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The World Bank**

Report No: 25249-TA

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED CREDIT
IN THE AMOUNT OF SDR 45.0 MILLION (US\$ 61.5 MILLION EQUIVALENT)
TO THE
UNITED REPUBLIC OF TANZANIA
FOR THE
DAR ES SALAAM WATER SUPPLY AND SANITATION PROJECT

April 10, 2003

**Water and Urban 1
Tanzania & Uganda Country Department
Africa Regional Office**

CURRENCY EQUIVALENTS

(Exchange Rate Effective January 1, 2003)

Currency Unit = Tanzanian Shilling (Tsh)

Tsh1.0 = US\$0.00102

US\$1.0 = Tshs980

FISCAL YEAR

July 1 - June 30

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank	ME	Monitoring and Evaluation
AHA	Asset Holding Authority	MWLD	Ministry of Water and Livestock Development
CAS	Country Assistance Strategy	NCB	National Competitive Bidding
CBO	Community Based Organization	NDWP	Non Delegated Works Program
CFAA	Country Financial Accountability Assessment	NEMC	National Environmental Management Council
CIP	Capital Investment Program	NGO	Non Governmental Organization
CPAR	Country Procurement Assessment Report	NPV	Net Present Value
CSC	Construction Supervision Consultant	O&M	Operation and Maintenance
CWSSP	Community WSS Program	PIP	Project Implementation Plan
DAWASA	Dar es Salaam Water and Sewerage Authority	POG	Procurement of Goods
DSSD	Dar es Salaam Sanitation and Sewerage Department	POM	Project Operation Manual
DWP	Delegated Works Program	PPA	Project Preparation Advance
EA	Environmental Assessment	PRSP	Poverty Reduction Strategy Paper
EIB	European Investment Bank	PSP	Private Sector Participation
EIRR	Economic Internal Rate of Return	PU	Project Unit
EMP	Environmental Management Plan	PWP	Priority Works Program
ENPV	Economic Net Present Value	RFP	Request for Proposals
EWURA	Electricity and Water Utility Regulation Authority	RPF	Resettlement Policy Framework
FIRR	Financial Rates of Return	QCBS	Quality and Cost Based Selection
FMM	Financial Management Manual	SBD	Standard Bidding Document
FMR	Financial Monitoring Report	SIL	Specific Investment Loan
GEF	Global Environmental Facility	SIPE	Supply and Installation of Plant and Equipment
GOT	Government of the United Republic of Tanzania	SOE	Statement of Expenditure
GPN	General Procurement Notice	TA	Technical Assistance
HBS	Household Budget Survey	TAS	Tanzania Assistance Strategy
ICB	International Competitive Bidding	UfW	Unaccounted for Water
IDA	International Development Association	USRP	Urban Sector Rehabilitation Project
IPP	International Professional Partner	UWSA	Urban Water and Sewerage Authorities
LRMC	Long Run Marginal Cost	WRM	Water Resources Management
LVEMP	Lake Victoria Environmental Management Project	WSS	Water Supply and Sanitation
MDG	Millennium Development Goal	WUA	Water Users Association

Vice President	:	Callisto E. Madavo
Country Director	:	Judy O'Connor
Sector Manager	:	Jaime Biderman
Task Team Leader	:	Alain R. Locussol

TANZANIA

Dar es Salaam Water Supply and Sanitation Project

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MAP: IBRD Nos. 32275, 32256, 32257

TANZANIA
Dar es Salaam Water Supply and Sanitation Project

Project Appraisal Document

Africa Regional Office
AFTU1

Date: April 10, 2003 Sector Manager: Jaime Biderman Country Director: Judy M. O'Connor Project ID: P059073 Lending Instrument: Specific Investment Loan (SIL)	Team Leader: Alain R. Locussol Sector(s): Water Supply (70%), Sewerage (20%), Sanitation (10%) Theme(s): Access to urban services for the poor (P), Infrastructure services for private sector development																																			
Project Financing Data																																				
<input type="checkbox"/> Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:																																				
For Loans/Credits/Others: Amount (US\$): 61.5 million Proposed Terms (IDA): Standard Credit																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Financing Plan (US\$m):</th> <th style="text-align: left;">Source</th> <th style="text-align: right;">Local</th> <th style="text-align: right;">Foreign</th> <th style="text-align: right;">Total</th> </tr> </thead> <tbody> <tr> <td>Borrower</td> <td></td> <td style="text-align: right;">12.60</td> <td style="text-align: right;">0.00</td> <td style="text-align: right;">12.60</td> </tr> <tr> <td>IDA</td> <td></td> <td style="text-align: right;">12.00</td> <td style="text-align: right;">49.50</td> <td style="text-align: right;">61.50</td> </tr> <tr> <td>African Development Bank</td> <td></td> <td style="text-align: right;">11.50</td> <td style="text-align: right;">36.50</td> <td style="text-align: right;">48.00</td> </tr> <tr> <td>European Investment Bank</td> <td></td> <td style="text-align: right;">7.10</td> <td style="text-align: right;">26.90</td> <td style="text-align: right;">34.00</td> </tr> <tr> <td>Private Operator Equity</td> <td></td> <td style="text-align: right;">0.00</td> <td style="text-align: right;">8.50</td> <td style="text-align: right;">8.50</td> </tr> <tr> <td>Total:</td> <td></td> <td style="text-align: right;">43.20</td> <td style="text-align: right;">121.40</td> <td style="text-align: right;">164.60</td> </tr> </tbody> </table>		Financing Plan (US\$m):	Source	Local	Foreign	Total	Borrower		12.60	0.00	12.60	IDA		12.00	49.50	61.50	African Development Bank		11.50	36.50	48.00	European Investment Bank		7.10	26.90	34.00	Private Operator Equity		0.00	8.50	8.50	Total:		43.20	121.40	164.60
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Private Operator Equity		0.00	8.50	8.50																																
Total:		43.20	121.40	164.60																																
Borrower: Government of United Republic of Tanzania (GOT) Responsible agencies: DAWASA, MWLD Implementing Agency: Dar es Salaam Water Supply and Sewerage Authority (DAWASA) Address: PO Box 1573 Contact Person: Mr. A. R. Mutalemwa, Chief Executive Officer Tel: 255 (22) 2131191 to 4 Fax: 255 (22) 2110872 Email: dawasadg@raha.com Other Agency(ies): Ministry of Water and Livestock Development Address: PO Box 9153 Contact Person: Mr. Bakari A. Mahiza, Permanent Secretary Tel: 255 (22) 2117153 to 9 Fax: 255 (22) 2118075 Email: Dppmaj@raha.com																																				
Estimated disbursements (Bank FY/US\$m):																																				
FY	2004	2005	2006	2007	2008																															
Annual	15.75	16.60	13.15	9.65	6.35																															
Cumulative	15.75	32.35	45.50	55.15	61.50																															
Project implementation period: July 2003-June 2008																																				
Expected effectiveness date: 07/15/2003			Expected closing date: 12/31/2008																																	

A. Project Development Objective

1. Project development objective

The development objective of the project is to provide a *reliable, affordable and sustainable* water supply service and improve the sewerage and sanitation in the "Service Area" of the Dar es Salaam Water and Sewerage Authority (DAWASA) that includes Dar es Salaam and part of the Coast region. This will help improve public health and well being in a city prone to cholera outbreaks or other water-borne diseases and support productive activities of the country's main economic center. This will be achieved by: (a) rehabilitating existing DAWASA drinking water production, transmission, storage and distribution facilities and waste water collection and treatment facilities that have lacked maintenance over the years; (b) extending piped water supply service to un-served areas through a balanced program of construction of primary and secondary distribution pipes and implementation of a commercial policy that will favor connections of households; (c) upgrading DAWASA commercial operations to industry standards, reducing physical and commercial unaccounted for water (UfW) and increasing collection of water and sewerage bills through the sub-contracting of operations to a private "Operator"; and (d) enhancing DAWASA financial situation by raising the Customer Tariff to a level that would initially cover operation and maintenance (O&M) costs, service long term debt and contribute to the capital expenditure program and eventually compare with the Long Run Marginal Cost (LRMC) of the service.

2. Key performance indicators

The performance indicators by which the project's outcome will be measured can be summarized as follows: at the end of the first five years of the new institutional arrangement:

- **Reliability of the WSS service:** (a) The piped water supply service will be continuously provided to a minimum pressure to 70% of the customers throughout the Service Area and 100% of the samples of the water distributed tested will meet Tanzania standards; and (b) 80% of waste water generated by users connected to sewers will be collected and treated and 95% of effluent samples will meet Tanzanian standards;
- **Affordability of the WSS service:** (a) Low income households will be offered low cost water connections as well as increased access to standposts; (b) low income households will benefit from a "lifeline" water consumption for the first five cubic meters per month (5 m³/month) at a lower tariff; and (c) communities that cannot initially be served by the distribution network will have access to financing for developing alternative systems and assistance for managing them; and
- **Sustainability of the WSS service:** (a) Commercial operations will be fully reorganized: all production and consumption will be metered, all bills will be established on the basis of actual consumption, average UfW will be reduced to about 35% of the production and the combined collection ratio of private and public bills will reach 90%; (b) the Customer Tariff level will cover operation and maintenance (O&M) costs and contribute 10% of the investment program; and (c) future projects will be prepared to ensure that investments can attract financing and be supported by the Customer Tariff.

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project

Document number: 20728-TA **Date of latest CAS discussion:** 06/30/2000

The Government has prepared a Tanzania Assistance Strategy (TAS) and a Poverty Reduction Strategy Paper (PRSP) in parallel to the Country Assistance Strategy (CAS). The TAS provides a development framework to organize donor assistance around strategic priorities; currently only about 50% of external aid is accounted for by the budget. The PRSP focuses on specific policies and institutional changes for reducing poverty and improving living standards in the short and medium term. The development targets in both the PRSP and the TAS are consistent with the Millennium Development Goals (MDG) of reducing by half the percentage of the population without access to WSS services by 2015. The CAS, whose preparation has involved consultations with a large number of stakeholders, focuses on higher growth, poverty reduction, and institutional reforms to improve governance and service delivery. The CAS shares the main strategic directions of the TAS, i.e., adherence to macro stability, improved governance, increased poverty focus, and increased private sector participation in the economy.

It also supports the Government's desire to enter into new relationships with partners, based on the phased switching from projects to programs for a more effective and efficient use of aid resources.

2. Main sector issues and Government strategy:

Main sector issues

2.1 **Water resource management (WRM):** Overall, Tanzania has sufficient surface and ground water to meet its present needs, but availability of water is uneven among regions, and in some river basins, water is becoming scarce and a source of conflicts. Major urban centers such as Dar es Salaam have water supplies with inadequate storage which makes them vulnerable to both drought and floods. Conflicts between the water supply, energy, livestock and agricultural sub-sectors are growing. Soil erosion and sediment deposition that result from poor land use have modified runoff patterns, damaged WSS and irrigation infrastructure and degraded quality of water used for urban supplies. The implications of poor land use are significant in the semi-arid and arid internal drainage basins. Pollution from inadequately treated municipal, industrial and mining effluents and agricultural runoff is contributing to the degradation of river quality and eutrophication of Lake Victoria, as well as the Mzimbazi Creek in Dar es Salaam. Uncontrolled land use and river regulation have degraded hydrologically important and productive wetland systems. Poor flood control management has resulted in damage to major infrastructure, including the water pipelines supplying Dar es Salaam. Groundwater pumping is uncontrolled and this has a strong potential for causing irreversible damage through saltwater intrusion. Weak policy framework, fragmented water resources management, poor cross sectoral coordination, inadequate participation of stakeholders in river basin planning, inadequate treatment of water as an economic good and to a lesser extent uncoordinated donor support are key issues to address.

2.2 **Urban WSS:** In 2002, about 70% of the urban population of 6.0 million had some kind of access to piped water. At the beginning of 1997, urban water systems managed by the then Ministry of Water (now Ministry of Water and Livestock Development, MWLD), were handed over to independent and autonomous Urban Water and Sewerage Authorities (UWSA). Local Boards set consumer tariffs and UWSAs are expected to meet O&M costs; however, most UWSAs still rely on MWLD subsidies to cover them, as well as on MWLD staff. The service is still unreliable and the water delivered often unsafe for drinking. Maintenance is rarely funded due to low tariffs. Commercial and financial performances are slowly improving. Less than 10% of the urban population is connected to a sewerage system. Another 10%, mostly in the middle and upper-income group use septic tanks, leaving the rest of the population dependent on pit latrines. Sanitation services are largely in the hands of the various municipal councils but sewerage operations, when they exist, are under the UWSA. Due to poor maintenance, most sewerage and waste water treatment facilities are not functioning. Pit emptying services are often inadequate, and health risks result from manual emptying most latrine users resort to. Cholera outbreaks are common in most urban centers.

2.3 **Rural WSS:** Large scale rural WSS schemes, traditionally supported by external donors since the 1950s, have suffered from limited community participation in the planning of facilities and community financial contribution to both O&M and capital costs. After three decades of a "supply driven" approach, only 50% of the rural population is served by a functioning system. As a result, most of the rural population still obtain its water from unprotected sources of doubtful quality; during the dry season, women have to walk long distances to fetch water. Information on rural sanitation is limited; only a part of the rural population has access to traditional pit latrines and incidence of water-borne diseases is high.

GOT strategy

2.4 **WRM:** GOT has adopted a phased approach to address WRM challenges. In 1993, it prepared a rapid water resources assessment which identified priority basins and a range of issues at the national level requiring special attention. Since 1994, GOT has restructured MWLD and changed its role from that of a service provider to a regulator and a facilitator. GOT is currently implementing the IDA-financed River Basin Management and Smallholder Irrigation Improvement Project, which also provides for the development of a WRM sections of the National Water Policy. Through GEF/IDA support, and in conjunction with the Governments of Kenya and Uganda, GOT is implementing the Lake Victoria Environmental Management Project (LVEMP) to address the management of the lake ecosystem. With IDA support, GOT is implementing the Lower Kihansi EMP Project to address a significant water use conflict between the needs for power generation and ecosystem maintenance as well

as institutional reforms for managing the water-environment. Tanzania is also a member of the Nile Basin Initiative (NBI) and has been instrumental in developing the Shared Vision strategy for the basin.

2.5 Urban WSS: About 18 urban water supply systems are now under the management of UWSA. Support to UWSA comes from the German, Chinese and British governments, the European Community and IDA under the Urban Sector Rehabilitation Project (USRP Cr. 2867-TA). In order to support decentralization of operations and decision making, the following legislation was enacted in February 1997; (a) Water Utilization Act (Control & Regulation); (b) creation of DAWASA; and (c) update of the Water Works Ordinance for merging water supply and sewerage under a single authority. Under the latter ordinance, the private sector can be associated with the provision of WSS service. GOT unwritten policy for urban sanitation of "self provision" is justified by the limited capacity of public infrastructure and responsible agencies. On-site sanitation is still based on self provision with regulation by the health departments of the municipal councils. The most significant policy change has been the transfer of sewerage services from the municipal councils to the UWSA.

2.6 Rural WSS: Since 1991, GOT policy has been to move away from "free water for all" and to promote community management. The rural water component of the National Water Policy drafted finalized in October 2002 calls for the provision of rural WSS services through: (a) community planning and management; (b) private provision of goods, works and services; and (c) public sector regulation, facilitation and environmental management. Demand from community, cost sharing and decentralization of management and implementation at the lowest level possible are the pillars of the new policy. In March 2002, IDA approved a Rural WSS project (Cr. 3623-TA), designed as a first phase of a national RWSS program.

3. Sector issues to be addressed by the project and strategic choices:

Sector issues to be addressed

3.1 Dar es Salaam water supply: Dar es Salaam obtains most of its water from the Ruvu river through two main schemes (Upper and Lower Ruvu) and also from a small surface water scheme (Mtoni). Boreholes fitted with electric or hand pumps have recently been developed in the city to alleviate the effect of low flows in the Ruvu river; but the safe yield of the aquifer is unknown and quality of the water is doubtful. Based on the Household Budget Survey (HBS) of 2000/2001, about 85% of city's population has some kind of access to piped water supply. However, the service is erratic with most households getting it less than six hours per day. Over 45% of the households buy water from neighbors, tanker trucks or from vendors. The total production capacity of about 273,000 m³/day from surface water plus up to 30,000 m³/day from groundwater, is likely to be sufficient to supply a city of 3.0 million, a population Dar es Salaam is likely to reach in 2007. The Upper Ruvu treatment plant (82,000 m³/day) was rehabilitated in the mid-1980s. The Lower Ruvu treatment plant (182,000 m³/day), built in the mid 1970s, is practically out of order and water produced is in fact not adequately treated. Only a fraction of the total production of the two Ruvu schemes reaches the city because of offtakes on the two 50 km transmission lines, often illegal and/or for irrigation purpose. The transmission lines have many weak points and can burst anytime; the 1999 and 2002 floods washed away sections of the Lower Ruvu transmission mains and created water shortages for over a million people for almost 10 days. The primary distribution network is sufficiently developed, but because of poor balancing and limited coverage of secondary distribution, many neighborhoods have to rely on long – and sometimes unofficial – individual connections. Poor piped water service has encouraged a very active water vending "industry" and the development of the above mentioned boreholes. Overall management of Dar es Salaam main source of water (the Ruvu/Wami River Basin) needs to be strengthened. Several options for Dar es Salaam future raw water source have been identified, but no decision can be made before an independent regional environmental impact assessment is carried out. Once a decision is made there will be a need to thoroughly prepare a program to extend water storage, production, transmission and main distribution to meet a demand expected to be multiplied by 1.5 before 2015.

3.2 Dar es Salaam sewerage and sanitation: Only about 10% of the population is currently served by several systems that consist of 140 km of sewers connected to either an ocean outfall or to nine decentralized waste water stabilization ponds. About 20% of the total population use septic tanks and 70% use pit latrines. Septage from septic tanks and some pit latrines – due in part to the high water table in many parts of the city – is disposed of through tipping stations connected to the stabilization ponds and the ocean outfall. In fact, the waste water treatment infrastructure serves indirectly a much larger proportion of the population than that connected to sewers. The

sewerage infrastructure built in the early 1980s is at various stages of collapse. Because none of the 15 pumping stations operate, raw sewage overflows in storm water drains. The sewerage operations of the Dar es Salaam Sewerage and Sanitation Department (DSSD) were handover to DAWASA in 1999. There is an obvious need to define a comprehensive sanitation strategy for the city to take into account environmental and economic issues.

3.3 DAWASA commercial and financial operations: DAWASA has about 100,000 water customers and 22,000 sewerage customers. Water produced and distributed is not metered and bills are established on the basis of estimations; because of the poor service it provides and systematic overestimation of consumption, only about 50% of the customers pay their water bill regularly. The current tariff varies according to customer category and ranges from Tshs391/m³ (US\$0.40/m³) for domestic customers to Tshs725/m³ (US\$0.74/m³) for non domestic customers (average tariff Tshs478/m³, equivalent to US\$0.49/m³). Customers with sewerage connections are charged an extra 30% over their water bill. DAWASA revenue in 2001 was about Tshs15bn (US\$15.3 million). Maintenance has not been adequately funded for decades.

Project strategic choices

3.4 Rehabilitation and extension of the WSS infrastructure: The project will support GOT strategy of focusing first on rehabilitation of the existing WSS infrastructure and extension of the piped water service to poorly served areas. The project will also support a "Community WSS" program to serve low income communities that may not rapidly benefit from an improved piped water service, either because they are located in remote areas or because the revenue they can generate is not sufficiently attractive. The project will also assist GOT select the future raw water source, support operations of the Wami/Ruvu River Basin Office, assess ground water capacity, design future water supply facilities and prepare a sustainable sanitation strategy for the Service Area.

3.5 Rehabilitation of DAWASA technical and commercial operations: The project will support the "privatization" of DAWASA's operations through a ten-year "Lease Contract" with a professional private "Operator", as a first step towards the transfer of more responsibilities and risks to the private sector .

3.6 Cost recovery strategy: The project will support GOT policy of pricing the WSS service, to achieve financial, economic and equity objectives. The "Customer Tariff" will be initially set at a level sufficient to cover O&M costs, service the debt and contribute to the investment program with the objective of eventually raising it to a level that will compare with the Long Run Marginal Cost (LRMC) of distributing water and safely disposing wastewater generated, so that it also becomes a key instrument of demand management.

