project.		
Description of the existing site/environment/communities – baseline for assessment.		
Description of the aspects of the environment likely to be affected.		
Description of the social aspects likely to be affected.		
Description of the likely impacts of the proposed project.		
Summary of the relevant local laws and legislations.		
Outline of the main alternatives.		
Description of the measures to prevent, reduce and where possible offset any adverse impacts on the environment and on societies.		
Limitations of the report.		

SECTION C1: Potential Environmental/Social Impacts of the project – FOR PROJECTS WITH A PHYSICAL SITE OR ACTIVITIES

(Please check each line appropriately. At this stage, questions are answered without considering magnitude of impact – only yes, no or I don't know are applicable answers)

	Yes	No	I don't know	If these risks are present, refer to:	Comments:
BIODIVERSITY					
Will the project require the acquisition or conversion of significant areas of land?				Biodiversity Requirements & Guidance	
Is the project located in proximity of protected areas or other areas classified as vulnerable?					
Will the project affect fragile, protected or endangered ecosystems or species? (e.g. natural forests, wetlands, estuarine, coral reefs, mangroves, endemic species, endangered species etc)					
Can the project cause disruption of wild life migratory routes?					
Can the project introduce alien species or GMOs?					
Can the project impact ecosystems upon which communities rely for food, water, fibers or other basic needs, including cultural and spiritual needs?					
Will the project involve natural forest harvesting or plantation development without an independent forest certification system for sustainable forest management?					
Does the project involve harvesting or depletion of natural resources (e.g. forest, fisheries, etc)?					
Are the needs of the project likely to exceed the capacity of existing water supply, sanitation systems, transport or other infrastructure?					
Will the project involve extraction, diversion or containment of surface groundwater?					
LAND DEGRADATION					
Is the project likely to cause soil erosion, siltation or degradation?				Biodiversity Requirements & Guidance	
Is the project located directly on river embankments?					
Will construction, operation or decommissioning of the project involve physical changes, such as topography or land use (e.g. construction camps, housing, etc.)?					
Will the project require accommodation or services for the workforce?				ref. to the Health and Safety Management System	
Is the project located in area prone to recurrent natural disasters? (e.g. floods, cyclones, etc.)				Disaster risk analysis Requirements & Guidance	
NATURAL RESOURCES					
Will the project require (during execution or after completion) significant amounts of water, energy, materials or other natural resources?				Resource efficiency Requirements & Guidance	
POLLUTION (from routine, non-routine or accidental sources)					
Will the project result in the production of solid waste? (directly by the project or by workforce)				Waste Management Requirements & Guidance	
Will the project result in the production of toxic or hazardous waste? (e.g. used oils, inflammable products, pesticides, solvents, pharmaceuticals, industrial chemicals, ozone depleting substances)					
Will the project produce effluents (waste water)?					
Will the project produce air pollution? (e.g. significant greenhouse gas emissions, dust emissions and other sources)				Pollution prevention Requirements & Guidance	
Can the project affect the surface or groundwater in quantity or quality? (e.g. discharges, leaking, leaching, boreholes, etc.)					
Will the project require use of chemicals? (e.g. fertilizers, pesticides, paints, etc.)					
Is there any risk of accidental spill or leakage of material?					
Is there a significant risk of fire, explosion or other emergency situations?				ref. to the Health and Safety Management System	
Will the project produce significant noise pollution, disturbing nearest settlement?				Community health, safety, security Requirements & Guidance	

SOCIAL

Will the project lead to the displacement of a population? (e.g. forceful relocation, relocation of the local community or in-migration to the area)				Displacement and resettlement Requirements & Guidance	
Will the project lead to significant population density increase (short and long-term), affecting environmental sustainability and social infrastructure?				- Community health, safety, security Requirements & Guidance - Resource efficiency Requirements & Guidance	
Will the project lead to an increase in population movement and (interregional) traffic?					
Is the project located in a conflict area, or has the potential to cause social problems and exacerbate conflicts, for instance, related to land tenure and access to resources				Conflict Sensitivity Requirements & Guidance	
Will the project be located in or close to a site of natural or cultural value?				Cultural heritage Requirements & Guidance	
Is the project site known to have the potential for the presence of cultural and natural heritage remains?					
Are there Indigenous People in the project area? Can they be negatively affected in their livelihoods (e.g. land ownership issues, access to resources, loss of				Indigenous people Requirements & Guidance	
Does this project have the potential for discriminatory impact on particular groups of individuals? (e.g. products or services are inaccessible to certain disadvantaged or vulnerable groups - women and girls; persons with disabilities; racial, ethnic, national or religious groups; indigenous groups; particular age groups, etc.)				Human Rights Requirements & Guidance	
Would the project potentially discriminate against women and girls based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?				Gender Equality Requirements & Guidance	
Can the project have adverse impacts on human rights (e.g. civil, political, economic, social or cultural) of people who interact with it and especially marginalised groups?				Human Rights Requirements & Guidance	
Does the project involve support for employment that may fail to comply with national and international labour standards (i.e. ILO fundamental conventions)?				Labour and working conditions Requirements & Guidance	
Will the project be located in a densely populated area?				Community health, safety, security Requirements & Guidance	
Does the project have health, safety and/or security consequences for local communities? (e.g. increased spread of disease or violence by influx of workers in the area)					
Is there a risk that the project fails to comply with UNOPS health and safety policies?				ref. to the Health and Safety Management System	
GENERAL					
Is an Environmental and/or Social Assessment required by the law of Zimbabwe where project is undertaken?					
Is there a risk that the project cannot be partially or fully maintained after handover, thus impacting the delivery of the planned outcomes?					
Is there a risk that the project fails to incorporate measures to allow meaningful, effective and informed consultation of stakeholders, such as community engagement activities?					

SECTION C2: Potential Environmental/Social Impacts of the project – FOR ADVISORY PROJECTS AND PROJECTS WITHOUT A PHYSICAL SITE

(Please check each line appropriately. At this stage, questions are answered without considering magnitude of impact – only yes, no or I don't know are applicable answers)	Yes	No	I don't know	If these risks are present, refer to:
BIODIVERSITY				
Will the project through its activities, advice provided or indirect influence potentially affect biodiversity or habitats? For example, can the project:				
... influence the management of protected areas or other areas classified as vulnerable?				Biodiversity Requirements & Guidance
... have indirect impacts on fragile, protected or endangered ecosystems or species? (e.g. natural forests, wetlands, estuarine, coral reefs, mangroves, endemic species, endangered species etc)				
... be indirect cause of disruption of wild life migratory routes?				
... deal with or potentially influence the introduction of alien species or GMOs?				
... indirectly cause adverse impacts on priority ecosystem services?				
... deal with access to and sharing of genetic resources?				
... deal with or influence management and/or conservation of living natural resources, for example through forest harvesting, plantation development, fisheries, etc?				
... deal with extraction, diversion or containment of surface groundwater?				
... result in changes in the capacity of existing water supplies, sanitation systems, transport or other infrastructure?				
LAND DEGRADATION				
Will the project through its activities, advice provided or indirect influence potentially affect soil quality or coastal or river embankments? For example, can the project:				
... influence physical changes, such as topography or land use (e.g. land assessments, agriculture studies, etc.)?				Biodiversity Requirements & Guidance
... deal with areas prone to recurrent natural disasters? (e.g. floods, cyclones, etc.)				Disaster risk analysis Requirements & Guidance
WASTE and POLLUTION (from routine, non-routine or accidental sources)				
Will the project through its activities, advice provided or indirect influence potentially influence waste generation or pollution? For example, can the project:				
... result in changes in the type and quantities of waste generated in the project area?				Waste Management Requirements & Guidance
... implement activities that indirectly result in the production of toxic or hazardous waste? (e.g. used oils, inflammable or explosive products, pesticides, solvents, pharmaceuticals, industrial chemicals, ozone depleting substances)				
... implement activities that indirectly result in air pollution? (e.g. significant greenhouse gas emissions, tailpipe emissions or other sources)				Pollution prevention Requirements & Guidance
... require use of chemicals? (e.g. fertilizers, chemical reagents, biological agents, etc.)				
... produce significant noise pollution, disturbing nearest settlement?				Community health, safety, security Requirements & Guidance

SOCIAL

Will the project through its activities, advice provided or indirect influence potentially affect people and communities rights and well-being? For example, can the project:

... lead to significant population density increase (short and long-term), affecting environmental sustainability and social infrastructure?				- Community health, safety, security Requirements & Guidance - Resource efficiency Requirements & Guidance
... lead to an increase in population movement and (interregional) traffic?				
Is the project located in a conflict area, or has the potential to cause social problems and exacerbate conflicts, for instance, related to land tenure and access to resources (e.g. providing unequal benefits to communities in conflict)?				Conflict Sensitivity Requirements & Guidance
... deal with elements of natural or cultural value, including intangible cultural heritage?				Cultural heritage Requirements & Guidance
... Affect or interact with Indigenous People? Can they be negatively affected in their livelihoods (e.g. land ownership issues, access to resources, loss of downstream beneficial uses such as water supply or fisheries) or belief systems?				Indigenous people Requirements & Guidance
... potentially have a discriminatory impact on particular groups of individuals? (e.g. products or services are inaccessible to certain disadvantaged or vulnerable groups - women and girls; persons with disabilities; racial, ethnic, national or religious groups; indigenous groups; particular age groups, etc.)				Human Rights Requirements & Guidance
... potentially discriminate against women and girls based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?				Gender Equality Requirements & Guidance
... Potentially have adverse impacts on human rights (e.g. civil, political, economic, social or cultural) of people who interact with it and especially marginalised groups?				Human Rights Requirements & Guidance
... involve support for employment that may fail to comply with national and international labour standards (i.e. ILO fundamental conventions)?				Labour and working conditions Requirements & Guidance
... the project have health, safety and/or security consequences for local communities? (e.g. risk of increased spread of disease or violence)				Community health, safety, security Requirements & Guidance

GENERAL

Is there a risk that the project cannot be partially or fully maintained after handover, thus impacting the delivery of the planned outcomes?				
Is there a risk that the project fails to incorporate measures to allow meaningful, effective and informed consultation of stakeholders, such as community engagement activities?				

SECTION D: Overview of Screening results		
<i>This page provides an overview of the outcome of the Screening process for this project</i>		
Project profile	Service line	0
	Role	0
	Type of project	0
	PRE-SCREENING ASSESSMENT	RECOMMENDATION
	Does the project need to screen based on UNOPS role?	
	Does the project need to screen based on project type?	
Only for projects requiring an ESIA	Has an environmental/social assessment (ESR or ESIA) that covers the project already been completed by the government, donors or other partners and is available?	0
	Does the Environmental and/or Social Assessment completed by Donor meet UNOPS requirements substantively?	
	SOCIAL AND ENVIRONMENTAL SCREENING	RECOMMENDATION
For projects with site(s)	Screening results	0
	Additional assessment necessary?	
	Next steps in the Social and Environmental Management system	
For projects without site	Screening results	0
	Next steps in the Social and Environmental Management system	

Annex 10. UNOPS Environmental and Social Risks and Opportunities form EM 04



Register of environmental and social risks - EM 04

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Instructions - All fields are mandatory

1: Activity: Shortly describe all main activities that take place in the office/project.

