African Water Facility
Facilité africaine de l'eau
Mobilising Resources for Water in Africa

ZIMBABWE

CHITUNGWIZA WATER AND SANITATION REHABILITATION PROJECT

APPRAISAL REPORT

June 2009

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Currencies and Measures (May 2009)

NB Under the Multi-currency regime Zimbabwe uses the USD and ZAR

EUR 1	=	USD 1.3275
USD 1	=	EUR 0.7533

Acronyms and Abbreviations

ADB	African Development Bank
AWF	African Water Facility
BNR	Biological Nutrient Removal
CoH	City of Harare
EU	European Union
EUR	Euro
ICE	Information, Communication and Education
KAP	Knowledge, Attitudes and Practices
MC	Municipality of Chitungwiza
O&M	Operations and Maintenance
STERP	Short Term Economic Recovery Programme
TA	Technical Assistance
UNDP	United Nations Development Programme
USD	Unites States Dollar
WB	World Bank (The International Bank for Reconstruction and Development)
ZINWA	Zimbabwe National Water Authority

LOG FRAME

HIERARCHY OF OBJECTIVES	EXPECTED RESULTS	REACH	PERFORMANCE INDICATORS	INDICATIVE TARGETS AND TIMEFRAME	ASSUMPTIONS/RISKS
1 Sector Goal	**1. Impact**	**Beneficiaries**	**Impact Indicator(s)**	**Target Indicators and Timeframe**	**Assumption**
1.0 Improvement in the public health status of residents as a result of better access to potable water and sanitation from functional facilities.	1.1 Improved quality of life of the residents through reduction in annual cases of cholera reported and elimination of deaths through cholera 1.2 Improved Municipal delivery of the water sector services	Residents and local government institutions of the City and neighbouring municipalities National Health systems	Number of cases of cholera reported from the City of Chitungwiza No. of cases of diarrhoeal diseases reported at health centres	Reported cases reach zero level after October 2010 Cases are reduced by 80% within 5 years **Source:** City and National Health Statistics **Method:** Health Centre records and Death Statistics	**Risk** Population continues with unhygienic practices **Mitigation strategy** Hygiene education included as a sub-component
2 Project Purpose	**2 Outcomes**	**Beneficiaries**	**Outcome Indicators**	**Progress anticipated in the medium term**	**Assumption**
2.0 To rehabilitate the critical components of the municipal water supply and sanitation systems and build institutional and community capacity for improved water and sanitation services	2.1 Improved access to water supply to all zones of the municipality, and availability of emergency supplies of water 2.2 Surface flows of sewage in populated areas eliminated and pollution in the watercourses reduced 2.3.Daily workload and household chores for women and girls in particular facilitated 2.4 Enhanced community awareness in improved water, sanitation and hygiene practices 2.5 Improved institutional capacity to plan, manage, operate and maintain drinking water, wastewater and solid waste service provision in the municipality	Residents of the high-lying zones of municipality Residents of Seke East, St Mary's and flooding parts of Zengeza Women and girls in the municipal areas Residents of the municipality: men and women Managers and Council Members, Residents	Zones receiving a minimum of 12 hours water supply per day Percentage of sewage evacuated from residential areas through the sewer system. Percentage of wastewater treated before discharge into the river Percentage of households with minimum supply of water year round Percentage of respondents in random surveys with positive KAP profiles Timely repair Cost recovery from water services	100% at completion of the project 100% by end of project 30% by end of project Increased from 60% to 100% by end of project Increased from baseline level at start of project to 95% by end of project Within 24 hours by end of Project 100% of O&M and some percent of Capital Costs by end of project **Source:** Municipal Statistics **Method:** Operating Records	**Risk** Harare water supplies improvement delayed or supply not sufficient for Chitungwiza **Mitigation strategy** Additional boreholes included in project to provide the bare minimum for drinking if supplies remain low

HIERARCHY OF OBJECTIVES	EXPECTED RESULTS	REACH	PERFORMANCE INDICATORS	INDICATIVE TARGETS AND TIMEFRAME	ASSUMPTIONS/RISKS
3 Inputs and Activities	**3 Outputs**	**Beneficiaries**	**Output Indicators**	**Progress anticipated in the short term**	**Assumption statement**
3A INFRASTRUCTURE REHABILITATION					
3A.1 Water Supply Systems i) Repair/replace defective appurtenances and pipelines; ii) Drill additional boreholes in high risk zones iii) Install water diversion valves on mains to improve water flow to high lying (low pressure) zones	3A.1 Leaking appurtenances reduced *Emergency supply from boreholes available *Infrastructure to regulate water pressures in place	Residents of Chitungwiza	Number of leakage spots attended Percentage of leaking appurtenances repaired Number of additional boreholes drilled and operational Number of off-takes with Pressure Regulating Valve arrangements in place	20 by M+ 15 from grant signature 80 by M +15 15 by M+15 10 by M+8 **Source:** Progress Reports **Method:** Project Monitoring	**Risk** Scope of Work larger than currently estimated **Mitigation strategy** Prioritize **Risk** Borehole yields lower than estimated **Mitigation strategy:** Use different geophysical survey technique suited to the local geology for siting
3A.2. Sewerage Systems i) Purchase high pressure Jet flushing pump, tools and repair equipment; ii) Flush sewers in residential areas iii) Repair excavation equipment; iv) Build grit removal sumps at pump stations v) Rehabilitate pump stations and replace pumps at pumping stations;	3A.2 Improved technical capacity to evacuate sewage from residential areas	Sewage system operators and residents of Chitungwiza	Availability of equipment for flushing Overflow of sewers in residential areas stopped Reduction in grit handled by mechanical equipment Number of Pump stations refurbished, and equipped with grit removal tanks and pumps	By M+15 By M+15 80% by M+15 3 by M+15 **Source:** Periodic Progress Reports **Method:** Project Monitoring	

HIERARCHY OF OBJECTIVES	EXPECTED RESULTS	REACH	PERFORMANCE INDICATORS	INDICATIVE TARGETS AND TIMEFRAME	ASSUMPTIONS/RISKS
3A.3. Rehabilitate Sewage Treatment Plants • Build grit removal sumps at the Zengeza plant • Recondition Primary Sedimentation Tanks • Re-commission part of the BNR plant	3A.3 *Sewage Pollution of Environment and Receiving Water Bodies reduced	Sewage Treatment operators	Number of grit removal sump built and operational Capacity of BNR plant load remocal as percentage of inflow	1 by end of project, 30% by end of project ***Source:*** *Plant operating data* ***Method:*** *Plant Operation Monitoring*	
3B CAPACITY BUILDING					
3B.1 Strengthen Community awareness on appropriate use of Water and sanitation facilities • Engage NGOs to do KAP studies and prepare ICE material • Establish Consultative Forums • Undertake basic health and hygiene knowledge diffusion; • Support limited community initiatives possibly financing solid management initiative	3B.1 Increased general awareness about water, sanitation and hygiene and their linkages to health	Community members, local leaders, special focus on women and children.	Percentage of households demonstrating sanitary practices	At least 50% of Households by end of project **Source:** Feedback from Sensitisation Meeting **Method:** Sample Questionnaire	**Risk** Sensitization messages not retained once threat of disease is perceived minimal **Mitigation strategy** Council Health Department reinforcement campaign
3B.2 Build Capacity for O&M and Manage Water and Sanitation System • Procure Water Maintenance Vehicles and Equipment • Procure Sewerage Maintenance Vehicles and Equipment • Supply Sewage Lab Equipment • Replace high impact consumer meters • Undertake Water Maintenance Artisan Training	3B.2*O&M capacity of water and sewerage services improved	Systems Maintenance managers and operators	Number of vehicles procured and in service Number of water meters replaced Supplied with spare parts	Pick-up trucks: 2 (1 for water 1for sewage) Motor cycles: 8 500 500 **Source:** Maintenance Records **Method:** Maintenance Monitoring	**Risk** Funding inadequate for O&M **Mitigation strategy** Prioritize and implement to the limit of the budget.
3B.3 Institutional Development • Procure and install basic Information Technology Equipment; • Prepare Institutional Development Plans • Prepare Strategic Investment Plan.	3B.3*Institutional Capacity for Asset Management and Strategic Planning for Longer-term investment Enhanced Business and Strategic Investment Plan jointly	Municipal Managers	Plans produced and in use	Corporate Strategic Plan Investment Plan ready by M+12. **Source:** Progress Reports **Method:** Project Monitoring	