C. Project Description Summary

1. Project components

1.1 Component 1: The *rehabilitation and extension of water supply facilities* will include: (a) a "Priority Works Program – PWP" for (i) emergency rehabilitation of production units and transmission lines, and (ii) the supply of 173,000 meters; (b) a "Non-Delegated Works Program – NDWP" for the full rehabilitation of the three water production units, two transmission lines, two main reservoirs and main distribution network and the construction of about 58 km of new main pipes and a new 5,000 m³ reservoir; (c) a "Delegated Works Program – DWP" for the rehabilitation and extension of secondary distribution pipes and connections that will involve the construction of about 900 km of small diameter pipes and 35,000 new connections and 250 water kiosks and the rehabilitation of about 135,000 connections; and (d) the services of a construction supervision consultant (CSC). DAWASA has already awarded contracts for sub-component (a) to the Operator. DAWASA will "delegate" to the Operator under the Lease Contract the responsibility for implementing sub-component (c). DAWASA will implement sub-component (b).

1.2 Component 2: The *rehabilitation and extension of wastewater facilities* will include: (a) the rehabilitation of 140 km of existing sewers, 3,100 manholes, 15 waste water pumping stations, nine waste water stabilization ponds and an existing ocean outfall; and (b) the construction of 26 km of new sewers. All construction activities, that are part of the NDWP will be implemented by DAWASA and supervised by the CSC.

1.3 **Component 3:** The *community water supply and sanitation program* will consist of grants by DAWASA to about 50 beneficiary communities for subprojects, such as schemes based on point sources or schemes relying on a bulk supply from the main network, to provide a minimum service to low income communities that may not immediately be served by a piped water network. This component will also support on-site sanitation facilities, hygiene promotion and community management training. This component will be implemented by DAWASA with the assistance of specialized NGO which will support communities formulating grant requests, implementing WSS projects and building capacity for post construction management.

1.4 **Component 4:** The *institutional strengthening program* will include: (a) an assistance to the Operator to help finance its initial operating costs; (b) technical assistance to DAWASA: engineering, financial, legal, assets revaluation, audits, communication, environmental monitoring, independent assessments of the institutional framework and activities aimed at the prevention of HIV/AIDS; (c) training of DAWASA and MWLD staff; (d) operational equipment and repairs of emergency nature to be financed by DAWASA under the Lease Contract; and (e) technical assistance to the Wami/Ruvu Basin Office. DAWASA will implement all components; MWLD will supervise component (e).

1.5 **Component 5:** The *preparation of a medium term WSS development program* will support: (a) studies for the selection of the future raw water source for the Service Area, an assessment of the ground water capacity in the Service Area in association with a comprehensive regional environmental assessment; (b) feasibility studies and designs of additional water supply facilities; (c) the development of a strategic sanitation plan and the preparation of feasibility studies and designs; and (d) the preparation of a strategy for developing the urban WSS sector in Tanzania. DAWASA will implement components (b) and (c), MWLD will supervise components (a) and (d).

Summary Project Costs (US\$ million)

Component (with contingencies)	Indicative Costs (US\$ m)	% of Total	Bank-financing (US\$ m)	% of Bank-financing
1. Rehabilitation and extension of water supply	106.05	64	36.00	58
2. Rehabilitation and extension of sewerage and waste water	22.40	13.6	2.50	4.1
3. Community water supply and sanitation	3.85	2.3	2.25	3.7
4. Institutional strengthening	25.00	15.2	13.95	22.7
5. Preparation of a medium term WSS development program	6.15	3.7	5.65	9.2
Total Project Costs	163.45		60.35	
Refinancing of PPF	1.15	0.7	1.15	1.9
Total Financing Required	164.60	100	61.50	100

2. Key policy and institutional reforms supported by the project:

2.1 **Overall framework:** . The project will support the reorganization of the provision of the WSS service in the Service Area that has recently been initiated by GOT by transforming DAWASA into an "Asset Holding Authority – AHA" sub-contracting the technical and commercial operations to a private "Operator". The relations between GOT, DAWASA, the Operator, the Customers and the Regulator EWURA are defined in a series of documents (Acts, contracts and licenses) that constitute the overall framework for the provision of the WSS service in the Service Area (see attached graph).

2.2 **Development Contract between GOT and DAWASA:** The DAWASA Act of 2001 transforms the existing DAWASA into an Asset Holding Authority (AHA) that will retain the name of DAWASA. DAWASA will remain fully owned by GOT and be mostly responsible for financing and developing WSS facilities in the Service Area. DAWASA will be fully established as AHA once the Operator mobilizes, but its Board and top management have already been appointed. GOT and DAWASA will enter into a ten year "Development Contract" that will specify conditions under which the Capital Investment Program (CIP) will be financed by GOT and implemented by DAWASA. Since the performance of the Operator will partly depend upon DAWASA's capacity to implement the

CIP, the Development Contract will be an important part of the overall contractual framework. The Development Contract, whose draft has been found satisfactory, will be signed before effectiveness of the IDA Credit.

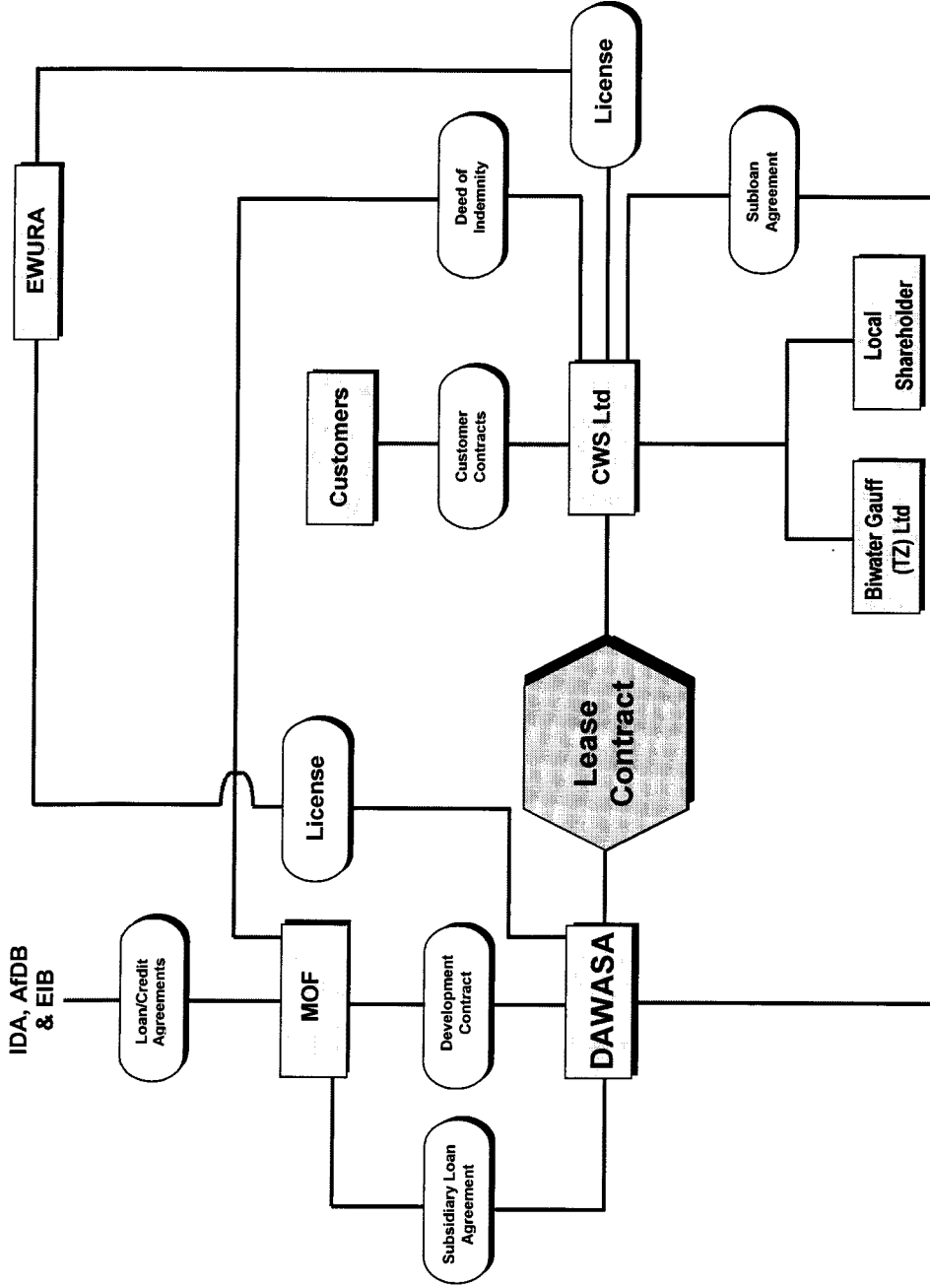
2.3 Lease Contract between DAWASA and the Operator: DAWASA has signed on February 19, 2003 a ten year "Lease Contract", satisfactory to the Bank, with "City Water Services Ltd.", a locally incorporated private Operator. GOT has selected, after a competitive process satisfactory to the Bank, the joint venture "Biwater/Gauff (TZ) Ltd." from the UK and Germany to become the majority shareholder and manager of the Operator for the duration of the Lease Contract. Minority shares will be held by local investors. The authorized capital of the Operator is US\$10.0 million equivalent with a minimum US\$2.5 million equivalent to be paid up on the Commencement date of the Lease Contract, that will coincide with effectiveness of the IDA Credit. The Lease Contract specifies conditions under which the WSS service has to be provided, assets have to be operated and maintained, connections have to be provided to customers, consumption has to be metered and billed, and bills have to be collected. The Lease Contract is designed to encourage the Operator to maximize its profits by reducing commercial losses, through improved billing and collection, and operating costs, by limiting physical losses. To minimize coordination problems with regards to the implementation of the CIP, DAWASA has also contracted, following a procedure acceptable to the Bank, the Operator to implement: (a) as a contractor: the "Priority Works Program" including the supply of 173,000 individual meters; and (b) as project manager: the "Delegated Works Program – DWP".

2.4 Customer Contract between the Operator and Customers: Customers will enter into a "Customer Contract" with the Operator, not with DAWASA. The Operator will bear the commercial risk as its revenues will come only from bills collected. While the Operator is expected to rapidly improve collection from private customers, its performance with GOT agencies will mostly depend upon proper GOT budget and disbursement procedures; GOT's new procedures are encouraging. Non payment of utility bills by government agencies that the Operator may not be able to disconnect may require remedies through the Regulator.

2.5 Licenses granted by the Regulator: In 2001, GOT passed the Energy and Water Utilities Regulatory Agency (EWURA) Act. EWURA will "license" both DAWASA and the Operator. Arrangements have been made to allow licensing in case EWURA is not yet operational by Effectiveness. EWURA will mostly be involved in the adjustments of the Operator and Customer Tariffs and the overall monitoring of the quality of the WSS service. EWURA's role should initially be limited since both tariffs are supposed to be fixed for a period of five years. In fact, because of the poor baseline data on which the Operator Tariff has been established, requests for tariff adjustments are likely to occur before the mandatory renegotiation of year five. EWURA activities will be funded by a levy included in the Customer Tariff. Technical Assistance (TA) to EWURA is expected to be financed from either another IDA supported project or bi-lateral sources. EWURA will employ technical, financial and economic consultants, inspectors or auditors, as required.

2.6 Customer Tariff structure: The "Water Customer Tariff" will be a three part tariff consisting of the "Operator Tariff" retained by the Operator; the "DAWASA Tariff" collected by the Operator on behalf of DAWASA; and a "Social Connection Tariff" to be deposited in the "First Time Domestic Water Supply Connection Fund". The Water Customer Tariff is designed to favor connection to and consumption of piped water by low income households. To that effect, new domestic connections for low income households will be funded by the Connection Fund and the first five cubic meters consumed each month by domestic customers will only be charged the Operator Tariff. The "Sewerage Customer Tariff" will be a two-part tariff consisting of an Operator Tariff and a DAWASA Tariff charged on 80% of the water consumption to customers connected to the sewerage system. The Operator Tariffs are supposed to remain fixed in real terms for five years, and adjusted annually using the cost index formula of the Lease Contract, to reflect inflation. The Lease Contract describes the mechanisms that will apply to review the Operator Tariff during the initial five year period of the Lease Contract: (a) annual review: to adjust the cost index formula or assumptions made when establishing the bid price; (b) interim review: to take care of material changes of circumstance; and (c) the major review: to set the tariff that will apply for the second five year period of the Lease Contract. DAWASA revenues, consisting principally of the DAWASA Tariffs and the "Rental Fee" charged to the Operator for use of the assets, will cover DAWASA's operating costs, debt service and contribute to the CIP. DAWASA Tariffs will be adjusted annually to reflect inflation.

Summary Contractual Arrangement



3. Benefits and target population:

The main benefits of the project will be: (a) the improved *reliability* of the WSS service as a result of a coordinated program of rehabilitation of operations and facilities; (b) an increased *affordability* of the WSS service by lower income groups who will be able to switch from current expensive private supplies, such as tankers and vendors, to public piped water, have access to the Connection Fund, and benefit from an adapted Customer Tariff structure and improved metering and billing procedures; (c) an improved *sustainability* of the WSS service as a result of an institutional arrangement with built-in incentives to perform and a pricing policy designed to recover costs and manage demand; (d) an increased *implementation capacity* of WSS projects by DAWASA and MWLD; and (e) an increased *regulatory capacity* of the provision of the WSS service. Overall the *public health* situation should improve as a result of a more permanent water supply service and rehabilitation of waste water collection and treatment facilities. The entire population of Dar es Salaam and most of its economic activities, which have suffered from unreliable public WSS for decades and have to rely on expensive private substitutes, will benefit from the project. Currently 75% of the total population in the Service Area of about 2.6 million obtain water a few days per week only; at the end of the project, it is estimated that about 80% of a population of 3.2 million will have access to piped water and that 70% of the DAWASA service area will obtain a 24 hours service. At the rate of increase of the coverage ratio and improvement of the quality of service, the MDG of reducing by half the percentage of the population without access to safe water and adequate sanitation by 2015 is likely to be achieved provided, however, that the production capacity can be increased by about 2010.

4. Institutional and implementation arrangements

4.1 **Implementation responsibility:** DAWASA will have the overall responsibility for implementing the project, expected to cover the first five years of the new institutional arrangement; its performance under the IDA financed USRP is satisfactory. DAWASA, as AHA, will primarily consist of two main departments: a “Technical Department” responsible for managing construction activities and preparing technical studies and a “Financial Department” responsible for financial matters as well as for monitoring implementation of the Lease Contract, and dealing with EWURA. The project will extend the Engineering Advisor and the Finance Advisor currently in place, for five years and three years respectively. DAWASA will employ a Construction Supervision Consultant (CSC) to supervise all construction activities related to the NDWP as well as the two contracts already awarded to the Operator under the PWP. Mobilization of the CSC is a condition of Effectiveness. Under the Lease Contract, the Operator will implement (on behalf of DAWASA) the DWP and build social connections financed by the Connection Fund. DAWASA will extend the mandate of its financial auditors to include regular technical audits of the performance of the Operator under the Lease Contract, including the implementation of the DWP and the management of the Connection Fund. Mobilization of the auditors is also a condition of Effectiveness.

4.2 **Procurement:** DAWASA will be responsible for the procurement of works under the NDWP; the assessment of its capacity and procedures has been updated during appraisal and found acceptable. The Procurement Unit will report directly to DAWASA Chief Executive Officer. Bidding documents have already been prepared and are being updated to meet requirements of the various financing agencies; EIB have agreed that the procurement process for the packages they will finance, in particular for the rehabilitation of water production and transmission facilities, be initiated before effectiveness of their loan. The CSC will assist DAWASA in the evaluation of bids. DAWASA procurement rules will be strictly followed by the Operator under the DWP. DAWASA will implement the Community WSS component with the assistance of NGOs already active in the WSS sector in Dar es Salaam: DAWASA will procure pipes and equipment; NGOs will be responsible for procuring, on behalf of DAWASA, small construction contracts. TOR and budgets for most TA and studies have been agreed upon and are attached to the Project Implementation Plan (PIP). Under a special arrangement, DAWASA will also procure works, goods and services for sub-components supervised by MWLD.

4.3 **Financing:** The project, whose total cost is estimated at US\$164.6 million, excluding tax and duties, but including contingencies will be financed by IDA (US\$61.5 million), the African Development Bank, AfDB (US\$48.0 million), and the European Investment, EIB (US\$34.0 million). The remainder will be financed by DAWASA and the Operator. Each agency will finance well defined construction contracts in parallel.

- IDA will finance the cost associated with the various contracts between DAWASA and the Operator including initial operating costs of the Operator up to US\$5.5 million, the PWP and the engineering fees for the implementation of the DWP (a total of about US\$20.0 million). IDA will also contribute to the financing of the

rehabilitation of the secondary distribution network and the Community WSS component and all the TA, audits, training of DAWASA and MWLD staff and studies; by Effectiveness, DAWASA will have awarded contracts with total value of about US\$30.0 million;

- AfDB will primarily finance the rehabilitation and extension of the main distribution network, and contribute to the financing of the DWP and of the Community WSS component. AfDB will also finance the rehabilitation of the sewerage system and TA to MWLD for improving operations of the Wami/Ruvu River Basin Office;
- EIB will finance works associated with the rehabilitation of the water treatment plants, transmission lines and reservoirs and waste water stabilization ponds;
- The Operator is committed to contribute US\$8.5 million to finance the working capital of the operation, inventories and operational equipment, of which US\$2.5 million will be paid when on the Commencement date of the Lease Contract that will coincide with Effectiveness; and
- DAWASA will contribute about US\$12.5 million, or about 10% of the cost of the construction activities from internal sources.

4.4 **GOT on-lending to DAWASA:** Financing made available to GOT for the project by IDA, AfDB and EIB will be passed on by the MOF to DAWASA under the following conditions to be specified in a Subsidiary Agreement: (a) grant for all consulting services and grant contribution for 60% of the construction program; and (b) loan in Tanzanian Shillings for 40% of the construction program on a 15 year term (25 years in case of EIB), of which five years of grace (including capitalization of interests during construction) at an interest rate of 11.5%. On-lending conditions have been set at levels deemed affordable by the Customer Tariff, as specified in the Development Contract. GOT will bear the foreign exchange risk. Up to US\$5.5 million from the IDA Credit will be made available by DAWASA to the Operator under the form of a sub-loan in local currency to help finance its initial operating costs; disbursement will be tied to the contribution of additional equity by the shareholders of the Operator and to the submission of evidence that funds already disbursed have been used for the acquisition of eligible goods, works and services.

4.5 **Accounting, financial reporting and auditing:** DAWASA's financial management systems have been strengthened during project preparation through TA and training financed by Project Preparation Advances (PPA). A Financial Management Manual (FMM) has been prepared as part of the Project Operation Manual (POM); it describes accounting and financial management procedures, audit arrangements and includes the format of Financial Management Reports (FMR) needed for quarterly monitoring; all have been reviewed and found acceptable. DAWASA will operate and report on the Special Account and arrange for its annual external audits.

4.6 **Monitoring and evaluation (M/E):** A series of reports by DAWASA, the Operator and EWURA will allow M/E of the implementation of the project and achievement of its objectives. All EWURA reports will be disclosed publicly; the Operator and DAWASA reports will be privileged.

- As per the Lease Contract, the Operator will report to DAWASA on an annual basis on key indicators: (a) water produced at the treatment plants, available at the Dar es Salaam reservoirs, sold, unaccounted for; (b) water pressure and quality; (c) waste water collected and treated; (d) effluent quantity and quality; (e) meters installed, meters read and billing established on actual reading; (f) bills collected; accounts receivable by category of customers; (g) illegal connections regularized; (h) implementation of the DWP; and (i) "social" connections and kiosks built. Simplified interim reports will be available for selected indicators;
- DAWASA will report on a quarterly basis to its Board and IDA on implementation of the construction programs and the various studies and TA supported by the project, in particular: (a) implementation schedules updated by component and financing agency; (b) commitment and disbursement by component and financing agency; (c) findings, recommendations, agreement reached, main issues and decisions sought; and (d) environmental performance; and
- EWURA will issue reviews of requests by the Operator and/or DAWASA to amend the Operator and/or the Customer Tariffs. Before the end of the first five year period, EWURA will also issue a review of the actual costs of the Operator, and recommendations on the future Customer Tariff level and structure based on detailed willingness to pay surveys and updated estimates of the economic and financial costs of the WSS service.

