

Southern African Development Community (SADC)

Sustainable Groundwater Management in SADC Member States Project

PART 1 :

SIMPLIFIED ENVIRONMENTAL MANAGEMENT FRAMEWORK, ENVIRONMENTAL
MANGEMENT PLAN (EMF-EMP)

&

PART 2 :

RESETTLEMENT POLICY FRAMEWORK (RPF)

PART 1 : ESMF - EMP

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For consultation & comments

PROJECT DESCRIPTION

Amongst different sources of water, groundwater is especially important for human wellbeing, livelihoods, food production, ecosystems, industries and growing cities in the Southern African Development Community (SADC). It is estimated that over 70% of the 250 million people living in the SADC region rely on groundwater as their primary source of water. Despite varying dependency on groundwater across SADC Member States, groundwater provides a critical buffer between dry and rainy seasons. The role of groundwater as key to economic growth is further exacerbated with the expansion of commercial farming and industries. In response to such dependency, some SADC Member States are actively integrating groundwater in their water resources management policies and laws (e.g., Botswana and South Africa). On the whole, however, institutional frameworks to manage water at both national and transboundary levels do not feature groundwater prominently. In spite of unequal attention between surface and groundwater, the economic role of the latter is significant.

Many future water-challenges facing SADC Member States know no administrative boundaries and cannot be fully resolved through sovereign action. In the next 25 years, the population of southern Africa is expected to double. With development comes rising demand for water and greater pressures and reliance on groundwater. Pollution of aquifers is of growing concern where; mining and factories continue to degrade groundwater; alongside widespread use of on-site sanitation in rural and urban areas. Reoccurring droughts of shallow groundwater cause social upheaval and distressed ecosystems. Groundwater is also essential for wildlife and other biota. The region is known for climatic variability that translates into reoccurring drought and flood conditions. The impact of climate change will further pose substantial challenges to water resources management. By 2050, temperatures are expected to rise with 1.5-2.0°C on average in the north of the SADC region, and by 2.5-3.0°C in the south (compared to 1961-1990 average).

The inter-governmental organisation of the SADC has the goal of fostering cooperation and mutual benefit from shared waters amongst its 15 Member States. Recognising the important role of water in fostering economic growth, the SADC Member States signed the “Protocol on Shared Watercourse Systems in the SADC Region” in 1995. The Protocol was later replaced by the legally binding “Revised Protocol on Shared Watercourses” in 2000¹ with the objective “to foster closer cooperation for judicious, sustainable and coordinated management, protection and utilisation of shared watercourses”. The operationalisation of the Revised Protocol and the SADC Regional Water Policy is agreed in the SADC Regional Strategic Action Plan for IWM (RSAP). The current SADC RSAP III (2011–2015) acknowledges the importance of groundwater to the region with a dedicated Groundwater Management Programme of Action (GMP, Programme No. 11). The GMP has four project interventions: policy and institutional frameworks; transboundary aquifer management; awareness raising; and regional cooperation and groundwater management.

¹ The revision of the Protocol was to align with UN Convention on the Law of the Non-Navigational Uses of International Watercourses (1997). The Convention is the first international law that is applicable to groundwater. The Revised Protocol was ratified and came into force in 2003.

To support SADC Member States develop more sustainable management of groundwater, at both national and transboundary levels the implementation and adherence to the Revised SADC Protocol on Shared Watercourses and the RSAPIII programme on groundwater, the Global Environment Facility (GEF) and the Multidonor Trustfund Cooperation on International Waters in Africa (CIWA) are providing grants of US\$11 million available for the proposed Project (US\$9 million from GEF and US\$2 million from CIWA).

The custodian of the Project is the SADC Secretariat's Water Division (in the SADC Directorate for Infrastructure and Services). The SADC Secretariat will apply the subsidiarity principle for implementation of the Project so that it is hosted at the University of the Free State's Institute for Groundwater Studies (UFS/IGS). During an open and competitive process between 2008 and 2009, the UFS was selected to host the SADC Groundwater Management Institute (SADC GMI). The SADC GMI was later registered as a legal entity in South Africa in June 2011 but was not fully operationalised. Establishing the SADC GMI was an integral part of a previous GEF-funded Project, the SADC Groundwater and Drought Management Project (2005-2011, GEF US\$7 million) upon which the proposed Project builds on.

The Project has four components. Through the first Component A, the SADC Groundwater Management Institute will be operationalised to serve as a center of excellence in groundwater in the region for the region. Through Component A, the remaining three components can have greater impact in the areas of institutional, information and infrastructure aspect of groundwater management amongst SADC Member States from local to regional levels.

Component A. Operationalisation of the SADC Groundwater Management Institute.

Component A will support: A1) *Coordination and administration including staff* that will finance the necessary resources for the starting and day-to-day running of the GMI during project implementation – i.e., the development and organisation of management functions, reporting, governance and project implementation plan, and facilitating the interlocutor role of the GMI by building partnership, national focal groups and networks; A2) *Raising awareness, knowledge management and communication* involving the critical activities to inform, engage and maintain dialogue with key stakeholders of the Project at national, basin, regional and international levels – i.e., implementing a graphic profile and communication activities, disseminating information and knowledge, and developing a research programme; A3) *Regional capacity building and training* which will include the vast scope of training offered by the GMI to technical groundwater practitioners, students and decision makers in SADC Member States (in and outside of Governments) – i.e., groundwater management training (onsite or online), disseminating and/or developing training materials, cooperating with existing training initiatives, and rolling out an internship and secondment programme; and, A4) *Mobilising and soliciting financing* that will entail developing and implementing a plan to ensure the GMI grows and sustains itself as a regional center of excellence in the long term future.

Component B. Strengthening institutional capacity for the sustainable management of groundwater in SADC.

Component B will support: B1) *Legal, policy and regulatory frameworks* which will address the prevailing gaps in institutional groundwater management tools at national and transboundary levels – activities will range from modernisation to harmonization of laws, policies and regulatory tools through technical assistance and tools; B2) *Compliance and advocacy* will focus on assisting Member States in following up on implementation of existing institutional management tools to enhance compliance of groundwater governance; B3) *Guidelines, standards and management tools* that will enable groundwater practitioners in Member States to access and compare up-to-date

practical management tools; B4) *Groundwater monitoring and data management* will support Member States in accessing guidance on how to strengthen and integrate monitoring of groundwater into national level efforts and access guidance on best-practice and affordable monitoring and data management schemes; and, B5) *Transboundary cooperation* that will facilitate the integration and harmonisation of groundwater provisions between the national and basin level commitments – i.e., through integration of groundwater in shared watercourse commissions and agreements, addressing gaps in knowledge or mechanisms of cooperation; as well as promoting standards for groundwater data collection and open-data solutions.

Component C. Advancing knowledge on transboundary and national groundwater.

Component C will support: C1) *Support to Transboundary Aquifer Management* will support Member States and associated RBOs in finding solutions to joint development and management issues through TDA (Transboundary Diagnostic Analysis) and SAP (Strategic Action Plan) alongside mechanisms for data collection and sharing (selected TDAs on the basis of the outcome from the 2012 SADC-ISARM analysis and the TBA management needs assessment by British Geological Survey a.o. (2013); C2) *Research on groundwater challenges* and enable information exchange on findings and implementation of solutions – i.e., focus challenges include climate change, drought, pollution protection, the role of remote sensing and geophysics technology, validation, groundwater buffering opportunities, mapping, monitoring and early warning systems, decentralised management, and others; and, C3) *Information and Communication Technologies for knowledge sharing platform* to build an integrated data management system (meta database) interlinked with a GIS platform involving storing, connecting and collecting information from various groundwater initiatives and data sources (e.g., the hydrogeological vulnerability mapping of the GDMP).

Component D. Promoting groundwater infrastructure management and development.

Component D will support: D1) *Infrastructure design for improved groundwater utilisation including groundwater buffering and managed aquifer recharge* involving the assessment, selection, mapping, siting, costing and designing of appropriate water buffer infrastructure solutions reflecting the geological and landscape aspects of groundwater in priority areas of Member States – with due attention to both rehabilitation, operation & maintenance, modernisation and the need for scaling up constructions; D2) *Operational support for groundwater infrastructure development* which will involve developing and disseminating manuals for infrastructure solutions that can improve groundwater management (e.g., for small infrastructures such as sand dams, infiltration banks and shallow wells) and guidance tools for siting of wells and/or mapping and siting of water buffering systems, cost-effective well drilling, as well as technical assistance in applying these manual and guidance tools; D3) *Impact evaluation* to help monitor impacts, trouble-shoot and report on results; and D4) *Support to securing funding for infrastructure development* within Governments or with bi/multilateral partners to allow for scaling up of successful solutions.