HIERARCHY OF OBJECTIVES	EXPECTED RESULTS	REACH	PERFORMANCE INDICATORS	INDICATIVE TARGETS AND TIMEFRAME	ASSUMPTIONS/RISKS
	prepared by the municipal departments of Engineering Services, Health and Finance, and in use. Investment Plan available for use by client				
3C PROJECT MANAGEMENT					
3C.1 Project Management • Procure Technical Assistance with backstopping and provide Project Management Logistics • Ensure compliance with Environmental Regulations • Organize Workshops and Donor Conference(s	3C.1 Project Implemented Efficiently and on Schedule	The project	Overall Project Performance	Adjudged "Satisfactory" at Completion	**Risk** Delays and Cost overruns occur due to lack of capacity to procure services **Mitigation strategy:** Project progress to be monitored and assistance sought when necessary
3C.2 Monitoring and Evaluation • Baseline studies • Collect and Analysis Monitoring data • Document lessons and share experiences • Organize Dissemination Materials for Workshop	3C.2*Lessons Learnt available for use in up-scaling related economic recovery in similar circumstances in Zimbabwe	Zimbabwe Water Sector Actors	Baseline studies completed Documented Experience available for sharing	By M+3 By the end of the project **Source:** Project Completion Report **Method:** Project Completion Review	
Cost : EUR 2.196 million **AWF grant : EUR 1.998 million** **MC contribution: EUR 0.198 million**	Duration: 14 mos				

EXECUTIVE SUMMARY

Zimbabwe is emerging from political and economic crisis of unprecedented dimension characterized by hyper inflation and drop in economic growth almost year after year since 2002. Since taking office in February 2009, Zimbabwe's Inclusive Government has been quick to establish the first strands of an economic recovery roadmap in the form of a Short-Term Emergency Recovery Plan (STERP), which places emphasis on ensuring political stability, good governance and rebuilding capacity of critical sectors of the economy and ensuring adequacy of water and sanitation services. The challenges facing the country are huge and will require the assistance of the international community and multilateral institutions, including the African Development Bank.

Arising from the economic crises, most of the infrastructures are dilapidated and are in dire need of rehabilitation. A request was received from the Government to support the funding of the water sector programmes in general, water being one of the main instruments of economic growth. A proposal from the Chitungwiza Municipality, the second largest community in Zimbabwe and which has borne the brunt of cholera epidemics was also submitted to the African Water Facility (AWF) to support its ailing water and sanitation systems. The AWF responded with a mission in May 2008 to follow up these proposals and to prepare and appraise a suitable project for AWF financing. The present project appraisal report is based on the agreement reached with the Zimbabwean authorities and the Chitungwiza municipality during the Mission.

The proposed project is aimed at (a) stabilising the deterioration in the provision of water and sanitation services in the Municipality of Chitungwiza and (b) enhancing institutional capacity for efficient and sustainable operation and management of the water supply and sanitation services.

The project consists in undertaking urgent repairs to broken down equipment and appurtenances necessary to ensure equitable and improved distribution of water supply. Access to drinking water supply will be augmented with motorized boreholes pending improvements to the Harare supply sources, which serve the municipality of Chitungwiza. The project will equip the municipality with adequate capacity to evacuate wastewater from households and industry, re-commission the three sewage pumping stations and the two sewage treatment plants to enable partial treatment of the wastewater before discharge to the receiving watercourses. Community and municipal management capacity will be built to maximize the benefits of water and sanitation service provision in the Municipality. Technical assistance will be provided to enhance strategic and investment planning for the water and sanitation system beyond the stabilisation phase.

The proposed project in Chitungwiza will be a bridging intervention between emergency and longer-term development assistance. This intervention therefore constitutes an entry point for AWF to deliver on its mandate to build stakeholder confidence, catalyze internal and donor resources, support the preparation of long-term investment plans and generate knowledge on transitional assistance in a post-conflict setting. The project will stabilise the existing ailing water and sanitation system by stopping the deterioration and thereby establish the platform for more rational planning of subsequent stages of interventions needed to bring the services back to normalcy and for future developments. The intervention will address the most pressing problems of water and sanitation service provision that may avert another outbreak of cholera epidemic in the city. Water supply to Chitungwiza from Harare is expected to increase following a proposed World Bank intervention to increase treatment capacity of the Harare water treatment plant.

It is recommended that the AWF considers favourably the grant application from the Municipality of Chitungwiza, Zimbabwe and approve the required funding not exceeding EUR

1.998 million of the EUR 2.167 million total cost required to finance the project described herein.

1. BACKGROUND

1.1 Origin of the project

1.1.1 Zimbabwe is emerging from political and economic crisis of unprecedented dimension characterized with hyper inflation and drop in economic growth almost year after year since 2002. Under this situation, infrastructure maintenance proved difficult. Delayed maintenance and repairs have resulted in dilapidation of the water and sanitation infrastructure with enormous rehabilitation requirements.

1.1.2 In order to address the enormous recovery and rehabilitation requirements including infrastructure, the Inclusive Government established on 15 September 2009 has come up with an ambitious Short Term Economic Recovery Programme (STERP) to initiate a process of stabilization and at the same time lay the foundation for a longer term recovery programme.

1.1.3 STERP identifies three priorities along three principal axes of Governance, Social Protection and Stabilisation. Along the Stabilization axes are issues that include rebuilding capacity utilization of sectors of the economy, enhance availability of essential commodities of food and utilities, rehabilitation of social sectors of health and education, and ensuring adequacy of water supplies.

1.1.4 The Government has launched requests for assistance from the international donor community in implementing the programme. The African Development Bank and the African Water Facility mission that visited Zimbabwe in March 2009, identified dire needs in the water sector and communicated the disposition of the AWF to assist within the areas of its competence.

1.1.5 A request was subsequently received from the Government to support the funding of the water sector programmes and a proposal from the Chitungwiza Municipality was also received by the AWF to support its ailing water and sanitation system. The Bank responded with a second mission in May 2008 to follow up these proposals and to prepare and appraise a suitable project for AWF financing. The present appraisal report is based on the findings, conclusions and recommendations of that Mission.

1.1.6 The African Development Bank (ADB), the World Bank (WB), European Union (EU) Commission and several other donors have accepted to support Zimbabwe to rebuild confidence in the the economy and to encourage investments in basic services, agriculture, manufacturing, and mining to spur economic growth and increase incomes of the ordinary workers. The AfDB has specifically been requested to lead the infrastructre sector recovery efforts among the donor partners and to develop Terms of Reference for Needs Assessment aimed at determining longer-term support requirements in the Infrastructure Cluster in general and the water sector in particular. Issues of water sector policy and institutional reform will be addressed under the medium-term recovery efforts within the mandate of the donor partners. The AWF will contribute to this longer-term strategy in its future interventions.