2: Environmental/Social aspect: Describe the environmental and/or social aspects that interacts with the environment and with the society. Note that one activity can potentially entail more than one environmental and/or social aspect.

3: Lifecycle stage: Indicate at which stage of the lifecycle of a product/service this aspect is occurring.

4: Potential impact: Describe the risk or opportunity that will occur in the environment and/or society due to this aspect.

5: Significance: Select the significance of the risk.

6: Action required: Describe what action(s) could be taken to address this risk, either for mitigation of a threat or for enhancement of an opportunity.

Office/Project:

Date:

[illegible]

Annex 11. Environmental and Social Management Plan (UNOPS form EM 01)

Introduction

Intro and scope of the Project S&E Management Plan

UNOPS recognizes its responsibility to protecting the environment and to promoting positive societal outcomes in the communities in which we work. This Project Social and Environmental (S&E) Management Plan (hereafter “the Plan”) describes how UNOPS intends to manage environmental and social issues under the sphere of influence of this project. It identifies the procedures to be followed by all personnel working in the project.

[DELETE PRIOR TO USE - Consideration needs to be taken as to whether UNOPS is delivering a typical management-based project (assurance role) or direct implementation project. Roles and responsibilities may vary accordingly and must be defined at the inception of the Plan. Please note that the Project Manager holds the overall responsibility for the environmental and social management in the project.]

[DELETE PRIOR TO USE – UNOPS operates with 3 Levels of performance in its Social and Environmental Management standards. The Project Manager should refer to 3 Levels system guidance to ensure that the applicable processes and performance levels are complied with.]

This Plan is a live document that will be reviewed on the regular basis and updated if necessary.

Project description and key dates

Table 1 – Project details

Project Title	
Project Location	
UNOPS Project No.	
Project Duration	
Project Social and Environmental Management Level	<i>[Indicate if this is a Level 1 project (minimum requirements apply), Level 2 (recommended) or Level 3 (externally certified country office)]</i>
Project Overall Risk Score, and sub-scores for elements 2 and 3	<i>[Refer to design manual risk assessment]</i>
UNOPS Project Manager	
UNOPS Project S&E Manager/Coordinator	

Roles and responsibilities

While the Project Manager holds the overall responsibility for Social and Environmental Management in the Project, other roles may hold accountability, or need to be consulted and informed of various work packages (e.g. the Contractor, the Office Director, the Programme Manager, the Project Design Manager). Table 2 below outlines Roles and responsibilities for Infrastructure projects in the assurance set-up.

[If any responsibilities deviate from the table below, indicate it here.]

Table 2 - RACI Table

ACTIVITY	Director /Programme Manager	UNOPS PROJECT MANAGER	Project Engineer*	Project Design Manager*	Contractor*
Ensure that the Environmental and Social screening has been performed	A	R			
Ensure that the Environmental/Social Review and the ESIA have been performed (if applicable)	A	R			
Ensure that the risks and opportunities for the project over its life-cycle have been identified	A	R			
Draft the S&E Plan	A	R			
Eliminate foreseeable environmental and social risks through engineering design solutions	A	R		R*	
Transmit to procurement function the environmental/social requirements for contractors and suppliers	A	R			
Ensure regular liaison between parties on site on Environmental and Social matters (including regular meetings)	A	R	C		
Ensure Consultation with the workforce, visitors and affected stakeholders	A	R	C		
Ensure that Contractor(s) employ effective S&E Management techniques	A	R	C		
Ensure arrangements are in place for Site induction, training and briefings	A	R	I		R*
Ensure that Waste Management is performed according to plans	A	R	I		R*
Ensure that other environmental and social activities are performed according to plans	A	R	I		R*
Conduct site inspections according to stated frequency	A	R	C		
Compile quarterly reports of performance and report to HQ	A	R	C		
Ensure reporting of environmental accidents, incidents and high potential near-misses	R	C	I		R*
Review and update the Plan at the indicated frequency or when circumstances change	A	R			

A - Accountable (overall responsibility)

C - Consulted (supports, has the information or capability required)

I - Informed (notified but not consulted)

R - Responsible (gets the work done)

R* - refers to Work Package Responsibility

Local laws, regulations and other *compliance* requirements

Environmental and social legislation and other relevant requirements in [Insert name of country] are described in the [Local Office] legal register using form HSE03. This should also include the relevant requirements of interested parties that have been identified by the local office using form HSE02. A check for legal compliance has been performed to ensure that this project is compliant with legal and other requirements, using form HSE04.

A copy of the legal register is available [in the Annex, or other location]. UNOPS Project Manager will review these laws and regulations every [12 months] to make sure that there are no changes that may affect this plan.

Operational planning (for multiple sites, detail all site-specific information)

Social and environmental screening report

At the pre-engagement stage of the project, the project developer completed the Environmental and Social screening report (form EM03); this document is attached to this Plan as [Annex x].

[DELETE PRIOR TO USE: All risk areas identified in the Report should be further discussed and analyzed in the Register of social and environmental risks and opportunities, form EM04.]

Identified social and environmental risks and opportunities

The main environmental and social aspects of the activities, products and services that are under the project's control and influence are identified and detailed using form EM04.

[DELETE PRIOR TO USE: When completing this form, the Project Manager may make reference to the corporate register of environmental and social risks and opportunities. In addition, the Project Manager should consider impacts relevant at the locality of the project, considering a life cycle perspective. If an Environmental and Social Review, or a full Environmental and Social Impact Assessment have been performed, this should be included in the Annexes and used to inform this document.]

The full Analysis of environmental and social aspects for the project is attached to this Plan as [Annex x].

Objectives and targets

The project will have the following Environmental and Social objectives and targets:

[DELETE PRIOR TO USE: These should be informed by the major risks and opportunities identified for the projects; and should also be aligned with UNOPS corporate Environmental and Social management targets.]

Table 3 - Objectives and Targets

#	Objective	Target (measurable where practicable)	Action/Program/Resources	Responsible	Target Date
1					
2					
3					
4					
5					
6					
7					
8					
9					

[DELETE PRIOR TO USE – Project Environmental and Social objectives and targets shall be set at the beginning of the project then reviewed every six months to ensure that UNOPS meets both local and corporate commitments.]

Management of contractors and sub-contractors

Bidders receive key documentation outlining the requirements of UNOPS Environmental and Social Management Systems during the tender phase. The selected contractor shall comply with all UNOPS S&E requirements for the whole duration of the contract. These requirements equally apply to any subcontractors hired by the contractor. It is the contractor's responsibility to ensure that subcontractors comply and to demonstrate such compliance in submittals and during verification processes by UNOPS.

If pre-bid meetings, site visits and/or contract commencement meetings are carried out, S&E requirements and submittals should be discussed, both for day-to-day work and for S&E critical stages/activities.

[Include any other requirements for suppliers and sub-suppliers under this project as relevant]

Environmental and social management at project site

[DELETE PRIOR TO USE – In cases where the Contractor(s) capacity limits their ability to perform the required S&E activities at site, the UNOPS team should take the lead so that the project can fulfil UNOPS S&E requirements. The Contractor(s) should be involved in a capacity building process to build their capacity to implement S&E in the future.]

Waste Management

A Waste management plan for the project has been developed using form EM06, and is available [in the annex, or other location].

[Briefly describe waste management practices, including main waste streams that the project is separating and the waste disposal strategy].

The plan shall be monitored and updated [Insert frequency].

Gender mainstreaming

The project has considered gender mainstreaming in its activities:

[DELETE PRIOR TO USE – Add a paragraph describing what actions the projects has planned to take to mainstream gender considerations. It is highly recommended to make use of the Gender Action Plan template and include it as an Annex to this Plan. Where applicable to the project activities, the relevant Gender in Infrastructure Checklist should also be used.]

Other key topics

[DELETE PRIOR TO USE – Add a paragraph if the project has identified any additional Environmental and/or Social aspect on which is planning to take significant action. Examples of activities within the project's sphere of influence (including activities over which it has a formal control and also those where it has no formal authority but the ability to affect behaviors) that may be included in the Plan are:

Human rights due diligence;

Preventing discrimination towards vulnerable groups;

Supporting and respecting fundamental rights at work;

Promoting improvement of conditions of work and social protection;

Promoting social responsibility in the value chain;

Conflict sensitivity;

Community involvement and development.]

Site inspections

UNOPS plans to implement [insert frequency, e.g. weekly, depending on risk level] environmental and social inspection on this project. Inspection will be carried out by UNOPS site representatives and Contractor(s) Project and Environmental/Social managers.

When carrying out the site weekly inspection, all aspects contained in the Health, Safety, Social and Environmental inspection site report (form HSE05) should be reviewed.

Site induction and training

Site induction, training and briefings will be given in accordance with this training matrix:

Table 4 - Training

<i>Planned Training</i>	<i>Nominated Staff</i>	<i>Frequency</i>

The HSE training matrix (form HSE18) can be used to keep detailed records of site inductions, toolbox talks and training.

[Include additional details on training as relevant]

Emergency and evacuation procedures

Emergency information details including the site location, neighbors, emergency contact details, location of the spill kits, high priority flora/fauna, culturally sensitive sites are provided within the Site emergency and evacuation plan.

Emergency Plan and procedures including the emergency contact numbers will be available on all notice and information boards all over the project work areas and site offices; also the emergency procedures will be incorporated in the project site inductions briefing. These documents are available in [Annex xx].

Emergency and evacuation procedures will be tested through appropriate drills that will be held every [Specify frequency, according to contractor's plan] and, where possible, may involve relevant interested parties [UNOPS, Contractor's Personnel, and specify others].

[DELETE PRIOR TO USE – Environmental emergency drills can be planned in conjunction or alternatively to other drills, and follow the same procedures. If emergency plans already exist, it is sufficient to reference them here.]

Emergency procedures should be periodically reviewed to ensure continued relevance.

Communication and information sharing

Internal communication

Internal communication for the Project will include as a minimum:

S&E [weekly or other recurrence] meetings. They may be dedicated to S&E or S&E may be one part of the agenda. Additional S&E meetings will be organized when needed. Meeting minutes will be distributed to UNOPS, Contractor's team and sub-contractors.

[Weekly or other recurrence] inspections (form HSE05); including Environmental and Social items will be performed jointly by UNOPS team and the Contractor(s) team; the report will be prepared by UNOPS S&E Manager/Coordinator and shared with the Contractor(s) for necessary actions.

Site HSE quarterly report (form HSE12); the HSE quarterly report is a summary of the site weekly inspection report findings and corrective action. It is prepared by UNOPS site HSE Manager/Coordinator to be shared with the Contractor(s) and with UNOPS Senior Management in the country as well as with UNOPS HQ.

Toolbox talks

Information and guidance signage will be present at site in [language, preferable local language as well].

The Site Notice Board will be used to convey daily updates and information.

[Additional communication channels envisaged by the project]

External communication

Queries on environmental and social management from local communities, journalists, business community, neighbors, local representatives, and any other external parties will be handled according to the following protocol:

[DELETE PRIOR TO USE: Briefly outline how external communication will be handled, who is the focal point for incoming communication (the Project Manager or other), what type of information will be issued about the project activities, etc. If Public Consultation / Good neighbor consultation is required, outline how it will be undertaken.]