A mid-term review of the project performance will be carried out together with all financing agencies about three years after effectiveness. Prior to this review, DAWASA will request an independent review of the implementation of the Development, Lease and Customer Contracts, that will include proposals for immediate and/or longer term

remedies, if needed. An Implementation Completion Report (PICR) will be prepared within six months of the project closing. GOT, DAWASA and EWURA will contribute their own evaluation of the project.

D. Project Rationale

1. Project alternatives considered and reasons for rejection:

AfDB identified a project in August 1997 that focused on the rehabilitation of operations and facilities, with DAWASA still being the operator. AfDB put processing of this project on hold pending the outcome of a consultation with private operators/developers initiated by GOT late in 1997 for a long term "Concession". Under this arrangement, responsibility for financing an investment program estimated to cost more than US\$300 million to develop a new source of water would have been transferred to the concessionaire, in addition to that of operating the WSS service. In November 1998, when it became clear that this consultation was not going to succeed, GOT confirmed earlier requests for Bank's assistance to help design an option combining private operation and public financing and focusing first on rehabilitation of WSS operations and facilities. The Lease Contract option was adopted after an additional analysis of different private sector participation (PSP) options by the transaction advisor appointed by GOT.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned).

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed Rehabilitation of infrastructure services, institutional strengthening	Urban Sector Rehabilitation Project (Cr. 2867-TA)	S	S
Parastatal Reform	Public and Parastatal Sector Reform Project (Cr. 2507-TA)	S	S
Parastatal Reform	Privatization and Private Sector Development Project (Cr. 3304- TA)	S	S
Other development agencies Rehabilitation of infrastructure services, institutional strengthening	Rehabilitation of Arusha, Tanga, Moshi WSS (parallel financing of Cr. 2867-TA by KfW/GTZ and EU)	S	S

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the project design:

3.1 **WSS projects in Tanzania:** Traditionally, urban WSS projects in Tanzania have paid little attention to institutional development and cost recovery issues; but with the creation of UWSAs and the formulation of the National Water policy, GOT has recently demonstrated a willingness to address these issues. The experience with UWSAs has been an important step towards accountability, but it is too early to judge its sustainability, taking into account the difficulty of attracting and retaining competent staff for each UWSA and of reducing operating costs, because of the small size of each operation. Sub-contracting technical and commercial operations of the WSS service to operators with a wider geographical coverage may be an option to consider.

3.2 **Private sector participation in WSS:** PSP in WSS is not a new concept in Africa. In Côte d'Ivoire, the private operator that now serves more than 600,000 customers in more than 600 cities and towns with populations ranging from 2.5 million to a few thousands, was created 40 years ago. Senegal, Niger, Mali and South Africa have implemented reasonably successful PSP schemes in the last decade. Cameroon, Nigeria are seeking similar arrangements. A review of the regional experience carried out early during project preparation led to the recommendation of: (a) the Lease Contract option transferring the commercial risk to the Operator; (b) the transformation of DAWASA into an AHA; (c) the need for a Development Contract between the Government and

the AHA; (d) the commitment by the Government to cause its agencies to pay water bills timely; (e) transfer of some responsibility for implementing part of the CIP to the Operator; and (f) a clear definition of the respective roles of the AHA and the Operator with regards to the financing of repairs and replacements.

3.3 **Other lessons:** Experience worldwide and in particular in Africa has also demonstrated the importance of: (a) proper pricing of WSS Service to manage water demand, in particular in water scarce areas, and of designing a tariff structure to allow access to piped water of lower income groups; (b) stakeholder participation in the design of institutional reform to build a strong consensus on the “privatization” of a key public service; (c) developing, in parallel to the mainstream project, specifically targeted programs to lower income communities that may not immediately benefit from improved WSS service; and (d) designing a well focused project.

4. Indications of borrower commitment and ownership:

Since 1997, GOT has been under tremendous pressure to improve the WSS service in Dar es Salaam. When the Bank was requested late in 1998 to provide financial support to the project, it was agreed that its processing would be linked to the “privatization” of DAWASA's operations. Thus before appraisal, GOT agreed to: (a) pass an Act to reflect DAWASA's new mandate as AHA; (b) prepare drafts of the various contracts that will constitute the framework for the WSS service in Dar es Salaam; and (c) select an IPP for the Operator following a transparent and fair process. A first bidding for the Lease Contract was organized early in 2000 among three pre-qualified companies (one from the UK, two from France). Despite two pre-bid meetings, the UK company did not participate and the two French companies submitted qualified bids, that GOT refused to evaluate, against the Bank advice. GOT requested a re-bidding with the objective of increasing competition and avoiding qualifications. The same three companies were pre-qualified. A second bidding took place during the first half of 2002 on the basis of a revised bidding document including, in particular, the PWP. To simplify bid evaluation, bidders were asked to bid on the Operator Tariff only, all other conditions, i.e., initial equity contribution to the capital of the Operator, financial support to the Operator's start-up activities, fees for managing the DWP and amount to be paid by DAWASA for the PWP, being identical for all bidders. The Bidding Document also include a formula to protect GOT against artificially low bidding. Despite two pre-bid meetings, two pre-qualified still disagree on several clauses of the draft Lease Contract, and only one bid was received from Biwater/Gauff. Despite the major delay in selecting the IPP, GOT has demonstrated its ability to prepare a complex and well focused project, draft a detailed PIP and ensure that construction activities can start as soon as the financing becomes available.

5. Value added of Bank support in this project:

The Bank is probably the only financing agency that has been actively involved in supporting “privatization” of WSS operations in Africa during the last two decades. Throughout preparation, it has provided constant assistance to GOT. The Bank also is the only financing agency that can provide GOT with the assistance needed to implement an institutional arrangement likely to require several fine tunings during the coming years. The Bank has been able to attract significant co-financing to the project, and will continue its coordination role during implementation. The Bank will also help prepare a technically complex future WSS project for Dar es Salaam.

E. Summary Project Analysis

1. Economic:

Cost Benefit NPV=US\$88 million; ERR = 24% (see Annex 4)

1.1 **Overview:** The economic analysis builds on the financial analysis that measures flows of costs and benefits in market prices, based on a total investment of US\$155.8 million (total project cost of US\$164.6 million minus US\$8.8 million to finance studies for a future project and Technical Assistance to MWLD, that are not related to direct project benefits) over a five year project implementation period and the ten year Lease Contract. The benefits used to calculate the Economic Net Present Value (NPV) and Economic Rate of Return (EIRR) are mostly: (a) direct expenditure savings by households which will obtain their water directly through new private connections and an increased number of standposts; (b) direct expenditure savings by existing consumers currently charged on the basis of assessed consumption, who will be paying lower bills as a result of improved metering; and; (c) time

savings by existing and new consumers relying on standposts and new domestic customers who will be connected to piped water.

1.2 **Benefits:** The identified project benefits are mainly predicated on the incremental quantity of water that will become available for consumption through the reduction of UfW, from the current 58% to 25% by 2013. It is, therefore, critical that targets for reducing UfW be achieved as planned in the Lease Contract. The project will: (a) improve the quality and reliability of service to the existing 100,000 (of which 87,000 are supposed to be active) domestic connections, serving about one million people, and 1,000 standposts, serving an estimated additional one million; (b) increase water coverage by serving an additional 385,000 people through direct connections, 300,000 through standposts, and 170,000 through Community WSS facilities by 2008; (c) lead to a more equitable service by allowing direct access to piped water through individual connections by households currently relying on neighbors and/or vendors; (d) improve revenue collection as a result of institutional restructuring and improvement in the utility's operating efficiency; and; (e) gradually introduce a more efficient pricing.

1.3 **Improvement of WSS for low income households:** Low income communities will benefit from the project through the: (a) establishment of the Connection Fund, replenished from the Customer Tariff, to finance small diameter domestic connections; (b) densification and extension of the secondary distribution network that will allow the construction of connections and standposts; (c) adoption of a "lifeline" tariff for the first five cubic meters per month (5 m³/month) consumed by domestic customers; (d) Community WSS component aimed at providing improved WSS services to about 50 low income communities that cannot rapidly be reached and/or where distribution networks cannot be developed rapidly.

1.4 **Long run marginal cost (LRMC):** Available information suggests that a medium term CIP of about US\$280m (which includes increasing water production through a new water treatment plant and a major sewerage investment) would be needed during the second half of the Lease. While these figures are only indicative, a preliminary estimate of the average incremental costs (AIC) as a proxy to the LRMC has been made, using this medium term CIP and a discount rate of 10%. The AIC is about Tshs950/m³ (US\$1.0/m³). Consumers should react to this price as inefficient consumption, that can exhaust current capacity, would necessitate a capacity expansion sooner. The LRMC suggests that some tariff increases would be required in the future. The medium term CIP would be confirmed during the project (component 5) and the LRMC more accurately estimated by EWURA during its review of the future Customer Tariff for the second half of the Lease.

2. Financial:

NPV=US\$62.0 million; FRR = 20% (see Annexes 4 and 5)

2.1 **Overview:** Financial projections submitted by the Operator as part of its bid for the Lease Contract were first analyzed for consistency with the technical proposal and viability of the company. Detailed financial forecasts of DAWASA and the Operator were then prepared to analyze the likely impact of the project on their financial sustainability. Key drivers of financial sustainability were also identified and the magnitude of their likely impact assessed. Finally, an investment analysis was carried out to assess the rates of return from the incremental benefits of the project. Below is a summary of Annex 5.

2.2 **Key assumptions:** Assumptions are predicated on the timely delivery of the CIP and, as a consequence, the timely increase of the volume of water available for consumption. Transmission and distribution losses are assumed to decrease from the current estimated 40% and 36% to 12% and 19% respectively, leading to a global reduction in UfW from 57% to 25%, assuming full billing. Other assumptions made rests with the ability of the Operator to improve the overall commercial performance and include, as specified in the Lease Contract: (a) metering of all customers by the end of year five; (b) billing of customers on actual meter reading by year five; (c) improvement of the collection rate from the current estimated 48% to over 90%; and (d) growth in the number of active connections.

2.3 **Financial projections:** Pro-forma financial statements, presented in local currency and in current terms, show that both DAWASA and the Operator will remain financially viable for the duration of the ten-year Lease Contract. DAWASA's internal cash generation capacity will be adequate to contribute about 10% counterpart financing towards the project cost. Cashflow from operations will however be initially weak and improve only after the third year. Key drivers affecting project cashflows and sustainability include: (a) timely payment of committed

funding of the Operator and DAWASA; (b) reduction of transmission and distribution losses; (c) achievement of full billing of customers; (d) improvement in collection efficiency; and (e) adaptation to changes in volumes of water on which bills are established once metering is effective.

2.4 **Investment analysis:** The financial Net Present Value (FNPV) – using a 10% discount rate – and Rates of Return (FIRR) of the project for the combined DAWASA/Operator operations, using a with and without project methodology, are estimated at about Tshs60bn (US\$62 million equivalent) and 20% respectively. A sensitivity analysis, modeled to take into account risks identified in Section F, envisages two main scenarios: (a) failure of GOT to pay its WSS bills and failure of the Operator to improve overall collection; and (b) delayed delivery of the immediate CIP leading to slower improvements in the facilities. Its results show that the project's FIRR are relatively robust to such changes, implying that the critical project success criteria rests with the ability to sustain DAWASA and the Operator as viable operations, in particular during the initial three years of the project.

2.5 **Cost recovery:** The Customer Tariffs proposed for the first five years of the Lease Contract, is adequate to support the immediate CIP; such Customer Tariffs compare with that charged in large African cities with efficient WSS operations. A medium term capital expenditure program will be needed towards the end of the ten year Lease. During the project, DAWASA will review in detail this program; such program, including its financing plan, need to be taken into account during the independent tariff review by EWURA in 2007.

2.6 **Fiscal Impact:** A detailed discussion of the fiscal impact of the project on GOT can be found in Annex 5. The project will yield a small fiscal surplus (US\$13.0 million) over the length of the Credits and Loans. But this figure does not take into account that without the project, facilities would deteriorate further resulting in additional costs to GOT to compensate for accumulated deferred maintenance. GOT agencies are expected to promptly pay their water bills under the project. GOT borrowings, estimated to a total of about \$144.0 million, represents about 2% of Tanzania's total debt outstanding and disbursed (2001 figures). Annual debt service after the grace period is about US\$5.0m which adds about 1.5% to the country's total debt service payments (2001 figures).

3. Technical:

The project will mostly rehabilitate existing water production, transmission and distribution supply facilities to restore their initial capacity and outputs quality. Initial designs of these facilities were adequate, but the absence of maintenance over the years has led to major degradation. The project is also expected to upgrade about 135,000 existing connections (87,000 active, 13,000 inactive and an estimated 35,000 illegal connections), create 35,000 new connections, install about 173,000 meters and lay a total of about 960 km of primary and secondary pipes with the main objective of reducing UfW, a large part of which is suspected to come from physical leaks on very long individual and sometimes illegal connections, and expanding the customer base. The project will also rehabilitate existing sewers, 15 pumping stations and nine stabilization ponds. The treatment capacity of the latter has recently been reassessed and limited modifications have been included in their design to meet expected increased load. Only limited extensions (26 km) of the secondary sewers will be included in the project. Detailed designs and cost estimates, initially prepared in 1995, have been updated; bidding documents have been prepared by engineering consultants financed by PPA. The project will not increase abstraction from the Ruvu river. The project will however provide consultants services for: (a) assessing the ground water potential in Dar es Salaam and along the transmission lines; (b) reviewing future raw water sources options and preparing related comprehensive environmental assessments; (c) preparing designs for the extension of the production and transmission and main distribution capacities; (d) preparing a sanitation strategic plan; and (e) a national strategy for developing urban WSS.

4. Institutional:

The institutional reforms described above took place as part of project preparation.

4.1 **Executing agencies:** DAWASA will be the main implementing agency of the project. MWLD will be responsible for supervising the components related to water resources management and the assistance to the Wami/Ruvu River Basin Office and the definition of the strategy for developing WSS in secondary urban centers; DAWASA will however be responsible for the selection of consultants and contract management.

4.2 **Project management:** DAWASA is already satisfactorily implementing the Dar es Salaam water supply component of the IDA financed USRP (Cr.2867-TA). However, the size and complexity of the proposed project justifies strong TA to DAWASA. The project will include: (a) financial and engineering advisors; (b) legal assistance; (c) public relation assistance; (d) audits of financial statements and project accounts; (e) technical audits of performance of the Operator; (f) a revaluation of assets; (g) construction supervision consultant (CSC); (h) specialized NGOs for implementing the Community WSS component; (i) environmental audits; (j) training of DAWASA Board members and staff and MWLD staff; (k) an independent assessment of the institutional arrangement, to be carried prior to the mid-term review of the project; and (l) a HIV/AIDS advisor on a part time basis. Outline of the TOR and budgets for the various TA included in the project have been agreed upon. MWLD has the capacity to implement its part of the project.

4.3 **Procurement issues:** Following the reform of public procurement in Tanzania, DAWASA will be fully responsible for procurement and will not have to rely on the services of the Central Tender Board whose role is now that of a regulatory agency. The assessment of DAWASA's procurement capacity initially carried out in 1999 was updated during appraisal; the procurement risk is assessed as average. The procurement plan included in the POM has been agreed with all financing agencies. The ICB procedure will apply to IDA financed contracts above US\$1,000,000 for works and US\$300,000 for goods; the QCBS procedure will apply to IDA financed consultant contracts above US\$100,000 for firms and US\$50,000 for individuals. Prior reviews by the Bank will be carried out for contracts of amounts above US\$1,000,000 for works, US\$300,000 for goods, US\$100,000 for consulting firms and US\$50,000 for individual consultants. Direct contracting with the Operator and/or other contractors may be used exclusively for repairs of emergency nature that DAWASA is obliged to finance and the Operator is obliged to carry out under the Lease Contract, within the limit of an aggregate amount of US\$1.8 million. Bank prior review will be required, but retroactive reviews may be requested on a case by case basis; the emergency nature of the works will be certified by the Auditors and claims for payment will be certified by the CSC.

4.4 **Financial management issues:** The assessment of DAWASA's financial management capacity carried out prior to appraisal revealed a sound accounting system, clear rules for financial management and guidelines for control of finances; many of these rules have recently been updated, under USRP financing. Financial Monitoring Reports (FMR) will cover project accounting, procurement, contract management, physical progress and projected cash flow. The Special Account will be replenished on the basis of full documentation for contracts of amounts above US\$500,000 equivalent for works, US\$300,000 for goods, US\$100,000 for consulting firms and US\$50,000 for individual consultants, and on the basis of SOE below these thresholds.

5. Environmental:

Environmental Category: B (Partial Assessment)

5.1 **Steps undertaken for the preparation of the environmental assessment and mitigation plan:** The advanced stage of disrepair of water supply and waste water facilities causes extensive pollution and health hazards. The project overall objective is not only to improve the provision of water, but also to improve environment and health conditions. The project enjoys a strong public support; the best environmental action that can be taken for the city is to implement it rapidly. An Environmental Assessment (EA) completed in 1995, covered the rehabilitation of water supply facilities and contained an Environment Management Plan (EMP). The EA was updated in March 2000 to include the waste water collection and disposal component of the project. Following initial review an addendum was issued in October 2002 to reflect comments by co-financiers, the National Environmental Management Council (NEMC) and the Vice President's Office. The addendum includes a summary of the EA report, the EMP and Public Consultation. The EA/EMP were disclosed publicly in Tanzania on February 28, 2003.

5.2 **Main features and adequacy of the EMP:**

- **Bulk water supply.** Regulation of the Ruvu river, Dar es Salaam main source of water, is being considered for the long term to support low flows during the dry season. The project includes an environmental assessment of the potential impact of such regulation works, as part of a regional EA of the Ruvu river watershed and of the Dar es Salaam water distribution area and coastal offshore area. Three main alternatives are currently being considered: banded reservoirs located close to the treatment plants, the Kidunda dam and the Ngerengere and Mgeta dams; another alternative considers a transfer from the Rufiji basin.

- **Constructions.** Water Supply: The project will include works to dispose sludge of the Ruvu water treatment plants in an environmentally safe way and to secure proper drainage at all public water distribution outlets.
- **Waste Water:** The project will rehabilitate and upgrade sewers and stabilization ponds as well as the ocean outfall, adding 100 meters to its present length. The project will also include works for safe disposal of sludge from the stabilization ponds. The project will finally monitor the rehabilitated waste water systems to avoid renewed deterioration. The project will not rehabilitate the existing solid waste landfill site; the City Council plans to commission a new site that meets the public health and environmental standards with bilateral assistance.
- **Construction (Others):** During construction, safety equipment will be provided, and people safeguarded near work sites to avoid accidents and temporary pollution damages.

5.3 *Timeline and status of EA:*

EA start-up date:	January 1999
Date of receipt of final draft:	November 1999
Date of final draft:	March 2000
Addendum to EA after public disclosure	October 2002

5.4 **Stakeholders consultation:** NEMC and various groups concerned with environmental issues have been consulted and their comments have been incorporated in the final EA and EMP. These documents have been publicly disclosed in leading English and Swahili newspapers in Tanzania on February 28, 2003; copies are available in MWLD, the offices of the Dar es Salaam City Council, the National Library, the library of the University of Dar es Salaam and NEMC offices.

5.5 **Monitoring and evaluation of the impact of the project on the environment:** DAWASA will employ a full time environmental specialist to supervise the environmental performance of DAWASA and the Operator. The environmental supervisor will monitor the implementation and functioning of the rehabilitated systems, and will maintain a regular reporting system and a data base. Environmental independent audits will be carried with the assistance of, for example, the Institute for Resource Assessment of the University of Dar es Salaam.