1.1.7 With due consideration of the current situation in Zimbabwe, the AWF considers the support to Chitungwiza as a bridging intervention between emergency and longer-term assistance. This intervention therefore constitutes an appropriate entry point for AWF to deliver on its mandate to assist in building stakeholder

confidence, catalyze internal and donor resources, support the preparation of long-term investment plans and generate knowledge on transitional assistance in a post-conflict setting. The lessons learnt will be disseminated / replicated in other cities throughout the country. The experience and knowledge generated can be used by the AWF in similar situations of countries emerging from political and/or economic collapse.

1.2 Sectoral Priorities

1.2.1 Currently STERP forms the basis for any comprehensive development planning process in Zimbabwe today as the country readies to prepare normal PRSPs and related instruments. As earlier stated, water supply and sanitation as well as irrigation and environmental management feature high in the priority areas of STERP.

1.2.2 Water supply and sanitation form part of the preventive health service provision necessary for ensuring a healthy labour force to operate the emerging manufacturing sector which STERP considers as the epicentre of the programme. Functioning of these utilities is also a significant input into the process of rebuilding the productive sectors.

1.2.3 The deterioration of the conditions in Zimbabwe occurred against a backdrop of institutional reforms at the end of the last decade that had seen the formulation of a national water policy embracing many aspects of the Integrated Water Resources Management (IWRM) principles. However, in the light of changes and challenges of the recent past, there will be strong need to revisit and redesign the reform in consonance with the present circumstances. A task that the local Donor agencies and the World Bank have promised to assist Zimbabwe and one that future interventions of the ADB/AWF will be making significant contributions.

1.3 Problem definition

1.3.1 Zimbabwe's water and sanitation services have collapsed. The collapse of the economy and the flight of donors have meant virtually no new investments in service delivery have taken place in nearly a decade. The infrastructures were allowed to run down and also repair and maintenance services in rural and urban areas were completely neglected. The result of this situation for the water sector has been a continued deterioration of water supplies and wastewater treatment systems. Government institutions have ceased to pay for water or sewerage services and collections from customers have virtually stopped. The 2006 directive to remove service management and revenue collection from local authorities to a central government agency (ZINWA) exacerbated the already deteriorating services and financial environment for water and sanitation services.

1.3.2 The two decades since independence saw a major increase in coverage of water and sanitation with WHO[1] reporting 85% for water and 68% for sanitation in 2000 compared to 77% and 51% respectively in 1990. Urban service coverage reached 99%. In contrast, while there are no reliable overall statistics on current coverage, estimates from informed Zimbabwean sector specialists estimate coverage levels of 25% for sanitation and 40% for water in rural areas, and around 40% for sanitation and 60% for water in urban areas.

[1] Water Supply and Sanitation Sector Assessment 2000.

1.3.3 There was also a massive drain of skills outside in the form of teachers, nurses, doctors and engineers significantly affecting the capacity of institutions to deliver on their mandates. As a result, the water sector and related institutions are among those that have suffered this erosion of capacity with inadequate support services and capacity to carry out comprehensive technical analysis of the water and sanitation systems and weakened institutional capacity to produce comprehensive strategies and recovery plans.

1.3.4 The deterioration of water supply and sanitation services culminated in the outbreak of a cholera epidemic in 2008 which saw 4,283 deaths before it was contained. This outbreak started in Chitungwiza, an urban settlement just outside the boundaries of metropolitan Harare, and then spread into the low income (high density) areas of Harare, then along transport corridors to neighbouring states.

1.3.5 The primary cause of this outbreak is known to be the inability to ensure continuous supply of water, which led inhabitants to sink shallow wells in the yards of individuals. The quality of water from these wells was very poor due to contamination from sewage flows from bursts or blocked sewer pipes, which over flow into the neighbourhood. Consumption of this unwholesome water due to inadequate supply from the normal supply mains was compounded by a greatly reduced capacity of the curative health services at the time of the outbreak. The low income high density communities were especially hard hit because of inadequate knowledge and information in dealing with water related diseases and their epidemics. In the specific case of Chitungwiza the conditions of provision of water and sanitation is as follows:

Water Supply

1.3.6 Chitungwiza is supplied by water entirely from the Harare water supply system. The 300mm diameter gravity pipeline from Letombo Reservoir in Harare supplies intermediate residential areas of Hatfield and along its route and is joined by the rising main from the Prince Edwards Water Treatment Plant to Ground Level Reservoirs at an elevation of 1467 meters in Chitungwiza. Within Chitungwiza this line has a total of four off-takes to different zones.

1.3.7 Under normal conditions this works relatively well. But as soon as there is a drop in supply from Harare the upper 40% of the consumers in the high-lying areas of Chitungwiza experience a shortage of supply that may last up to 24 hours for several days in succession. The Municipality is then obliged to shut off the lower off-takes to build up pressure in the line to reach the reservoirs and the high lying areas. In recent months, even this has failed due to increasingly less water supplied from Harare and also due to the fact that the isolation valves and related fittings are in a poor state of repair.

1.3.8 The 2008 cholera epidemic started in Chitungwiza in August during the dry spell, as some members of the community had began to sink shallow wells in the area, a problem that was further compounded by failures in the sewerage system of the area as discussed hereunder. The epidemic did not reach Harare until the onset of the wet season in November. During the epidemic, external humanitarian assistance was provided in the form of trucking of water and sinking of deeper boreholes to augment the supply. These efforts served as short term measures to alleviate the shortage of drinking water pending expansion.

Sewerage

1.3.9 All (but the most recently built up) of the estimated 55,000 stands in Chitungwiza are provided with a full sewerage system and other forms of sanitation are not permitted by law. Through a network ranging in sewer sizes from 110mm to 675 mm diameter, the sewage is collected and pumped from three stations to a central treatment plant run by the Municipality. The central treatment plant has grown in stages from Waste Stabilisation Pond through Bio-filter system to a form of Activated Sludge plant that removes nutrients biologically.

1.3.10 Part of the problem of inadequate water supply has been the accumulation of solids in sewers, inadequate flow capacity to scour and in some cases accumulation of corrosive gases that attach the roofs of the sewers, leading to mechanical collapse and failure of the system.

1.3.11 A peculiarity of sewage in Zimbabwe is a high level of grit attributed to the use of sand for scouring pots and utensils by a large number of Zimbabweans. The level of grit has aggravated the accumulation of solids in sewers as well as in the pumping stations and treatment works. This situation, in many cases, led to almost permanent blockages not easily rodded with normal equipment.

1.3.12 This state of things has led to the complete decommissioning of the pumping stations and wastewater treatment plants and major blockages in sewers in the city, in turn leading to sewage overflowing onto the ground surface in streets and contaminating shallow wells and generally polluting the water sources as well as the soil environment.

1.3.13 Failure of pumping stations and treatment plants has resulted in raw sewage discharging into the Manyame River, which feeds the Lake Chivero, the source of water supply to the City of Harare.

Institutional Capacity

1.3.14 Crowning the technical problems enumerated above is the institutional inability of the municipal council to operate and manage the water and sanitation system, in particular, in mobilising adequate revenues to fund the operation and maintenance of the system. Corporate governance leaves room for improvement. There are inadequate management systems and inadequate skills to implement them were they to be provided. There are insufficient decision support systems in terms of basic information and management models to run the infrastructure. Human skills have also eroded while motivation levels are low among staff, who are reported to go for months without salary payments.