Description of civil works investments and associated facilities

The Project involves promotion of infrastructure solutions for more sustainable groundwater management. These infrastructures include interventions such as small sand dams, sub surface dams, river bank infiltration systems, checkdams, infiltration ponds, well drilling (at suitable locations), hand dug wells and so forth. Along with this, the project will also promote and advise on impact monitoring which may include the drilling of monitoring wells and installation of rainfall gauges or river gauges. Examples are provided in the photos below from the demonstration pilot works under a previous *SADC Groundwater and Drought Management Project* (2005-2011, GEF).





The Project may also directly finance minor, small scale demonstration works that builds on pilots and infrastructures developed across the region. The number of demonstration works is likely to be small (≤ 10). This could enhance the learning, training and trial opportunities of the infrastructures.

The purpose is to build capacity, support and enable practitioners and decision makers to meet the infrastructure and economic gaps to utilize groundwater sustainably for human livelihoods, food production and economic activity. The location for any demonstration works financed directly by the Project is not determined at the preparation stage of the preparation of the Project but would be decided by the purpose of the demonstration, accessibility for people to visit and learn from the demonstration works, and ease of monitoring impact. The demonstration works would most likely be done within national boundaries, but if associated with transboundary aquifers, the works would take place within the boundaries of the SADC region. The exact location of the demonstration works is not known at the stage of project preparation but is to be developed in consultation with the SADC Subcommittee on Hydrogeology (who also act as the steering committee of the Project).

In the previous GEF-funded project, a number of pilots were completed in the upper Limpopo River Basin (Botswana, South Africa and Zimbabwe). The activities under Component D will draw on the lessons learnt, including the way they incorporated environmental and social impact considerations and mitigation actions (in particular, the process of consultation and development of site-specific Environmental and Social Management Plans).

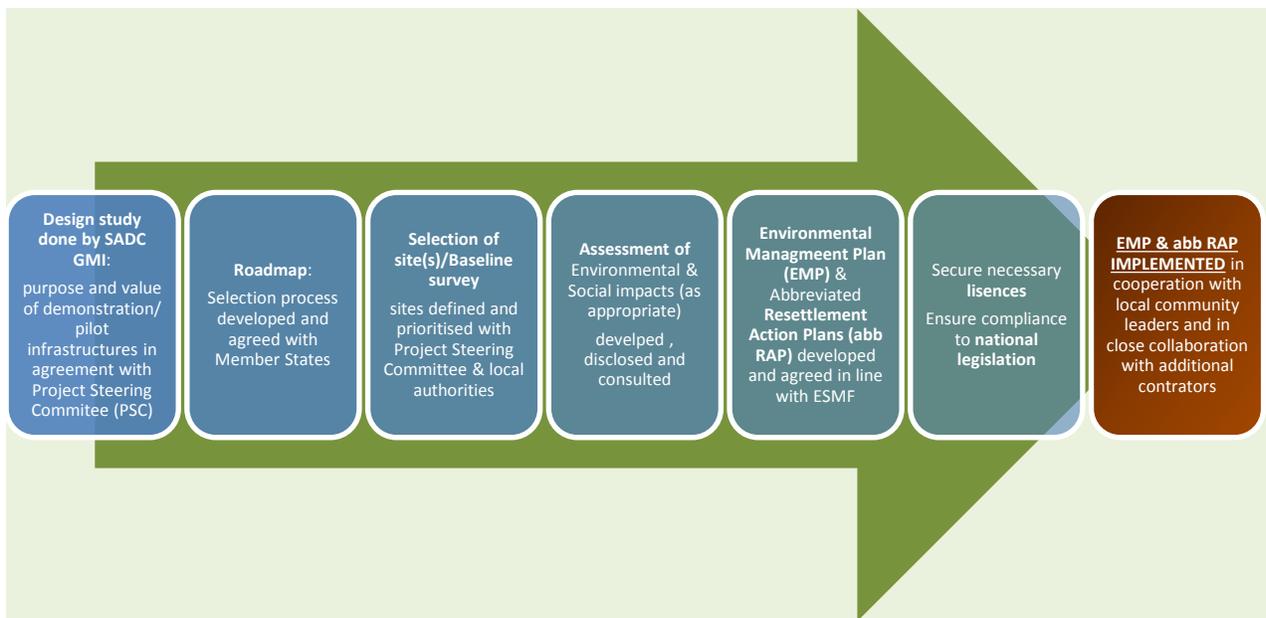


Figure 1. Flow chart of design process of EMP & Abbreviated RAP

Capacity to manage Social and Environmental management

For the implementation of the civil works pilots under the previous SADC Groundwater and Drought Management Project, a experts in social and environmental management were hired alongside contractors who were responsible for the infrastructure/civil works aspects of the pilots. The said experts took an active role in the assessment, consultation and supervision phases of the pilots. The management of environmental and social aspects were additionally recorded in site-specific plans. Throughout, these experts worked closely with the contractors and helped establish local groundwater committees in the communities benefiting from the pilots. These were respectful to routines/structures of local customs and local authorities, and in several cases found creative solutions to include women's perspective and voices into the planning and decision making processes.

For the new Project, the intention is that the SADC GMI will have the resources to employ experts in social and environmental management of the pilots, alongside hiring contractors to undertake the construction work. Because the demonstration/pilots of the new Project are only one of many activities in the Project, these experts would be hired on a demand-basis to support the SADC GMI. Being able to hire experts with unique competencies would also be suitable with respect to groundwater infrastructures beyond community level interventions.

Adherence to national legislation

The process of environmental screening (or if necessary, environmental assessment) and management and mitigation of potential negative environmental and social impact will need to be in accordance with national legislation that prevail in the area of the demonstration/pilot sites. The application, requirements and adherence to such regulation will have to be elaborated in the process of selecting, assessing and designing of the pilots sites. The relevant national legislation will have to be defined during the implementation phase of the project.

ENVIRONMENTAL SCREENING, ASSESSMENT AND MANAGEMENT

Potential Environmental Impacts

The *Sustainable Groundwater Management in SADC Member States Project* (P127086) in southern Africa, has been classified as Category B under the World Bank safeguards system, with relatively low potential adverse environmental and social risks.

The World Bank operational safeguard policies triggered at this time include OP/BP 4.01 on Environmental Assessment, given the modest infrastructure civil works of pilots/demonstrations; OP/BP 4.12, as any civil works may require measures to address loss of access to assets and/or land acquisition; and OP/BP 7.50 Projects on International Waters, as the Project will finance Transboundary Aquifer Diagnostics that cross SADC Member States (but within the SADC region).

Given the uncertainty in determining the location of pilot/demonstration works, SADC and the Bank have agreed to the application of this Simplified Environmental Management Framework (EMF-EMP) for the Project, including (i) applying a standard subproject screening checklist; (ii) preparing simple Environmental Management Plans (EMPs); and, (iii) applying standard Environmental and Social Rules for Contractors to civil works.

The Resettlement Policy Framework, developed in tandem with this EMF-EMP, will guide application of appropriate procedures for adverse social impacts, specifically preparation of Resettlement Action Plans (RAPs) or Abbreviate Resettlement Action Plans (ARAP) as required. The Resettlement Policy Framework (RPF) has been prepared to address the potential of small-scale land acquisition or loss of assets or access to assets.

Any EMPs promoted under this project will be prepared in accordance with World Bank guidelines and legal and regulatory frameworks of SADC Member States as appropriate. They will state the expected environmental and social impacts and provide good operational practice to control emissions (e.g. dust, noise), wastewater discharge, solid waste management on the construction site, and reduce impacts experienced by the surrounding population.

The EMPs will provide guidance on avoiding the use of hazardous substances, such as toxic paints, solvents or cleaning agents. They will also provide guidance on worker and public safety measures to be followed on-site and along routes used to access the site. They will also cover traffic safety (especially focusing on pedestrian safety) in the immediate vicinity of the construction sites, as necessary. They will address steps to be taken if any cultural heritage elements (e.g. archaeological relics, fossils, etc.) are encountered during the implementation of civil works.