Consultation with the workforce

Arrangements for consulting and coordinating with the workers at site will be as follows:

An employee representative will participate in the regular and extraordinary meetings between UNOPS and the Contractor(s)

All Contractor's and sub-contractor's employees will be encouraged to raise any suggestions and concerns on environmental and social management of the project on an ongoing basis and during meetings, briefings, toolbox talks, etc.

[Add any other planned measures for facilitating consultation with the workforce]

Accident and incident reporting and investigation

All significant accidents or incidents and high potential near misses shall be reported to UNOPS HQ using form HSE09.

They should be thoroughly investigated and action taken to prevent recurrence. For Class 1 incidents, the outcomes of the review shall be reported to UNOPS HQ using form HSE10. Lessons learned should be captured using HSE11.

UNOPS and Contractor's personnel have an obligation to report all incidents and near misses to the UNOPS Project Manager/ESM coordinator, and will receive proper induction in this sense. Main incidents and near misses should be recorded in Table 5:

Table 5 – Incidents/near misses

<i>Incident/near miss description</i>	<i>Date</i>	<i>Corrective action taken</i>

Audit and monitoring

Project files and records

UNOPS environmental and social management electronic files will form the archived component of the records for this project, in line with UNOPS Record Retention Policy and to facilitate internal and external audit and review. As a minimum they will consist of:

A copy of [Local Office] legal register

The Project Social and Environmental management plan with its Annexes

Waste management plan and records

S&E meetings minutes

Weekly site inspection reports

Quarterly HSE site reports

Incidents investigation reports and near misses

Emergency drill records

Record of training and toolbox talks

A copy of any S&E related correspondence in the project including any nonconformities notification for the Contractor(s)

Internal and External Audits records

Copy of the latest UNOPS HQ Management Review records

The UNOPS S&E system shall be formally documented to allow for control and accountability.

Audit and monitoring

Environmental and social performance at site will be regularly monitored through:

Standard Monitoring plan, including

Activity	E&S Risks and Impact	Mitigation Measures	Monitoring Indicators	Frequency of Monitoring
----------	----------------------	---------------------	-----------------------	-------------------------

Weekly site inspections

Ad hoc site inspections

Internal peer reviews if requested by UNOPS HQ

External audit visit if requested by UNOPS HQ

[Other, for instance audit requirements from Donor or local authorities]

Revisions of the Plan

Table 6 - Revisions

Revision date	Name and title	Description of main changes

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Table of references to Templates and Guidance documents

Table 7 - References

TOPICS	TEMPLATES	GUIDANCE
Legal review	HSE02 Register of interested parties HSE03 Legal register HSE04 Check for legal compliance	
Social and environmental screening	EM03 Environmental and social screening report	
Social and environmental assessment	EM05 Environmental review report TOR for EIA	
Analysis of environmental and social risks and opportunities	EM04 Register of environmental and social risks and opportunities	GEM01 Generic REI
Waste management	EM06 Waste management plan – site EM07 Waste management plan – office	GEM02 Waste management GEM07 Hazardous waste
Gender mainstreaming	Gender Action Plan template	Gender checklists
Other environmental management topics		GEM03 Protection of water GEM04 Wastewater management GEM05 Borrow pit management
Other social management topics		GEM06 Historical
Site induction and training	HSE07 Site induction register HSE08 Visitor induction register HSE18 Training matrix	See catalogue of Toolbox talks
Site weekly inspections	HSE05 HSE inspection report – site	
Management of contractors and sub-contractors		See guidance for Contractors working with UNOPS

<i>Emergency and evacuation procedures</i>	<i>Site emergency and evacuation plan HSE03 Emergency contact numbers HSE04 Emergency drill record</i>	
<i>Accident/incident reporting</i>	<i>HSE08 Incident report form HSE10 Incident review form HSE11 Incident highlight form</i>	
<i>Communication and reporting</i>	<i>HSE12 Quarterly HSE report – site</i>	
<i>Audit and monitoring</i>	<i>HSE16 Internal review (audit)</i>	

 = UNOPS responsibility (usual set-up in assurance position)

 = Contractor responsibility (usual set-up in assurance position)

Annex 12. Quarterly and Annual Reporting Template

Summary of Key E&S Aspects during the Reporting Period

Project Status, E&S Incidents, E&S Changes, E&S Initiatives

Project Status

- Provide a brief description of any new developments in relation to concessionaire's operations and facilities over the reporting period.
- If there are assets added onto Concessionaires portfolio since the last reporting period, please list them here.

E&S Incidents

- Please provide a summary of all the notifiable E&S incidents, per CTA definitions.

Please expand or collapse the table where needed.

Date	Incident description	Class	Reports sent to lenders	Corrective actions / Remedial plan

E&S Changes

- Please provide a summary of all the notifiable E&S changes.
- Please expand or collapse the table where needed.

Date	Change description	Reports sent to lenders	Implementation status

Improvements/initiatives regarding E&S performance

- Briefly describe improvements/initiatives implemented during the reporting period on management of E&S aspects (e.g. energy/water savings, sustainability reports, waste minimization, etc.)

ESS1: Assessment and Management of Environmental and Social Risks and Impacts

E&S Impact / Risk Assessment

- Have any supplemental environmental, social, health and safety impact/risk studies been conducted during the reporting period? (Please provide copies)

E&S Regulatory Reporting, Permits and Supervision

- Please list any environmental reports submitted to Zimbabwe authorities.

☐ Copies attached with this AMR

☐ Copies available upon request

- Please summarize Zimbabwe authority monitoring and inspections.

Management of Technical Leads

- Please illustrate with a chart or table on the Technical Leads' (TL) organizational structure to manage environment, health and safety, labor and social aspects during the reporting period. Please name the individuals in the TLs who hold responsibility for environmental, social, health and safety, human resources, security performance and give their contact information

Compliance with Environmental and Social Management Plans

- The status of the ESMP implementation should be described and any issues that remain outstanding should be detailed. Include IVA reports.

ESS2. Labor and Working Conditions

- This section will be verified against the LMP prior to effectiveness

Human Resources Management

- Have the Technical Leads and contractors changed/updated their Human Resource (HR) policy and procedures, HR manual, and Health & Safety (H&S) procedures, during the reporting period?

☐ Yes

☐ No

If yes, please provide details.

- Provide the following information regarding the workforce:

	# community workers	# direct workers	# Female direct workers	Turnover	# Contracted workers ⁷⁴
Previous year					
Reporting year					

- List the worker-related court cases and describe their status.

Occupational Health and Safety

- Describe the main changes implemented in terms of Occupational Health and Safety (OHS) during the reporting period, e.g. revision of the OHS management procedures, action plans for technical improvements, leading/lagging indicators used/introduced, identification of hazards, new controls, etc.
- Please attach Health & Safety audit reports available for the reporting period.

☐ Copies attached with this AMR

☐ Copies available upon request

☐ Not Available

Accident Statistics Monitoring

Report TOTAL numbers for each parameter	This reporting period			Last reporting period (not cumulative) ⁷⁵		
	Community workers	Direct workers	Contracted workers	Community workers	Direct workers	Contracted workers
Total number of workers						
Total man-hours worked - annual						
Total number of lost time occupational injuries ⁷⁶						
Total number of lost workdays ⁷⁷ due to						

⁷⁴ See ESS2 definitions.

⁷⁵ To be provided after the project has been operational for at least two consecutive years.

⁷⁶ A *lost-time injury* (LTIs) is the incapacity to work for at least one full workday beyond the day on which the accident or illness occurred.

⁷⁷ *Lost workdays* are the number of workdays (consecutive or not) beyond the date of injury or onset of illness that the employee was away from work or limited to restricted work activity because of an occupational injury or illness.

injuries						
Lost time injury frequency⁷⁸						
Fatalities						
Vehicle collisions⁷⁹						

- Provide details for the non-fatal lost time injuries during this reporting period.

Company or concessionaire/ contractor/ Subcontractor employees?	Total workdays lost	Description of injury	Cause of accident	Corrective measures to prevent reoccurrence

- Provide details for fatal accidents during this reporting period, if any, (and provide copies of accident investigation and respective corrective plan).

Date of Accident	Type of Accident	Description of Accident	# of Fatalities	Preventive measures taken after the incident

OHS Training

- Describe Health and Safety training programs carried out in the reporting period.

Date	Type of audience	Description of training (and duration)	Number of attendees

Workplace Monitoring

- Please provide copy of any Workplace Monitoring reports developed for the reporting period.

ESS3. Resource Efficiency and Pollution Prevention

Environmental Monitoring

⁷⁸ The number of *lost time injuries* (LTIs) recorded for Project workers per million man-hours worked by them. LTI Frequency Rate = injuries per million hours worked = # of lost time accidents x 1,000,000 hours / total man-hours worked).

⁷⁹ Vehicle Collision: When a vehicle (device used to transport people or things) collides (comes together with violent force) with another vehicle or inanimate or animate object(s) and results in injury (other than the need for First Aid) or death.

- Provide copy of environmental monitoring data reports for this reporting period, collected consistent with the ESMP's for the sub-projects.
- Briefly describe environmental mitigation measures implemented during the reporting period to comply with E&S requirements.

Resources Efficiency: Energy and Water

- Provide data on energy and water consumption during the reporting period. If the data requested are available in another format, they can be submitted instead.
- Describe the Concessionaires' resources efficiency measures/efforts being implemented to minimize fuel, energy, and water consumption.

Hazardous and non-Hazardous Waste⁸⁰

- Erosion Control, Slope Stability and Reinstatement
- Please describe status and actions implemented in terms of erosion control, slope stability, and reinstatement within the project's footprint and area of influence.

ESS4 Community Health, Safety and Security

Community Health and Safety

- Please list and describe any initiatives implemented in relation to community health and safety during the reporting period.
- Please provide the list and description of the actions, the expected or actual dates of implementation, progress/status, results obtained. You can use a tabular format (as below) or provide the information as an attachment of the AMR.

Issues	Mitigation Measures	Expected or Actual Date of Implementation	Results/Current Status

- During the reporting period, have any emergency drills been conducted with participation of the local authorities, public emergency organizations, local communities? Are the communities aware of the emergency response plans?

Accident Reporting

⁸⁰ Waste types include but are not limited to: chemical containers, chemical sludge, containers/pallets, dewatered sludge, domestic waste, ferrous and non-ferrous scrap, hospital waste, laboratory waste, liquids, off-specification raw materials, paint waste, sludge, solids, truck and auto tires, waste fuel hydrocarbons, waste hydraulic fluids, waste lubricating hydrocarbons, waste solvents, waste treatment sludge, contaminated soil, creosote sleepers, etc.

- Provide details for the non-fatal casualties, involving third parties, during this reporting period.

Date of Accident	Type of Accident	Description of Accident	# of People Injured	Preventive measures taken after the incident

- Provide details for fatal accidents during this reporting period (and provide copies of accident investigation and respective corrective plan).

Date of Accident	Type of Accident	Description of Accident	# of Fatalities	Preventive measures taken after the incident

GBV/SEA Action Plan

- Please provide an update on the status and progress of the actions as defined in the GBV Action Plan. You may attach relevant monitoring reports.

ESS5 Land Acquisition and Involuntary Resettlement

- Report any activities that have been screened out as a result of potential displacement impacts
- Report any activities that are using voluntary land donations and assess compliance with the protocol

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

Biodiversity Management

- Please report on the mitigation measures included in the ESMF and ESMPs
- As needed, using the table below describe any **new activities or expansions** that have increased the project footprint into new **areas of habitat** during the reporting period.