Ongoing interventions and Way forward

1.3.15 Whereas the long term solution will include investment in rehabilitation with upgrading of major components of the network and the expansion of treatment facilities to meet the demands, practical incremental measures can be implemented to improve the deplorable situation prior to the onset of the next wet season in November. At the same time, the approach will build capacity of the Municipality and the community in improved participatory management of water and sanitation facilities.

1.3.16 The broad approach has been followed in the present proposal which will be refined in more detailed design-as-you-go learning-by-doing that will ultimately form the basis for a longer term solution.

1.3.17 In response to the call for assistance to implement recovery measures, key donors including the AfDB, the WB, the United Nations Development Programme (UNDP) United Nations Children's Fund (UNICEF), and the EU have provided emergency assistance and they are in the process of preparing to undertake an overall needs assessment countrywide for the short to medium term. The African Development Bank leads the Infrastructure cluster in a scoping exercise ongoing at the time of the appraisal of the proposed project.

1.3.18 In the specific case of Greater Harare, the World Bank proposes to take the ongoing humanitarian assistance hitherto provided by UNICEF, and International Committee of the Red Cross (ICRC) under EU and raise US$ 10 to 12 million to address problems in the water and wastewater treatment plants of the City of Harare. In addition, Technical Assistance would be provided to assist the city to get the treatment plants operational, train staff and assist with installation of equipment. This should finally augment the amount of water available for distribution in the Harare system and ultimately to increase availability and reliability of supply to Chitungwiza although not to the full design capacity. The AWF intervention consequently focuses on Chitungwiza.

1.4 Objectives of the project

1.4.1 The project objective is to rehabilitate the critical components of the municipal water supply and sanitation systems and build institutional and community capacity for improved water and sanitation services. This will help to stabilise and begin to reverse the deterioration in the condition of water and sanitation services infrastructure and enhance institutional and community capacity for efficient and sustainable operation and management of these services and avert the risk of future outbreaks of cholera.

1.5 Beneficiaries and Stakeholders

1.5.1 The direct beneficiaries are the residents and the Council of Chitungwiza municipality and at large, all residents of Harare benefit ultimately when the receiving water bodies of waste water from Chitungwiza, which are also the source of water supply for the city of Harare, are made cleaner.

1.5.2 Under Central Government, the supervising Ministry for the Municipalities is the Ministry of Local Government Rural and Urban Development and is therefore a key stakeholder. Other relevant Ministries responsible for the overall coordination and monitoring of the water sector in the country are Water Development and Management, Finance and the Environment.

1.5.3 Humanitarian aid agents and donors such as International Committee of the Red Cross/Crescent (ICRC), Oxfam, German Agro Action, United Nations Children's Fund (UNICEF), Gezellschaft fuer Techniche Zusammenabeit (GTZ) , Practical Action and Africare, who have provided different forms of assistance to the council, are equally important external stakeholders.

1.6 Justification for AWF Intervention

1.6.1 Zimbabwe is emerging from a prolonged political and economic crisis which significantly undermined the country's ability to maintain and rehabilitate the water supply and sanitation infrastructures. Arising from this, most of these infrastructures are dilapidated and are in dire need of rehabilitation. However, given

the long list of unmet needs and the constraints on revenues, the country cannot rehabilitate these infrastructures without external assistance from donor partners. Chitungwiza, having been a hot spot for cholera, there is urgent need for support. The AWF will support the recovery efforts in Chitungwiza with respect to water supply and sanitation services through this intervention in order to stabilise water supply and sanitation systems and assist in institutional capacity building to plan and programme rationally for future investments.

1.6.2 The project falls under the AWF area of intervention "Investments to Meet Water Needs". This intervention will improve service delivery which is critical in Zimbabwe which lost its capacity to supply safe water and sanitation services during the period of the crises. The project will also improve the capacity of the municipality to manage water and sanitation services and plan for longer-term investment. The realisation of a strategic investment plan under this project may attract investments and thereby support another area of intervention of the AWF – "Strengthening the Financial Base"

1.6.3 The AWF is best poised for this transitional activity from emergency humanitarian assistance because of the unique advantage that it can target the sub-national systems, such as local governments and municipalities more directly, therefore it has a quick response time compared to traditional development assistance.

2. THE PROJECT

2.1 Impacts

2.1.1 The project will contribute to improved quality of life of the residents of Chitungwiza, in the form of reduced risk of contracting water borne diseases, and improved management capacity in the governance and delivery of water supply and sanitation services.

2.2 Outcomes

Improved access to water and overall availability of water in all zones

2.2.1 Reduced pressure downstream of Pressure Control Valves will permit a residual pressure in the main line to reach higher zones, while functioning sluice valves and other appurtenances will permit manual rationing and overall maintenance when necessary. The provision of new boreholes will permit a higher level of security for essential uses of safe water.

Surface flows of wastewater elimination and pollution of water courses reduced;

2.2.2 Better equipped teams will be able to clear blockages in sewers caused by deposits of silt and grit. Repair teams will attend to burst sewers caused by poor structural conditions of sewers. Functioning pumping stations will eliminate sewage streams such as seen upstream of these pumping stations in residential areas. With grit traps installed, the life of pumps will be longer and maintenance costs lower. Grit removal will also result in better functioning sewage treatment works and hence reduced pollution of Nyatsime and ultimately the Manyame watercourses.

Daily Workload of and Household Chores of Women and girls facilitated

2.2.3 The current disproportionate allocation of time by women and girls in collecting water, from inconvenient and unreliable sources will be reduced as a result of improved availability of water.

Improved Community Awareness and improved Hygiene and Sanitation Practices

2.2.4 As a result of the Education, Information and Communication (EIC) inputs, the community will be better informed of the impact of their practices on the functioning of services, will be better able to effectively use these services, adapt appropriate coping strategies such as use of household treatment of drinking water when the level and quality of supply is low. In addition the community will be willing to contribute to the management of solid waste in partnership with the local government.

Institutional Capacity to manage water and sanitation services

2.2.5 The Operators and Managers of the water and sanitation services will provide better services when adequate tools for various aspects of their work have been made available to them. They will be better motivated to improve performance.

2.2.6 Line Managers of the Council and Councillors themselves will be empowered to better manage the affairs of the council and the water and sanitation services based on strategic business planning processes that allow them to focus on high impact objectives based on available resources, to make appropriate budgetary allocations to these services and improve revenue collection.

2.2.7 Based on the Strategic Investment Plan components, the managers will be aware of the investment needs from the inventory of assets, the appropriate timing of replacement and upgrading and expansion of components and hence build these into the annual capital plans, to avoid backsliding into the condition of continuous deterioration. This will form the basis for mobilization of funding for short to medium term investments.

2.2.8 Due to improved supply and quality of water, the challenges of ensuring water for daily routines and household chores, including water for personal hygiene as well as drinking, cooking, washing and cleaning, will be significantly reduced. These tasks are in general still considered to be the responsibilities of women and girls. Thus, in addition to enhancing the health and wellbeing of all beneficiaries, an additional outcome will be to reduce the daily drudgery and facilitate the daily work of a large number of women and girls.