If acquisition of land or impact on assets is required as groundwater infrastructures is promoted or required under any demonstration works, procedures established in the Resettlement Policy Framework (RPF) will guide due-diligence with OP/BP 4.12. The RPF will provide guidance in determining whether a RAP or ARAP is needed and outlines the preparation of both.

Environmental Management Approach

The checklist includes standard mitigation measures to common civil works contracts with time bound, small and site-specific adverse impacts. This format provides the key elements of an

Environmental Management Plan to meet World Bank requirements under OP 4.01; adopted as needed to address national and local environmental compliance issues. This checklist is directly applicable to bidding documents and as an integral part of contract documents for civil works under Bank-supported projects.

The checklist has four sections:

- **Part 1** constitutes a descriptive part that describes the project specifics in terms of physical location, institutional and legislative aspects, need for capacity building and the public consultation process. Attachments with supplemental information should be annexed to the completed checklist as needed.
- **Part 2** includes the environmental and social screening form in a simple Yes/No format, followed by a comprehensive list of standard mitigation measures applied as relevant for specific types of impacts.
- **Part 3** presents the standard monitoring matrix to be applied to each subproject.
- **Part 4** presents the standard Environmental and Social Rules for Contractors.

Application of the EMP Checklist

As part of the promotion of civil works in the SADC Groundwater Project, and in any directly financed demonstration works, design follows three phases:

- 1) *General identification and scoping phase*, in which the objects for installation, rehabilitation, extension and/or demolition and complete reconstruction are selected and an approximate program for the potential work activities elaborated. The attached screening table will be used to select typical activities from a “menu” and relate them to the typical environmental issues, mitigation measures and procedures to be followed. The scoping phase will also identify social impacts and the estimated magnitude of these impacts.
- 2) *Detailed design and tendering phase*, including specifications and bills of quantities for individual investments, integrating environmental provisions in form of a tabular EMP (Part 2) and Environmental and Social Rules for Contractors. This phase also includes the tender and award of the works contracts and, in this phase, the Contractor’s obligations for environmental and social measures during the works are contractually fixed. Prior to implementing civil works, the required EMP and RAP/ARAP will need to be reviewed and approved by the University of the Free State/SADC Groundwater Management Institute and the World Bank.
- 3) *During the works implementation* phase environmental and social compliance would be checked on-site, alongside other quality criteria, by qualified inspector(s) for the project implementing agencies. The key monitoring activity will be to verify the compliance of contractors with the required environmental and social provisions, and to impose penalties in cases of non-compliance.

Practical application of the screening checklist would include completion of Part 1 to document all relevant project and site characteristics. In Part 2, the type of planned works would be checked and the resulting provisions identified. The completed EMP checklist and the Environmental and Social Rules for Contractors presented below would be an integral part of the works contract and, analogous to all technical and commercial terms, will be signed by the contract parties.

MONITORING AND REPORTING

For monitoring the Contractor’s safeguards due diligence, the designated inspector will work with the relevant portions of the EMP Checklist (Parts 3 and 4). This work will be developed at each site, defining clear criteria which should be included in the works contracts. These shall reflect the status of environmental

and social practice at each construction site in adjacent areas and communities, and which can be observed, measured, quantified and verified by the inspector during the actual works.

Part 3 (Monitoring Plan) would be used during and after the works to ensure compliance with Bank safeguard policies. Part 4 (Environmental and Social Rules for Contractors) would also be checked during and after works for compliance assurance and Contractor's remuneration.

The monitoring criteria would include use of Personal Protection Equipment (PPE) by workers on site, dust generation prevention, amount of water used and discharged at the site, presence of proper sanitary facilities for workers, waste collection of separate types of waste (wood, metals, plastic, hazardous waste such as asbestos, paint residues, spent engine oil), waste quantities, proper organization of disposal pathways and facilities as well as reuse and recycling practices.

The inspector's monitoring report would be a condition of full payment of the contractually agreed remuneration, the same as technical quality criteria or quantity surveys. To assure a degree of leverage on the contractor's environmental and social performance, an appropriate clause will be introduced in the works contracts specifying penalties in case of noncompliance with the contractual environmental and social provisions, e.g., in the form of withholding a certain proportion of the payments, the amount depending on the severity of the breach of contract. In extreme cases, a termination of the contract shall be contractually tied in.

EMP CHECKLIST FOR CONSTRUCTION AND REHABILITATION ACTIVITIES

Part 1: Institutional & Administrative				
Country	Southern African Development Community/Relevant SADC Member State			
Project title	Sustainable Groundwater Management in SADC Member States Project			
Scope of project and activity				
Institutional arrangements (Name and contacts)	WB Louise Croneborg	Project Management	Local Counterpart and/or Recipient SADC Secretariat, Gaborone University of the Free State/SADC Groundwater Management Institute, South Africa	
Implementation arrangements (Name and contacts)	Safeguard Supervision	Local Counterpart Supervision	Local Inspectorate Supervision	Contact Contactor
SITE DESCRIPTION				
Name of site				
Describe site location	Attachment 1: Site Map []Y [] N			
Who owns the land?				
Who is using the land?				
What is land being used for?				
Geographic description				
LEGISLATION				
Identify national & local legislation & permits that apply to project activity				
PUBLIC CONSULTATION				
Identify when / where the public consultation process took place *				
INSTITUTIONAL CAPACITY BUILDING				
Will there be any capacity building?	[] N or []Y if Yes, attach the capacity building program			

*minutes should be kept of all public consultations and made available as annex of prepared documents

Part 2: Environmental and Social Screening [adjusted as relevant to selected demonstration/pilot site]

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
Will the site activity include/involve any of the following:	Activity	Status
	A. Rehabilitation of access roads	<input type="checkbox"/> Yes <input type="checkbox"/> No
	B. New construction of access roads	<input type="checkbox"/> Yes <input type="checkbox"/> No
	C. Individual wastewater treatment system	<input type="checkbox"/> Yes <input type="checkbox"/> No
	D. Archaeological, historical, sacred, or other culturally significant sites or objects	<input type="checkbox"/> Yes <input type="checkbox"/> No
	E. Acquisition of land ² or impact on assets	<input type="checkbox"/> Yes <input type="checkbox"/> No
	F. Hazardous or toxic materials ³	<input type="checkbox"/> Yes <input type="checkbox"/> No
	G. Impacts on forests and/or protected areas	<input type="checkbox"/> Yes <input type="checkbox"/> No
	H. Traffic and Pedestrian Safety	<input type="checkbox"/> Yes <input type="checkbox"/> No
		Additional references
		See Section B below
		See Section B below
		See Section C below
		See Section D below
		See Section E below
		See Section F below
		See Section G below
		See Section I below
A. General Conditions	Notification and Worker Safety	<ul style="list-style-type: none"> (a) The local construction and environment inspectorates and communities have been notified of upcoming activities (b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works) (c) All legally required permits have been acquired for construction and/or rehabilitation (d) All work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. (e) Workers' personal protection equipment will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) (f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.
B. General Rehabilitation and /or Construction Activities [Can more details on well drilling, installation, sand dams, and other project-specific activities?]	Air Quality	<ul style="list-style-type: none"> (a) Keep surrounding environment (sidewalks, roads) free of debris to minimize dust (b) There will be no open burning of construction / waste material at the site (c) There will be no idling of construction vehicles at sites
	Noise	<ul style="list-style-type: none"> (a) Construction noise will be limited to restricted times agreed to in the permit (b) During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible
	Water Quality	<ul style="list-style-type: none"> (a) Circulation water (and its discharge) and possibly the need for additives/chemicals in the case of well drilling (b) The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers. (c) Installation of drainage works on access roads to prevent erosion, sedimentation, blockage of water flows, or pooling of water.
	Waste management	<ul style="list-style-type: none"> (a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities. (b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.

² Land acquisitions includes displacement of people, change of livelihood, encroachment on private property, impact on persons using land, affects people who are living in the area and/or squatters and/or operate a business (kiosks) on or otherwise use land that is being acquired. The Resettlement Policy Framework (RPF) for this project specifies the criteria and procedures for assisting people who might require compensation for lost land or other assets.