6. Social:

6.1 *Key social issues relevant to the project objectives:*

- **Redeployment of existing DAWASA staff:** The 1,500 existing DAWASA employees will be employed by either the new AHA or the Operator. The selected IPP has indicated that the Operator, it will become the majority shareholder of, will not retrench any staff; some of the staff will however be reassigned to sub-contractors employed for construction activities. Consultation with representatives of DAWASA staff took place prior to appraisal; DAWASA and the Operator have now agreed on reassignment procedures.
- **Resettlement of families illegally settled on the transmission lines:** Over the years, DAWASA did not prevent illegal construction in the rights of way of its two transmission lines, in particular in the downstream part of the Upper Ruvu line. Illegal constructions also exist very close to the stabilization ponds. While this has not created a major problem so far, the Operator may request DAWASA to ensure that access to key equipment of the pipes (wash-out, air valves) is guaranteed to perform routine maintenance tasks. Resettlement is expected mostly from improved operations rather than from construction activities and therefore will be limited. The Resettlement Framework Paper (RFP) prepared by DAWASA was found acceptable to the Bank and publicly disclosed in Tanzania on February 28, 2003. The RFP provides for an annual assessment of the construction program, the identification of affected families, the preparation of a Resettlement Action Plan and the payment of compensation, if needed, before construction is initiated. Communication to affected families will be made in a language they understand and a medium they have access to.
- **Disconnection of illegal users along the transmission lines:** Offtakes along the transmission lines contributes to the reducing the quantity of water available at Dar es Salaam main reservoirs. Leaks and offtakes possibly account for up to 40% of the production at the treatment plants; DAWASA is already rationalizing connections on transmission lines under USRP. The Operator is likely to disconnect customers

using drinking water for irrigation purposes. DAWASA will offer them an alternative by helping them to develop their own water supply system under the Community WSS component.

- **Affordability of the WSS service by low income households:** The project will support connection of low income domestic customers to piped water, if a distribution pipe exists nearby. Beneficiaries will be required to deposit Tshs20,000 (US\$21) and will receive a connection valued at an average Tshs145,000 (US\$150) financed by the Connection Fund. Also all domestic customers will benefit from a reduced Customer Tariff of Tshs322/m³ (equivalent to the Operator Tariff) for the first 5m³ consumed each month (5m³/month is usually accepted as the lifeline consumption in African cities). Finally the Community WSS component, to be implemented with assistance from specialized NGOs, will provide grants to communities that cannot be served by piped water to develop their own supplies.
- **Other affected groups:** Providers of substitutes to piped water, such as small water vendors or larger tankers will see their business reduced as a result of an improved public WSS; they will only gradually be affected since improvement will not happen overnight. Illegal users of the WSS service (illegal oftakers on the transmission lines or on the distribution network or bad payers) or illegal providers of service (artisans building illegal connections) will also be affected by the project whose main objective is to institute rational operation and discipline.

6.2 **Participatory approach:** During project preparation, GOT and DAWASA have consulted with key stakeholders affected by the project. Minutes of meetings with the following groups highlight project features that take their valid concerns into account: (a) DAWASA staff; (b) households that could potentially be resettled along the transmission lines and near the stabilization ponds; (c) environmental groups; (d) water tankers and water vendors; (e) commercial customers; (f) institutional customers; (g) representatives of domestic customers; (h) current customers along the transmission lines; (i) NGOs; and (j) the media. The main challenge is now to carefully manage expectations that may be high after a very long preparation period; obviously the quality of the WSS service cannot improve overnight with the mobilization of the Operator. During project implementation, EWURA will channel customer concerns to DAWASA and the Operator and make public information on tariff adjustment.

6.3 **Consultations and collaboration with NGOs:** NGOs have been consulted on the EA and have offered inputs to the design of aspects of the project during the stakeholder assessment. NGOs have been associated with the design of the Community WSS component of the project and will be employed by DAWASA to implement it. NGOs will also be consulted by EWURA during informal or structured surveys to be carried out in low income communities on evolution of the quality of service and WSS budget of households.

6.4 **Monitoring and evaluation of social development outcomes:** The project design includes a series of incentives to ensure that all actors (GOT, DAWASA, Operator) focus on improvement of the **reliability** of the WSS service to existing customers and extension of service to un-served communities, rather than purely on construction activities. The transfer of the commercial risk to the Operator implicitly encourages the latter to expand the customer base and increase sales; the transfer of responsibility for implementing the rehabilitation/extension of the distribution network and for managing the Connection Fund will provide to the Operator the means to achieve increased coverage. The metering program will gradually improve the **affordability** of the WSS service by charging customers for what they actually consume, rather than overestimated consumption. The Community WSS component will improve the lot of communities that cannot benefit from extension of piped water immediately. Reports to be periodically issued by the Operator will include data on the evolution of connections, metering, billing and collection and use of the Connection Fund, extension of the distribution networks and quality of water distributed and effluents discharged. An independent assessment of the implementation of the Development, Lease and Customer Contracts will be carried before the mid-term review. EWURA will, by year five, propose adjustments to the Customer Tariff level and structure based on a review of the achievement of those project features aimed at improving reliability and affordability and on an analysis of willingness to pay for and long term marginal cost of the WSS service.

7. Safeguard Policies:

7.1 *Safeguard policies triggered:*

Policy	Applicability
Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	Yes
Natural Habitats (OP 4.04, BP 4.04, GP 4.04)	
Forestry (OP 4.36, GP 4.36)	
Pest Management (OP 4.09)	
Cultural Property (OPN 11.03)	
Indigenous Peoples (OD 4.20)	
Involuntary Resettlement (OP/BP 4.12)	Yes
Safety of Dams (OP 4.37, BP 4.37)	
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)*	

7.2 *Provisions made to ensure compliance with safeguard policies:* Both the environment and resettlement arrangements will be the subject of annual, mid-term and final technical audits. **Environment.** In addition to the in-house environmental monitoring specialist, the project will provide support of an independently contracted Environmental Advisor, such as the Institute for Resource Assessment at the University of Dar es Salaam during the first two years of its implementation, and the necessary equipment for pollution monitoring and analysis. **Resettlement.** DAWASA has prepared a RPF that defines the number of affected families who currently live near critical WSS appurtenances and the arrangements for compensation. At the beginning of each year, the annual construction program will be reviewed against the RPF and any affected families duly compensated by DAWASA before the Bank authorizes the disbursements of funds against such contracts.

F. Sustainability and Risks

1. Sustainability:

The key elements that will affect the sustainability of the project benefits are:

- The clarity of the contractual arrangement and the predictability of the regulatory framework;
- The accountability of the various actors and their incentives to perform;
- The capacity of GOT to implement a tariff policy gradually achieving cost recovery, demand management and minimum service to low income communities; and
- The ability of the GOT in promptly paying for water and sewerage bills incurred by its agencies.

2. Critical Risks:

Critical risks are assessed as follows:

2.1 **Contractual arrangement and regulatory framework:** (a) inexperience of DAWASA in monitoring the performance of the Operator and in dealing with requests to adjust the terms of Lease Contract of the Operator Tariff to reflect changing conditions; (b) inexperience of EWURA in monitoring performance of the various actors (GOT, DAWASA, Operator, customers) and in appraising requests for Customer and Operator Tariffs adjustments; (c) "capture" of EWURA by one stakeholder (GOT, DAWASA, the Operator or the customers);

2.2 **Accountability of the various actors:** (a) poor performance of the Operator as a result of inadequate staffing, procedures and/or funding; (b) poor performance of the Operator for tasks executed on behalf of DAWASA (mostly management of the Connection Fund and of the DWP); (c) low profits of the Operator resulting in the withdrawal of its IPP; (d) inadequate focus by DAWASA and the Operator on construction activities rather than on improvement of the WSS service to customers; (e) poor performance of DAWASA in implementing the construction programs eventually affecting the performance of the Operator; (f) insufficient cash generation from operations affecting counterpart funding for the project; (g) poor discipline of GOT agencies in budgeting and paying their water bills;

2.3 **Tariff policy:** (a) inadequate adjustment of the Operator Tariff leading to low profits or losses of the Operator; (b) inadequate adjustment of the Customer Tariff leading to insufficient counterpart funding of the project.

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
<p>Contractual arrangement and regulatory framework:</p> <p>(a) inexperience of DAWASA;</p> <p>(b) inexperience of EWURA;</p> <p>(c) capture of EWURA.</p>	S	<p>(a) - the Lease and standard Customer Contracts have been signed before approval;</p> <p>- reporting requirements by the Operator are clearly specified in the Lease Contract;</p> <p>- engineering, financial and legal assistances will be provided to DAWASA to monitor performance of the Operator and, if necessary, amend the Lease Contract to reflect changing conditions.</p> <p>(b) - the DAWASA and Operator licenses will be issued before Commencement of the Lease Contract;</p> <p>- effects of “discretionary” decisions by EWURA will be limited by fixing the Customer and Operator Tariffs for the first five years;</p> <p>- TA will be provided to EWURA under a separate project.</p> <p>(c) - TA will be provided to EWURA to carry out independent review of the tariff level and structure;</p> <p>- EWURA’s decisions and reports will be publicly disclosed.</p>
<p>Accountability of various actors and incentives to perform:</p> <p>(a) poor staffing, procedures and/or funding of the Operator;</p> <p>(b) poor performance of the Operator in implementing DAWASA delegated tasks</p> <p>(c) withdrawal of the IPP from the Operator because of its low profitability</p> <p>(d) focus on construction rather than on service to customers</p> <p>(e) inadequate coordination between DAWASA and the Operator affecting the performance of the Operator</p>	M	<p>(a) - required equity contribution by shareholders of the Operator and performance guarantee have been set at dissuasive, but reasonable, levels;</p> <p>- detailed business plan of the Operator has been reviewed as part of bid evaluation and found acceptable;</p> <p>- the Operator will have access to financial assistance from DAWASA to help finance its start-up costs.</p> <p>(b) - independent technical audits of the Operator performance for these tasks will be carried out regularly for DAWASA.</p> <p>(c) - incentives to increase customer base and sales and reduce cost of service are built in the Lease Contract by transferring the commercial risk of operation and the management of the rehabilitation of the distribution network and the management of the Connection Fund to the Operator;</p> <p>- under the Lease Contract, the Operator has the possibility of applying for reviews of the Operator Tariff;</p> <p>- EWURA and DAWASA will obtain TA for assessing the need to adjust the Operator Tariff to guarantee reasonable return of the Operator's equity;</p> <p>- withdrawal of the IPP from the Operator could lead to a termination of the Lease Contract and in turn to the suspension of the IDA Credit.</p> <p>(d) - incentives to increase customer base and sales are built in the Lease Contract (see above);</p> <p>- penalties for non compliance with contractual performance objectives have been set at a dissuasive, but reasonable, level.</p> <p>(e) - procurement of major works will start soon after Effectiveness;</p> <p>- TA will be provided to DAWASA to coordinate implementation of the investment program;</p>

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
<p>(f) insufficient cash generation limiting availability of counterpart funding</p> <p>(g) low discipline of GOT agencies in paying their water bills.</p> <p>Tariff policy</p> <p>(a) inadequate adjustments of the Operator Tariff</p> <p>(b) inadequate adjustments of the Customer Tariff</p>	M	<p>- the Operator will be fully responsible for implementing the PWP and for managing the DWP and the Connection Fund.</p> <p>(f) - DAWASA financial forecast will be updated regularly;</p> <p>- requests for adjustment of the Customer Tariff will be assessed independently by EWURA.</p> <p>(g) - GOT is committed to enforce timely payment of utility bills by its agencies through its new computerized commitment control system;</p> <p>- the Operator is authorized to cut-off government agencies in arrears;</p> <p>- the Operator is required to establish bills on the basis of metered consumption as of year two of Lease Contract;</p> <p>- the Operator and DAWASA will consult with EWURA and MOF to compensate long standing arrears.</p> <p>(a) - a protection against artificially low bidding on the Operator Tariff was built in the bidding process for the Lease Contract;</p> <p>- the Operator Tariff will be fixed for five years in the Lease Contract, but will regularly be adjusted according to cost index formula;</p> <p>- triggers for revision of the Operator Tariff are clearly specified in the Lease Contract;</p> <p>(b) – the Customer Tariff will be fixed for five years in the Development Contract, but will regularly be adjusted according to a cost index formula;</p> <p>- review of the Customer Tariff level will be carried out before year five if cash generated from operations is insufficient to provide counterpart financing;</p> <p>- a mandatory independent review of the Customer Tariff level and structure will be carried out by EWURA before the end of year five.</p>
From Components to Outputs		
DAWASA capacity to implement construction programs	M	<p>- DAWASA has been granted the Procuring Entity;</p> <p>- Distribution of responsibility between DAWASA and the Operator for implementing construction programs is clearly defined in the Lease and Development Contracts;</p> <p>- Procurement of major works will be initiated by DAWASA before financing is effective;</p> <p>- The PO will implement a PWP as soon as financing is effective;</p> <p>- TA for project management and construction supervision will be provided to DAWASA.</p>
Overall Risk Rating	S	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N(Negligible or Low Risk)

3. Possible Controversial Aspects:

3.1 *Controversial aspects associated with the “privatization” of DAWASA's operations:* They have been mostly dealt with during project preparation.

- The selection of the IPP has followed a transparent competitive process and the Lease Contract negotiated is in line with the draft contract included in the bidding document;
- An agreement was reached with DAWASA staff representatives on the selection and reassignment procedures;

- The Resettlement Policy Framework has been publicly disclosed and presented to families that have illegally built on DAWASA rights of way; resettlement however is expected to be minimal;
- The tariff increase needed before Commencement of the Lease Contract will only be about 6%. Low income households will be offered low cost connections to piped water and a low tariff for lifeline consumption;
- Communities that cannot immediately be connected to piped water will be offered financing for developing their own systems through the Community WSS component;
- Fixing the Customer Tariff for the first five years of operation will limit uncertainty about future tariff increases; and
- The project itself can be considered as an Environmental Action Plan.

3.2 **Billing on assessed consumption:** Billing by the Operator will initially be based on currently assessed consumption, which are assumed to be higher than actual consumption, and used for its current billing until meters are installed. While currently customers do not argue with DAWASA, a public entity, on the basis for billing or they simply do not pay their bills, they may complain that the private Operator overcharges them and refuse to pay until the dispute is settled. The project includes an ambitious metering program: under the Lease Contract, all GOT agencies connections will be metered within the first twelve months and all other connections will be metered within the first five years. Conditions for contesting meter readings are clearly specified in the Lease and Customer Contracts. DAWASA and EWURA will closely monitor implementation of the metering program by the Operator.

G. Main Loan Conditions

1. Effectiveness Conditions

The following are conditions of Effectiveness which is expected for July 15, 2003:

- The Subsidiary Agreement has been executed on behalf of GOT and DAWASA;
- The Development Contract has been executed on behalf of GOT and DAWASA;
- The DAWASA Subloan Agreement has been executed on behalf of DAWASA and the Operator;
- An initial contribution to the capital stock of the Operator in the amount of US\$2.5 million equivalent has been paid by its shareholders;
- DAWASA has appointed an engineering and a financial advisor, a financial and technical auditor and construction supervision consultants;
- DAWASA has opened a Project Account and an initial contribution of Tshs500 million (US\$0.5 million) has been deposited; and
- Legal Opinions have been forwarded to the Bank on: (a) with respect to GOT: the Development Credit Agreement (DCA), Development Contract and Subsidiary Agreement; (b) with respect to DAWASA: the Project Agreement (PA), Development Contract, Lease Contract, Subsidiary Agreement and the Subloan Agreement; and (c) with respect to the Operator: the Lease Contract and the Subloan Agreement.

2. Other [classify according to covenant types used in the Legal Agreements.]

2.1 **Financial covenants:**

- **Internal Cash Generation:** DAWASA shall produce for each fiscal year from its fiscal year ending on June 30, 2006, an annual average of the funds from internal sources produced for that year and the two previous fiscal years equivalent to not less than 10% of the annual average of the DAWASA's capital expenditures incurred for that year and the two previous fiscal years;
- **Leverage:** DAWASA shall not incur any debt, if after the incurrence of such debt the ratio of debt to total capitalization shall be greater than 1 to 3.33; and
- **Debt Service Coverage:** DAWASA shall produce for the fiscal year ending June 30, 2008, and each fiscal year thereafter a net revenue equal to at least 1.2 times the estimated debt service requirements of DAWASA in the following fiscal year.

2.2 **Selected Dated Covenants:** DAWASA shall furnish to the Bank:

- Not later than 45 days after the end of each quarter: a Financial Monitoring Report (FMR) showing the sources and uses of funds, the physical progress of project implementation and the status of procurement;

- Not later than six months after the end of each fiscal year: (a) certified copies of its financial statements; and (b) the audit report on such statements;
- Not later than six months after the closing of its fiscal year: a financial and technical audit report on the performance of the Operator including implementation of the Delegated Works Program, management of the Connection Fund, Customer Contracts, the certification of emergency works and compliance with the provisions of the Lease Contract;
- Not later than six months after the closing of its fiscal year: a financial and technical audit of the Community WSS program;
- Copies of reports submitted by DAWASA to EWURA with respect the Annual, Interim and the Major reviews of the Operator Tariff, as described in the Lease Contract and subsequent communications between EWURA and DAWASA addressing issues identified in such reviews; and
- By June 2006: the report of an independent expert to review the institutional arrangements for discussion during the project's mid-term review.

2.3 *Selected Suspension Covenants:*

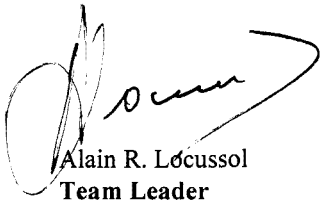
- The AfDB and EIB loans are not declared effective within 12 months of Effectiveness;
- DAWASA or the Operator have failed to perform their respective obligations under the Lease Contract or the Subloan Agreement;
- The DAWASA Act or the EWURA Act have been amended, suspended, abrogated, repealed or waived; and
- EWURA has revoked the licenses of DAWASA and/or the Operator.

H. Readiness for Implementation

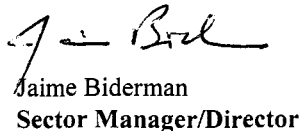
- The procurement documents for the first year's activities are complete and ready for the start of project implementation.
- The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.

I. Compliance with Bank Policies

This project complies with all applicable Bank policies.