2.3 Outputs

2.3.1 The project has as deliverable the following outputs:

Rehabilitated Water Supply Infrastructure Functional

- Defective water valves and meters repaired
- Emergency boreholes drilled and equipped
- System for regulation of water pressure in the distribution system functional;

Rehabilitated Wastewater Infrastructure Functional

- Equipment and facilities for evacuation of sewage and solid waste from the settlements, available and operational;
- Sewage pumping stations and part of the sewage treatment and disposal system re-commissioned

Community Members better Informed on Water, Sanitation and Hygiene

- Community awareness of water, sanitation and hygiene issues and their linkages to health and illness will be strengthened;

Improved Institutional Capacity and Teamwork

- Operations and maintenance capacity for water supply and sanitation will be improved;
- Business and strategic investment plan jointly prepared by the municipal departments of Engineering Services, Health and Finance, and in use.

Project well managed

- Through Project Management, resources will be efficiently used and objectives attained on schedule
- Lessons learnt will be available for up-scaling related economic recovery in similar circumstances

2.4 Activities

2.4.1 Improve access and availability of water supply to all areas in the town

- Repair defective sections of the pipelines sluice, air and scouring valves at about 20 key locations in the distribution system including installation of a volumetric (integrating) flow meter on the supply line from Harare;
- Drill a total of 15 new boreholes to augment emergency supplies to high pressure areas, including installation of motorized pumps, local elevated reservoirs and distribution pipes to kiosks.
- Install 10 (ten) pressure regulating valves on each of the 150 mm diameter off-takes from the supply main from Harare to improve water flow to high lying zones

2.4.2 Ensure evacuation of wastewater and removal of solid wastes from human settlements neighborhoods

- Purchase one high pressure Jet flushing pump with spare parts, tools and repair equipment;
- Flush sewers in built-up areas, using flushing pumps for large diameter, difficult to access sections and standard rods for domestic and shallow secondary section;
- Repair and replace defective sewers;
- Repair excavation equipment to be used in repairing damaged sewers;
- Rehabilitate 3 pump stations: one at St Marys, and two in Zengeza and replace a total of 8 pumps at these pumping stations;
- Build grit removal sumps at pump stations, equipped with de-silting pumps

2.4.3 Reduction in Pollution of the Environment and Receiving Water Bodies

- Build 1 additional grit removal sump of 1 $m^3/m^2/s$ overflow rate at the Zengeza Wastewater Treatment plant, including restoration of grit removal pumps;
- Recondition primary sedimentation systems to reduce solids in the plant;
- Re-commission part of the Biological Nutrient Removal (BNR) treatment plant to remove at least 30% of the wastewater load prior to discharge into the receiving water bodies.

2.4.4 Strengthen Community Capacity to utilize water and sanitation services;

- Engage local non-governmental organizations (NGO) to Knowledge, Attitudes and Practices survey to preparation of information for dissemination, choice of media, and monitoring and evaluation of the impact of messages;
- Explore the possibility of establishing structures at the local (ward or sub-ward) level to facilitate engaging the population in consultations and communication with the Municipal Sector Services and make appropriate recommendations.
- Undertake basic Health and Hygiene knowledge diffusion
- Support limited community initiatives of self improvement resulting from the promotion effort. It is expected that these will include community initiatives in cooperative solid waste management.

2.4.5 Build Municipal Capacity to Manage Water and Sanitation Systems

- Procure water maintenance vehicles and equipment: 1 pickup truck and 8 motor cycles will allow rapid access to areas requiring attention as well as reading of water meters, distribution of bills and collection of revenues;
- Procure sewerage maintenance vehicles and equipment: 1 pickup truck for the sewage maintenance crew;
- Supply sewage laboratory equipment for measurement of key process parameters, as well equipment for assessing performance of sewers;
- Procure and install 500 replacement water meters, and spares for repair of 500 existing meters serving the high consumption consumers.
- Undertake Water Maintenance Artisan Training: Supervisors should identify training needs including improvement of staff morale and motivation and organize training. On the job training provided during construction will as necessary be supplemented by institutional training.

2.4.6 Institutional Development

- Procure and install basic Information Technology Equipment, in the form of micro-computers (one desk top and one laptop for each of the Water and Sewerage Services) for maintenance of basic information on resources and systems;
- Prepare an Institutional Development and Business Plan; with the help of Utility Management Consultants to define short to medium term goals of

the services based on challenges and available resources, and define initiatives to achieve these goals. An estimated *four person-months* of expertise in relevant disciplines is required.

- Prepare Strategic Investment Plan with the help of Consultants to define a transitional path towards long term development of services, starting with the present rehabilitation. The consultant shall draw up a plan, based on sample assessments a condition survey of the sector facilities, demands made on them, prospects of resources availability, to show progressive incremental development steps for capital developments. The plan shall identify need for additional studies and project designs. An estimated *six person-months* of expertise is required.

2.4.7 Works Supervision, Project Management, Monitoring and Reporting

- Procure 12 person-months of Consultancy Services, to assist with Project Management and Works Supervision of the water and sanitation services to support project implementation as well as make inputs to institutional development;
- Provide project management logistics: acquire resources for transport, communication, office support for the project management including the externally recruited Technical Assistance for the 14 months duration of the project.
- Ensure that the project complies with the national Environmental Management Authority regulations for its class of project and that necessary permits are obtained prior to construction.
- Monitoring and Reporting: Acquire services of short term Monitoring and Evaluation experts to assist project management with acquisition and analysis of data on implementation, consisting of baseline studies, and on-going monitoring data collection.
- Lesson Learning: Project Management shall document lessons and experiences in supporting Zimbabwe recover from collapsed economy using water supply and sanitation as an entry point.
- Organize Workshops and Donor Conference(s): It shall also organize workshops at appropriate stages to inform stakeholders on progress and obtain feedback. Upon completion of the investment plan, a donors' roundtable shall be convened to inform them about the results. In total, two workshops and one donors' roundtable are envisaged.

2.5 Risks

2.5.1 Project results would be negatively impacted by the following situations: *Mitigation measures are suggested for each risk situation.*

- There is a delay in the implementation of the rehabilitation of Harare water supply treatment works under the World Bank funding since Chitungwiza receives its water from the Harare works. This would affect the two municipalities equally. *By way of mitigation the project includes construction of boreholes to provide emergency supplies at reduced per*

capita consumptions and would delay expansion of the scheme in the future

- The capacity of the Municipality is low and implementation is unduly affected. *Technical Assistance may be required to assist in this case.*
- The Municipality may divert project funds to other activities due to cash shortage currently experienced by most public institutions in Zimbabwe. *Most of the project funds (96.9%) will be disbursed using direct payment method to contractors and consultants thus minimising this risk. Technical Assistance will be provided to the Municipality and supervise the work of contractors and other project activities.*
- Residents may continue unhygienic practices once the threat of cholera is attenuated. *It will be necessary for the Health Department to continue reinforcing the educational messages well past the project completion.*

2.6 Cost and Financing Plan

2.6.1 The total cost of the project is estimated at EUR 2.196 million (equivalent to USD 2.915 million). The costs include allowances for contingencies and are based on recent quotations and bid prices for similar work. The Project will be financed by an AWF grant of EUR 1.998 million and a contribution of EUR 198,200 from Chitungwiza Municipality to cover site works to be implemented by municipal direct labour, taxes and duties, management staff time and provision of office space and utilities.