³ Toxic / hazardous material includes and is not limited to asbestos, toxic paints, pesticides, etc.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		(c) Construction waste will be collected and disposed properly by licensed collectors (d) The records of waste disposal will be maintained as proof for proper management as designed. (e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)
C. Individual wastewater treatment system	Water Quality	(a) The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities (b) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment (c) Monitoring of new wastewater systems (before/after) will be carried out
D. Culturally significant sites or objects (archaeological, historical, sacred sites, fossils, etc.)	Cultural Heritage (* see World Bank Policy on Physical Cultural Resources OP/BP 4.11)	(a) If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notify and obtain approval/permits from local authorities and address all construction activities in line with local and national legislation (b) Ensure that provisions are put in place so that artifacts or other possible “chance finds” encountered in excavation or construction are noted, officials contacted, and works activities delayed or modified to account for such finds. (c) Any other measures to deal with sacred sites that are not associated with a physical structure.
E. Acquisition of land or impact on assets	Compensation for land or other assets taken	(a) If acquisition of land is required, or if some people would lose assets or sources of income, then an Abbreviated Resettlement Action Plan—including compensation for lost assets as well as any potential physical relocation----will be prepared and implemented before the relevant civil works are installed . (b)
F. Toxic Materials [Should any such materials associated with well drilling and testing be included?]	Asbestos management	(a) If asbestos is located on the project site, mark clearly as hazardous material (b) When possible the asbestos will be appropriately contained and sealed to minimize exposure (c) The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust (d) Asbestos will be handled and disposed by skilled & experienced professionals (e) If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately (f) The removed asbestos will not be reused
	Toxic / hazardous waste management	(a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information (b) The containers of hazardous substances should be placed in a leak-proof container to prevent spillage and leaching (c) The wastes are transported by specially licensed carriers and disposed in a licensed facility. (d) Paints with toxic ingredients or solvents or lead-based paints will not be used
G. Affects forests and/or protected areas	Protection	(a) Any civil works within National Parks or other protected areas need to be (1) approved by the protected area management authority and (2) consistent with the written protected area management plan (if one exists). (b) All recognized natural habitats and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities. (c) For large trees in the vicinity of the activity, mark and cordon off with a fence large trees and protect root system and avoid any damage to the trees (d) Adjacent wetlands and streams will be protected, from construction site run-off, with appropriate erosion and sediment control feature to include but not limited to hay bales, silt fences (e) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.
H. Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	(a) In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to <ul style="list-style-type: none"> ▪ Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards ▪ Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes.

		<ul style="list-style-type: none">▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement▪ Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public.▪ Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public.
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For consultation & comments

Part 3: Monitoring Plan

Part 3: Monitoring Plan							
	What <i>(Is the parameter to be monitored?)</i>	Where <i>(Is the parameter to be monitored?)</i>	How <i>(Is the parameter to be monitored?)</i>	When <i>(Define the frequency / or continuous?)</i>	Why <i>(Is the parameter being monitored?)</i>	Cost <i>(if not included in project budget)</i>	Who <i>(Is responsible for monitoring?)</i>
During activity preparation							
During activity implementation							
During activity supervision							

Part 4: Environmental and Social Rules for Contractors

The Project will include a small number of civil works; largely to support pilot projects and demonstration activities. This could include measures to increase recharge/infiltration of surface and storm waters, small test wells, construction or improvement of access roads and other localized civil works. Many of these actions will not require a formal Environmental Assessment or site review, however the use of Environmental and Social Rules for Contractors (ESRC) will serve to avoid and minimize any adverse environmental or social impacts. The Environmental and Social Rules for Contractors will be included in any bidding documents and contracts for civil works under the Project.

To help ensure that the environmental and social measures agreed are implemented, strict field supervision of construction works will have to be carried out by staff in the implementing agencies or contracted specialists. In this regard, any case of non-compliance will result in withholding of payment until the issue on the contractor's part is remedied.

The Contractor and their employees shall adhere to the mitigation measures set forth and take all other measures required by the Supervising Engineer (or comparable person responsible for civil works supervision, aka the Engineer) to prevent harm and to minimize the adverse impact of their operations on the environment and social conditions.

The Contractor shall minimize any clearing of natural vegetation during construction, and avoid any impacts on land beyond what has been set aside for project works. The Contractor shall ensure that, to the maximum extent feasible, worker camps, storage sheds, parking lots, and other construction-related facilities will be located so as to avoid or minimize the removal of natural vegetation, opting instead to use previously cleared or degraded lands. The Contractor shall also ensure that site offices, depots, and fuel storage areas are not located within 500 meters of watercourses (or a shorter distance if required by national law or more local ordinance), and are operated so that no pollutants enter watercourses, either overland or through groundwater seepage (including inadvertent connection of subsurface zones and aquifers), whether routinely or as a result of storms and floods.

The Contractor shall ensure that all civil works take place within established project boundaries. In particular, impacts beyond already acquired and compensated land (or prevent access to income-producing activities by users without tenure to land) may require additional Abbreviated or Full Resettlement Action Plan (ARAP/RAP) mitigation actions. The Contractor shall also use existing roads whenever possible; if works contractors must impact beyond the current road-way, then additional Resettlement Action Plans may be required and compensation provided.

The Contractor shall enforce good behavior by construction workers, including the prohibition of hunting, fishing, wildlife capture, bush-meat purchase, plant collection, unauthorized vegetation burning, speeding, off-road driving, firearms possession (except by security personnel), or inappropriate interactions with local people. The Contractor shall not allow the use of fuel-wood from natural vegetation for cooking in any labor camp or base camp and shall provide alternate facilities using other fuels.

The Contractor shall ensure that sufficient drainage works are installed under any new or improved access roads, to avoid flooding land, damaging streams, and polluting aquifers. The Contractor shall also ensure that adequate measures are implemented to control any soil erosion and runoff.

Remedial actions shall be carried out before the specified works can be handed over as completed. Any necessary remedial works shall be undertaken without delay, including restoration of vegetation

and stabilization of land surfaces. Culverts or other drainage works shall be cleared of debris and checked for clear flow paths. Any borrow pits shall be re-graded and made safe.

The Contractor shall ensure that locally obtained construction materials—including stones, gravel, sand, and wood—come from legal and environmentally sustainable sources. Any rocks or gravel taken from a river shall not exceed one-tenth of the width of the river at any one location, and shall not disrupt the river flow, or damage or undermine the river banks. Any earthworks shall be properly controlled, especially during the rainy season. Any excavated cut or unsuitable material shall be disposed of in designated tipping areas as agreed to by the Engineer.

All construction debris and other solid and liquid wastes shall be properly disposed of, at sites identified and approved by the Engineer. The Contractor shall ensure that these sites: (a) are not located within designated protected areas; (b) do not impact natural drainage courses; and (c) do not impact forests, wetlands, or critical natural habitats. Under no circumstances shall the Contractor dispose of any material in environmentally sensitive areas.

Vehicle/machinery and equipment operations, maintenance, and refueling shall be carried out to avoid spillage of fuels and lubricants and ground contamination. The Contractor shall ensure that all employees refrain from washing of vehicles or changing of lubricants in waterways or wetlands. All spills and collected petroleum products shall be disposed of in accordance with standard environmental procedures/guidelines. Fuel storage and refilling areas shall be located at least 300m from all cross drainage structures and important water bodies or as directed by the Engineer.

Physical cultural resource includes objects or sites of archaeological, historical, paleontological, or religious significance, including sacred natural sites. This includes graveyards and graves. The Contractor shall not undertake any activity that adversely impacts cultural property without prior approval of the Engineer and relevant government authority as appropriate. If the Contractor discovers sites or objects of cultural interest (including graveyards or individual graves) during any phase of construction, the Contractor shall:

- (a) Stop the construction activities in the area of the chance find;
- (b) Delineate the discovered site or area;
- (c) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the relevant authority take over;
- (d) Notify the Engineer who in turn shall notify immediately the responsible local authorities and the relevant authority (within 24 hours);
- (e) Contact the responsible local authorities and the relevant authority which shall be in charge of protecting and preserving the site before deciding on the proper procedures to be enforced. This will require a preliminary evaluation of the findings performed by the specialists of the relevant authority (within 72 hours). The significance and importance of the findings shall be assessed according to the applicable cultural heritage criteria;
- (f) Ensure that decisions on how to handle the finding be made by the responsible authorities and the relevant authority. This could include changes in the specific location of the planned facility (when needed to protect a site or object that cannot easily be moved), or removal, preservation, and documentation of the object(s) of interest;
- (g) Implementation of the decision concerning management of the finding shall be communicated in writing by the relevant authority; and

- (h) Construction work shall resume only after authorization is given by the responsible local authorities and the relevant authority concerning the cultural heritage item(s) found.