Alain R. Lécussol
Team Leader



Jaime Biderman
Sector Manager/Director



Judy O'Connor
Country Manager/Director

Annex 1: Project Design Summary

TANZANIA: Dar es Salaam Water Supply and Sanitation Project

Indicators in bold are listed in Schedule 5 of the DCA

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
<p>Sector-related CAS Goal:</p> <p>Improved urban infrastructure services and participation of the private sector in utility management to support expansion of productive sectors and public health</p>	<p>Sector Indicators:</p> <ul style="list-style-type: none"> • Urban WSS services rehabilitated and expanded in urban cities and towns; • Private Operation of WSS in Dar es Salaam; • Functioning regulatory framework. 	<p>Sector/ country reports:</p> <ul style="list-style-type: none"> • GOT Development plans • Annual national economic survey report • PRSP/TAS progress report • EWURA annual report to Parliament 	<p>(from Goal to Bank Mission)</p> <ul style="list-style-type: none"> • GOT capacity to sustain investments in the WSS sector, attract private sector participation and maintain a functioning regulatory framework
<p>Project Development Objective:</p> <p>Provision of a reliable, affordable and sustainable water supply and sewerage and sanitation services improvements in the Dar es Salaam city and the Coast Region</p>	<p>Outcome / Impact Indicators:</p> <ul style="list-style-type: none"> • 70% of the customers obtain 24 hour water supply service under adequate pressure; • 100% of the water samples taken meet the water quality standards specified in the Lease Contract; • 80% of sewage collected is treated and 95% of effluent samples meet specified standards; • A life-line tariff for domestic customers is fully implemented; • Revenues from water and sewerage services cover all operations and maintenance costs and allow for a 10% contribution to the construction costs of the project. 	<p>Project reports:</p> <ul style="list-style-type: none"> • Quarterly and annual report of the Operator, DAWASA (including FMR) • Independent audits and reviews • Project mid-term review report • Implementation Completion Report • Annual, Interim and Major Reviews of the Operator Tariff and communications with EWURA 	<p>(from Objective to Purpose)</p> <ul style="list-style-type: none"> • All parties function within the dictates of the regulatory framework and perform as stipulated by their respective contract • Capacity of GOT to maintain a tariff policy that ensures adequate cost recovery, demand management and guarantees services to the poor

Output from each component:	Output Indicators: (Key Indicators in Bold)	Project reports:	(from Outputs to Objective)
1. Water supply facilities rehabilitated and extended	<ol style="list-style-type: none"> 1) Production capacity guaranteed at 9,000 m3/d (Mtoni); 82,000 m3/d (Upper Ruvu) and 180,000 m3/d (Lower Ruvu) by year 2008; 2) Quality of water produced to Tanzanian quality standards at all three WTP by year 2008; 3) Supply to Dar es Salaam increased by 28,000 m3/d (Upper Ruvu) and 27,000 m3/d (Lower Ruvu) by year 2008; 4) About 110 km of transmission main rehabilitated and losses reduced to 7% by year 2008; 5) About 1,040 km of distribution pipes installed by year 2008; 6) About 135,000 connections rehabilitated and metered by year 2008; 7) About 35,000 additional residential connections installed by year 2008; 8) At least 80% of new domestic water supply connections installed under the project are financed from the Connection Fund by year 2008; 9) About 250 new water kiosks built by 2008. 	<ul style="list-style-type: none"> • DAWASA and Operator quarterly and annual reports • Periodic revision of the "Development Contract" between GOT and DAWASA • Commissioned surveys and audits • IDA supervision mission reports 	<ul style="list-style-type: none"> • Inadequate capacity of DAWASA to implement works in a timely fashion and supervise implementation agents (Operator, consultants and NGOs) • Poor performance of the Operator in the execution of the delegated works
2. Sewerage and wastewater facilities rehabilitated and extended	<ol style="list-style-type: none"> 10) About 140 km of sewer and marine outfall cleaned and rehabilitated by year 2007; 11) 15 pumping stations rehabilitated by year 2007; 12) 9 stabilization ponds rehabilitated by year 2007; 13) 26,000 m3/day of collected sewage is treated to specified standards before discharge into environment by year 2008; 14) About 500 new sewer connections made by year 2007. 	<ul style="list-style-type: none"> • NEMC environmental monitoring reports • DAWASA and Operator quarterly and annual reports • Periodic revision of the "Development Contract" between GOT and DAWASA • Commissioned surveys and audits • IDA supervision mission reports 	<ul style="list-style-type: none"> • Inadequate capacity of DAWASA to implement works in a timely fashion and supervise implementation agents (Operator, consultants and NGOs) • Poor performance of the Operator in the execution of the delegated works

3. Community water supply and sanitation program operational	<p>15) About 50 community WSS schemes built and operating by year 2008;</p> <p>16) Community sanitation activities implemented in low income neighborhood where piped water is installed..</p>	<ul style="list-style-type: none"> • DAWASA and Operator quarterly and annual reports • Commissioned surveys and audits • IDA supervision mission reports • Participatory M&E 	<ul style="list-style-type: none"> • Inadequate capacity of DAWASA to implement works in a timely fashion and supervise implementation agents (Operator, consultants and NGOs)
4. Technical, commercial and financial capacity of institutions strengthened	<p>17) GOT agencies connections identified by year 1; GOT agencies WSS bills established on actual meter reading by end of year 2005;</p> <p>18) All private connections identified by year 5; all private WSS bills established on actual meter reading by year 2008;</p> <p>19) About 173,000 meters installed by year 2008;</p> <p>20) UfW reduced to 35% by year 2008;</p> <p>21) Combined collection ratio of private and public water supply and sewerage bills increased to 90% by year 2008;</p> <p>22) Working capital of Operator replenished;</p> <p>23) TA to DAWASA mobilized and performing;</p> <p>24) DAWASA assets revalued by year 2006;</p> <p>25) DAWASA and other accounts audited on time;</p> <p>26) DAWASA staff trained in regulation, pricing, procurement and project management;</p> <p>27) Operating equipment supplied to Ruvu/Wami Basin Authority;</p> <p>28) About 5 gauging stations built by year 2008.</p>	<ul style="list-style-type: none"> • DAWASA quarterly and annual reports • Periodic revision of the "Development Contract" between GOT and DAWASA • Annual, Interim and Major Reviews of the Operator Tariff and communications with EWURA • Commissioned surveys and audits • IDA supervision mission reports • MWLD annual reports 	<ul style="list-style-type: none"> • Poor performance of the Operator • Inadequate capacity of DAWASA to implement works in a timely fashion and supervise implementation agents (Operator, consultants and NGOs) • Low discipline of GOT agencies in paying their WSS bills • EWURA's capacity to reconcile financial, economic and equity considerations in the implementation of the regulatory framework • Inadequate coordination between DAWASA and the Operator in delivery of delegated and non-delegated works
5. Future WSS projects prepared	<p>29) Water resource management and corresponding environmental assessment carried out by year 2007;</p> <p>30) Water supply feasibility study and preliminary design completed by year 2007;</p>	<ul style="list-style-type: none"> • MWLD annual reports • DAWASA and EWURA quarterly and annual reports • Periodic revision of the "Development Contract" between GOT and DAWASA • Commissioned surveys 	<ul style="list-style-type: none"> • Inadequate capacity of DAWASA to implement works in a timely fashion and supervise implementation agents (Operator, consultants and NGOs)

	<p>31) Strategic sanitation plan completed by year 2006;</p> <p>32) Sanitation feasibility study and preliminary design completed by year 2007;</p> <p>33) Urban WSS sector development strategy prepared by 2005.</p>	<p>and audits</p> <ul style="list-style-type: none"> • IDA supervision mission reports 	
Project Components / Sub-components:	Inputs: (budget for each component)	Project reports:	(from Components to Outputs)
<p>Component 1: Rehabilitation and Extension of Water Supply Facilities (BC US\$ 89.15m)</p> <ul style="list-style-type: none"> • Treatment plants • Transmission lines • Storage facilities • Primary distribution • Secondary and tertiary distribution • Meters • Construction supervision for non-delegated works • Construction supervision of delegated works • <i>Contingencies</i> 	<ul style="list-style-type: none"> • US\$ 13.75m • US\$ 11.25m • US\$ 1.95m • US\$ 14.10m • US\$ 35.50m • US\$ 4.25m • US\$ 4.80m • US\$ 3.55m • US\$ 16.90 • (US\$ 106.05m) 	<ul style="list-style-type: none"> • DAWASA and Operator quarterly and annual progress reports • Bank disbursement data and supervision mission reports. • Independent audit reports. 	<ul style="list-style-type: none"> • Inadequate capacity of DAWASA to supervise the timely delivery of the major rehabilitation and extension works
<p>Component 2: Rehabilitation and Extension of Sewerage and Wastewater Facilities (BC US\$ 18.20m)</p> <ul style="list-style-type: none"> • Stabilization ponds • Sewers, Outfall and Pumping stations • Construction supervision • <i>Contingencies</i> 	<ul style="list-style-type: none"> • US\$ 7.35m • US\$ 8.65m • US\$ 2.20m • US\$ 4.20 • (US\$ 22.40m) 	<ul style="list-style-type: none"> • PO, DAWASA and EWURA quarterly and annual progress reports • Bank disbursement data and supervision mission reports. • Independent audit reports. 	<ul style="list-style-type: none"> • Inadequate capacity of DAWASA to supervise the timely delivery of the major rehabilitation and extension works
<p>Component 3: Community Water Supply and Sanitation Program (BC US\$ 3.2m)</p> <ul style="list-style-type: none"> • Construction of sub-projects • Consultants and NGOs • <i>Contingencies</i> 	<ul style="list-style-type: none"> • US\$ 3.10m • US\$ 0.80m • US\$ 0.65m • (US\$ 3.85m) 	<ul style="list-style-type: none"> • DAWASA, Operator and EWURA quarterly and annual progress reports • Bank disbursement data and supervision mission reports. • Independent audit reports. 	<ul style="list-style-type: none"> • Limited ability of the NGOs to mobilize communities and supervise the construction of WSS sub-projects
<p>Component 4: Institutional Strengthening (BC US\$ 23.95m)</p> <ul style="list-style-type: none"> • Op. costs of the Operator 	<ul style="list-style-type: none"> • US\$ 5.50m 	<ul style="list-style-type: none"> • DAWASA, Operator and EWURA quarterly and annual progress reports • Bank disbursement data 	<ul style="list-style-type: none"> • Inadequate coordination between DAWASA and the Operator in delivery

<ul style="list-style-type: none"> • Equity injection to Operator • TA to DAWASA (incl. Audits) • Training • Transitional/Emergency Operational Equipment • TA to Ruvu/Wami River Basin Office • <i>Contingencies</i> 	<ul style="list-style-type: none"> • US\$ 8.50m • US\$ 6.20m • US\$ 0.50m • US\$ 2.00m • US\$ 1.25m • US\$ 1.05m • (US\$ 25.00m) 	<ul style="list-style-type: none"> • and supervision mission reports. • Independent audit reports. 	<ul style="list-style-type: none"> • of delegated and non-delegated works • Undue focus of the Operator on construction activities rather than on service to the customer
<p>Component 5: Preparation of Medium Term WSS Development Program (BC US\$ 5.50m)</p> <ul style="list-style-type: none"> • Water resources assessment • Water supply augmentation • Strategic sanitation plan • Urban WSS strategy • <i>Contingencies</i> 	<ul style="list-style-type: none"> • US\$ 2.00m • US\$ 1.50m • US\$ 1.50m • US\$ 0.50m • US\$ 0.65m • (US\$ 6.15m) 	<ul style="list-style-type: none"> • DAWASA, Operator and EWURA quarterly and annual progress reports • Bank disbursement data and supervision mission reports. • Independent audit reports. 	<ul style="list-style-type: none"> • Inadequate capacity of MWLD and DAWASA to timely mobilize and monitor the performance of consultants
PPA Refinancing	• US\$ 1.15m		
Total Financing Required	US\$164.60 million	IDA Share US\$61.50 million	Co-financiers/GOT Share US\$103.10 million

Annex 2: Detailed Project Description

TANZANIA: Dar es Salaam Water Supply and Sanitation Project

By Component:

Project Component 1: (US\$89.15 million¹)

1. Rehabilitation and extension of the water supply facilities

This component will be implemented under three separate “programs”:

- The Priority Works Program (PWP): that includes (a) an emergency rehabilitation of the treatment works, reservoirs and transmission mains to be implemented under a contract already awarded to the Operator (referred to as SIPE in the Lease Contract for “Supply and Installation of Plants and Equipment”); and (b) the supply of meters also to be implemented under a contract already awarded to the Operator (referred to as POG in the Lease Contract for “Procurement of Goods”);
- The Non-Delegated Works Program (NDWP): major rehabilitation of the treatment plants, reservoirs, transmission mains and primary distribution system to be implemented directly by DAWASA under various contracts; and
- The Delegated Works Program: rehabilitation and extension of secondary distribution to be implemented by the Operator, acting a project manager on behalf of DAWASA, under the Lease Contract.

DAWASA will be assisted by a Construction Supervision Consultant (CSC) to supervise implementation of the NDWP and of the two contracts already awarded to the Operator (SIPE and POG).

1.1 Treatment plants and pumping stations: US\$13.75 million

- 1.1.a. **Lower Ruvu** (182,000 m³/day): rehabilitation of intake structure and raw water pumping station; duplication of intake pipe; lining of mixing chamber; modification of clarifiers; rehabilitation of filters, chemical dosing system, treated water pump, chemical building and blower building, install stop-log gates at intake: US\$6.83 million.
- 1.1.b. **Upper Ruvu** (90,000 m³/day): partial rehabilitation of intake, treatment plant, pumping station and equipment, installation of a dedicated power supply to intake: US\$5.32million.
- 1.1.c. **Mtoni** (9,000 m³/day): limited rehabilitation of intake, flocculation chamber, clarifiers, filters and chemical dosing equipment: US\$1.60 million.

1.2 Transmission mains: US\$11.25 million

- 1.2.a. **Lower Ruvu** (55 km 1,350 mm diameter): replacement and repair of pipes, washouts, valves, off take valves, flow meters, pressure reducers, air valves, supply and install surge control system, supply and install time modulated PRV and CATT air valves, chambers, thrust blocks and river crossings: US\$4.64 million;
- 1.2.b. **Upper Ruvu** (50 km, 760, 520 and 900 mm diameter): replacement of highly corroded pipes (2.0 km of 900 mm diameter raw water main and of 4.0 km of 900 mm diameter treated water main), repair of pipes, washouts, valves, off take valves, flow meters, pressure reducers, chambers, trust blocks and river crossings, supply and install time modulated PRV and CATT air valves, new cross connection for mainline dedication : US\$6.48 million;
- 1.2.c. **Mtoni**: general rehabilitation: US\$0.13 million.

1.3 Treated water storage reservoirs: US\$1.95 million

- 1.3.a. Structural repairs, repair or replacement of equipment of reservoirs at the University (22,700 m³) and Kumara (34,200 m³).
- 1.3.b. Construction of 5,000 m³ reservoir at Mesa.

1.4 Primary distribution: US\$14.10 million

- 1.4.a. Supply and laying of about 58 km of pipe 400 to 200 mm diameter and of 180 bulk meters.

¹ All figures below are base cost given in end December 2002 conditions.

- 1.5 **Secondary and tertiary distribution (financed by DAWASA - implemented by the Operator): US\$39.75 million**
- 1.5.a. Replacement of about 26 km and installation of about 875 km of pipes diameter 150 to 80 mm: US\$35.50 million;
- 1.5.b. Supply of about 173,000 customer meters: US\$4.25 million.
- 1.6 **Construction supervision for sub-components 1.1, 1.2, 1.3, 1.4: US\$4.80 million**
- 1.7 **Design & construction supervision for sub-component 1.5.a: US\$3.55 million**
- 1.7.a Remuneration of the Operator @ 10% of construction costs, as per Lease Contract.

Project Component 2: (US\$18.20 million)

2. Rehabilitation and extension of the sewerage and waste water treatment facilities

All works will be implemented under various contracts as part of the NDWP by DAWASA with the assistance of the CSC.

- 2.1 **Waste water stabilization ponds: US\$7.35 million**
- 2.1.a Rehabilitation and dislodging of the nine existing stabilization ponds and facilities, renovation of the Auguring ventilated pit latrine (VIP) slab casting facility.
- 2.2 **Sewers, sea outfall and pumping stations: US\$8.65 million**
- 2.2.a. Rehabilitation of about 170 km of sewers diameter 150 to 250 mm, 3,100 manholes and 1.0 km marine outfall, and extension of sewers: US\$7.43 million;
- 2.2.b. Rehabilitation of 15 pumping stations: US\$1.22 million.
- 2.3 **Construction supervision for 2.1 and 2.2 : US\$2.20 million**

Project Component 3: (US\$ 3.20 million)

3. Community water supply and sanitation facilities

- 3.1 **Construction of 50 sub-projects: US\$2.50 million**
- 3.2 **Consultants' services: US\$0.70 million**
- 3.2.a. Services of specialized NGOs to assist communities and community based organizations (CBO) in the creation of Water User Associations (WUA) and the formulation of their WSS sub-projects and, after approval of the financing by the DAWASA Steering Committee, in their implementation and operation: US\$0.50 million;
- 3.2.b. Training of NGOs and CBOs: US\$0.20 million.

Project Component 4: (US\$23.95 million) .

4. Institutional strengthening

All activities associated with the improvement of the operation of the WSS service.

- 4.1 **Operating costs of the Operator: US\$5.50 million**
- 4.1.a. Supply of water and sanitation equipment, spare parts, chemicals, vehicles, office equipment, software, mapping; construction of offices and depots; utilities; and short term consultancies needed by the Operator in carrying out commercial and technical operations.
- 4.2 **Equity contribution to the capital of the Operator: US\$8.50 million**
- 4.3 **Technical assistance to DAWASA: US\$6.20million**
- 4.3.a. Engineering and project implementation adviser for 60 months : US\$1.25 million;
- 4.3.b. Financial adviser for 36 months: US\$1.00 million;

- 4.3.c. Revaluation of assets: US\$0.40 million;
 - 4.3.d. Environmental monitoring : US\$0.30 million;
 - 4.3.e. Financial & technical audits of DAWASA financial statements and project accounts and performance of the Operator: US\$1.90 million;
 - 4.3.f. Legal assistance : US\$1.00 million;
 - 4.3.g. Independent assessment of the institutional arrangements: US\$0.15 million;
 - 4.3.h. Communication Plan including HIV/AIDS prevention measures: US\$0.20 million.
- 4.4 Training of DAWASA and MWLD staff: US\$0.50 million**
- 4.4.a. Training at specialized institutes in (a) regulation and pricing; (b) procurement; and (c) project management.
- 4.5 Transitional expenses & maintenance contingency: US\$ 2.00 million**
- 4.5.a. Essential office equipment, vehicles and computers for DAWASA: US\$0.20 million;
 - 4.5.b. Supply and construction needed for repairs of WSS facilities of emergency nature that have to be financed by DAWASA under the terms of the Lease Contract: US\$1.80 million.
- 4.6 Technical assistance to the Ruvu River/Wami Basin Office: US\$1.25 million**
- 4.6.a. Supply of vehicles, computers and flow measurement equipment: US\$0.25 million;
 - 4.6.b. Construction of gauging stations: US\$1.00 million.

Project Component 5: (US\$5.50 million)

5. Preparation of a medium term WSS development program

- 5.1 Water resource assessment for the Dar es Salaam region: US\$2.00million**
- 5.1.a. Pre-feasibility study of the various surface water options or augmenting water production for Dar es Salaam: Kidunda, Ngerengere and Mgeta dams, banded reservoirs, Rufiji basin transfer, and preparation of a regional environmental assessment and mitigation plan: US\$1.50 million;
 - 5.1.b. Assessment of ground water potential in the vicinity of Dar es Salaam: recharge, safe yield, pollution and water quality, sea water intrusion: US\$ 0.50 million;
- 5.2 Water supply for Dar es Salaam region: US\$1.50 million**
- 5.2.a. Water demand assessment, willingness to pay, cost of substitutes and elasticity of demand: US\$0.25 million;
 - 5.2.b. Feasibility studies and detailed designs for additional production, transmission and main distribution facilities to meet demand for 2015: US\$1.5 million.
- 5.3 Sanitation for Dar es Salaam region: US\$1.50 million**
- 5.3.a. Development of a Strategic Sanitation Plan covering the excreta and waste water, solid waste, industrial waste and storm water drainage aspects.
- 5.4 National urban water supply and sanitation strategy: US\$ 0.50 million**

Annex 3: Estimated Project Costs

TANZANIA: Dar es Salaam Water Supply and Sanitation Project

By Component

Description	Base Cost	Project Cost (incl. Cont.)		
		Local	Foreign	Total
1. Rehabilitation and expansion of water supply facilities	89.15	28.05	78.00	106.05
1.1 Treatment plants and pumping stations (Upper Ruvu, Lower Ruvu and Mtoni)	13.75	3.95	12.25	16.20
1.2 Transmission mains (Upper Ruvu, Lower Ruvu and Mtoni)	11.25	3.45	10.40	13.85
1.3 Treated water storage reservoirs (University, Mesa and Kumara Reservoirs)	1.95	0.55	1.75	2.30
1.4 Primary distribution (58 km of pipes and 180 bulk meters)	14.10	3.75	13.05	16.80
1.5 Secondary distribution				
1.5.a. Installation of about 875 km of pipes & replacement of 26 km of pipes	35.50	14.10	28.75	42.85
1.5.b. Supply of 173,000 customer meters	4.25	0.90	4.10	5.00
1.6 Construction supervision of 1.1, 1.2, 1.3, and 1.4	4.80	0.75	4.45	5.20
1.7 Design and construction supervision of 1.5.a	3.55	0.60	3.25	3.85
2. Rehabilitation and expansion of waste water facilities	18.20	7.30	15.10	22.40
2.1 Waste water stabilization ponds	7.35	2.90	5.95	8.85
2.2 Sewers, sea outfall and pumping stations	8.65	3.50	7.40	10.90
2.3 Construction supervision of 2.1 and 2.2	2.20	0.90	1.75	2.65
3. Community water supply and sanitation program	3.20	3.40	0.45	3.85
3.1 Construction of facilities	2.50	3.10	0.00	3.10
3.2 Consulting services and training	0.70	0.30	0.45	0.75
4. Institutional strengthening	23.95	2.20	22.80	25.00
4.1 Operating costs of the Operator	5.50	0.00	5.50	5.50
4.2 Equity contribution to the capital of the Operator	8.50	0.00	8.50	8.50
4.3 Technical assistance to DAWASA	6.20	1.60	5.20	6.80
4.4 Training of DAWASA and MWLD staff	0.50	0.00	0.55	0.55
4.5 Transition and maintenance contingency	2.00	0.60	1.55	2.15
4.6 Technical assistance to MWLD (Wami/Ruvu basin)	1.25	0.00	1.50	1.50
5. Preparation of a medium term WSS development program	5.50	1.75	4.40	6.15
5.1 Water resources assessment for Dar es Salaam region	2.00	0.70	1.55	2.25
5.2 Water supply expansion studies for Dar es Salaam region	1.50	0.50	1.15	1.65
5.3 Strategic sanitation plan for Dar es Salaam region	1.50	0.55	1.15	1.70
5.4 Urban WSS development strategy	0.50	0.00	0.55	0.55
PPA refinancing	1.15	0.00	1.15	1.15
Total Project Base Cost	141.15	42.7	121.9	164.60
Contingencies	23.45	-	-	-
TOTAL PROJECT COST	164.60	42.70	121.90	164.60
IDA Share		12.00	49.50	61.50