Table 1: Costs and Financing

No.	**Component**	**Amount (EUR '000)**		
		AWF	MC	Total
1	Water distribution system rehabilitation	566.9	82.9	649.8
2	Sewerage Collection System Rehabilitation	1 000.8	79.1	1 079.9
3	Institutional and Community Capacity	210.9	-	210.9
4	Supervision, Project Management Monitoring and Reporting	219.2	36.2	255.4
	Total	1 997.8	198.2	2 196.0

Table 2: Cost by Categories of Expenditure (EUR'000)

Category of Expenses	**AWF**	**MC**	**Total Cost**
Works	1 567.7	162.0	1 729.7
Goods			
Services	361.6		361.6
Miscellaneous	68.5	36.2	104.7
Total	1 997.8	198.2	2 196.0

3. IMPLEMENTATION

3.1 Recipient, Implementation Arrangements and Capacity

3.1.1 The Recipient of the grant shall be the Municipal Council of Chitungwiza. The responsible officer shall be the Town Clerk who is also the Municipal Secretary. The departments concerned with water and sanitation services are Engineering Services, Health and Finance. The Engineering Services Department shall execute the project with support from the Health Services Department. The Director of Engineering Services shall be designated Project Manager.

3.1.2 Due to limited capacity with implementation, the AWF will provide initial assistance in the form of a special mission to the Municipality to help the Department of Engineering Services undertake procurement of the consultancy services that will supervise works throughout the project duration. The Finance Department will allocate an Accountant who will be dedicated to the project.

3.1.3 The project shall be executed through two works contractors, one for water supplies and the other for sanitation rehabilitation, under the supervision of a consulting firm. The Contractors shall undertake the civil engineering rehabilitation works, involving repairs and replacement of fittings and plant, drilling of emergency boreholes. They shall in addition procure tools and equipment and spare parts for operations and maintenance; train the municipal workers and artisans through hands-on engagement in undertaking regular maintenance activities on the water and sewerage systems. They shall be responsible for maintenance of the equipment and care of tools up to the point of handover.

3.1.4 The Consulting firm shall be responsible for supervision of the contractors, as well as the execution of studies involving the business and capital investment strategic plans, the project monitoring and evaluation, the community mobilization.

3.1.5 A Steering Committee composed of representatives of the departments of Health and of Finance within the Council, and Ministries of Local Government, Water Development and Management, Environment Management Agency (EMA), Finance, and Health will be constituted to provide oversight over the project. The Municipality shall ensure continuous communication with other stakeholders in its normal business and shall constitute a multi-stakeholder forum (MSF) for this purpose.

3.1.6 The steering Committee shall approve the annual work programme and budget to ensure adherence to the development objectives and time schedule. It shall ensure that there is adequate communication and coordination among stakeholders to discuss progress and issues. It shall ensure that the work plans have the endorsement of the stakeholders.

3.2 Implementation schedule

3.2.1 The project will be implemented over a period of 14 months, commencing late in July 2009 and to be completed in September 2010. The project is expected to be submitted for approval in June 2009. In order to accelerate the start up the AWF will assist the Recipient in the preparation of Request for Proposals (RfP) and Bid Documents by mounting a special mission for that purpose. The nature and scope of

work make the project amenable to a Small Works form of Contract based on a Schedule of Rates. Such a contract should be easy to rapidly prepare.

Table 3: Implementation Plan

	Responsible Agency	Start	Duration (Weeks)	End
Grant approval	AWF			24-Jul-09
Signature	AWF/MC	24-Jul-09	2	7-Aug-09
Effectiveness				
Fulfil Conditions				21-Aug-09
Declaration				28-Aug-09
PROCUREMENT				
Procurement Documents Preparation	MC/AWF	Immediately		7-Aug-09
Issue General and Specific Proc Notices				14-Aug-09
Consultancy Contracts				
Preparation and Approval of Shortlist	MC/AWF	24-Jul-09	3	14-Aug-09
Issue of RfP		14-Aug-09	6	25-Sep-09
Evaluation and Selection		25-Sep-09	2	9-Oct-09
Commencement to completion		23-Oct-09	52	22-Oct-10
Water Rehabilitation Contract	MC			
Bidding period		1-Sep-09	4	29-Sep-09
Evaluation and Selection		29-Sep-09	2	13-Oct-09
Commencement to Completion		27-Oct-09	20	16-Mar-10
Sewage Rehabilitation Contract	MC			
Bidding period		1-Sep-09	4	29-Sep-09
Evaluation and Selection		1-Oct-09	2	15-Oct-09
Commencement to Completion		15-Oct-09	35	17-Jun-10

3.3 Procurement Arrangements

3.3.1 Procurement arrangements are summarized in Table 4 below. All procurement of goods, works and acquisition of consultancy services financed by AWF will be in accordance with AWF's Operational Procedures, the Bank's Rules and Procedures for Procurement of Goods and Works, or as appropriate the Rules and Procedures for the Use of Consultants using the relevant Bank Standard Bidding Documents.

3.3.2 **Civil Works** consisting of *Water Supply System Rehabilitation (EUR 566,900) and Sewage System Rehabilitation (EUR 1,000,800)* will be implemented through

National Competitive Bidding (NCB), while Site Works to be undertaken and funded by the Municipality prior to commencement of the private contracts amounting to EUR 162,200 will be implemented through Force Account as day works in the construction contract.

3.3.3 **Goods** consisting of Valves, Bulk Water meters and Fittings, Consumer Meters, Maintenance Equipment, Microcomputers, Sewage Pumps, Electromechanical spares for the Wastewater Treatment Plant, Motor Vehicles and Laboratory Equipment will be procured as part of the civil works contracts.

3.3.4 **Consultancy Services:** One contract, consisting of *Technical Assistance and Supervision Services* during project implementation, *Planning Studies*, as well as inputs to *Monitoring and Evaluation and Community Mobilization and Empowerment Services* totalling EUR 361,600, will be procured through competition on the basis of an international shortlist using the Quality and Cost Based Selection (QCBS) selection procedure.

3.3.5 **Miscellaneous Items**: Sundry items, totalling EUR 68,500, consisting of expenses with respect to Workshops, per diems and site allowances, logistics, are to be provided under day-works within the Consultancy Contract.

Table 4 Procurement Arrangements (Amounts in EUR '000)

Procurement Packages	**NCB**	**QCBS Short List**	**Others**	Total
Works				
Site Works and Clearances			162.2	162.2
Water Supply System Construction	(566.9) 566.9			(566.9) 566.9
Sewerage System Construction	(1,000.8) 1,000.8			(1,000.8) 1,000.8
Goods				
Services				
Consultancy Services Supervision and Studies		(361.6) 361.6		(361.6) 361.6
Miscellaneous				
Sundry payments			(68.5) 104.7	(68.5) 104.7
TOTAL	(1,567.7) 1,567.7	(361.6) 361.6	(68.5) 266.7	(1,997.8) 2 196.0

(Figures in brackets show AWF funding)

3.3.6 Procurements in excess EUR 50,000 shall be subject to prior review by the AWF. The Recipient will maintain accurate records of procurement steps including signed evaluation forms, minutes of the opening of bids and proposals and all meetings on all procurement processes. The Recipient is capable of undertaking the required procurement activities. It has the staff and the experience (Section 3.1) and will benefit from the input of Technical Assistance for preparation of tender documents, tendering, tender evaluation and award of the construction works contracts and overall execution of the project shall be provided under a special assistance by the AWF.

3.3.7 The Recipient shall, not later than July 24, 2009, prepare and submit a Procurement Plan acceptable to the AWF, setting forth (a) the particular contracts for goods, works and consulting services during the life of the project; (b) the proposed modes of procurement; and (c) the related AWF review procedures (prior or post

review). The Recipient shall update the Procurement Plan annually or as needed throughout the duration of the project. The mode of implementation and all revisions to the Procurement Plan are subject to prior approval by the AWF.