Occupational Health and Safety. The Contractor (or other employer) is responsible for implementing appropriate occupational health and safety (OHS) standards, codes and guidelines. The Contractor shall identify and provide appropriate personal protective equipment (PPE) that will offer adequate protection to the worker, co-workers and occasional visitors without incurring unnecessary inconvenience. Proper use of PPE shall be part of the recurrent training programs for employees. Relevant types of PPE for this project include hardhats, sturdy boots, and gloves. The Contractor shall also ensure that qualified first aid can be provided at all times. Prior to undertaking new assignments, the Contractor shall ensure that workers have received adequate training and information for them to understand the hazards of work and to protect their health from hazardous factors that may be present.

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For consultation & comments

PART 2 : RESETTLEMENT POLICY FRAMEWORK

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PROJECT DESCRIPTION AND POTENTIAL IMPACT

The objective of the *Sustainable Groundwater Management in SADC Member States Project* (P127086) is to support the sustainable management of transboundary and national groundwater in the Southern African Development Community (SADC). The Project consists of four components:

- A: Operationalisation of the SADC Groundwater Management Institute
- B: Strengthening institutional frameworks for sustainable groundwater management
- C: Advancing knowledge & information-sharing on transboundary and national groundwater
- D: Promoting groundwater infrastructure development

Component D involves minor physical civil works activities that are part of the “demonstration/pilots” for promoting groundwater infrastructures. These pilots build on those implemented under a previous SADC Groundwater and Drought Management Project that was implemented between 2005-2011 with the support of the Global Environment Facility. The pilots in the previous project were implemented in the Limpopo basin, namely in 7 rural communities in Botswana, South Africa and Zimbabwe. The civil works then consisted of: small sand dams, shallow infiltration dams, restoration and construction of shallow wells (7-11 meters deep). Collectively these pilots benefited the nearby communities by prolonging the availability of water in shallow wells during the drought periods and provided direct use of the water for domestic consumption or irrigation of small communal plots for growing vegetables and staples. The purpose of continuing these demonstration works in new pilots in the future project is to promote the expansion and learning potential of improved small scale groundwater infrastructures.

The civil works in the new project would similarly to the previous above mentioned pilots, focus on rehabilitation and construction of small infrastructures (small dams, monitoring stations, infiltration banks, shallow wells etc.) that promote the sustainability of groundwater use by local communities.

The exact sites and SADC countries in which the pilot works will be located is not known at this time. The country and location of the new pilots will be determined and assessed according to the master plan for the pilots that will be designed during implementation of the project. Hence, the space dimensions may range depending on the specific site but number of pilots (estimated at ≤ 10) and size of civil works will follow the scale of the previous pilots.

The civil works for the pilots may possibly require acquisition of land for the actual infrastructures and potentially paths or dirt roads to be specifically built. These will characteristically be simple in form due to their limited use and the costs involved in more advanced road building/maintenance.

Environmental and social screenings of the proposed pilots have been designed to minimize the necessity of land acquisition. The SADC GMI and relevant government agencies involved in the implementation of the works will assess the details about the identification of the location, types of lands (public/government and private) and specific size of area needed. Priority will be given to using public (Government) land on which there is no structures, squatters or existing uses for grazing, crops or other livelihood activities.

PRINCIPLES GUIDING RESETTLEMENT

The guiding resettlement policies for the project are:

- Land acquisition and adverse social impacts will, to the extent possible, be avoided when locations are screened, prioritized and chosen.
- Any affected people who will experience loss of land or resources will be compensated in accordance with the relevant national legislation.
- The implementation of the Environmental and Social Management Framework for the project will be done in conjunction with the Resettlement Policy Framework.

LAWS AND POLICIES GOVERNING PROJECT

The national legislation for resettlement and land acquisition will vary between different countries in the SADC region. It is not yet decided in which country the pilots will be implemented. However, during the design phase of the pilots, the application and plan for adherence to national legislation will be developed in detail.

[Please share any relevant information on nation land policies that could apply]

Due to the possibility that new land may be needed for the groundwater infrastructure pilots, the project has triggered the World Bank Operational Policy on Involuntary Resettlement (OP/BP 4.12). The other safeguard policies triggered are Environmental Assessment (OP/BP 4.01) and Projects on International Waterways (OP/BP7.50). If it is determined that there is a discrepancy between the national laws and regulations and that of the World Bank policy, the World Bank policy will be followed.

The World Bank policy on Involuntary Resettlement addresses the direct economic and social impacts caused by loss of land and assets, including: displacement or loss of shelter; loss of assets or access to important production resources; loss of sources of income or better subsistence; or loss of access to the places that offer better production or less cost for businesses or people.

Should land acquisition be required, then this Resettlement Policy Framework will serve to mitigation and remedial actions as outlined below.

PREPARATION, REVIEW AND APPROVAL OF ABBREVIATED/RESETTLEMENT ACTION PLANS (RAP)

When land acquisition is unavoidable, a Resettlement Action Plan (RAP) is developed and implemented. Individual RAPs specifies the procedures for land acquisition, compensation and economic assistance of Project Affected Persons (PAPs). As an RPF is being prepared for this project, the follow-up instrument will be a RAP, if it is required. Given the scale of the subproject pilot, an abbreviated RAP will be appropriate.

Following the decision to implement the civil works, the following process will start:

- Assessment of potential land acquisition issues if any, using the Environmental and Social Screening Checklist;
- Development of an abbreviated Resettlement Action Plan where land acquisition is needed;

- Submission of the RAP to the national authorities responsible for RAPs and also for review and clearance by the World Bank.

Preparation at the SADC Groundwater Management Institute (SADC GMI).

As part of the planning and implementation of subproject pilots, the SADC GMI will follow the steps below:

The first task will be to designate staff whom are responsible for social management issues who will conduct environmental and social screening to determine whether or not an EIA or EA or abbreviated RAP needs to be prepared for each individual subproject.

Preparation of individual RAPs

Once a subproject and its Developer have been identified and the basic infrastructure plan has been produced, the RAP process will begin. The end result of the RAP process is the production of a draft RAP which will be an agreed action plan and commitment of all stakeholders for resolving compensation and resettlement matters related to a particular subproject. Among others, it will indicate the criteria to be used after overall approval and during implementation. These approved criteria will assist in determining whether a person or entity is eligible for compensation or resettlement entitlements, what entitlements will be due to different categories of PAPs and for different types of losses, how the affected assets of individual PAPs will be valued and how compensation and resettlement entitlements will be delivered. It therefore forms the basis for determining the specific entitlements due to individual PAPs during implementation.

Environmental & Social Screening and RAP Needs Assessment

If the national environmental legislation requires that certain categories of proposed projects should be subjected to environmental and social screening to determine whether an environmental and social assessment of some type needs to be undertaken. The screening process identifies potential environmental and social impacts of sub-project activities, including impacts on land, assets and socio-economic activities. This requirement will be applied to all subprojects.

The SADC GMI will be responsible for initiating the environmental and social screening process for subprojects which should be undertaken by a team of environmental and social practitioners from the public and/or private sectors.

Where the environmental screening process determines that an environmental assessment is necessary the initial screening process will have determined whether or not there are significant adverse social impacts that require attention. Where it is clear that there will be no significant adverse impacts, including deprivation of land and assets, and where any small losses can be dealt with effectively in accordance with a simple EMP a separate RAP may be considered to be unnecessary. The final decision will be made by the WB.

The result from the environmental and social screening should (i) be communicated to local communities and their leaders; (ii) be used to develop appropriate mitigation measures; and (iii) help identify the need, if any, for any additional environmental analysis (i.e. Environmental Impact

Assessment). If the screening's output shows a “No” to all questions, the subproject receives the 'green light' for implementation. But if the screening reveals one or more ‘Yes’ answers, one or more of the following is required:- Environmental Impact Assessment (EIA); Environmental Management Plan (EMP); A Resettlement Action Plan (RAP).