New activity/expansion	Total area covered	Habitat type

ESS8 Cultural Heritage

- Report if chance find procedures have been applied if not, please indicate Not Relevant.

ESS 10 Stakeholder Engagement and Information Disclosure

Stakeholder Engagement, Public Consultation and Disclosure

- List any stakeholder engagement events, including public hearing, consultation and disclosure, liaison with non-governmental organizations, civil society, local communities on E&S.

Date	Participant(s)	Formats of Interaction	Issues Discussed	UNOPS response/ Agreement reached (attach minutes if any)	Actions Taken (if any)/ Remarks

Grievance Mechanism and Court Cases

- Report the number and type of requests and/or grievances received from project affected people / local communities / local organizations
- How many have been resolved and how many are pending? (Please attach a log of the grievance redress registry.
- Report the number and type of court cases on E&S grounds, if any (Please attach a log of all court cases and their status)

ANNEX 13: UNOPS' Form HSE09 - Incident Report Form.



FORM HSE09 | Incident report | Health, Safety, Society and Environment

Incident Report Form

Project/Office			
Report date			
Reported by		Title/role	

I. DETAILS OF THE INCIDENT

Incident date	
Incident time	
Incident place	

Incidents are classified into two classes, as below. You can select either Class 1 or Class 2, not both. Select that better describes the type of incident. You can select multiple sub-categories under each class.

Incident class	Category 1	Category 2	Category 3	Category 4	Category 5
Class 1					
Class 2					

II. IDENTIFICATION OF TYPE OF INCIDENT AND IMMEDIATE CAUSES

1) Select the type of the incident from the list below. An incident can be classified at the same time as H&S/environmental/social.

Type of Incident - H&S		Type of Incident - Social
Moving Machinery/vehicles at project site	Dust, Fumes, Vapours	Misuse of UNOPS property
Fall from height	Noise	Damage to Cultural Heritage
Powered Hand tools	Temperature or heat	Occurrence of infringement of labour rights
Hand Tools	Overexertion	Occurrence of infringement of human rights
Animals or insects	Structural Failure	Stakeholder/community complaint
Fire or Explosion at project site	Chemical/biological	Strike, demonstration
Trips & smaller falls	Stress	Other (please specify)
Drowning	Other (please specify)	
Borrow-pit Management		

Type of Incident - Environmental	
Chemical/Oil Spill	Damage to ecosystems (e.g. damage to flora/fauna)
Improper Disposal Waste	Odour air Emissions
Disasters (Earthquake, Flood, etc)	Dust, Fumes, Vapours, Air pollution
Water Pollution/ Sedimentation	Other (please specify)

* note that incidents related to terrorism, civil unrest, armed conflict and crime; as well as fire, aviation safety and road transport, are under of the UN Security Management System, and should be reported to UN Security using the security incident form. Incidents at contractor oper should be reported through this incident report form.



2) For each type of incident, select the relevant descriptor(s) from the list. You can select up to 5 descriptors for each type of incident. If a descriptor is not listed below, please type in short descriptor in "Other" rows as necessary.

Incident type	Descriptor 1	Descriptor 2	Descriptor 3	Descriptor 4	Descriptor 5	
H&S						Please type in
						Please type in

Provide description of the immediate causes of the incident:

at the Class

III. DESCRIPTION OF THE INCIDENT

Record all facts prior to and including the incident, if it was a planned activity, describe/list macro ecosystem and property damaged, etc:

IV. ROOT CAUSE ANALYSIS

Select the root cause(s) of the incident from the list below. If "Other" please specify.

Root causes	Yes	No
Improper Planning		
Poor Maintenance		
Poor Supervision		
Poor Quality of Equipment		
No rules, standards, or procedures		
Lack of knowledge or skills		
Improper motivation or attitude		
Failure to comply with rules		
Other		

the responsibility
ated project sites

ANNEX 14: Pest Management Framework

Given that certain community livelihoods activities undertaken by the ZIRP, replanting of vegetation and setting up of tree nurseries, this ESMF includes a brief discussion on Integrated Pest Management (IPM) as decision-making process for the selection, implementation, and evaluation of pest management practices. Integrated Pest Management (IPM) refers to a mix of farmer-driven, ecologically based pest control practices that seeks to reduce reliance on synthetic chemical pesticides. It involves (a) managing pests (keeping them below economically damaging levels) rather than seeking to eradicate them; (b) relying, to the extent possible, on non-chemical measures to keep pest populations low; and (c) selecting and applying pesticides, when they have to be used, in a way that minimises adverse effects on beneficial organisms, humans, and the environment.

IPM techniques can be separated into two major groups: i) Relatively straightforward replacements for chemicals, and ii) Supporting measures.

Chemical replacement includes:

- Biological control: the introduction of insects, mites, micro-organisms that prey on or parasitize harmful species.
- Bio-pesticides: these have a pathogenic micro-organism as the active ingredient, for example a bacterium, fungus or a virus.
- Botanicals: botanical pesticides contain plant extracts that have biocidal properties (i.e. Neem).
- Semi-chemicals: chemicals (especially pheromones) are used to stimulate particular behaviours or interactions between individual insects so as to control pests.

Choosing appropriate measures is not straightforward and requires significant understanding of the interactions between environment, crop, pest, and predator. The scientific basis for farmer decision-making in biological control depends on detailed knowledge of the life histories of pests and their natural enemies, crop ecology, and interactions within the agro-ecosystem. Supporting measures include traditional methods of pest control as used in subsistence farming systems: cultural control (e.g., intercropping), habitat manipulation (e.g., creating diversity), mechanical and physical control, natural biological systems and host plant resistance. Farmer participation and learning are therefore essential in ensuring proper pest management practices.

The basic requirements for implementing IPM in the ZIRP sites include understanding the biology and economics of the pest and the system in which the pest exists, monitoring the pests and natural controls, and establishing their economic or aesthetic injury thresholds. IPM can be achieved by selecting an appropriate strategy of cultural, mechanical, biological, and/or chemical prevention or control techniques, as briefly described below:

Cultural Practices: These include habitat modification and adapting operating procedures so that pest damage is reduced and natural control is enhanced. It involves sanitation or cleaning of sources of pest infestation, choosing plant varieties that are resistant to pest injury, adjusting planting time, fertilization, tillage, and harvesting operations to have the most beneficial effect for the pest management situation.

Biological Controls: These are predators, parasites, and diseases that attack pests. Measures should be taken to conserve naturally occurring populations of these biological controls. In some situations where naturally occurring biological controls are not effective, they can be introduced from outside sources.

Chemical Control: This involves selecting a pesticide with the lowest toxicity to humans and non-target organisms (including biological controls) and using it in such a way to prevent or minimize undesirable environmental effects. The lowest effective amount of pesticide is applied, using appropriate and carefully calibrated equipment. In many cases, use of pesticides cannot be entirely eliminated. However, use of pesticides must be controlled so as to reduce or

eliminate social and environmental impacts. A comprehensive IPM should support a pesticide management plan that is designed to ensure that pesticides are procured, handled, stored, applied and disposed in such a manner that protects life and the environment. The plan shall consider the entire life cycle of the pesticides. Hence the SNSDP activities and operations must observe the following:

- a) All pesticides must be purchased from registered pesticides dealers.
- b) Pesticides must be purchased strictly according to the requirements to avoid over-stocking. A follow up system for the procurement, transportation, receipt and custody of pesticides must be established.
- c) Movement or transportation of pesticides from suppliers must conform to FAO guidelines: Pesticides must not be mixed up with other items, particularly food items. They should be in well confined containers.
- d) Pesticides shall be stored in a dedicated and centralized warehouse or storage facility, separately from agricultural produce and other items. All pesticides must always be under lock and key and under the custody of a very responsible person. Storage of pesticides in farmers' houses must be prohibited. Warehouses must be protected from sources of fire. Access to the warehouses must be restricted to responsible and authorized persons.

IPM strategies will comprise of soil pests, weeds, field and post- harvest pests, and pest diseases management. Use of certified seeds or seed dressing will protect crop from soil borne pests. Weed control could either be manual or use of appropriate herbicides, for example, pre- and post-germination herbicides. However, extreme care is needed in the use of herbicides, as wrong or uninformed use is likely to cause total loss of crops or pollution of water and soil. As a rule, beneficiaries should observe strict surveillance of their crop and observe high levels of crop hygiene as a first step to manage the pests and diseases in the field, as appropriate. These include removal and destruction of affected plants and then preventive control of the identified problem. Post-harvest pests are managed even before harvesting by cleaning the stores and destroying the residues from previous harvest. Use of recommended pesticides on the harvested crop before storage contributes immensely to the preservation of the harvested crop against attacks by pests.

ANNEX 15: Key Issues to be considered in TOR for site-specific ESIA (Solid Water and Sanitation, Agriculture, Irrigation and Drainage, Solid Waste)

Site-specific activities under the ZIRP likely only require partial Environmental Assessments. The following is a menu of options that should be considered when designing concrete TOR for site-specific assessments.\

TOR - Key Issues and Outputs - Solid Waste Management

Required Expertise

- General EA experience;
- Environmental specialists;

And expertise in the following areas:

- solid waste management environmental issues including collection, transport, recycling, disposal and composting;
- landfill leachate and groundwater pollution control and management;
- facility siting and traffic issues;
- air pollution control;
- noise specialists; and
- social specialists' social assessment and public participation.

Key Issues

Key EA issues for solid waste management projects typically include the following:

- solid waste management facilities require land for access roads, waste handling, disposal and associated facilities and operating efficiency is enhanced when the disposal site is proximal to the source of waste
- proximity to city centre is often a key siting factor to minimize haul time, transfer stations, and potential traffic impacts
- hydrogeological conditions are often a key siting factor to minimize potential for groundwater contamination from leachate infiltration
- suitable land is often a limited resource, but activities requiring resettlement will be screened out by the ZIRP
- potential effects on local property values.
- potential impacts of landfill traffic on local communities.
- potential impacts on existing waste recycling/rag-picking community
- uncontrolled mingling of clinical or hazardous waste with municipal waste stream
- worker risks of exposure to clinical or hazardous waste
- public risks of exposure to clinical or hazardous wastes
- local community health impacts from airborne pathogens or animal vectors
- potential explosion from unmanaged methane gas production.
- noise during construction and operation
- traffic noises

- potential for groundwater (aquifer) contamination from waste leachate
- potential for surface water contamination
 - dust during construction and operation from on-site vehicle movements and placement of waste materials
 - vehicle exhaust emissions
 - smoke from fires
 - methane gas emission (methane is a major greenhouse gas); waste to energy options
- public consultations held
- gender and communication issues must be carefully considered and incorporated in the design of public consultation exercises and in the dissemination of project information.

EA Study and Report

Consultants are required to carry out an EA study and prepare an EA report according to the World Bank standards. The report should include the following sections:

- Executive summary;
- Policy, Legal, and Administrative Framework;
- Project Objectives and Description;
- Baseline Data;
- Environmental Impacts (includes mitigation measures);
- Analysis of Alternatives;
- Environmental Management Plan; and
- Appendices.