3.4 Disbursement Arrangements

3.4.1 While the financial system in Zimbabwe is still being revitalized and streamlined, it is necessary that a large portion of the disbursements will be made through direct payment to contractors and consultants. All contracts will be subject to staged payments such that no payment is less than EUR 25,000 for direct payment. Disbursement will be made to the different parties as follows:

Disbursement Method	**Beneficiary**	**Amount (EUR '000)**	**Percentage of Grant Amount**
Direct Payment	Consultants	363.6	28.4%
Direct Payment	Water Supply Contractor	516.5	50.1%
Direct Payment	Wastewater Contractors	1,000.8	18.1%
Special Account	CMC: Sundry suppliers	68.5	3.4%

3.4.2 A limited amount of funding (equivalent to 3.4% of total AWF grant) required for miscellaneous operations of the Project Management Team will be disbursed through the Special Account method. The project will open a Special Account with a local commercial bank acceptable to the AfDB, into which the advances will be deposited. The Special Account will be replenished on the condition that the preceding advance has been utilized and justified up to at least 50 percent and that the following advance has been fully justified.

3.4.3 The expected disbursement schedule is shown in Table 5 below:

Table 5: Disbursement schedule (EUR '000)

	Semester1	**Semester2**	**Semester3**	**Total**
Improved Water Distribution	340.1	226.7	0.0	566.9
Improved Sewage Collection	400.3	400.3	200.2	1 000.8
Institutional and Community Capacity	84.4	63.3	63.3	210.9
Project Supervision, Management Monitoring and Evaluation	87.7	65.8	65.8	219.2
Total	912.5	756.1	329.2	1 997.8

3.5 Accounting and Audit Arrangements

3.5.1 The project accounts will be managed under the Director of Finance of the Municipality who has adequate relevant experience in the management of externally funded project. A dedicated Accountant will be identified to manage receipt of funds from the AWF, account for expenditures as well as prepare requests for reimbursement.

3.5.2 A Special Account denominated in EUR or USD will be opened at a Bank in Zimbabwe for the purpose of receiving proceeds of the grant from the AWF and from which payments to contractors and service providers will be made.

3.5.3 The project will be subject to the normal audit of the Recipients financial statement. In addition, the AWF will recruit auditors for the audit of the Projects financial statements. . Audit of the project shall include the use of the special account and attestation that: i) the requests for replenishment of the revolving fund submitted are consistent with relevant information, ii) the internal controls and procedures used for their preparation, are reliable enough to justify the requests for replenishment, and iii) the goods and services financed from the special account have been received by the project.

3.5.4 The project shall, within six months of the close of the financial year, submit audited financial statements, auditor's management letter and an attestation of the auditor on the use of the Special Account.

3.6 Monitoring, Evaluation and Reporting Arrangements

3.6.1 Project Management will be responsible for preparing periodic reports on the execution of all the project components and reporting to stakeholders and to the AWF. Under the related components an allowance is made for monitoring the indicators stated in the log frame matrix, as well as other generic indicators.

3.6.2 It shall ensure collection and analysis of baseline data prior to commencement of the project and timely collection of monitoring data throughout implementation to measure trends in the indicators, and dissemination of the lessons learnt at the proposed workshops and seminars.

4. PROJECT BENEFITS

4.1 Effectiveness and Efficiency

4.1.1 The project is based on the observation that the primary causes of cholera and related diseases in the Municipality and indeed in other areas has been the prolonged absence of water supply in certain parts of the city as well as the easy contact with raw sewage in others. This resulted in some residents digging shallow wells, which are readily contaminated by raw sewage. The project thus aims to ensure that water is available on equal bases to all residents irrespective of their location and its influence on the available static pressure of water. It also addresses the issue of raw sewage that overflows when water becomes available.

4.1.2 While the main components address this simple cause of cholera, complementary components are aimed at primarily ensuring that the infrastructure re-instated will not immediately fall into disuses as a result of lack of capacity for

maintenance, which capacity is dependent on the ability of the Municipality to manage its resources and mobilize funding.

4.1.3 Resource requirements to attain the condition of adequate provision of water and sewerage services are huge. The project therefore aims to stop the deterioration, stabilize the situation and initiate a process that will improve capacity to mobilize further funding to ultimately address these requirements. Included in the components is a mechanism to build up knowledge to deploy in subsequent improvement steps as well as mobilize funds from operations as well as from donors.

4.1.4 The project maximises the spare capacity in the Municipal labour in the rehabilitation process while allowing the labour force to sharpen and intensify skills. The selected procurement methods are furthermore expected at ensuring high value for money in the project.

4.2 Sustainability

4.2.1 **Institutional aspects:** The project addresses part of the institutional capacity to manage the water and sanitation services in terms of improved decision making using planning tools that improves decision making as well as the organisational and human capability required for this purpose.

4.2.2 **Fiscal effects**: The project targets improvements in the capacity to mobilize revenues necessary to meet these operations and maintenance costs as well as mobilise resources for capital investments.

4.2.3 **Environmental impacts**: The project has as its main objective to rehabilitate depleted water systems and minimize losses, un-block sewage systems and reduce smell as well as improving quality of air. The project works will have minimum negative impacts on the surrounding ecosystem and reduce the chances of environmental degradation leading to epidemics as experienced during 2008 in the project area. There are no major components of the project considered likely to negatively impact on the environment. However, anticipated short-term impacts of less significance likely to occur during operation, construction and implementation works include: minimum displacement of biodiversity, dust emissions, noise, disposal of replaced pipes subject to material compositions whether asbestos or any other health hard materials, smell resulting from un-blocking the sewage and necessary upgrades. The project will ensure that necessary mitigation measures are included in the contractor's and supervising consultant's terms of reference. In addition, funding is made available to allow monitoring by the relevant authorities and taking up necessary action as required. During implementation the Zimbabwe Environmental Management Agency ensures compliance with the national environmental regulations relating to the class of the project. The Consultant will be responsible for monitoring environmental impacts associated with the project implementation and Contract documents will include provisions for this compliance.

4.2.4 **Climate Change**: The Municipality will incorporate adaptation measures in the design and construction of water and sewerage infrastructure to withstand incidence of droughts and floods.

4.2.5 **Social impacts:** The project will have significant positive social impacts for a large number of people and no negative impacts on any socio-economic group are anticipated. The intervention will improve the water and sanitation situation for the city of Chitungwiza at large. The reduction and control of the risks of water borne

diseases, in particular cholera, will benefit the entire population, as will the general improvements in supply and distribution of water in the city. However, relatively speaking, those who are likely to experience the greatest improvements in everyday livelihood as a result of the enhanced water supply and distribution will be the most vulnerable and least favoured segments of the population. These are households that are most affected by the current situation and who do not possess the means for storing water and therefore must rely on other sources for basic water supply.

4.2.6 **Gender:** The project will benefit all segments of the population regardless of their gender or socio-economic standing. However, the improvements in water supply and sanitation will significantly reduce the daily drudgery and challenges of ensuring water for basic household and hygiene purposes, which is mainly regarded as a female responsibility. The project outcomes will facilitate these tasks and, in that regard, particularly benefit women and girls.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

5.1.1 The project will greatly improve the lives of the inhabitants of Chitungwiza through the availability of safe drinking water and management of wastewater which will reduce the incidence of water related diseases plaguing the community and surrounding settlements. At the same time, the capacity of Chitungwiza municipality will be enhanced to efficiently operate and manage water and waste services and plan for future investments. The population will be sensitized in safe water, sanitation and hygiene practices to optimize and sustain the benefits of improved water and sanitation services.