By Implementation Packages and Financiers

Components	Packages	Project Cost (US\$ million)			Financing Plan (US\$ million)						
		Base Cost	Conting.	Total Cost	Local	Foreign	IDA	AfDB	EIB	Operator	DAWASA
Water Supply (WS)		89.15	16.90	106.05	28.05	78.00	36.00	35.55	25.80	0.00	8.70
Treatment plants	PWP-SIPE	2.30	0.35	2.65	0.45	2.20	2.35	-	-	-	0.30
	Non-DWP	11.45	2.10	13.55	3.50	10.05	-	-	12.45	-	1.10
Transmission lines	PWP-SIPE	1.20	0.20	1.40	0.25	1.15	1.35	-	-	-	0.05
	Non-DWP	10.05	2.40	12.45	3.20	9.25	-	-	11.35	-	1.10
Reservoirs	PWP-SIPE	0.15	-	0.15	0.05	0.10	0.15	-	-	-	-
	Non-DWP	1.80	0.35	2.15	0.50	1.65	-	-	2.00	-	0.15
Primary distribution	PWP-SIPE	1.25	0.20	1.45	0.25	1.20	1.40	-	-	-	0.05
	Non-DWP	12.85	2.50	15.35	3.50	11.85	-	14.15	-	-	1.20
Meters	POG	4.25	0.75	5.00	0.90	4.10	8.00	-	-	-	-
Secondary distribution	DWP	35.50	7.35	42.85	14.10	28.75	17.35	21.40	-	-	4.10
Operator (delegated WP)	CSC-DWP	3.55	0.30	3.85	0.60	3.25	3.80	-	-	-	0.25
CSC (non delegated WP + SIPE) WS	CSC-Non-DWP	4.80	0.40	5.20	0.75	4.45	4.80	-	-	-	0.40
Waste Water (WW)		18.20	4.20	22.40	7.30	15.10	2.50	9.95	8.20	0.00	1.75
Stabilization ponds	Non-DWP	7.35	1.50	8.85	2.90	5.95	-	-	8.20	-	0.65
Sewers and pumping stations	Non-DWP	8.65	2.25	10.90	3.50	7.40	-	9.95	-	-	0.95
CSC (non delegated WP + SIPE) WW	CSC-Non-DWP	2.20	0.45	2.65	0.90	1.75	2.50	-	-	-	0.15
Community WSS		3.20	0.65	3.85	3.40	0.45	2.25	1.00	0.00	0.00	0.60
Construction	Non-DWP	2.50	0.60	3.10	3.10	-	1.55	1.00	-	-	0.55
NGOs	CSC-Non-DWP	0.70	0.05	0.75	0.30	0.45	0.70	-	-	-	0.05
Institutional strengthening		23.95	1.05	25.00	2.20	22.80	13.95	1.50	0.00	8.50	1.05
Operating costs of the Operator		5.50	-	5.50	-	5.50	-	-	-	-	-
Equity contribution by Operator		8.50	-	8.50	-	8.50	-	-	-	8.50	-
TA to DAWASA		6.20	0.60	6.80	1.60	5.20	5.90	0.40	-	-	0.50
Training		0.50	0.05	0.55	-	0.55	0.55	-	-	-	-
Transitional and Emergency Equipment		2.00	0.15	2.15	0.60	1.55	2.00	-	-	-	0.15
TA to MoWLD		1.25	0.25	1.50	-	1.50	-	1.10	-	-	0.40
Preparation of Medium term WSS Program		5.50	0.65	6.15	1.75	4.40	5.65	0.00	0.00	0.00	0.50
Water resources development		2.00	0.25	2.25	0.70	1.55	2.05	-	-	-	0.20
Water supply expansion studies		1.50	0.15	1.65	0.50	1.15	1.55	-	-	-	0.10
Strategic sanitation plan		1.50	0.20	1.70	0.55	1.15	1.55	-	-	-	0.15
Urban WSS development strategy		0.50	0.05	0.55	-	0.55	0.50	-	-	-	0.05
Refinancing of PPP		1.15	0.00	1.15	0.00	1.15	1.15	0.00	0.00	0.00	0.00
TOTAL		141.15	23.45	164.60	42.70	121.90	61.50	48.00	34.00	8.50	12.60
PWP	Priority Works Program - SIPE contract with Operator						5.25	SIPE			
Non-DWP	Non-Delegated Works Program by DAWASA						6.00	POG			
DWP	Delegated Works Program by Operator						3.00	Engineering fee for DWP			
POG	Procurement of Meters by Operator							Loan to Operator			
SIPE	Supply and Installation of Plants and Equipment							19.35	IDA financing to Operator		

Annex 4: Economic Analysis

TANZANIA: Dar es Salaam Water Supply and Sanitation Project

1. Summary of costs and benefits

1.1. **General:** The economic analysis builds on the financial analysis which measures the flows of costs and benefits in market prices, based on a total investment of US\$155.8 million (US\$164.6 million minus US\$8.8 million to finance TA to MWLD and studies for future projects) over an initial five year implementation period and the Lease Contract period of 10 years (2004 – 2013). The economic viability of the project is determined by comparing the “with” and “without” scenarios and by adjusting the incremental financial flows by:

- adding household expenditure savings by; (i) existing and new private domestic customers, (ii) existing and new standpost consumers, and, (iii) time savings by existing and new standpost consumers, as well as new private domestic customers;
- deducting estimated revenues lost by water vendors (hand cart vendors and tanker operators) and by connected households selling water to neighbors as a result of the project.

The cash flows are then discounted at 10% as the proxy for the opportunity cost of capital in Tanzania. A sensitivity analysis is also carried out on the main identified risk factors to determine the robustness of the economic returns. The economic model is archived in project files.

1.2. **NPV and IRR calculations:** The analysis indicates that the project has a *positive economic NPV of Tshs87.0 billion (US\$88.0 million) and an IRR of 24%*. The most significant drivers of the NPV and IRR are the direct expenditure savings by existing domestic customers, existing standpost consumers, new private domestic customers and new standpost consumers; the total estimated annual savings amount to Tshs5.0 billion (US\$5.0 million), due to the much lower financial tariff that will have to be paid by customers as a result of the project. However, these ENPV and EIRR estimates are conservative because they do not include the economic benefits expected from sewerage investments (estimated to cost US\$22.0 million) and that going to commercial and industrial customers (currently over 3,000 and expected to grow to about 5,400 by 2013). Also the calculations for the expenditure saving assume an average price of Tshs10 for a 20 liter jerrican (equivalent to Tshs500/m³) instead of the commonly observed Tshs20 to 50 (Tshs1,000 to 2,500 per m³). Finally, the calculations do not account for the fact that many of the existing DAWASA domestic customers are buying water from vendors to supplement the inadequate supply from DAWASA.

1.3. The financial analysis arrives at a NPV of Tshs60.0 billion (US\$62.0 million) with a IRR of 20%. Its sensitivity analysis indicates that both are robust. The economic returns of the project exceed the financial returns because of: (i) large expenditure savings arising from the difference between the financial tariff to be charged by the project (at an average Tshs455/m³) and the average price that standpost consumers and unconnected households are paying when buying water from neighbors, vendors and tankers (conservatively estimated at Tshs10 per 20 liter jerrican) and the significant over billing of domestic customers by DAWASA. With the project, the new paying consumers will receive a large consumer surplus. The project will also be able to supply water much more efficiently and at a lower price than current substitute sources; the average unit price of water procured from all sources combined will fall. The resources released by this cutback are a benefit to the overall economy. The project is expected to result into significant savings as households shift to direct purchase from DAWASA, and to significantly reduce time spent and as well as distances traveled to safe water sources.

1.4. **Affordability:** The project’s four prong strategy to provide improved services to low income households is based on the: (i) intensification of the distribution network in low income neighborhoods; (ii) introduction of a Connection Fund to finance small diameter domestic connections; and (iii) adoption of a “lifeline” domestic tariff for the first 5 m³ consumed each month, that will also applies standposts. In addition a Community WSS component will provide improved WSS services to about 50 low income communities that cannot rapidly be reached by piped network. Assuming a per capita consumption of 15lcd in low income households, prices of Tshs10 to 20 per 20 liter jerrican (Tshs500 to 1,000/m³) and an average household size of 4.3, low income households are currently spending at least Tshs980 to 1,960 per month on water; many spend more than this as water is often sold at rates of up to Tshs50 per 20 liter jerrican. Such levels of expenditure

translate into about 2.0% to 4.0% of their incomes for a minimum urban wage in Tanzania of Tshs48,000. With the new tariff of Tshs322/m³ applying for the first 5 m³ consumed each month, low income households connected to the piped system and still consuming 15lcd will see their water budget reduced to about Tshs650/month (1.3% of their income); if they are taking full advantage of the lower tariff and consuming 5 m³/month (i.e., by more than doubling their consumption to 38 lcd) they will spend Tshs1,610/ month (or 3.4% of their income). Households relying on public standposts will have to pay more, as user fees will have to cover the cost of the standpost caretaker in addition to the DAWASA tariff; a standpost consuming 180 m³/month will result in a water bill of about Tshs57,500/month; if the revenue of the caretaker is about Tshs72,500 the average tariff charged to users will be about Tshs725/m³ (Tshs15 per 20 liter jerrican) resulting in a monthly water budget of Tsh1,425. Provided that a distribution pipe exists nearby, a low income household will have an interest in requesting an individual connection (valued at an average Tshs145,000) to be financed by the Connection Fund and by paying an advance of Tshs20,000 on its future consumption.

1.5. **Least Cost Solutions:** Based on comparisons with similar large African cities, the present water production of slightly below 300,000m³/day is likely to be sufficient to supply a population of about 3.0 million people, which is expected to be reached by 2007 in the Service Area, provided, however, that both consumption and management of the service are efficient. Thus the project aims at rehabilitating the existing WSS facilities and its technical and commercial operations and at implementing a pricing policy encouraging customers to adjust their consumption, rather than immediately increasing production capacity, as initially envisaged by GOT. At the same time, the project aims at reaching new customers by extending distribution networks and favoring connections to the systems of low income households.

1.6. **Contribution to the MDG:** To meet the MDG, improvements in WSS should result in halving the percentage of the population without access to improved WSS by 2015. The Service Area (including Bagamoyo and Kibaha) has an official 2002 population 2,680,000. It is estimated that the DAWASA system currently provides water to about 2,100,000 people (78%); the service is highly unreliable. The Poverty Reduction Strategy, 2000 observes that 68% of the urban population has access to some kind of piped water but that less than half of the served population obtains a 24 hour supply; un-served households are depending on expensive substitutes. It appears realistic, therefore, to assume that only about 35% of the current population has a 24 hour service. At the end of the project (2008), an estimated 2,950,000 people (93%) out of 3,160,000 will be receiving a service from DAWASA. Of this, an estimated 70% is expected to receive a 24 hour service with minimum pressure. This constitutes an important step in the direction of the MDG, that will have to be sustained by implementing a medium term investment program for increasing water production and waste water collection and treatment capacities.

2. Methodology and assumptions

The “without project” scenario

2.1. The “without” project scenario is based on a continuation of the present level of service provided by DAWASA and of the technical and financial indicators during the coming 10 year period (2004 – 2013). Realistically, in the absence of the project, it is safe to assume that the quality of service will deteriorate significantly due to increasing UfW, decreased treatment capacity, and lack of maintenance.

The 2000/01 Household Budget Survey (HBS) also shows a declining utility service between 1991/92 and 2000/01 as described in Table 1 below:

Table 1: Households' Sources of Drinking Water Supply (%)

Source	1991/92	2000/01
Piped water	93	85.7
piped water	22.1	13.7
private piped outside house	52.6	19.1
piped to neighbor	NA	46.4
piped to community	18.4	6.6
Other protected sources	3.8	7.9
public wells	3.5	4.7
private wells	0.4	3.2
Unprotected sources	1.8	3.6
public wells	1.7	2.2
private wells	0.1	1.0
Springs	0	0.2
river, dams, lakes	0	0.1
Other sources	1.4	2.8

Source: Household Budget Survey, 2000/01, National Bureau of Statistics, Government of Tanzania

2.2. Due to the impact of the deteriorating WSS infrastructure, the HBS shows that overall, there has been a decline in the number of households using any type of piped water supply in the Service Area, and a doubling of the proportion of households using point sources (protected and unprotected) such as springs and wells. The number of households relying on in-house connections is a mere 14% (down from 22% in 1991/92) while those relying on connections outside the house is 19% (down from 53%); some 46% of the households now depend on a neighbor's connection for water. Piped water to community outlets had declined from 18% to 7% over the 10 year period. Further, service to connected households is available a few days a week and only for a few hours in the days when supply is available – the supply is highly irregular and many households report being without piped water for three days at a time. As a result, connected households are depending on multiple alternative sources of water and take precautions by increasing storage; black plastic tanks on the ground or mounted on houses are a common site in Dar es Salaam.

2.3. The information provided by the HBS confirms the state of DAWASA as a rapidly declining utility; this finding is consistent with other technical studies. However, the technical estimates of the population directly served with piped water (based on DAWASA records and technical estimates) differ from those given by the HBS. Technical estimates indicate that the current population with access to improved WSS is about 2.10 million (about 1.00 million through direct connections; about 1.00 million through standposts, and about 100,000 by community water supplies). These technical estimates, therefore, imply a 78% coverage as opposed to the HBS estimate of 85.7%. Further, other studies carried out in Dar es Salaam (Small Scale Independent Providers of Water and Sanitation to the Urban Poor in Dar-es-Salaam) indicate that there is significant water vending by handcart and tanker operators currently serving an estimated 92,000 people – this is not reflected in the HBS. Assuming: (a) a 2002 population of 2,680,000; (b) direct access to 2,100,000 people; (c) vendor service to 100,000 people; and; (d) 165,000 people depending on unprotected and other sources, the estimated population obtaining water from a neighbor's connection would be about 320,000. This amount is significantly lower than the estimate given in the HBS which suggests that 930,000 people are currently depending on a neighbor's connection. The economic analysis uses 320,000 as the estimated number of people depending on a neighbor's connection for water.

2.4. Currently, only 10% of the households are connected to sewerage; 84% have a latrine of some type (mainly unimproved). The remaining 6% of the households in the Service Area (up from 2% in 1991/92) have no form of sanitation.

2.5. The 2000/01 HBS also carried out an assessment of distances traveled by households to access water for the entire country (covering rural areas, other urban areas except Dar es Salaam, and Dar es Salaam itself) particularly in the dry season. The specific results for Dar es Salaam are summarized in Table 2 below:

Table 2: Distribution and mean distance to drinking water in the dry season

Distribution of distance	1991/92 % HH	2000/01 % HH
Less than 1km	88.5	84
1 – 1.9km	7.8	6.5
2 – 2.9km	2.3	1.7
3 – 3.9km	0.1	3.3
4 – 4.9km	0.6	2.3
6km+	0.6	2.2

Source: Household Budget Survey, 2000/01, National Bureau of Statistics, Government of Tanzania

The survey shows an increasing number of households reporting a drinking water source within 1.0 km in the country with the exception of Dar es Salaam, where the number has decreased over the past 10 years. In general, the survey showed increasing distances to water sources for residents in Dar es Salaam.

2.6. A study carried out by Wateraid in 2001 shows that Dar es Salaam residents, especially low income households, are spending significant amounts of time fetching water mainly from standposts and neighbors' taps. The study recorded the following times spent: (i) neighbor's tap and public standposts from 31 to 60 minutes; (ii) shallow wells ranging from 10 to 60 minutes; surface water sources ranging from 10 to 60 minutes. (*Drawers of Water II (DOW II)*) reported that in general, time spent collecting water had increased in the period between 1967 to 1997 in terms of distances to sources as well as queuing at the sources: the study found that time spent queuing at sources was particularly long for urban areas. Households spent between one and two hours fetching water. Given the deteriorating services provided by DAWASA, such households would be expected to be spending the same amount time, at the very least, or more, during the three years after the *DOW II* research.

The "with project" scenario

2.7. The "with project" scenario is based on the proposed investment of US\$155.8 million (US\$164.6 million less US\$8.8 million to finance Technical Assistance to the MWLD and studies for future projects that are not related directly to project benefits) that will focus on asset replacement/rehabilitation, commencement of extensions into new areas and provision of services to low income communities. The investment is aimed at addressing the problems arising from many years of under-investment and poor maintenance of the WSS infrastructure. The primary benefit will be the improved use of scarce resources in Dar es Salaam and along the Lower Ruvu, based on the principles of equity and efficiency and on the following expected results:

- improved quality and reliability of service to customers served by the existing 87,000 active domestic connections;
- increased consumption as a result of the installation of about 35,000 new domestic connections and slightly less than 1,000 non-domestic connections by 2008; standposts are expected to serve an additional 300,000 people by 2008;
- reduced UfW (from the current 58% to about 25% of production by 2013) and the registration and payment by customers, who currently obtain water without paying for it;
- equitable distribution of water by providing private access to consumers who currently rely on neighbors and vendors to obtain DAWASA water; the lack of water allows those consumers who have a water connection to sell to others at extremely high prices;
- incremental revenue generated that will ensure financial sustainability and enable the utility to deliver a more reliable and better quality service to residents;
- increased coverage through: (i) direct connection service from the current 1.0 million to 1.385 million; (ii) standposts from 1.0 million to 1.30 million; and, (iii) through CWSS facilities from about 100,000 to about 270,000 by 2008;
- gradual introduction of economically more efficient pricing and increased billing and revenue collection efficiency due to the planned institutional restructuring and improvement in the utility's operating efficiency;

- improved access to sewerage services;
- provision of improved water supply and low cost sanitation to about 50 low income settlements under the CWSS component of the project; and
- reduced distances traveled and time spent in collecting water to less than 1.0 km and 10 to 15 minutes respectively.

3. Switching values of critical items

3.1. The economic benefits are mainly predicated on the incremental consumption by new customers, made possible by reducing UFW. It is, therefore, crucial that the works are delivered in a timely manner so that the set UFW targets are realized as planned. To assess the impact of slower delivery of performance, two changes to base case were modeled:

- If improvement in transmission and distribution losses is five points lower than the base case every year, i.e. evolving from 63% now to 28% in 2013 instead of from 58% to 25%; the EIRR dropping from 24% to 19%; and
- A ENPV equal to zero would result from improvement in transmission and distribution losses lower by 15 points than the base case, i.e., evolving from 73% now to 38% in 2013 instead of from 58% to 33%.

When tested against the financial NPV, a reduction of improvement by about 10 points each year would lower the financial NPV to 0. Both indicate that the financial and economic returns of the project are quite robust, a conclusion that is supported by later years' projected gains. The fact that the economic rate of return is higher than the financial rate of return implies that sustainability of the project can be achieved.

4. Detailed methodology and assumptions

4.1. **Expenditure savings:** calculated as a comparison between the “without” and “with” project scenario for: (a) existing private domestic customers; (b) existing stand post consumers; (c) savings by new private domestic connections; (d) new stand post consumers. Annual savings are added to the incremental financial flows.

4.2. **Time savings:** calculated for: (a) existing stand post consumers; (b) new stand post consumers; (c) new private domestic connections. Value of time spent collecting water estimated as 30% of the minimum urban wage rate of Tshs48,000, due to possibility of low opportunity cost of time spent collecting water. Value of saved time is added to the incremental financial flows.

4.3. **Revenue losses to water vendors:** average earnings from vendors estimated separately for hand cart and tanker operators using the “without” and “with” project scenarios. In general, the analysis assumes that vendors will continue to operate (in slightly reduced numbers) because the project will not be able to reach all the residents in the short term and due to a growing population. The total estimated losses in earnings are deducted from the benefits.