Key Output for EA of Solid Waste Management Activity

Policy, Legal, and Administrative Framework	<p>Tables should be used to list applicable standards and note which authorities are responsible for their application. Where there are no relevant local standards, World Bank Group <i>Environment, Health and Safety Guidelines</i> may be used. Where relevant local legislation and standards exist, these should be described. The section should include:</p> <ul style="list-style-type: none"> • national laws and local ordinances which delineate the solid waste management responsibility and authority delegated to local government; national laws and guidelines which define the design and operating standards which local governments are to meet in the conduct of their responsibilities; a description of any environmental standards which are to be met, any requirements for submission of environmental monitoring data or environmental impact assessment statements by local government to the national government; local ordinances which govern citizen responsibility to participate in and co-operate with the solid waste system. Discuss the extent to which the local government uses education, inspection and enforcement to assure compliance with the available regulations. Describe the technical assistance, environmental monitoring, and regulatory enforcement activities provided by national and provincial government as a support to local government operations and actions
Project Objectives and Description:	<p>This section should describe the need for and target consumers of solid waste management in the context of the local and national waste management strategy. The effect on economic and social development goals of the locality, country and region should be described. If the project is an element of an overall waste management development program in the area, then a description of the other program elements must be presented.</p> <p>A physical and engineering description of the project should be provided including at least the following:</p> <p>(a) For project improvements to solid waste collection, include:</p> <ul style="list-style-type: none"> • physical layout of the neighbourhoods to receive improved collection;

	<ul style="list-style-type: none"> • social, cultural and economic conditions of the neighbourhoods to receive improved collection; • description of the project elements, including proposed collection method; pilot tests to confirm the proposed collection method as appropriate; pre-implementation activities of public education and involvement; cost recovery systems; equipment specifications and procurement plans; implementation plans; operation and maintenance procedures; and responsible parties for each aspect of the system. <p>(b) For project improvements to solid waste transfer and disposal, include:</p> <ul style="list-style-type: none"> • physical layout of the overall urban area to be served by transfer and/or disposal facilities, including mapping of all major roads; • strategic siting of the facilities, including economic justification for the overall strategic plan of collection service areas, direct haul routes, transfer stations, transfer routes and disposal locations; • physical, ecological and demographic setting of facilities, including surrounding land use characteristics, proximity to residential neighbourhoods, location of public water supply sources and private wells, direction of ground water flow, uses of surface water, prevailing wind direction; • description of the site-specific activities, including layout of proposed facilities (e.g., fencing, buildings, weighbridges, roads, ramps, drainage, gas and leachate control systems, monitoring wells); construction schedule, operating plans, closure plans, long-term monitoring plans, and responsible parties
Baseline Data	<p>The key categories of data needed for a waste collection and disposal systems include the following:</p> <p>(a) For project improvements to collection systems:</p> <p><i>Physical Environment</i></p> <ul style="list-style-type: none"> • Neighbourhood layout, showing locations for communal containers, stops for truck during block collection, or streets served by curb-side collection • Conditions of road or walkway access for collection equipment; • Climate and meteorology, as it affects refuse containment and frequency of collection. <p><i>Socio-cultural Environment</i></p> <ul style="list-style-type: none"> • Population density and demographic level by neighbourhood • Community structure of local leader and traditional public involvement process • Employment and other activities indicating patterns of movement to and from neighbourhood • Education level with regard to sanitation and public health • Customs and attitudes relative to co-operation with collection system <p>(a) For project improvements to transfer and disposal facilities:</p> <p><i>Physical Environment</i></p> <ul style="list-style-type: none"> • Location of proposed facilities with regard to nature of surrounding land uses and proximity to homes and other establishments • Existing road and traffic conditions in the area of proposed facilities, versus proposed road and traffic conditions • Existing topography and proposed changes, including area which will be affected by any visible aesthetic impacts • Soils and geology • Surface and ground water hydrology, and hydraulic connections between the proposed sites and receiving waters down gradient of the sites • Existing and proposed uses of receiving water, including location of private and public water supply wells and intakes • Climate and meteorology, including prevailing wind direction <p><i>Biological Environment</i></p> <ul style="list-style-type: none"> • Flora and fauna

	<ul style="list-style-type: none"> • Sensitive habitats • Rare, endangered, or commercially important species <p><i>Socio-cultural Environment</i></p> <ul style="list-style-type: none"> • past uses of sites and consideration of historic significance • land use and demographic character of surrounding neighbourhoods • planned development activities • education, awareness, and sensitivity of public to propose siting of facilities; and public concerns over traffic insects, noise, dust, odour, smoke or aesthetic issues. <p>Where more detailed information is required (if significant effects on an important natural or cultural resource are anticipated, for example) there may be studies on local areas done by international agencies. There may also be unpublished information in government departments, universities, PhD theses, or voluntary groups. These should be investigated and used where relevant, provided that the sources, and any assumptions or uncertainties in the data are documented</p>
Environmental Impacts:	<p>A prediction of the changes in the environment resulting from project construction and operation are to be considered, and an assessment of the effect on the surrounding physical, biological, and human systems, should be presented.</p> <p>For solid waste activities, there are numerous potential impacts to be reviewed as a part of design. For the most part, well-conceived designs will minimize adverse impacts. Also, altering operating practices can minimize many potential impacts.</p> <p>There are some potential impacts whose consequences would be environmentally significant over the long term. Specifically, prior to design of a land disposal site, groundwater monitoring wells should be installed both on-site and off-site to assess the character of soils, geology and groundwater quality and flow dynamics. Data from these brings coupled with precipitation and infiltration data should be used to develop a conceptual model of the landfill and estimate the quantity of leachate which could be generated and released from the land disposal site and its potential effect on the nearest receiving water.</p>
Analysis of Alternatives	<p>This section should provide a brief description of possible alternatives to the project/project design (including the 'no action' alternative). For various aspects of a solid waste management activity, there are appropriate alternative technologies or operating methods, as listed below. The reasons why the various alternatives considered were rejected should be documented</p> <p><i>Disposal Systems</i></p> <ul style="list-style-type: none"> • source reduction of wastes • managed landfill • sanitary landfill (i.e., designed refuse cell construction) • sanitary landfill with gas and leachate control • separate disposal zone in sanitary landfill or separate disposal site for construction/demolition debris, bulky wastes and tires • composting • incineration <p><i>Collection Systems</i></p> <ul style="list-style-type: none"> • source reduction of wastes • self-reliant systems of on-site waste management • equipment includes: pushcart, animal cart, tractor, and truck • communal stationary container systems • communal portable container systems • curb-side collection systems from liftable containers • block collection systems with resident co-operation • separate collection for potentially hazardous materials • separate disposal for potentially hazardous materials

	<ul style="list-style-type: none"> • hold and bleed pumped sewage into wastewater treatment facilities where available, or provide separate disposal • separate incineration for medical wastes • Recycling Systems • increase product durability • source segregation of recyclables • manual or mechanized sorting of recyclables at transfer stations and disposal facilities • financial incentives to private sector recycling initiatives • refurbishment and re-manufacturing of durable products • modify procurement specifications to increase opportunities for products made from recycled materials
Environmental Management Plan	<p>The EMP should include details of the management initiatives to be implemented during both the construction (for landfill sites) and operational phase of the project. The EMP will need to account for monitoring of environmental parameters and the influence of mitigation measures on environmental impacts. It should include the following basic components.</p> <p><i>Institutional Component</i></p> <ul style="list-style-type: none"> • Institutional responsibilities for management of the solid waste sector • Responsibilities for monitoring, reporting and enforcement • Identification of any needs for capacity building, training or equipment <p><i>Environmental Mitigation Plan</i></p> <p><i>Table 1.6.1</i> presents the key aspects of a mitigation plan for a new solid waste management facility.</p> <p><i>Environmental Monitoring Plan</i></p> <p>Monitoring should address both emission and ambient levels of pollutants where these may be detrimental to human health. <i>Table 1.6.2</i> below presents a typical monitoring program for a solid waste management facility.</p> <p>For solid waste projects which include a land disposal facility, monitoring will include:</p> <ul style="list-style-type: none"> • gas and ground water monitoring wells • regular schedule of monitoring for key indicators of contamination (for specific parameters see the World Bank Group's <i>General Environment, Health and Safety Guidelines</i>, which would apply to projects of this type.. • If the land disposal site has a gas collection and ventilation system, periodic monitoring will need to address: <ul style="list-style-type: none"> ▪ The composition of gas being discharged from the vents <p>Ambient oxygen and combustible gas levels on- and off-site (using a portable meter).</p>

Example Mitigation Plan for new solid waste management facility

Issue	Mitigating Measure	Responsibility	Time or Cost Requirements
Land Use and Siting			
Permanent loss of productive land	Purchase of replacement land or compensation	tbd	To be determined
Reduction in local property values	Compensation	tbd	To be determined
Landfill traffic through existing communities	Restrict traffic to work day initially Investigate construction of new access road avoiding community	Collection Contractor	To be determined To be determined
Socio-economic			
Loss of livelihood for rag-picking community	Incorporate series of dumping bays in design where rag-pickers can access waste prior to disposal	Landfill Design Contractors	To be determined
Public Health			
Control of clinical and hazardous waste disposal	Segregate incoming waste stream through education program, collection system and strict enforcement	tbd	To be determined. Management and supervision estimate 2 men full time
Noise			
Construction noise effects on nearest community	Restrict construction to day light period	Landfill Construction Contractors	NA
Operations noise effects on nearest community	Implement agreed mitigation measures including: creation of perimeter berm and planting of tree buffer around landfill boundary, restrict landfill operation and collection traffic to work day.	Landfill Operating Company and Collection Contractors	To be determined
Ground and Surface Water Quality			
No existing baseline for ambient (pre-landfill) conditions	Implement agreed baseline monitoring program prior to and during construction; samples to be analysed in local laboratory with semi-annual samples exported for corroboration	tbd tbd Annual reporting by Landfill Operating Company; review by Environment Ministry	\$80,000 estimate for 2-year monitoring program including analyses to be determined
Potential contamination of ground and surface water during future operations	Implement monthly monitoring program of perimeter wells and surface effluents		Component of annual operations
Discharge of treated leachate	Must meet effluent discharge standards (local standards and World Bank guidelines)		
Air Quality			

Dust during construction	Implement agreed dust control measures such as wetting dirt roads, truck washing for trucks exiting site, and monitoring dust emissions	Landfill Construction Contractors	To be determined
Dust during operations	Implement agreed mitigation measures including paving haul roads and offloading facilities and rapidly covering refuse with soil.	Landfill Operating Company	To be determined
Exhaust from landfill collection traffic	Upgrade collection fleet	Collection Contractor	\$750,000
Odors during operation	Implement sanitary landfill management practices including daily soil covering	Landfill Operating Company	NA

General Monitoring program for new solid waste management facility

Item	Monitoring Parameters:	Sampling Frequency:	Monitoring Locations:
Baseline			
A baseline monitoring program may be required if existing data is insufficient for decision making; such a program may be more rigorous than the construction and operation monitoring programs.			
Construction Phase			
Air Quality	Dust (particulate matter)	Passive – 2/4 weeks	4 locations minimum: at nearest residences and site boundary
Noise	Decibels (dB)	Weekly	6 locations minimum: at nearest residences
Water Quality	oil and grease	Daily	At all discharges including run-off
	Total Suspended Solids	Daily	At all discharges including run-off and waste water discharges
	BOD	Weekly	At waste water discharges
	Total and fecal coliform	Weekly	At waste water discharges
Operations Phase			
Noise	Decibels (dB)	Monthly	6 locations at residences nearest facility
Ground Water Quality			
	pH	Monthly	Monitoring wells
	Alkalinity	"	"
	Total Chlorides	"	"
	BOD	"	"
	COD	"	"
	Metals	"	"

Treated Leachate Effluent Quality ¹	pH Alkalinity BOD COD Temperature Oil and grease Total chlorides Total Suspended Solids Metals	All weekly	At point of discharge
Air Quality	Dust Fine particulate matter Odour	Weekly	2 stations: 500 meters upwind and 500 meters downwind

TOR: Key Issues and Outputs - Water Supply and Sanitation

Required Expertise

- General EA experience;
- Environmental specialists;

Further expertise may be required in:

- hydrology;
- environmental engineering;
- water quality modelling;
- ecology (terrestrial, aquatic, and possibly marine depending on receiving environment);
- water quality;
- soil science (for land application of sludge);
- wastewater utility management; and
- social assessment and public participation.