Team for the Preparation of Draft Resettlement Action Plan

The SADC GMI will be responsible for producing the draft RAP. They will be ultimately responsible for the implementation of the draft RAP, in close co-ordination with the relevant national and local authorities in the country in which the pilot is located

Baseline Survey & Preliminary Asset Inventory

During the preparation of the EA (if necessary), or soon thereafter, the Developer will indicate as accurately as possible the location of proposed infrastructure, rights-of-way and construction sites. Based on this information, the RAP preparation team will undertake a baseline survey. The purpose of this baseline survey is to determine whether 1) anyone determine who (individuals, households and entities) will be potentially displaced (physically, economically or socially) or lose access to land (either permanently or temporarily by sub-project activities and 2) the nature and extent of potential displacement or such loss.

As potential PAPs are identified during the baseline survey each PAP is to be provided with a letter or fact sheet, briefly explaining the sub-project and detailing the planning procedures being followed, the cut-off date for eligibility, the rights of PAPs and the grievance procedures to be followed.

Categorisation of Affected Persons

Based on the preliminary register of potential PAPs and affected assets the draft RAP preparation team will identify different categories of potential PAPs and assign each potential PAP to one of the categories. This will enable the preparation team to determine the number of PAP in each category, the number of each type of affected asset in each category, the overall total number of potential PAP and the total number of affected assets.

Possible Categories

The amount of impact (physical, social, economic and cultural) that could occur as a result of subproject activities would be highly dependent on specific subproject circumstances. It is not possible to estimate at this stage the number of PAPs although it is expected to be minimal.

Losses are likely to be small and will most commonly include the permanent loss of very small, almost negligible, areas of land, the permanent loss of some fruit trees, the temporary loss of vegetable gardens and small areas under crops, the temporary loss of land areas during construction and the temporary loss of or damage to infrastructure and crops or trees during construction.

Both people with and without official title to their land are likely to be affected, with people without official title likely to be the larger group.

Although the low likelihood of negative social impact, PAPs may include individuals, households, businesses, communities, associations (e.g. churches) and public authorities (e.g. municipal councils). It should be noted that a PAP may be placed in more than one of the categories or sub-categories indicated and this will result in a variety of categories each with multiple attributes. .

Determination of eligibility for compensation and resettlement entitlements

Based on the framework eligibility criteria presented in the RPF, the draft RAP preparation team will draw up a list of criteria that have to be met for a particular PAP to be considered eligible for compensation and/or resettlement entitlements. The criteria will be formulated together with traditional or local leaders, Government officials and local authorities.

Using the approved eligibility criteria and the preliminary register of potential PAPs the draft RAP preparation team will determine which categories will be eligible for various compensation and/or resettlement entitlements, including any additional allowances and assistance to be provided.

Eligibility Criteria

The World Bank's OP 4.12 on Involuntary Resettlement classifies as eligible for consideration all those who either have formal legal rights to land (including customary and traditional rights recognised under the laws of the country), those who do not have legal rights but have a claim to land or assets under national legal processes that could be adjudicated over time, and those who have no recognisable legal right or claim to the land they are occupying.

Of this last category, the World Bank's policy provides for resettlement assistance as necessary to achieve the objectives set out in the policy (recovery of lost assets, incomes and standards of living, or improvement of them). The only caveat is that all people should be recognized as having occupied the project area or had rights to its resources prior to an established cut-off date which is the date of commencement of the census of PAPs within the project area boundaries. This is the date on and beyond which any person whose land is occupied for project use, will not be eligible for compensation.

Under this Policy Framework, any individual who loses land or other assets (e.g. housing, business premise, crops or economic trees) or whose livelihood is affected by land acquisition or changed land use is eligible for compensation and/or assistance. The nature and extent of compensation and assistance depends on the rights that individual has to the land taken and on the nature and extent of the impact. Table 1 provides some examples.

In some instances, it may not be necessary to acquire the entire plot. If the remaining area is no longer viable, the entire plot will be acquired. Where, however, sufficient area remains for the occupant to continue using the remaining area, land and any structures taken are compensated, and the owner rebuilds the structures lost on the remaining area, if the individual so wishes. Temporary land take should be relatively uncommon, and is generally treated as land rent (e.g. area for a construction depot).

The cut-off date for eligibility will be set by each subproject as the date when the community project-development committee completes the census of people occupying the land to be acquired,

the inventory of their assets (land, built structures, and other infrastructure such as wells, latrines, fences).

Determination of eligibility for compensation and resettlement entitlements

Based on the framework valuation methodology of the RPF, a RAP preparation team would submit a more detailed valuation methodology to the SADC GMI for approval.

This will include a list showing standard unit costs or rates for each type of asset. In some cases the application of standard unit rates may not be appropriate and more specific valuations may need to be obtained and negotiated with potential PAPs.

The RAP preparation team will then calculate the estimated cost of compensation and resettlement measures in accordance with the agreed valuation methodology. This might, for example, be achieved by multiplying the standard unit rates for a particular type of asset with the total number of potentially affected assets within categories of PAPs that are deemed eligible for compensation and/or resettlement entitlements.

Draft RAP report

It is recognised that each activity will produce different impacts although many of them will be common among subprojects. The level of detail will also depend on the nature and extent of impacts. For some civil works activities, this may require only a very brief RAP or a statement in the EMP concerning the payment, for example of cash compensation to one or two PAPs for the loss of a few fruit trees. Although not very likely, in other instances the impacts may be more severe and requiring the physical relocation of a number of households.

The draft RAP document will be as a RAP depending on the decision made immediately after environmental screening. The contents and level of detail of the draft RAP report will vary according to specific circumstances of each subproject but will, in all cases, include details of the procedures for implementing the RAP (i.e. detailed valuation of the assets of each PAP and the subsequent provision of entitlements), responsibilities of the various stakeholders, an implementation timetable and cost estimates.

The draft RAP document will be accompanied by signed asset inventory forms, the preliminary register showing, for each PAP, the nature and extent of any displacement, affected land and assets and the agreed corrective measures and entitlements.

RESETTLEMENT ACTION PLAN – PROCESS & APPROVAL

If the screening process determines that the resettlement policy is triggered, the implementing agency will prepare a RAP. The RAP will include the following information:

1. Project description
2. Identification of potential impacts
3. Objectives
4. Socio-economic summary, as required
5. Legal framework
6. Institutional framework
7. Eligibility of PAPs

8. Census survey of displaced persons
9. Valuation of assets
10. Description of compensation and other assistance to be provided
11. Environmental management
12. Consultations with displaced people about acceptable alternatives
13. Institutional responsibility for implementation and procedures for grievance redress
14. Arrangements for monitoring and implementation
15. Timetable and budget
16. Monitoring and evaluation

All resettlement documents will undergo review and clearance from the implementing agency and the World Bank. Compensation will be provided prior to project causing impact in affected persons.

The implementing agencies (SADC GMI) and national/local agencies in co-ordination will be responsible for filling in the checklist and will be responsible for reviewing the checklists. These implementing agencies will be responsible for ensuring the Abbreviated RAP is prepared, cleared by the World Bank, and implemented.

Review and Approval

SADC GMI will be responsible for submitting the draft RAP documentation. At this stage, the main elements of the draft RAP, particularly those concerning implementation and delivery of entitlements, will be disclosed to the PAPs, although detailed compensation and/or resettlement entitlement in respect of each PAP will only be determined after approval of the final RAP and the overall subproject plan. The SADC GMI will review and approve the draft RAP before forwarding it to the World Bank for final review and clearance.

Cut-off Date

It will be important to set a cut-off date at an early stage of the preparation process in order to avoid speculation and illegitimate claims at a later stage. An appropriate cut-off date will possibly be the time when the tentative location of subproject infrastructure is identified on the ground and when the baseline survey, census and preliminary asset inventory is undertaken.

Nature of Entitlements for Specific Eligibility Categories

Based on the initial categorisation of PAPs, those categories that will be eligible for compensation and resettlement entitlements will be identified and the type of entitlement that each category will be eligible for will be determined by the draft RAP preparation team. Eligibility of categories of PAPs may be based on location, land tenure, ownership or renting of property, land use and the type and extent of loss or displacement to be incurred. For subprojects land tenure status will not affect eligibility.

The following section provides some guidelines for defining the nature of entitlements for specific eligibility categories.