4.4. **Revenue losses to households selling water to neighbors:** population estimated to be buying water from a neighbor's connection is about 318,000 with a per capita consumption of 15lcd; and buying water at Tshs10.00 per 20litre jerrican; amount of water purchased assuming 15lcd = 1,935,000 liters per day.

4.5. **Economic rate of return:** The economic rate of return was estimated by discounting the net resource flows by 10% as the proxy for opportunity cost of capital.

4.6. Assumptions:

- Current (2002) population of Dar – 2,679,044; growth rate – 4.2% p.a; average household size – 4.3;
- Number of existing (active) private domestic customers – about 87,000;
- Total number of new private domestic customers by 2008 will be 35,000; this will increase to 124,245 by the end of the 10 year Lease period;
- Amount billed to existing private domestic customers - Tshs12,440 per household per month, based on an assessed consumption of 34m³/month @ Tshs366/m³;
- Existing private domestic customers assumed to pay only Tshs5,973 due to a collection efficiency of 48%;

- Average household consumption = 6.4m³/month, based on a population of 2.0 million (2002), a proportion of 85.7% of households connected; estimated daily production of 85,120m³/day (2,553,600m³/month); an average HH size of 4.3 persons; and a total of 398,600 households;
- Financial price “with project” - Tshs322/m³ for the first 5m³ and Tshs455/m³ for the rest;
- Existing population served through direct connection – 1m, expected to increase to 1.385m by 2008;
- Existing population served through standposts – 1.0 million, to increase to 1.3 million by 2008; current population served by the CWSS is 97,000 to increase to 267,000 by 2008;
- Average per capita consumption for households that obtain water from stand posts or vendors – 15lcd; average price for a 20 liter jerrican equal to Tshs10;
- Time spent collecting water “without project” – 3 trips per day at 20 minutes per trip (total time spent = 60 minutes per day) for stand post consumers as well as other households obtaining water from neighbors, springs, streams, etc;
- Time spent collecting water “with project”- 3 trips per day at 10 minutes per trip by existing and new stand post consumers; and a total of 15minutes per day for the new private domestic consumers;
- Minimum urban wage rate – Tshs48,000 per month; value of time spent assumed to be 30% of the minimum wage rate due to a possibility of low opportunity cost of time;
- Number of handcart vendors – 800 during year 1 and to reduce gradually to; 730 in Yr. 2; 660 in Yr.3; 590 in Yr. 4; 520 in Yr. 5; and 450 in Yr. 6 – 10;
- Handcart prices per 20 liter jerrican assumed to be: Tshs100 in Yr. 1; 75 in Yr. 2, 50 in Yr. 3 - 10;
- Number of trips made by a handcart vendor per day – 10; number of jerricans per trip – 6; total number of jerricans sold per day - 60;
- Hand cart vendor costs – Tshs20 per 20litre jerrican;
- Handcart hire – Tshs570/day;
- Total number of tankers operating in Dar es Salaam– 80; tankers make 2 trips/day and charge Tshs44,100 per trip delivering 10m³ of water;
- Tankers assumed to reduce gradually to 70 inYr.2; 60 in Yr. 3; 50 in Yr. 4; 40 in Yr. 5, and 30 in Yr. 6 – 10;
- Tanker prices reduce to TshsTshs39,690 in Yr. 2; 35,280 in Yr. 3; 30,870 in Yr. 4; 26,460 in Yr. 5 and 22,050 in Yr. 6 – 10;the tankers continue to make 2 trips per day;
- Tanker costs: purchase of water – US\$0.34 per 1000 liters; tanker hire @ Tshs950,000/yr; fuel and other expenditures – US\$20/tanker/day; 2 employees (a driver and assistant, estimated at 30% of minimum urban wage rate) – Tshs960/day;
- Selling water to neighbors: 318,000 people are currently obtaining water from neighbors. This number is expected to reduce “with project” to: 286,200 in Yr. 2; 222,600 in Yr. 3; in Yr. 159,000; and 95,400 in Yr. 5 – 10.

Annex 5: Financial Analysis and Forecast

TANZANIA: Dar es Salaam Water Supply and Sanitation

1. Introduction

1.1. The financial viability of DAWASA and the Operator was analyzed, focused on their ability to service the debts and contribute to the project-related costs. The implications of this in terms of required conditions (amounts of borrowings, sustainable borrowing interest rates and terms, etc.) were taken into account in the financial structuring of the project. The financial projections of the bid by the Operator were also analyzed for sustainability and consistency. An investment analysis was carried out comparing the with and without project scenarios, followed by a sensitivity analysis using several identified financial risk factors. This Annex is divided into five sections. Section II discusses the financial forecasts of DAWASA and the Operator and discusses the critical factors affecting sustainability. Section III discusses the investment and sensitivity analysis for project financial returns. Section IV discusses the fiscal impact of the project on GOT. Section V summarizes the base case financial projection assumptions. The financial model will be archived in project files.

1.2. The uncertainty of the accuracy of some data used is a risk. The lack of production and consumer meters throws the technical assumptions (e.g. production volumes, systems losses, etc.) into some doubt. Inconsistencies also appear between available technical and commercial data. Nevertheless, the available data have been estimated through various studies and revised to take into account the results of various due diligence performed in the run-up to the project. These include, among others:

- The Howard Humphreys Feasibility Report for the Dar es Salaam Water Supply System (1995);
- The studies, due diligence and re-examination of the Feasibility Report carried out by DAWASA and PPSRC's advisors for the privatization process (Severn Trent Water International – STWI), including the revalidation of the Feasibility Report through site visits and inspections of the facilities between 1998 and early 1999;
- The due diligence performed by the pre-qualified companies during the first Lease bidding process (1999);
- A further due diligence by the winning Operator in the second Lease bidding process (2002); and
- The audit of DAWASA financial accounts.

A sensitivity analysis was also carried out to mitigate the risk of data inaccuracies.

2. Financial forecasts

Methodology and assumptions

2.1. Detailed financial projections (in current terms of the Tanzanian Shillings) over the 10-year period of the Lease, reflecting the likely impact of the project on the financial viability of DAWASA and the Operator, were prepared. The base case financial projections assumes only the investments identified under project – the immediate Capital Investment Program (CIP). This is the first of a three phase program recommended in the 1995 Feasibility Report (see above). These investments mainly involves asset rehabilitation, some extensions into new areas and a scheme for provision of supplies and services to low income groups. They are aimed at addressing the prolonged under-investment and inadequate maintenance under which the water and sanitation services in Dar es Salaam has been operating for some time.

2.2. The main sources for financial projections assumptions are the information gathered from DAWASA 1999/00 Annual Accounts together with its 2000/01 budget. Some financial and technical data were subsequently modified by the due diligence work carried out by the sole bidder (Biwater/Gauff) and included in their proposal to the GOT. Other data were obtained from the STWI consultancy. Base case assumptions are attached at the end of this Annex.

Financial forecasts

2.3. The Operator's financial projections were analyzed and determined to show a sustainable operation. The results of appraisal projections indicate that both DAWASA and the Operator will remain financially viable. DAWASA's internal cash generating capacity is adequate to fund its portion of the project investments. Cashflow from operations will be negative or weak (especially in the first two years) in the initial three years. Total owner's

equity for both the Operator and DAWASA remains positive throughout. External funds committed to DAWASA and the Operator will form a buffer against initial liquidity difficulties, as will capitalization of interests of DAWASA's borrowings in the first five years. Both DAWASA and the Operator remain able to build debt service reserves and service their loans obligations due from Year 6. DAWASA's profitability is expected to be weak but should stabilize by Year 5, when the metering program is due for completion, achieving profitability towards the end of the Lease. This reflects a strategy to balance the need for cost recovery against avoiding the need for sudden tariff hikes. The grant element to be passed on to DAWASA as GOT equity represents a liquidity support to make possible gradual tariff revisions towards full cost recovery from customers by the end of the Lease period.

Key factors affecting the financial sustainability of the project

2.4. The forecasts show that the initial two years of operations are most critical, especially for DAWASA. There are some provisions to buffer DAWASA and the Operator's operations against delays in the speed of improvements and financial payments. However, critical factors needs to be monitored.

2.5. *Initial funding of DAWASA and the Operator.* It is important that the all committed project funds (see Section IV of this Annex) are provided on time. DAWASA will receive disbursements of loans and grants from GOT to finance project investment financing. Its cash position will be helped by the capitalization of interest during construction. Beyond this, DAWASA requires timely payment of the DAWASA portion of the Operator's revenue collection. DAWASA's initial cash generation capacity is very weak and cannot support more than its projected contribution to the project costs. In Year 1, any delay at all of GOT disbursements for capital investment would immediately cause a corresponding delay in the implementation of the planned investment programs.

2.6. *Immediate CIP - reduction of transmission and distribution losses.* About US\$30 million are earmarked for the rehabilitation of treatment plants, pumping stations, transmission mains and water storage. Most of the works are due to be done by Year 2. About US\$58 million are earmarked for rehabilitation and extension of primary, secondary and tertiary distribution over the first five years of the Lease. Of this, about \$42 million are for secondary distribution, to be carried out by the Operator as delegated works. It is imperative that these works are carried out in time. The assumption of increased bill collection rates and growing customer base presupposes that capital works will save enough water from losses to adequately supply all customers present and new.

2.7. *Collection and billing efficiencies.* The collection rate for revenue billed is currently estimated to be very low (48%) and provisions have been made to mitigate this situation such as providing DAWASA and the Operator with initial external cash injections. Collection is assumed to improve significantly - reaching 90% by year 5. The Operator is assumed to very rapidly implement a commercial system to ensure that all connected customers are billed from year 1. Billing at standpipes are estimated to progress less rapidly - 25% in year 1, 75% in year 2 and full billing from year 3. Assuming billing improvements are achieved, without the corresponding improvement in collections, the Operator liquidity will dry up by Year 3. Conversely, if collection improvements are achieved, cashflow deficit will also occur due to a failure to bill more than 65% of customers (excluding at standpipes) in Year 1.

2.8. *Payment of DAWASA fee.* DAWASA must receive its portion of collected revenues and the Rental Fee on time from the Operator. Since the Operator will be depositing the DAWASA portion of collected revenue on a weekly basis, this payment timing is not expected to be a significant risk.

2.9. *Over billing and demand management.* Available technical and commercial data are inconsistent. The current amount billed appears to be much larger than the technical estimates of water available for distribution. A large degree of customer over billing is probable given the minimal metering and the use of an assessed consumption volumes for billing. It is currently not possible to gauge the real magnitude of the over billing; this represents a large uncertainty risk. It is expected that over billing will be eliminated as the metering program is implemented resulting in a lowering of the volumes billed per existing customers. The resulting lower household bills is offset by the projected increase in customers through new connections and the registration of illegal connections. This underscore again the importance of the immediate CIP being on schedule (see above). The payment to the Operator for new connections made would also encourage the achievement of growth targets.

2.10. *Cost recovery and medium term Capital Investment Program.* During the Lease period, nominal tariff will be revised yearly in accordance to an indexation formula taking into account inflation, etc. While delays are not expected, the timely revision of this nominal tariff in the early years is critical. The higher the required revision, the

less robust the cashflow of DAWASA and the Operator to delays in tariff revisions. It is expected that customers would accept the proposed tariff levels, especially given the expected improvements in the network. Additionally, water vendors in the service area typically have a higher charge: approximately Tshs100 per a jerry can of 20 liters and Tshs40,000 for a 10m³ truck load – equivalent to Tshs5,000 and Tshs4,000 per m³ respectively. The impact of the new water tariffs on the poor is mitigated by charging the first 5m³ of monthly domestic consumption and all kiosks (standpipes) consumption only at the Operator Tariff (about 25 – 30% discount from the customer tariff).

2.11. *Medium term CIP.* While the assumed tariffs could support the immediate CIP, a sizable medium term CIP (roughly estimated at US\$280m) may be required in the second half of the Lease period to ensure the adequacy and security of supply as growth continues. Detailed investment plans will be drawn up in parallel with the tariff review process to set the tariff for years 6 to 10 of the Lease. It should be expected that an increase in the customer tariff would be required to cover the financing costs for this investment. The size of this increase would be dependent on the final investment amounts required and the availability and terms of financing. Using the current projected medium term CIP cost of about US\$280 million at discount rate of 10%, the Long run marginal cost (LRMC) as estimated by the average incremental cost (AIC) for water is about Tshs954/m³.

3. Investment Analysis

Methodology and assumptions

3.1. This analysis was carried out using a ‘with and without project’ methodology to estimate the financial net present values and rates of return for the combined DAWASA/Operator operations. Sensitivity analysis were conducted where feasible to model the risks identified in the PAD. The assumptions used for investment analysis are:

- Assumptions for the ‘with project’ scenario are similar to the base case financial projections; for the purposes of investment analysis, a project cost of US\$155.8m (\$164.6m total project costs less \$8.8m for studies for a future project and technical assistance not related directly to project benefits) is assumed;
- In the ‘without project’ case, technical situation and customer numbers are conservatively assumed to remain static for the 10-year period (network deterioration will probably occur without the project);
- The incremental cash flow is assumed to remain static after the Lease period;
- A discount rate of 10% was used (IDA’s normal hurdle rate for water and wastewater project) based on constant terms projections.

3.2. The NPV and IRR for the combined DAWASA/Operator operations are Tshs60bn and 20% respectively.

Sensitivity analysis of drivers of rates of return

3.3. Two scenarios were modeled for the sensitivity analysis for the risks identified in Section F.2 of the PAD. These scenarios were also modeled for their switching values. The results are shown in the Tables below:

Scenario	Risk Modeled	Description of Change to Base Case	Resulting Revised FIRR
1	GOT does not pay any of its water bills	Collection from year 2 onwards is 12% less than in base case every year (GOT billings is estimated to comprise about 12% of total over the 10 year Lease)	14% (DAWASA+ PO)
2	Slow delivery of delegated works	Improvement in transmission and distribution losses 5% less than Base Case each year	15%

Scenario	Description	Result
1	Collection % from year 2 onwards would have to decrease by what % from the Base Case in order to result in financial NPV = 0?	21%
2	Improvement in transmission and distribution losses would have to decrease by what % from the Base Case to result in financial NPV = 0?	10%

3.4. Sensitivity analysis using the identified risks that can be feasibly quantified indicate that the rates of returns are robust to variation in these parameters, resulting from the expected healthy incremental cashflow in later years.

This implies that the main risks are posed by the variation of these risks to the sustainability of the cashflow of the operations especially in the early years of operations rather than to the rates of return of the operations.

4. Fiscal Impact

4.1. The GOT will receive credits and loans from various multilateral and bilateral agencies (AfDB, EIB, IDA) on the following terms and conditions: (i) IDA: SDR credit with a 40 year term and a 10 year grace period on the principal, annual service fee of 0.75% on the disbursed balance, and a 0.50% commitment fee which may be charged on undisbursed balance; (ii) AfDB: UA credit with 50 year term and a 10 year grace on the principal; annual service fee of 0.75% on the disbursed balance; and (iii) EIB: Euro loan with a 25 year term and a 5 year grace on the principal; annual interest rate of 1.00% on the disbursed balance.

4.2. A portion of these proceeds (40% of the construction components and support to the Operator working capital) will be on lent to DAWASA in local currency (15 year term – 25 years in the case of EIB loan - with a 5 year grace period on interest and principal, and an interest rate of 11.5% on the disbursed balance). The rest passed on to DAWASA as grants. Counterpart funding will come directly from DAWASA revenue.

4.3. Inflows come from loans and credits disbursements to GOT, loan repayments from DAWASA and the Operator's estimated company taxes. Outflows comprise of investment financing via grant and loan and the foreign loan repayment. The effects of these have been calculated and are summarized in the table below.

Summary of Fiscal Impact (2002 US\$)

	Yr 1 – 5	Yr 6 – 10	Yr 11 – 20	Yr 21 – 50	Total
IDA/EIB/AfDB Loan Disbursement	143.5	0	0	0	143.5
DAWASA On lending Principal Repayment	0	28.0	26.3	2.4	56.7
DAWASA On lending Interests and Fees	0	29.1	13.3	0.7	43.1
Est. Tax from PO and DAWASA	9.7	9.0	25.1	38.5	82.3
TOTAL INFLOWS	153.2	66.1	64.7	41.6	325.6
DAWASA Grant/grant Disbursement	143.5	0	0	0	143.5
IDA/EIB/AfDB Loan Principal Repayments	0	8.5	49.5	85.5	143.5
IDA/EIB/AfDB Loan Interests and Fees	4.0	5.6	8.7	7.3	25.6
TOTAL OUTFLOWS	147.5	14.1	58.2	92.8	312.6
Surplus / (Deficit)	5.7	52.0	6.5	(51.2)	13.0

5. Base Case Assumptions

Technical assumptions

- Detailed evolution of production, consumption and customer/connection assumptions are tabulated in the Datasheet at the end of this annex.
- Efficiency Gains.* From Year 2, electricity consumption reduced by 2% due to operational improvements.

General commercial assumptions

- Inflation.* Foreign inflation: 1.8% p.a. Local inflation: 5.5% p.a. (for current terms projections).
- Inflation will influence: all tariff, new connection payments to Lessee, rental payment to DAWASA, local and foreign staff costs, transport, repair and rehabilitation costs, electricity, chemicals, foreign exchange rates.
- Billing efficiencies.* Operator immediately bill 100% of domestic and non-domestic customers currently on DAWASA's database. For standpipe, billing will be 25% in year 1, 75% in year 2 and 100% thereafter.
- Collection efficiencies.* Yr 1 – 48.0%; Yr 2 – 70.0%; Yr 3 – 85.0%; Yr 4 – 88.0%; Yr 5 – 90.0%; Yr 6 to 10 – 91% (PO assumption). Uncollected billing is provisioned against bad debt.
- Over billing factor.* Initial over billing estimated from the gap between the estimated currently available water for sale and the PO's commercial due diligence on the current operation's billing amounts. Over billing factor of 200% in Year 1 will be eliminated linearly to 100% (no over billing) by Year 5.
- Tariff assumptions.* New tariff to be implemented when the Lease starts as follows (in real terms):

WATER TARIFF

Operator Tariff	Tshs322/m3
First Time Connection Funds Tariff	Tshs24/m3
DAWASA Tariff	Tshs86/m3 (1st year); Tshs111/m3 (thereafter)

TOTAL (Customer Tariff) Tshs432/m3 (1st year); Tshs457/m3 (thereafter)

Note: Domestic consumers are charged only the Operator Tariff for the first 5m3 of consumption.

SEWER TARIFF

Operator Tariff Tshs100/m3

DAWASA Tariff Tshs29/m3 (1st year); Tshs33 (thereafter)

TOTAL (Customer Tariff) Tshs129/m3 (1st year); Tshs133 (thereafter)

- i. *New domestic connections.* Customer will pay a deposit of Tshs20,000 per connection.

Financing arrangements

- j. Project costs totaling US\$164.5 million, of which about US\$8.5 million is PO shareholder equity contribution. Of the remaining US\$156 million, US\$143.5 million will be funded by IDA, AfDB and EIB loans to GOT. The remaining US\$12.5 million funded through DAWASA's internal cash generation.
- k. About US\$132 million of construction component, of which about US\$10.5 million would be carried out by the PO on behalf of the DAWASA as part of the Priority Works Program (PWP).
- l. Financing of DAWASA Investments. 60% of the construction component of IDA, AfDB and EIB financing will be passed to DAWASA as grant in the form of equity. The remaining will be on lent to DAWASA in local currency with 15 year term (25 year in case of EIB loan), 5 year grace period on principal (interest capitalized during this period), and an interest rate of 11.5% on the disbursed balance. Non-construction components will be passed on to DAWASA as grant.
- m. Operator's Financing of Startup Costs & Working Capital. Shareholders equity contribution of \$8.5m in the first 2 years (\$2.5m minimum startup equity). DAWASA will provide \$5.5m of the credit proceeds to the Operator to support the Operator's working capital per the provision of the Lease agreement.
- n. *Depreciation / Amortization.* Operator's start-up equipment are written down over seven years. Capital investments and GOT grant to DAWASA are written down over 20 years.