Other specialties that may be needed, depending on the nature of the project, are public health, agronomy, land use planning, oceanography and resource economics.

Key Issues

ZIRP activities will be on the smaller scale, which will result in a smaller scope of the below issues.

Key issues for an EA in this sector are:

- Water treatment and wastewater treatment plants facilities require tracts of land for treatment facilities, storage, offices and laboratories, and access roads.
- Smaller dispersed plots may be required for peripheral pumping stations.
- Elevation relative to the municipality is often a key siting factor to optimize gravity flow and reduce or minimize reliance on pumps.
- Potential impacts of wastewater treatment plant on local communities including odour and reduction in property values.
- The population of the region is growing rapidly, and the primary sources of water in this arid and semi-arid region are non-renewable fossil aquifers.
- Allocation: exploitation of an aquifer for municipal supply may necessitate use restrictions on other users.
- It is essential to control and prevent further contamination of freshwater water resources (ground and surface water) through discharge of untreated or inadequately treated domestic, municipal and industrial wastewater.
- Equally important is the conservation of scarce water resources through demand side management and efficient allocation and use of water.
- Pollution of coastal waters by domestic, municipal and industrial wastewater is also a serious problem.
- Water re-use for agriculture (the reader is recommended to the World Health Organization's (WHO) publication *Health guidelines for the use of wastewater in agriculture and aquaculture* (WHO Technical Report Series, No. 778, 1989).
- Demand side management of water supplies will typically involve pricing increases, and willingness/ability to pay for the poorer segments of society will likely be an issue.
- The poorer segments of the populace prefer to continue using contaminated water to avoid the costs of associated with treated water.
- Similarly, cost recovery for wastewater treatment services may adversely impact the poorer segments of the society

- Contamination of potable water by domestic and industrial effluent is common place in many countries of the region.
- Municipal wastewater contamination causes high incidences of illness and death from water borne diseases including dysentery and cholera.
- Agricultural sources contribute fertilizers, pesticides and herbicides.
- Sludge management and disposal.
- Public consultation held
- Gender and communication issues must be carefully considered and incorporated in the design of public consultation exercises and in the dissemination of project information.

The EA Study and Report

Consultants are required to carry out an EA study and prepare an EA report according to the World Bank standards. The report should include the following sections:

- Executive summary
- Policy, Legal, and Administrative Framework
- Project Objectives and Description
- Baseline Data
- Environmental Impacts
- Analysis of Alternatives
- Environmental Management Plan

Key Output for EA of Water Supply and Sanitation Project

Policy, Legal, and Administrative Framework:	<p>Tables should be used to list applicable standards and note which authorities are responsible for their application. Where there are no relevant local standards, suitable international norms may be used. The World Bank's <i>General Environmental Guidelines</i>, which would apply to projects of this type</p> <p>Specifically, the TOR should describe the pertinent regulations and standards governing environmental quality, pollutant discharges to surface waters and land, industrial discharges to public sewers, water reclamation and reuse, agricultural and landscape use of sludge, health and safety, protection of sensitive areas, protection of endangered species, siting, land use control, etc., at international, national, regional and local levels (The TOR should specify those that are known and require the consultant to investigate for others).</p>
Project Objectives and Description:	<p>This section should describe the need for and target consumer of the water network in the context of the local and national water supply and sanitation strategy. The effect on economic and social development goals of the locality, country and region should be described. If the project is an element of an overall sanitation program in the area, then a description of the other program elements must be presented.</p> <p>A physical and engineering description of the project should be provided including at least the following:</p> <ul style="list-style-type: none"> • Location • water supply source • general layout (e.g. distribution and/or collection systems, pumping stations, treatment works, intakes and outfalls) • unit process description and diagram • size in terms of population and population equivalents, present and projected • number and types of connected industries • anticipated influent and effluent characteristics • pre-construction and construction activities • schedule, staffing and support facilities and services

	<ul style="list-style-type: none"> • operation and maintenance activities • required off-site investments <p>life span</p>
Baseline Data	<p>The key categories of data needed for a water supply and sanitation EA include the following:</p> <p><i>Physical Environment</i></p> <ul style="list-style-type: none"> • geology (general description for overall study area and details for land application sites) • topography • soils (general description for overall study area and details for land application sites); • monthly average temperatures, (rainfall) and runoff characteristics <p>description of receiving waters (identity of streams, lakes, or marine waters; annual average discharge or current data by month, chemical quality; existing discharges or withdrawals).</p> <p><i>Biological Environment</i></p> <ul style="list-style-type: none"> • Terrestrial communities in areas affected by construction facility siting land application or disposal; • Aquatic, estuarine or marine communities in affected waters; • Rare or endangered species; • Sensitive habitats, including parks or preserves, significant natural sites; • Species of commercial importance in land application sites and receiving waters. <p><i>Socio-cultural Environment</i></p> <ul style="list-style-type: none"> • Present water and sanitation system • Relevant public health data • Present and projected population; • Present land use; • Planned development activities; • Community structure; • Present and projected employment by industrial category; • Distribution of income, goods and services; • Recreation; • Public health; • Cultural properties, customs, aspirations and attitudes. <ul style="list-style-type: none"> • Baseline data is often only partially available, though many countries will have a large part of these data and inexpensive field investigations can provide much of the remainder. There may also be unpublished information in government departments, universities, PhD theses, or voluntary groups. These should be investigated and used where relevant, provided that the sources, and any assumptions or uncertainties in the data are documented
Environmental Impacts:	<p>A prediction of the changes in the environment resulting from project construction and operation are to be considered, and an assessment of the effect on the surrounding physical, biological, and human systems, should be presented. The assessment should pay particular attention to:</p> <ul style="list-style-type: none"> • the extent to which receiving water quality standards and/or other beneficial use objectives will be achieved with the proposed type and level of treatment. • The length of stream or expanse of lake or marine waters which will be positively or negatively affected by the discharge, and the magnitude of the changes in water quality parameters. • Projected quantitative changes in beneficial uses, such as fisheries (species composition, productivity), recreation and tourism (visitor-days, overnights, expenditures), and waters available for portable supply, irrigation, and industrial use. • Sanitation and public benefits anticipated. <p>Wastewater re-use for agriculture</p>

Analysis of Alternatives:	<p>This section should provide a brief description of possible alternatives to the project/project design (including the 'no action' alternative). The reasons why the various alternatives considered were rejected should be documented.</p> <p>The analysis should investigate the variety of siting and technological alternatives existing for wastewater collection, treatment and disposal, and sludge management. Several will be applicable in every situation. For example:</p> <p><i>Collection Systems</i></p> <ul style="list-style-type: none"> • on-lot treatment • individual holding tanks with truck collection • small-diameter gravity, pressure or vacuum sewers • shallow sewers • flat sewers • simplified sewerage systems • conventional gravity sewers and force mains • regional collection systems <p><i>Disposal</i></p> <ul style="list-style-type: none"> • reuse in agriculture, silviculture, aquaculture, landscaping • reuse for groundwater recharge • rapid infiltration • underground injection • reuse in industrial applications • ocean outfall • surface water discharge • night soil treatment plants <p><i>Treatment Works</i></p> <ul style="list-style-type: none"> • community on-lot systems • oxidation ponds • stabilization pond systems • aerated lagoons • conventional biological treatment • physical-chemical treatment • preliminary or primary treatment (possibly with ocean disposal) • secondary or tertiary treatment <p><i>Sludge Management</i></p> <ul style="list-style-type: none"> • composting • co-composting with municipal refuse • reuse in agriculture or silviculture • reclamation of marginal land for reforestation, cultivation • energy recovery (methane gas) • incineration • landfill • ocean disposal
Environmental Management Plan	<p>This section should include details of the management initiatives to be implemented during both the construction and operational phases of the project. The EMP will need to account for monitoring of environmental parameters and the influence of mitigation measures on environmental impacts. It should include the following basic components.</p> <ul style="list-style-type: none"> • Institutional responsibilities for management of the water supply and sanitation sector

	<ul style="list-style-type: none"> Responsibilities for monitoring, reporting and enforcement Identification of any needs for capacity building, training or equipment <p>Monitoring should ascertain compliance with agreed standards of potable water supply and/or effluent discharge and serve as an analytical support tool for achieving optimal operational performance. The World Bank Group's <i>General Environment, Health and Safety Guidelines</i>, which would apply to projects of this type. Monitoring parameters and frequencies for an actual situation are dependent on numerous factors including treatment technologies, quality of influent, etc and should be determined on a case by case basis. Monitoring parameters and frequencies for potable water are not provided herein due to similar complexities. The reader is referred to the World Health Organization's <i>Guidelines for Drinking Water Quality (1996)</i> for further information.</p> <ul style="list-style-type: none"> In cases where the wastewater is to be re-used for irrigation agriculture, the WHO's <i>Health guidelines for the use of wastewater in agriculture and aquaculture</i> (Technical Report Series No. 778, 1989) are recommended for monitoring parameters and guidelines
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Example Mitigation Plan for wastewater treatment plant project

Issue	Mitigating Measure	Responsibility	Time or Cost Requirements
Institutional			
Cooperation between Environment and Agriculture Ministries for joint monitoring or irrigation water from treatment plant	Capacity building	tbd	To be determined
Capacity to monitor irrigation water quality	Training and procurement of required equipment	tbd	To be determined
Land Use and Siting			
Permanent loss of productive land	Purchase of replacement land	tbd	To be determined
Reduction in local property values	Monetary compensation	tbd	To be determined
Water Resources			
Potential health and environmental risks associated with use of treated wastewater effluent for irrigation	Secondary treatment of wastewater and chlorination of final effluent followed by aeration; initial monitoring of irrigation water quality in irrigation channels in addition to effluent monitoring at treatment plant outfall	tbd	To be determined
Socio-economic			
Ability to pay of poorer segments of population	Reconsideration of rate structures and subsidies	tbd	To be determined

General Monitoring program for a wastewater treatment plant

Monitoring Parameter	Frequency
<i>Monitoring at Effluent Outfall</i>	<i>Frequency dependent on characteristics of effluent and treatment prior to discharge, as well as dilution, dispersion, sensitivity and downstream use of receiving environment (i.e., water or land).</i>
pH	
Biological Oxygen Demand (BOD)	
Chemical Oxygen Demand (COD)	
Oil and grease	
Total Suspended Solids (TSS),	
Heavy metals (total and specific)	
Ammonia	
Coliform	
Cyanide, free	
Cyanide, total	
Nitrate	
Fluoride	
Chlorine, total residual	
Phenols	
Phosphorous	
Sulphide	
Temperature, at edge of initial mixing zone	
Effluent flow, l/second	
<i>Downstream Monitoring of Receiving Waters (additional parameters for measurement)</i>	
Dissolved Oxygen (DO ₂), mg/l	

TOR: Key Issues and Outputs – Irrigation and Drainage

Required Expertise

- General EA experience;
- Environmental specialists;

And expertise in the following areas:

- EAs of irrigation and drainage projects or projects with similar issues;
- Agricultural and hydrological engineering;
- Hydrology and hydrogeology;
- Ground and surface water chemistry;
- Soil and water conservation management;
- Terrestrial and wetland ecology (wildlife, plant and conservation ecology);
- Health and water borne and soil disease vectors and parasites;
- Social assessment and public participation.