Land

Where PAPs lose most (i.e. more than 20%) of their agricultural or productive land or in cases when the remaining assets are not economically viable they will be entitled to:

- full compensation through provision of replacement land of equal productive capacity;
- full compensation at full replacement cost of immovable assets associated with the abandoned land (e.g. water supplies and out-buildings) through replacement of the assets or cash compensation;
- Appropriate transfer and inconvenience allowances and/or subsistence support allowances to cover the transitional period and other development assistance as may be agreed.

Where PAPs lose only small areas (e.g. less than 20%) of their agricultural or productive land or in cases where the remaining land is economically viable they will be entitled to:

- full compensation through provision of replacement land if available and practical; or
- where it is not practical to offer alternative land contiguous or near to the original land holding, full compensation in cash or kind at a rate to be determined and agreed by the parties, but probably based on the medium to long-term production potential of the land in question.

Crops and trees

Replacement of damaged or lost crops will be based on full market value for one year's harvest. For fruit trees, other trees of economic value and perennial crops the compensation will be based on a cash payment for lost production potential of the tree.

Residential houses and other structural improvements to the land

Circumstances will vary from one subproject to another but entitlements will be guided by the following:

- full compensation through provision of alternative residential land of equal characteristics and advantages where the original holding is no longer viable as a residential plot;
- full compensation at replacement cost of the entire asset through cash compensation or the provision of building materials and building costs;
- for urban houses, which can be transferred to other parties together with the land use and benefit rights, full compensation at replacement cost which reflects the market value of the structure, including the implicit value of the land, through cash compensation, provided that this exceeds the full replacement cost;
- full compensation at replacement cost for minor or temporary damage which can be repaired, either by restoration of the damaged asset, through cash compensation or through provision of materials and building costs; and
- For tenants who have been renting a house, a cash grant for a specified number of month's (e.g. two months) rent at prevailing market rents for the area as well as assistance in finding alternative accommodation.

Business structures

PAPs will be entitled to:

- the provision of alternative business sites of equal advantages acceptable for customers and satisfactory to the PAPs;

- cash compensation for structures at full replacement cost; and
- Cash compensation for the loss of income and opportunity during the transition period.

Other measures

In terms of agreements reached locally, PAPs may be eligible for additional measures, extra to normal compensation and resettlement measures. These might, for example, include:

- allowances to cater for general translocation expenses, inconvenience, "nuisance" and disturbance (e.g. noise and dust) and for "intangible" items that are not easily included within other forms of entitlement;
- support after displacement, for a transition period, in order to restore livelihoods and standards of living;
- Development assistance (e.g. land preparation).

Valuation of Losses and Determination of Entitlements

National legislation would normally specify how assets should be valued for compensation purposes. It only states the compensation should be just and fair. The valuation of assets lost due to project implementation can be determined through an agreement between Developers and PAPs, based on the advice of Experts from the construction industry or the agricultural sector.

As the need for resettlement measures and compensation is unlikely to be extensive and because subprojects circumstances may differ, it is proposed that compensation rates and entitlements should be agreed in the first instance between the RAP preparation team and the PAPs ensuring the amount is equal to or greater than the cost for replacing the impacted asset.

Officials from any Local, District or Provincial Directorates of Agriculture and Rural Development should be brought in to assess the value of crops. Because displacements are likely to be small and varied, it is envisaged that most cases are likely to be settled through direct negotiation between the parties concerned and there will be only a few instances where standard unit rates for costs can be simply applied.

In compliance with the requirements of the WB OP 4.12, compensation will be based on full replacement cost at the time of impact or pre-project period, whichever is higher. This will be the value considered to be a fair compensation for any property, the actual cost of replacing houses and structures (based on current fair market prices of building materials, labour and transport, without depreciation or deduction for salvaged materials) and the market value of crops, trees and other commodities.

Individual circumstances will differ but the following guidelines should be applied to compensation rates and entitlements:

Land

Where only very small areas of land are involved and it is not practical or warranted to provide replacement land it is suggested that cash compensation be awarded. It is sometimes not possible to easily place a value on the land in question. It is suggested that the valuation should be based on the

production potential of crops typically grown in the area over an agreed period of, for example ten years. Officials should be consulted to determine standard unit rates.

Crops and vegetables

Compensation for the permanent loss of crop fields will be covered through placing a value on the land based on the lost production potential of the land in question.

Compensation for the temporary loss of cropland and vegetable gardens will be determined on the basis of the production potential and the local market value of the crop over the period of temporary displacement, e.g. one season or one year. Local market values vary considerably throughout the country and unit rates will be determined in consultation with local agricultural experts, marketing organisations and local businessmen.

Fruit trees and trees with economic value

For fruit trees, other trees of economic value and perennial crops the compensation will be based on a cash payment for lost production potential. This will be determined from the annual yield of the tree multiplied by the expected life of the tree in years multiplied by the unit market price of the product. These parameters are highly variable so that the level of compensation offered will need to be based on local production and market figures. In some cases it may be necessary to consider the age of the tree and the remaining productive lifespan of the tree in determining compensation entitlements.

Residential houses and structures

For houses and other infrastructure the compensation value will be determined from standard unit values (e.g. cost per m2) based on current fair market prices of building materials, labour and transport, without depreciation or deduction for salvaged materials, Information regarding local unit costs will be obtained from local authorities, local construction companies and local building material suppliers.

Business structures

Compensation for loss of income will need to be determined on a case by case basis, taking into consideration the degree of displacement and average earnings and expenditure for an agreed preceding period.

Once standard unit rates have been determined and agreed to by the parties involved the draft RAP preparation team will apply these rates to the total number of affected assets associated with each category of PAP to determine the total value of compensation measures for the subproject.

Illustrative Compensation List by Type of Asset Lost and Ownership Right

IMPACT	RIGHT	COMPENSATION
Land	Formal title or customary title	Replace with plot of similar size and location for residence or similar size and characteristics (soil, water) for agriculture
	Renter or Lessee	No payment for land; assistance to locate replacement plot for rent. Payment for work invested to improve the

		land
	Squatter	No payment for land; assistance to locate replacement plot. Payment for work invested to improve the land
House or Business Premise (including all infrastructure such as wells, fences, outdoor kitchens, chicken coops and the like)	Owner	Replace with house of at least same size and infrastructure
	Renter	Reimburse any advance rental payments; provide assistance to locate new rental property; provide at least three months rent (as disturbance fee)
	Squatter	Provide assistance to locate new rental property; provide at least three months rent (as disturbance fee); assistance to acquire house plot recommended
Crops annual	Owner/farmer	Compensate for lost production (yield) at price between harvests
Trees	Owner	Provide seedlings as replacement; Value of lumber or of fruit lost until seedlings come into production
Business	Owner	Compensate monthly profits foregone during period of relocation; Pay employee salaries during period of relocation
	Renter	Compensate profits and employees for wages as above, plus assistance to acquire new locale (as for all renters)

Compensation

Payment of Compensation

For subprojects, the most common type of entitlement is likely to be the payment of compensation - in cash or kind - for loss of assets, loss of access to assets, loss of income earning opportunities and damage to assets. In most cases, it is envisaged that it will be more practical and more acceptable to all parties to implement monetary compensation. However, in some cases, it may be agreed that compensation be provided in kind, including the physical replacement of infrastructure and assets adversely affected by the subproject.

Compensation will be paid to the beneficiaries at least one month before subproject construction activities can commence, or in accordance with some other time period defined and agreed to during RAP preparation.

The SADC GMI shall be responsible for paying each beneficiary, compensation in accordance with the agreed entitlements listed in the entitlement contract forms and the main asset and award register. Compensation will be provided as cash or a cheque according to the preference of the beneficiary.

Compensation for Unforeseen Damage

The construction activities on individual subprojects may lead to small amounts of additional displacement not foreseen during the preparation of the RAP. Construction activities may also cause some additional temporary or permanent damage to land and assets that cannot be identified or quantified during RAP preparation. An example might be construction workers trampling crops or vegetables while accessing particular construction sites.

In such cases, affected parties will be required to complete a compensation claim form and submit it to SADC GMI who will then negotiate the required compensation measures, based initially on the standard unit values determined during RAP preparation, and then obtain agreement from the SADC GMI. Payment of compensation should be effected within one month of submission of the claim form.