5.2 Recommendations

5.2.1 In view of the overwhelming benefits of this project it is recommended that the AWF approves a grant not exceeding Euro 1.998 million for the Municipality of Chitungwiza to finance the proposed project activities set out in this report, subject to the following conditions:

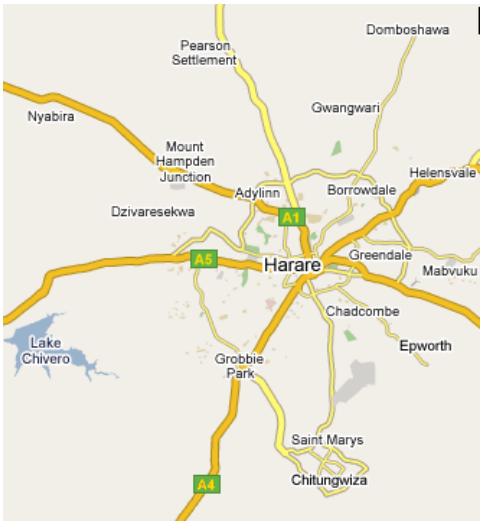
5.2.2 **Conditions precedent to Entry into force of the Grant Protocol of Agreement and First Disbursement:**

I. The Grant shall enter into force on its signature. The first disbursement of the Grant shall be conditional upon the fulfilment of the following conditions:

II. The Recipient shall
   1. Provide evidence of the opening of a Special Account at a bank in Zimbabwe (3.5.2) into which part of the AWF grant resources shall be deposited on the request of the Recipient
   2. Provide evidence that it has designated the Director of Engineering Services as Project Manager (3.1.1) and that the incumbent has qualifications acceptable to the AWF to execute the project as described.
   3. Establish a project Steering Committee (3.1.3) with a composition and qualification of members, and Terms of Reference acceptable to the AWF.

Annex 1

Location Map of the Project



These maps have been drawn by the African Development Bank Group exclusively for the use of the readers of the Appraisal Report to which it is attached. The names used and the borders shown do not imply on the part of the Bank and its members any judgment concerning the legal status of a territory nor any approval or acceptable of these borders

Project Cost Estimates

Project Definition

	USD	EUR	Works	Goods	Services	Miscellar	AWF	CMC
1 **Drinking Water Rehabilitation Work**	**862 500**	**649 718**					**566 855**	**82 863**
Improve pressure distribution on supply line								
Refurbish 10 No. 150 mmm Control Valves on off takes	150 000	112 994	**112 994**				101 695	11 299
Install 10 No. 150 mm meters and pressure monitoring sys	100 000	75 330	**75 330**				67 797	7 533
Improve water distribution performance								
Repair/replace defective appurtenances 20 localities	100 000	75 330	**75 330**				67 797	7 533
Direct Labour input to repairs	45 000	33 898						33 898
Repair 500 and replace 500 15 mm water meters	40 000	30 132	**30 132**				30 132	
Water Maintenance Tools	30 000	22 599	**22 599**				22 599	
Microcomputers (1 Lap-, 1 Desk-top with ancillaries)	5 000	3 766	**3 766**				3 766	
Vehicles (1 Pick-up + 8 Motor cycles)	52 500	39 548	**39 548**				39 548	
Augment emergency supplies to low pressure areas								
Drill 15 No 6" additional boreholes	300 000	225 989	**225 989**				203 390	22 599
Technical Capacity								
Water Maintenance Artisan Training	40 000	30 132	**30 132**				30 132	
2 **Sewerage and Solid waste Rehabiliation Work**	**1 433 500**	**1 079 849**					**1 000 753**	**79 096**
Improve evacuation of wastewater from residential areas								
Strengthen Capacity to flush sewer pipes								
Purchase 1 high pressure Jet flushing pump	120 000	90 395	**90 395**				90 395	
Tools and Equipment for 4 Area teams	50 000	37 665	**37 665**				37 665	
Flush Priority trunk sewer sections	54 000	40 678	**40 678**					40 678
Initiate community contracting in solidwaste management	50 000	37 665	**37 665**				37 665	

		Reduce pollution of water courses								
		Rehabilitate pump stations								
		Built grit removal u/s of sumps at 3 No. PSs	180 000	135 593	**135 593**				122 034	13 559
		S+I 8no pumps at 3 St Mary's pump stations	400 000	301 318	**301 318**				301 318	
		Desludge and recommission primary settling at TWKs								
		Build Grit tanks u/s of BNR plant	130 000	97 928	**97 928**				88 136	9 793
		BNR Primary Treatment	120 000	90 395	**90 395**				90 395	
		Revive Stream I of BNR	200 000	150 659	**150 659**				135 593	15 066
		Basic Laboratory Equipment	10 000	7 533	**7 533**				7 533	
		Technical Capacity								
		Sewerage Maintenance Vehicles and Equipment	59 500	44 821	**44 821**				44 821	
		Sanitation Demonstration	15 000	11 299	**11 299**				11 299	
		Sewage Lab Equipment and IT exchange	45 000	33 898	**33 898**				33 898	
3	**Capacity Building**		**280 000**	**210 923**					**210 923**	**0**
		Institutional Capacity								
		Capital Investment Planning	200 000	150 659			**150 659**		150 659	
		Institutional Development Business Plan	50 000	37 665			**37 665**		37 665	
		Community Capacity								
		Basic health and hygiene IWRM education	30 000	22 599			**22 599**		22 599	
4	**Project Management Monitoring and Reporting**		**339 000**	**255 367**					**219 209**	**36 158**
		18 PerMonths Technical Assitance with backstopping	200 000	150 659			**150 659**		150 659	
		Project Management Logistics @ 30% TA costs	60 000	45 198				**45 198**	22 599	22 599
		Baseline studies and Monitoring (4 PersMo)	25 000	18 832				**18 832**	18 832	
		Knowledge Documentation and Sharing (6 PerMo)	30 000	22 599				**22 599**	22 599	
		Workshops and Donor Conference(s) 4 meetings	6 000	4 520				**4 520**	4 520	
		Sundry Project Expenses	18 000	13 559						13 559
			2 915 000	2 195 857					1 997 740	198 117
										2 195 857

Annex 3

Project Implementation schedule

Time table of implementations	Start	Duration (Weeks)	End
			7
Grant approval			24-Jul-09
Signature	24-Jul-09	2	7-Aug-09
Effectiveness			
Fulfil Conditions			21-Aug-09
Declaration			28-Aug-09
PROCUREMENT			
Procurement Documents Preparation	Immediately		7-Aug-09
Issue General and Specific Proc Notices			14-Aug-09
Consultancy Contracts			
Preparation and Approval of Shortlist	24-Jul-09	3	14-Aug-09
Issue of RfP	14-Aug-09	6	25-Sep-09
Evaluation and Selection	25-Sep-09	2	9-Oct-09
Commencement to completion	23-Oct-09	52	22-Oct-10
Water Rehabiliation Contract			
Bidding period	1-Sep-09	4	29-Sep-09
Evaluation and Selection	29-Sep-09	2	13-Oct-09
Commencement to Completion	27-Oct-09	20	16-Mar-10
Sewage Rehabiliation Contract			
Bidding period	1-Sep-09	4	29-Sep-09
Evaluation and Selection	1-Oct-09	2	15-Oct-09
Commencement to Completion	15-Oct-09	35	17-Jun-10
Project Management