Key Issues

Irrigation and drainage are often, but not always, combined in a project. In some cases a project may address only drainage to mitigate for the effects of long term irrigation. A brief background is provided below.

Drainage projects are typically characterized as positive environmental projects because they can improve water use efficiencies, improve natural processes which enhance soil fertility and promote maximum productivity on existing agricultural lands. However, there can be a number of impacts associated with these projects including concentrations of agricultural chemicals and salts in the drainage and the impacts of the drainage water on the receiving waters, downstream users, and the aquatic ecosystem. Key issues typically associated with irrigation and drainage projects are listed below.

- competition for scarce land with sufficient moisture to support vegetation, be it crop land, pasture, or natural habitat, is a reality. Hence, the impacts in terms of socio-economic and ecological effects of conversion of any land from one state to another must be carefully assessed.
- irrigation and drainage may lead to significant accumulation of salts in the soil profile which permanently alters the plant community type which can be supported.
- effects of drainage include depth to water table, soil surface and profile salinity and sodicity.
- Drainage in conjunction with reduced soil salinity generally improves natural soil fertility. Water Resources/Water Quality
- Water resources are under great pressure in the region and any proposed increase in water consumption must be carefully evaluated in terms of local and national water use and allocation strategies.
- Conservation and re-use options should be thoroughly explored.
- The major component of the drainable surplus is irrigation water seepage from earthen canals and fields; hence, better irrigation systems and more efficient use of water can minimize the problem and conserve water resources.
- The characteristics of the underlying aquifer (i.e., salinity, depth to water table) in combination with irrigation and crop management practices can have long term impacts on project performance and sustainability. The hydrology of the entire basin, including the groundwater hydrology or hydrogeology, and quality must be assessed, and the potential impacts of the program assessed.

- Tubewell pumping is often used as a technique for lowering the water table of waterlogged areas; however, in some situations, tubewell pumping can cause intrusion of saline groundwater into the surface freshwater aquifers which are causing the waterlogging, thereby contaminating an important source of freshwater.
- Potential adverse effects of drainage water on the quality of receiving surface waters (drainage water may contain high concentrations of agricultural chemicals and salts). In most cases, the adjacent river is the most efficient receptor for drainage effluent, but the river is also the source of irrigation water downstream. If river quality is degraded by drainage effluent (main issue is salinity), it can no longer be used for downstream irrigation without costly treatment. Various solutions and/or combinations of solutions (i.e., river and sea drainage in combination with evaporation basins) must be investigated to determine the most sustainable approach in terms of present and future water quality requirements.
- Management of the salt balance/flux through the drainage and hydrologic systems is necessary for sustainability. This requires detailed knowledge of the water balance and quality of the basin system combined with proactive monitoring and management to avoid loss of land and water resources from salinization.
- Discharge of untreated municipal and/or industrial wastewater to the drainage and irrigation system further complicates matters, making management even more difficult. Control and treatment of such sources of wastewater should be pursued in conjunction with an assessment of the assimilative capacity of the receiving waters. This will require the same level of knowledge of the system and ongoing monitoring and management as in the previous item.
- The water quality and hydrological impacts of irrigation and drainage projects may adversely impact important fishery resources.
- Wetlands and other natural floodplain habitats have been drastically reduced in the river floodplains over history as agricultural lands have expanded and as formerly marginal lands are drained.
- Major drainage projects can alter the hydrology of wetlands and other floodplain habitats distant from the project area and have adverse impacts on natural functions and species composition resulting in loss of habitat value. Conversely, irrigation reservoirs, evaporation basins, expansion of irrigation and drainage canals, and creation of waterlogged areas by irrigation create new aquatic and wetland habitats, although poor water quality may limit the value of these artificial habitats. Also, non-mobile species of the affected area are more vulnerable than mobile species.
- New drainage works can destroy plant communities and habitats that have developed in former drainage ditch systems, which, although artificial and linear in character, can provide important habitat in some areas.
- Drainage water discharge can adversely impact aquatic and wetland habitats in the area of discharge.
- Irrigation and drainage projects typically disproportionately benefit landlords over share-croppers and workers.
- Increases in productive land area from irrigation and drainage are associated positively with reduced out migration due to direct and indirect increases in employment opportunities.
- Waterlogged lands are often productive fallow areas which support natural vegetation and provide vital pasture for nomadic herders; after drainage these areas are converted to cropland, often depriving the herders of a key resource.
- Communities dependent on fisheries may be adversely impacted by irrigation and drainage projects which negatively affect this resource.
- Positive as well as negative health impacts can arise in conjunction with irrigation and drainage projects, both for people and livestock. Drainage can reduce stagnant areas where mosquitoes and other vectors breed. Conversely, irrigation, waterlogging and drainage canals may result in increased habitat for pests and disease vectors. Lack of sanitation facilities in fields and increased numbers of workers may lead to increases in intestinal borne diseases.
- The region is rich in archaeological sites of major local and international importance as well as graveyards and other sites of religious importance.
- Water table rise (waterlogging) and salinization can cause severe damage to ancient and modern structures and artefacts, especially metal.

- Extensive ditching and related excavations associated with a major drainage project may potentially intersect sites of local or national cultural significance.
- Public consultation held
- Gender and communication issues must be carefully considered and incorporated in the design of public consultation exercises and in the dissemination of project information.

The EA Study and Report

Consultants are required to carry out an EA study and prepare an EA report according to the World Bank standards. The report should include the sections:

- Executive summary
- Policy, Legal, and Administrative Framework
- Project Objectives and Description
- Baseline Data
- Environmental Impacts
- Analysis of Alternatives
- Environmental Management Plan

The general requirements for the above are described in the introduction to this chapter (for additional details see the World Bank's *OP/BP/GP 4.01 - Environmental Assessment at the World Bank*). Specific aspects under the above components of the EA that should be addressed in an EA of a project combining both irrigation and drainage are described below.

Key Output for EA of an Irrigation and Drainage Activity

Project Objectives and Description:	<p>This section should describe the need for the project in the context of the local and national agricultural strategy. The effect on economic and social development goals of the project area, country, and region when the project influences transboundary rivers, aquifers, coastal zones or other issues. If the project is an element of an overall irrigation and drainage or agricultural sector development program in the area, then a description of the other program elements must be presented.</p> <p>A physical description of project should be provided, including the physical location and area of influence, the schedule of works and implementation program, the source of irrigation water, the disposal strategy for drainage water, and the projected effects including volume and flow rate of irrigation and drainage waters.</p>
Baseline Data:	<p>The key categories of data needed for an irrigation and drainage project include:</p> <ul style="list-style-type: none"> • Hydrology and hydrogeology • water quality (chemistry), supply, demand and allocation • soils • existing land use • ecology of the project area, ecologically important or sensitive habitats, including parks or preserves; • social environment • significant natural, cultural or historic sites. <p>There may also be unpublished information in government departments, universities, PhD theses, or voluntary groups. These should be investigated and used where relevant, provided that the sources, and any assumptions or uncertainties in the data are documented</p>

Environmental Impacts:	<p>A prediction of the changes in the environment resulting from project construction and operation are to be considered, and an assessment of the effect on the surrounding physical, biological, and human systems, should be presented. The engineering design plans should reflect “best practice” in terms of construction management and operations to ensure that potential negative environmental impacts are minimized.</p> <ul style="list-style-type: none"> • <i>Land and soil resources</i> • <i>Water resources</i> • <i>Water quality</i> • <i>Wetlands and Other Natural Habitats</i> • <i>Socio-economic, Health and Cultural Heritage Issues</i> • <i>Public Consultation</i>
Analysis of Alternatives	<p>Project alternatives should be clearly presented (including the ‘no action’ alternative). For irrigation projects, alternative sources of water and demand reduction through conservation and re-use and project management and monitoring should be considered. For drainage, alternative methods, overall project concepts and management and monitoring programs should be thoroughly analyzed.</p>
Environmental Management Plan	<p>This section should include details of the management initiatives to be implemented during both the construction and operational phase of the project (irrigation, drainage or a combination). The EMP will need to account for monitoring of environmental parameters and the influence of mitigation measures on environmental impacts. It should include the following basic components</p> <ul style="list-style-type: none"> • Institutional responsibilities for management of the irrigation and drainage sector and/or the agricultural sector • Institutional responsibilities for health and socio-economic issues management • Responsibilities for monitoring, reporting and enforcement for water quality, water balance and salt balance and related issue management • Identification of any needs for capacity building, training or equipment <p>Monitoring should address all potential issues listed in <i>Section 1.8.2</i> and any others which are considered relevant to the project and the location. These may include water resources (water balance); soil and water quality (salinization); disease, parasites and health; and socio-economic effects. For Bank-financed projects the results of the monitoring and analysis including interpretation and recommendations, if any, should be reported to the Bank on a quarterly basis during the construction phase and annually during the operational phase for at least three consecutive years following the completion of construction.</p> <p>It is important to note that these parameters apply in general to such projects and that it may be necessary to include additional parameters for individual projects. The parameters listed do however provide a benchmark for the environmental management plan, which will need to be geared toward the specific project circumstances</p>

Example Mitigation Plan for a drainage project

Issue	Mitigating Measure	Responsibility	Time or Cost Requirements
Land and Soil Resources			

Issue	Mitigating Measure	Responsibility	Time or Cost Requirements
4 hectares of non-contiguous waterlogged lands utilized by nomadic herders will be converted to cropland	Herders will be allowed access to bunds and intervening non-cropped areas for grazing; these areas will be allowed to grow up in suitable forage crops	Irrigation and Drainage Management Agency	Minimal except for possible periodic inspection to ensure that herders are granted free access and occasional conflict resolution
Water Resources/Water Quality			
Discharge from continuous Tubewell pumping of saline aquifer will raise salinity levels in the river to excessive heights according to modelling exercises	Tubewell pumping will be discontinuous and staggered along the river such that the saline discharge will be sufficiently diluted. Pumping rates and salinity of discharge and the river at strategic locations will be monitored to verify model predictions. The pumping will be continuously refined to balance water table reduction with river water quality requirements.	Irrigation and Drainage Management Agency	Dedicated staff of 8 full time for first three years of project; to be re-evaluated at end of study period. May require initial support of international consultant, cost to be determined
Wetlands and Other Habitats			
Degraded saline wetland will be lost	Evaporation ponds will exceed wetland in area and are predicted to develop similar vegetation community within 3 years	Irrigation and Drainage Management Agency	No additional cost
Health			
Schistosomiasis and other parasites	Parasite monitoring for workers and residents	tbd	To be determined
Cultural Heritage			
Drainage canals will need to cross an area suspected to contain significant archaeological resources	Personnel from the Ministry of Antiquities will monitor the canal excavation work and will have the authority to halt construction if and when any archaeological resources are encountered	Irrigation and Drainage Management Agency and Ministry of Antiquities	To be determined