Acknowledged Receipt of Entitlements

Each beneficiary will be required to sign an entitlement receipt form confirming receipt of the entitlement whether as physical resettlement or compensation in cash or kind. The entitlement receipt form will also be signed by the Developer and witnessed by a Representative from the local authority (e.g. district administration or municipal council).

ORGANISATIONAL PROCEDURES FOR THE DELIVERY OF ENTITLEMENTS

For subprojects, it is not envisaged that there will be need for physical resettlement. The implementation process will vary according to the nature of a particular subproject and the type of agreed entitlements or compensatory measures. SADC GMI will be responsible for ensuring that all compensation is provided to PAPs prior to experiencing impact from the project.

RAP Integration into the overall Project Planning

Once a subproject RAP has been approved SADC GMI will be required to integrate the elements of the RAP into the overall subproject plan, budget and implementation schedule. The implementation schedule will show that no subproject construction work (or activities that will cause displacement) will take place until all entitlements are delivered.

Final Determination of Entitlements

It is only after final approval for a particular subproject has been given and detailed survey and planning work has commenced that the final location of subproject infrastructure and the alignment of overhead distribution lines are likely to be accurately known. It will therefore be necessary for the RAP preparation team to update the information contained in the RAP and to prepare a final, more detailed, inventory of PAPs and the displacements to be suffered. On the basis of this detailed inventory final negotiations concerning entitlements and values will be conducted by the developer and costs determined. Final entitlements will be approved by the **CRC** and should not differ considerably from the estimates contained in the RAP.

Entitlement Agreement Contracts

For each PAP, the entitlements (i.e. compensation and resettlement actions) should be recorded on an entitlement contract form which should be signed by the relevant PAP, the SADC GMI. Details of entitlements due to each PAP should then be entered in the asset register against the name of the recipient.

Where the SADC GMI and a PAP cannot reach agreement on entitlements, each party will be able to bring its grievance to the SADC GMI as a first recourse. Where the SADC GMI are unable to satisfactorily resolve any grievance, the aggrieved party will then be able to appeal through agreed legal procedures with final redress to the courts.

ORGANISATIONAL PROCEDURES FOR DELIVERY OF ENTITLEMENTS, MONITORING, IMPLEMENTATION PROCESS & FUNDING

When it comes to any compensation of land, the official authorization is given by the Right to Land Use and Benefit. The procedures for obtaining the DUAT involve: negotiations with the seller and formulation of contractual documentation, community consultations, district administrators' approvals, submission of a business plan or feasibility study for approval by the Ministry of Planning and Development, land registration and demarcation. For local population, what is usually followed is a customary land regime that is managed at the community level by traditional leaders.

For delivery of compensation and entitlements, the RAP will outline the organisational roles in responsibilities along with the timeline for delivery of compensation. Also captured in a RAP that would follow identified negative impact on land entitlement, would be the method with which progress would be monitored. Responsibility to monitor would fall on the implementing agencies.

Grievances

PAPs will be provided many opportunities to review baseline survey results and compensation policies during the process of draft RAP preparation and implementation. However, during implementation various issues might be encountered by PAPs. In order to resolve effectively and quickly concerns that may occur at any time during draft RAP preparation and implementation, a grievance redress mechanism will be set up by SADC GMI. PAPs will be informed verbally and in writing about this mechanism after the decision to prepare a RAP has been taken.

Under the proposed grievance procedure if a PAP is dissatisfied with a resettlement or compensation measure or the delivery of entitlements, s/he could voice a complaint in the first instance to SADC GMI, through his or her Representative or directly. This may initially be done through local leaders (e.g. tribal leaders or local government leaders). The PAP will require an answer with a stated period, e.g. fourteen days. Appeal could then be made through the formal legal system. PAPs will have the possibility to seek final redress at the courts. No project activity can be initiated until the matter is resolved.

All attempts will be made to settle grievances.

Funding of RAPs

SADC GMI will be responsible for funding the preparation of the draft RAP and all compensation and resettlement activities, including internal monitoring. Funding for external monitoring and evaluation should be covered by the overall SADC GMI budget.

The compensation and resettlement budget for proposed subprojects will be fully included in the total subproject cost. In order to ensure that the compensation and resettlement component will be implemented smoothly, efforts will need to be made to develop realistic cost estimates during the draft RAPs. It is accepted that not all eventualities will be foreseen and a reasonable contingency should be approved.

Detailed cost estimates will be based on a comprehensive inventory drawn up during the baseline survey and the actual replacement costs for various types of compensation, relocation and rehabilitation. The draft RAP will contain detailed costs of compensation, relocation and rehabilitation costs for:

- land;
- infrastructure;
- businesses;
- other assets;
- Public services and facilities.

Other related costs, such as surveying, planning, consultations, supervision, miscellaneous entitlements and monitoring will also be estimated.

As part of ongoing progress reporting exercise, the Developer will be required to submit details of expenditure on all aspects of implementing the compensation and resettlement component of a subproject.

Participation and Consultation of Affected Persons

Consultation Process

The screening mechanism will involve planning for appropriate consultation with local communities on the planned civil works in the tradition of participatory approaches if there is a need for an Abbreviated RAP.

Consultation with Project Affected will take place all along resettlement planning and implementation. It will start early in the process of draft RAP preparation. Before the baseline survey of impacts is conducted, the draft RAP preparation team will carry out a reconnaissance survey to identify the people and communities potentially affected by a given subproject. During the survey, comments and opinions of affected people, traditional or local leaders, local communities and local administrations will be collected and passed onto the subproject design and planning teams. Continued consultation and participation will take place during the detailed baseline survey which will determine precisely the extent of affected areas. During the survey, every potentially affected household or business persons will be visited and survey results will be disclosed and reviewed.

Compensation, relocation and rehabilitation measures will be discussed and agreed to with PAPs. In developing the RAP, PAPs and local administrations will be given opportunities to review the resettlement measures, compensation policies and rehabilitation measures and to make site selection for replacement land if necessary.

Such consultations will be organised by the SADC GMI throughout implementation. It will then include signing entitlement agreement contracts, delivering entitlements to PAPs, providing replacement land and restoring any affected community structures.

Public documents should be drafted in an accessible language and made available in national and local languages at suitable locations (i.e. offices of local authorities).

Progress Monitoring and Reporting

Throughout the implementation process, SADC GMI will be required to keep records of all progress, indicating the level of progress achieved and showing that various tasks have been completed. Once the subproject has been completed SADC GMI will assess whether or not PAPs have been able to maintain, or improve, their standard of living. If it's determined that the PAP has not been able to return to a standard of living at least equal to pre-project levels, then further mitigation measures will be instituted.

Monitoring and Evaluation

Following World Bank's requirements, during compensation and resettlement implementation, and possibly for some time afterwards, both internal and external monitoring and evaluation exercises will be carried out in order to monitor progress and ensure that PAPs are adequately catered for and are left in a position no worse off than they were prior to sub-project commencement. Draft RAPs will be required to detail the monitoring and evaluation arrangements for individual sub-projects.

For internal monitoring the project developer will be required to submit regular reports outlining progress in relation to targets and delivery entitlements. The monitoring should address the following:

- delivery and usage of compensation and resettlement entitlements;
- allocation of replacement land and residential plots, where applicable;
- reconstruction of new houses and other infrastructure, where applicable;
- compensation measures applied to cater for damage during construction activities;
- reported grievances and action taken;
- problems encountered and action taken;
- General issues related to the success of compensation and resettlement measures.

External monitoring will be conducted by the World Bank. The main objectives will be to determine whether the objectives of resettlement (compensation, relocation and rehabilitation) have been achieved and to assess, to the extent possible, implementation of resettlement and the restoration of the livelihoods of PAPs. The external monitoring and evaluation exercise should include, but not be limited to, an evaluation of:

- implementation progress;
- compensation and resettlement policies;
- delivery of entitlements, including replacement land where applicable;
- changes in livelihoods and incomes among PAPs; and
- Consultation with and participation of PAPs and other Stakeholders.

SUBPROJECT RESETTLEMENT PLANS

- I) baseline census
- II) socio-economic survey information
- III) specific compensation rates and standards
- IV) policy entitlements related to any additional impacts
- V) description of sites
- VI) programs for improvement or restoration of livelihoods and standards of living
- VII) implementation schedule
- VIII) detailed cost estimate

For consultation & comments

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