General Monitoring program for a drainage project

Item	Monitoring Parameters:	Sampling Frequency:	Monitoring Locations:
Baseline			
A baseline monitoring program may be required if existing data is insufficient for decision making; such a program may be more rigorous than the operations monitoring program. The baseline program should collect water balance data (surface and groundwater flow rates, evapotranspiration rates, infiltration, etc.) and water quality data.			
Operations Phase			
Ground Water Quality	PH Salinity Alkalinity Conductivity Ammonia Total nitrates Phosphorous Herbicide and pesticide scans BOD COD	Monthly	Tube wells, tile drain outfalls, and/or monitoring wells
Surface Water Quality- Receiving Waters ¹	PH Salinity Alkalinity Conductivity Ammonia Total nitrates Phosphorous Herbicide and pesticide scans BOD COD Coliforms	Weekly	Above and below project influence and at strategic stations above and below drainage outfalls, at minimum every 500 meters; if the river exceeds 3 meters depth, samples at all stations should be at surface and at 60-80% of depth.
Drainage Quality ¹	PH Salinity Alkalinity Conductivity Ammonia Total nitrates Phosphorous Herbicide and pesticide scans BOD COD Coliforms	Weekly	At point of discharge

TOR: Key Issues and Output – Agriculture

Required Expertise

- General EA experience;
- Environmental specialists;

EAs of agricultural projects, depending on the scope and purpose of the project, may require specific expertise in the following areas:

- Irrigation and drainage;
- Agricultural engineering;
- Soil and water management conservation;
- Integrated pest management;
- Use and management of pesticides and herbicides;
- Rural transport;
- Range management;
- Point and non-point source water pollution management;
- Terrestrial ecology (wildlife, plant and conservation ecology);
- Health and water borne and soil disease vectors and parasites;
- Social assessment and public participation.

Key Issues

A listing of the types of agricultural projects which could have adverse impacts is provided below, but this list is for guidance only and is by no means comprehensive or indicative. In many cases, a project may involve more than one of the following:

- Crop diversification programs with new farming system components;
- Production intensification programs (fertilization);
- Pest management programs (pesticides and herbicides);
- Livestock programs;
- Agro-processing (i.e., development of new or increased capacity);
- Land reclamation/expansion programs;
- Irrigation and drainage; and
- Rural road programs for improved market access.

Key issues associated with Irrigation and Drainage and Roads and Highways have been addressed previously, and the reader should refer to those sections for information.

Key issues in the other likely aspects of a potential agriculture project may include:

Land and Water Resources

- Land tenure/property rights – land ownership is often concentrated in the hands of a few, or in other cases ownership is unclear. Cadastre projects are often necessary to clarify land ownership and property rights.
- Water resources are under demand in the region, and virtually all agricultural projects in the region are dependent on allocation of water for irrigation. Water allocation and sustainable supply should be carefully considered in light of current and forecasted urban and industrial (including agro-industrial) demand.
- Existing and future water quality constraints should also be carefully considered.
- Expansion of crop lands or rangelands may replace or otherwise degrade important natural habitats.
- Agricultural runoff or effluent may adversely impact aquatic and/or terrestrial ecosystems and habitats.

- These industries can produce significant waste streams which must be managed.
- Issues may include air emissions, wastewater effluents, and solid wastes.
- Pollution prevention/cleaner production and energy and water conservation measures should be considered.
- Worker health and safety and possibly labor issues should also be considered.
- Pesticides and herbicide use can have serious short and long term impacts on the environment and ultimately human health through degradation of water quality, bio-accumulation, and direct morbidity or mortality of the workers utilizing these products.
- Projects may have positive benefits such as employment and reduced out migration.
- Water table rise (waterlogging) and salinization can cause severe damage to ancient and modern structures and artefacts, especially metal.
- Extensive ditching and related excavations associated with a major drainage project may potentially intersect sites of local or national cultural significance.
- Public consultation held
- Gender and communication issues must be carefully considered and incorporated in the design of public consultation exercises and in the dissemination of project information.

The EA Study and Report

Consultants are required to carry out an EA study and prepare an EA report according to the World Bank standards. The report should include the sections:

- Executive summary
- Policy, Legal, and Administrative Framework
- Project Objectives and Description
- Baseline Data
- Environmental Impacts
- Analysis of Alternatives
- Environmental Management Plan

The general requirements for the above are described in the introduction to this chapter (for additional details see the World Bank's *OP/BP/GP 4.01 - Environmental Assessment at the World Bank*). Specific aspects under the above components of the EA that should be addressed in an EA of an agricultural project are described below.

Key Output for Project Level EA for an Agricultural Project

Policy, Legal, and Administrative Framework:	<p>In some countries EA legislation is in the process of development or awaits formal adoption. These countries may, nevertheless, operate according to a “voluntary” standard procedure, and the requirements of this should be described, including a brief description of the permitting and licensing procedures. Summaries of the requirements of any co-financing institutions should also be included. If transboundary impacts are likely, relevant international conventions should be described (a listing of International Conventions and country signatories is supplied in <i>Annex V</i>).</p> <p>Tables should be used to list applicable standards and note which authorities are responsible for their application. Where there are no relevant local standards, suitable international norms may be used (see relevant World Bank guidelines and standards)</p>
Project Objectives and Description:	<p>The type of project(s) involved will dictate the content of the EA. This section should also describe the need for the project in the context of the local and national strategy. The effect on economic and social development goals of the project area, country, and region when the project may potentially influence transboundary resources or other issues.</p> <p>Where relevant and applicable, a physical and engineering description of the project should be provided.</p>

Baseline Data:	<p>This section should include descriptions of the area of influence or study area and the relevant physical, biological and socioeconomic conditions. This should include any topics falling under the Environmental and Social Standards of the World Bank. The data presented should be relevant to decision making regarding project location, design, operation, and mitigation measures for adverse impacts. The source, accuracy and reliability of the data should be clearly stated.</p> <p>Appropriate baseline data is not always readily available. It may be necessary to initiate a monitoring program for collection of baseline data prior to initiating the formal EA study. Many countries will have meteorological data, and, in most cases, relatively inexpensive field investigations can provide much of the remainder. Where more detailed information is required (if significant effects on an important natural or cultural resource are anticipated, for example) there will often be previous studies of local conditions prepared for international agencies. There may also be unpublished information in government departments, universities, PhD theses, or voluntary groups. These should be investigated and used where relevant, provided that the sources, and any assumptions or uncertainties in the data are documented.</p>
Environmental Impacts:	<p>A prediction of the changes in the environment resulting from project construction and operation are to be considered, and an assessment of the effect on the surrounding physical, biological, and human systems, should be presented. This should include positive as well as negative impacts. Mitigation measures should be identified as well as any negative impacts for which there are no mitigative measures. This section should also identify and estimate the extent and quality of available data, key data gaps, and uncertainties associated with predictions, and specific topics that do not require further attention.</p>
Analysis of Alternatives:	<p>This section should provide a brief description of possible alternatives to the project/project design (including the 'no action' alternative). These may include alternative location, site layout, technologies, design options, and management systems.</p> <p>The reasons why the various alternatives considered were rejected should be documented</p>
Environmental Management Plan:	<p>This section should include details of the management initiatives to be implemented during both the construction and operational phase of the project. The EMP should have three main components:</p> <ul style="list-style-type: none"> • Institutional capacity issues; • Environmental mitigation implementation program; and • Monitoring program. <p>Responsibilities, implementing agencies or consultants, costs and sources of funds should be specified. Costs for EMP implementation typically range between ½ to 5% of project costs, though in some special cases costs may be higher. Higher costs are typically associated with projects involving large scale resettlement.</p> <p>The standards, guidelines or targets for performance measurement for the monitoring program should be specified as well. This may include social economic measurements in cases where re-settlement is required. Performance standards are typically based on national legislation and the guidelines contained in the World Bank's <i>Pollution Prevention and Abatement Handbook</i> (see <i>Annex III</i> for the <i>General Environmental Guidelines</i>).</p> <p>Table 1.9.1 provides some general guidance on how a mitigation plan for an agricultural project may be structured. The exact nature of such a plan would be a function of the specific project's likely adverse impacts.</p> <p>The structure of an Environmental Monitoring Plan for an agricultural project would also be tailored to the specific project and its likely impacts. Therefore, a typical plan is not included here. The reader should consult previous sections of this chapter for types of monitoring plans for more specific sectors</p>

Example Mitigation Plan for potential issues associated with specific aspects of an agricultural activity

Project Type/Issue	Mitigating Measure	Responsibility	Time or Cost Requirements
Irrigation and Drainage	See Irrigation and Drainage		
Rural Roads	See Transport		
Crop Diversification Programs	Farm worker training program	tbd	2 months of staff time per year for extension agents to work with farm workers
<ul style="list-style-type: none"> <i>Farm workers may be unfamiliar with techniques associated with new crops leading to loss of employment</i> 			
Production Intensification Programs			
<ul style="list-style-type: none"> Introduction of new crop strains or varieties 	Same as above	tbd	2 months of staff time per year for extension agents to work with farm workers
<ul style="list-style-type: none"> <i>Increased usage of chemical fertilizers</i> 	Training/supervision of farm workers in the judicious use and efficient application of fertilizers		
Pest Management Programs			
<ul style="list-style-type: none"> <i>Storage, handling and application of agricultural chemicals (pesticides and herbicides)</i> 	Training/supervision of farm workers in the judicious use and efficient application of chemicals to protect worker health and safety and the environment	tbd	2-3 months of staff time per year for extension agents to work with farm workers
<ul style="list-style-type: none"> <i>Application of Integrated Pest Management to optimize benefits and minimize excessive usage of chemicals</i> 	Training of IPM scouts for early recognition of pest outbreaks and the most environmentally sound methods to combat outbreaks	Agricultural Ministry with support of international consultants	2-3 months of staff time per year for extension agents to work with farm workers; costs of international consultant to be determined
Livestock Programs			
<ul style="list-style-type: none"> <i>Overgrazing</i> 	Development of range management specialists in Agricultural Ministry; training/supervision of herders in range management.	Agricultural Ministry with support of international consultants	4-6 months of staff time per year for extension agents to work with herders; costs of international consultant to be determined
Agro-processing			
<ul style="list-style-type: none"> <i>Waste and effluent production</i> 	Proper waste management and wastewater treatment	tbd	Will vary with type of waste, conditions of existing facilities; must be determined on the basis of the specific project characteristics

Project Type/Issue	Mitigating Measure	Responsibility	Time or Cost Requirements
Land reclamation/expansion Programs <i>May potentially include most impacts associated with land take/land use conversion identified in previous sections, including cultural heritage</i>	See preceding sections	tbd	Will vary with project location, existing site use/cover, and site resources