Operator financials

- o. Operator is paid Tshs145,000 (real price) per new connection made.
- p. *Operator consultancy fee.* Project cost estimates of design and construction cost of delegated works.
- q. Profit margin for new connections and PWP works (delegated works) are 40% and 14% respectively.
- r. *Local staff costs:* Costs per Operator's proposals
- s. Operator's starting base for office expenses, insurance, transport costs, electricity and chemicals is the DAWASA 1999/00 annual accounts and 2000/01 budget.
- t. Repair and maintenance costs - 0.8% of net book value of WSS assets (50% local and 50% foreign costs).
- u. Abstraction fee per Operator's proposals.
- v. Regulatory levy is assumed to be 1% of gross operating revenue (maximum possible under EWURA Act).
- w. *PO foreign employees:* per Operator's proposal.
- x. *TA contract costs* (% of operating revenue): Yr 1 – 5%; Yr 2 – 4%; Yr 3 – 3%; Yr 4 to 10 – 2%.
- y. Operator is liable to 30% corporate tax on corporate profits.
- z. Trade debtor days – 3 months; stock levels – 3 months; trade creditor days – 3 months; DAWASA and FTC fund payables – 7 days lag.
- aa. First dividend is assumed declared and paid in the first year accumulated net profits is positive to the amount of 100% net accumulated profits. Thereafter, dividends paid annually at 100% of annual net income.

DAWASA financials

- ab. DAWASA assumed to benefit from GOT starting cash injection of Tshs500 million.
- ac. DAWASA's starting base for local staff costs, office expenses, insurance, transport, repair and maintenance costs is the 1999/00 annual accounts and 2000/01 budget.
- ad. Regulatory levy is assumed to be 1% of gross operating revenue (maximum possible under EWURA Act).
- ae. Trade debtor (i.e. Operator) days – 7 days; trade creditor days – 3 months.
- af. Existing pre-project assets assumed to be revalued up by 50% from 2004.
- ag. DAWASA is liable to 30% corporate tax on corporate profits (excluding proceeds from the Credit).

BASE CASE PRODUCTION & CONSUMPTION ASSUMPTIONS

TECHNICAL ASSUMPTIONS	Yr 1 2004	Yr 2 2005	Yr 3 2006	Yr 4 2007	Yr 5 2008	Yr 6 2009	Yr 7 2010	Yr 8 2011	Yr 9 2012	Yr 10 2013
Production										
Available Production at WTP	m3/d	268,000	268,000	268,000	268,000	268,000	268,000	268,000	268,000	268,000
Reliable/ Actual Production at WTP	m3/d	200,000	220,000	240,000	270,000	270,000	270,000	270,000	270,000	270,000
Transmission Losses	%	40%	30%	25%	15%	12%	12%	12%	12%	12%
Volume of Water at Dar es Salaam Reservoirs	m3/d	120,000	154,000	180,000	229,500	237,600	237,600	237,600	237,600	237,600
Water Available from Boreholes	m3/d	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Available Water for Distribution	m3/d	133,000	167,000	193,000	242,500	250,600	250,600	250,600	250,600	250,600
Distribution Losses	%	36%	36%	30%	27%	25%	21%	20%	19%	19%
Available for Billing	m3/d	85,120	106,880	135,100	177,025	187,950	197,974	200,480	202,986	202,986
Available for Billing	m3Yr	31,068,800	39,011,200	49,311,500	64,614,125	68,601,750	72,260,510	73,175,200	74,089,890	74,089,890
Water Connections										
Standpipes										
Population Served	'000	1,097	1,148	1,196	1,218	1,244	1,273	1,306	1,343	1,366
Consumption (15lcd)	m3/day	16,455	17,220	17,940	18,270	18,660	19,095	19,590	20,145	20,490
Consumption	m3Yr	6,006,075	6,285,300	6,548,100	6,668,550	6,810,900	6,969,675	7,150,350	7,352,925	7,478,850
Active Domestic Connection Growth Assumptions (new connections)	Nos.	1,000	4,000	10,000	10,000	10,000	10,000	10,000	10,000	12,000
Growth Assumptions (new connections)	%	0	0	0	0	0	0	0	0	0
Inactive Connections (15% of total conn)	Nos.	16,245	17,595	19,845	22,095	24,345	27,345	28,845	30,645	32,445
Registering of illegal connections Assumed Consumption Band 1 (avail. for billing)	Nos.	5,000	5,000	5,000	5,000	5,000	-	-	-	-
Total Domestic Connections	m3Yr	5,523,420	5,982,420	6,747,420	7,512,420	8,277,420	8,787,420	9,287,420	9,807,420	10,419,420
	Nos.	108,302	117,302	132,302	147,302	162,302	172,302	182,302	192,302	204,302
Non-Domestic Growth Assumptions	Nos.	3,080	3,311	3,550	3,795	4,048	4,309	4,577	4,853	5,138
Growth Assumptions	%	0.00%	7.50%	7.22%	6.90%	6.67%	6.45%	6.22%	6.03%	5.87%
Grand Total Connections	Nos.	111,382	120,613	135,852	151,097	166,350	186,879	197,155	209,440	221,733
Sewer Connections										
No. of Connections	Nos.	21,700	21,800	21,900	22,000	22,100	22,200	22,300	22,400	22,500
Volume Discharged (at 80%)	m3/day	29,962	30,260	30,564	30,868	31,178	31,490	31,805	32,123	32,444
Volume Discharged (at 80%)	m3Yr	10,936,130	11,044,900	11,155,860	11,266,820	11,379,970	11,493,850	11,608,825	11,724,895	11,842,060

DAWASA

	Yr 1 2004	Yr 2 2005	Yr 3 2006	Yr 4 2007	Yr 5 2008	Yr 6 2009	Yr 7 2010	Yr 8 2011	Yr 9 2012	Yr 10 2013
	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh
PROFIT AND LOSS										
OPERATING REVENUE	2,315,072	5,024,104	7,404,121	9,328,802	9,233,771	13,653,375	14,764,806	15,608,916	16,497,675	17,297,087
Net Operating Revenue										
OPERATING EXPENDITURE	3,523,246	6,326,318	9,038,557	10,062,112	10,684,713	10,718,432	10,789,389	10,860,886	10,937,364	11,016,512
Total Operating Expenditure										
Op Income before Int and Tax	(1,208,174)	(1,302,214)	(1,634,435)	(733,311)	(1,430,942)	3,134,942	3,976,417	4,748,020	5,560,311	6,280,575
COST OF FINANCING										
Net Interest (Int prmt to GOT - Int Rcvd fr PO)	0	0	0	0	0	7,825,959	7,232,183	6,638,408	6,044,632	5,450,657
Total Financing Costs										
Income before Tax	(1,208,174)	(1,302,214)	(1,634,435)	(733,311)	(1,430,942)	(4,681,017)	(3,255,767)	(1,690,367)	(484,322)	828,718
Tax @ 30%	0	0	0	0	0	0	0	0	0	248,916
Net Income	(1,208,174)	(1,302,214)	(1,634,435)	(733,311)	(1,430,942)	(4,681,017)	(3,255,767)	(1,690,367)	(484,322)	580,803
Dividend @ 0%	0	0	0	0	0	0	0	0	0	0
Retained Earnings	(1,208,174)	(1,302,214)	(1,634,435)	(733,311)	(1,430,942)	(4,681,017)	(3,255,767)	(1,690,367)	(484,322)	580,803
BALANCE SHEETS										
Fixed Assets										
Net Fixed Assets	77,652,808	127,001,164	186,080,718	198,143,516	187,616,312	188,141,794	178,667,276	168,192,757	159,718,239	150,243,721
Current Assets	3,626,827	7,761,522	20,332,111	37,673,309	55,272,591	54,901,997	55,970,479	58,404,731	62,245,779	67,401,261
Current Liabilities	168,808	182,634	195,536	210,350	7,158,334	7,167,505	7,180,502	7,193,889	7,208,005	533,221
Total Assets	81,110,828	134,580,053	206,227,292	233,606,474	245,730,589	235,876,286	227,457,253	220,403,600	214,756,012	217,111,761
Total Equity and LT Liabilities	81,110,828	134,580,053	206,227,292	233,606,474	245,730,589	235,876,286	227,457,253	220,403,600	214,756,012	217,111,761
CASH FLOW										
Cash Flow From Operations	1,013,632	3,990,970	6,310,344	8,171,231	8,065,196	4,702,847	6,214,026	7,581,105	8,987,032	10,303,204
Cash Flow from Financing	18,809,296	54,771,439	41,776,822	28,112,493	20,493,249	(5,163,266)	(5,163,266)	(5,163,266)	(5,163,266)	(5,163,266)
Cash Flow from Investing	(17,241,116)	(54,880,388)	(35,562,858)	(18,979,850)	(10,947,315)	0	(0)	0	(0)	0
Net Annual Cash	2,581,812	4,082,019	12,524,311	17,303,773	17,601,130	(460,419)	1,050,760	2,417,839	3,823,766	5,139,938
Cumulative Cash	3,081,812	7,163,831	19,688,142	36,991,915	54,593,045	54,132,626	55,183,386	57,601,225	61,424,990	66,564,929
FINANCIAL RATIOS										
Operating Income as % of Net Op. Revenue	-52%	-26%	-22%	-8%	-15%	23%	27%	30%	34%	36%
Net Income as % of Net Op. Revenue	-52%	-26%	-22%	-8%	-15%	-34%	-22%	-12%	-3%	3%
Return of Average Invested Capital (Note A)	-1%	-1%	-1%	0%	-1%	-2%	-1%	-1%	0%	0%
Debt Service Coverage (Note B)	NA	NA	NA	NA	NA	91%	120%	147%	174%	200%
% of Total Project Exp. Financed by Int Sources	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
% of Total CIP Exp. Financed by Int Sources	10%	10%	10%	12%	11%	0%	0%	0%	0%	0%
Current Ratio	21.5	42.5	104.0	179.1	7.7	7.7	7.8	8.1	8.6	126.4
Debt as % of Total Capitalization	8%	21%	22%	25%	26%	25%	23%	22%	20%	21%

Note A: Net Income / Total Asset

Note B: Cash from Operations / Repayments

COMBINED PRIVATE OPERATOR AND DAWASA

	Yr 1 2004	Yr 2 2005	Yr 3 2006	Yr 4 2007	Yr 5 2008	Yr 6 2009	Yr 7 2010	Yr 8 2011	Yr 9 2012	Yr 10 2013
	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh
PROFIT AND LOSS										
OPERATING REVENUE										
Net Operating Revenue	11,068,209	21,597,494	32,693,611	40,958,008	40,565,790	37,694,890	40,584,202	43,201,463	46,485,558	52,569,131
OPERATING EXPENDITURE										
Total Operating Expenditure	17,600,174	22,814,665	27,615,255	29,756,931	29,638,883	29,568,540	30,581,459	31,104,502	32,242,077	33,328,703
Income before Interest and Tax (EBIT)	(5,186,831)	301,861	6,064,592	12,044,043	11,816,141	8,126,350	10,002,743	12,096,961	14,243,482	19,240,427
COST OF FINANCING										
Net Interest Payments	0	0	0	0	0	8,744,493	7,946,599	7,148,705	6,350,810	5,552,916
Income before Tax (Pre-tax Income)	(5,186,831)	301,861	6,064,592	12,044,043	11,816,141	(618,143)	2,056,144	4,948,256	7,892,671	13,687,511
Tax	0	481,222	2,309,708	3,833,206	3,974,125	1,221,862	1,593,573	2,051,593	2,513,098	4,106,253
Net Income	(5,186,831)	(179,362)	3,754,884	8,210,837	7,842,016	(1,840,005)	462,571	2,896,663	5,379,573	9,581,258
Dividend	0	0	2,533,514	8,944,148	9,272,958	2,851,012	3,718,337	4,787,051	5,863,895	9,000,455
Retained Earnings	(5,186,831)	(179,362)	1,221,370	(733,311)	(1,430,942)	(4,691,017)	(3,255,767)	(1,890,387)	(484,322)	580,803

BALANCE SHEETS

	Yr 1 2004	Yr 2 2005	Yr 3 2006	Yr 4 2007	Yr 5 2008	Yr 6 2009	Yr 7 2010	Yr 8 2011	Yr 9 2012	Yr 10 2013
	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh
Fixed Assets										
Net Fixed Assets	79,779,701	130,244,782	190,722,809	201,084,574	202,124,254	191,884,929	181,160,972	170,941,474	160,583,638	150,363,778
Current Assets	9,511,928	19,951,400	37,201,681	57,052,371	76,294,341	72,376,960	73,670,797	75,919,653	79,860,980	85,809,022
Current Liabilities	2,611,866	3,752,208	6,210,861	8,183,985	17,151,386	14,623,909	15,387,768	16,245,724	17,251,749	10,624,183
Total Assets	86,679,762	146,443,974	221,713,629	249,952,960	261,267,209	249,637,980	239,444,002	230,615,402	223,192,869	225,548,618
Total Equity and LT Liabilities	86,679,762	146,443,974	221,713,629	249,952,960	261,267,209	249,637,980	239,444,002	230,615,402	223,192,869	225,548,618

CASH FLOW

	Yr 1 2004	Yr 2 2005	Yr 3 2006	Yr 4 2007	Yr 5 2008	Yr 6 2009	Yr 7 2010	Yr 8 2011	Yr 9 2012	Yr 10 2013
	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh	'000 Tsh
Cash Flow From Operations	(4,429,397)	3,765,298	13,246,235	18,377,872	18,963,938	7,473,265	11,392,755	13,758,418	16,072,003	20,527,270
Cash Flow from Financing	16,287,967	59,943,574	40,009,918	20,028,494	12,185,391	(9,789,223)	(10,656,549)	(11,725,263)	(12,802,107)	(15,938,667)
Cash Flow from Investing	(19,722,490)	(56,396,798)	(37,882,371)	(20,426,629)	(11,792,828)	(642,280)	(210,196)	(480,230)	(193,383)	(200,137)
Net Annual Cash	(7,863,920)	7,312,074	15,373,782	17,979,737	19,356,502	(2,958,238)	526,010	1,552,926	3,076,513	4,388,466
Cumulative Cash	(7,363,920)	(51,847)	15,321,935	33,301,672	52,658,174	49,699,936	50,225,946	51,778,872	54,855,385	59,243,850

Annex 6: Procurement and Disbursement Arrangements

TANZANIA: Dar es Salaam Water Supply and Sanitation Project

A. Procurement

1. Ongoing procurement reform

1.1. Public procurement is currently being reformed in Tanzania. In February 2001, GOT enacted the Procurement Law to replace all previous procurement legislation and issued two regulations for the Procurement of Goods and Works and the Selection and Employment of Consultants. In November 2002, GOT issued a set of Standard Bidding Documents (SBD) for: (a) Procurement of Goods through International Competitive Bidding; (b) Procurement of Health Sector Goods; (c) Standard Request for Proposal; (d) Standard Pre-qualification Document for Procurement of Works; (e) Procurement of Works through National Competitive Bidding; and (f) Procurement of Works, Smaller Contracts. These documents were reviewed during the 2003 Country Procurement Assessment Report (CPAR) and found to be consistent with the Bank SBD.

1.2. The Public Procurement Act (PPA) covers procurement by both central government and local government agencies, though the latter is to be covered by specific Local Government Regulations to be issued under the Local Government Finance Act. The authority in charge of local government has finalized draft Regulations and a Procurement Manual, which are in line with the new procurement law. A noticeable change in the new Regulations is the removal of councilors from local government tender boards.

1.3. During the stakeholders workshop conducted as part of the CPAR, the following recommendations were formulated: (a) establishing a Procurement Authority responsible for oversight of public procurement; (b) decentralizing procurement to ministries and departments; (c) changing the legal framework to include private sector representatives in the Public Procurement Appeals Authority; and (d) replacing the supplies officers with procurement specialists, a new position in the civil services rating system. The final report including all recommendations agreed upon during the stakeholders workshop will be submitted to the Government by end of March 2003 for implementation.

2. Scope of IDA financed procurement under the project

2.1. Total project cost is estimated at US\$164.60 million. IDA will contribute US\$61.50 million towards the financing of:

- The three contracts awarded by DAWASA to the Operator, according to a procedure acceptable to the Bank, valued at a total of about US\$19.35 million: (a) under the Lease Contract: US\$5.5 million for the Subloan to the Operator and US\$3.60 million for engineering fee for implementing the Delegated Works Program (DWP); (b) under the Priority Works Program (PWP): US\$5.25 million for urgent rehabilitation of water supply facilities (SIPE, see para. 14 below) and US\$5.0 million contract for the supply of meters (POG, see para. 14 below);
- A share of the DWP implemented by the Operator valued at about US\$17.35 million;
- A share of the Community WSS component valued at about US\$2.25 million;
- The supply of goods and equipment, and works (transitional expenses) valued at a total US\$2.0 million
- Technical assistance (TA), audits, studies and training contracts valued at a total of US\$19.40 million, of which the US\$7.3 million for the Construction Supervision Consultant (CSC); and
- Refinancing of the PPF for US\$1.15 million

2.2. Major civil works for the rehabilitation of water production units, transmission lines, reservoirs, main distribution, sewerage network, waste water stabilization ponds and the ocean outfall will be financed by AfDB and EIB. AfDB will also contribute to the financing of the DWP, the Community WSS component, and the TA to MoWLD for Ruvu/Wami River Basin Office.

2.3. This Annex describes procurement and disbursement arrangements that apply to IDA financing only. Guidelines of the co-financiers will apply to components they will finance. Details of the overall procurement arrangements for IDA and specific arrangements for the other co-financiers are provided in the POM.

3. DAWASA procurement capacity assessment

3.1. A detailed assessment of DAWASA procurement capacity was carried out in 1999 and updated during appraisal. Most of the capacity building measures suggested in 1999 have been implemented, and thus the overall procurement risk is rated as average:

- DAWASA new Procurement Unit (PU) will report directly to its Chief Executive Officer; it will be created by merging the existing Supplies Section and the Project Implementation Unit (PIU) of the IDA financed Urban Sector Rehabilitation Project (USRP Cr. 2867-TA), which is near completion. The PU has recently been strengthened by the recruitment of a full time procurement engineer. The PU currently includes three procurement specialists, two supplies officers, a secretary, and a driver. DAWASA procurement specialists are conversant with Bank procurement procedures, and record keeping and filing systems under USRP were adequate;
- DAWASA will be assisted by the Construction Supervision Consultant for procurement activities under the Non Delegated Work Program (NDWP) implemented by DAWASA, in particular for evaluation of bids; and
- DAWASA will delegate all procurement activities under the DWP to the Operator; the joint venture that will manage the Operator (Biwater/Gauff) includes an international consulting firm with extensive experience on Bank procurement procedures, in particular in the region.

3.2. Professional staff of the PU and members of the DAWASA Tender Board will benefit from training financed under the project on the new Public Procurement Law, Bank Guidelines, procurement planning and contract administration.

4. Use of Bank Guidelines

4.1. Procurement of works and goods will be carried out in accordance with the *Guidelines: Procurement under IBRD Loans and IDA Credits (January 1995 edition- revised January and August 1996, September 1997, and January 1999)*. Bank SBD and standard bid evaluation forms will be used for works and goods procured under ICB. SBD recently prepared by GOT will be used for works and goods procured under NCB.

4.2. Selection of consultants will be carried out in accordance with the *Guidelines: Selection and Employment of Consultants by World Bank Borrowers (January 1997 edition - revised September 1997, January 1999, and May 2002)*. Bank standard Request for Proposals (RFP) and evaluation forms will be used where applicable.

5. Advertising

5.1. A General Procurement Notice (GPN) has been published in the UN Development Business and in a daily national newspaper of wide circulation after approval of the project; it will cover procurement financed by AfDB and EIB as well. The GPN will be updated annually for outstanding ICB and large consultancy services. Specific Procurement Notices (SPN) for goods and works to be procured under ICB and NCB and for consultant services will be published in a daily national newspaper of wide circulation. This also applies to the DWP implemented by the Operator on behalf of DAWASA. Specific notices will be posted in districts for sub-projects under the Community WSS component. DAWASA will also publish annually in local newspapers a "Promotional Procurement Notice (PPN)" in the format included in the POM to promote business opportunities to local contractors and suppliers. The PPN will indicate the likely dates at which bid documents will be made available.

6. Procurement plans

6.1. A global procurement plan covering the entire project period is included in the POM. A specific procurement plan for the first year of implementation has been agreed with DAWASA and the Operator; its final version will be submitted for review before Effectiveness. DAWASA will submit for review by March 31 of each year specific annual procurement plans for the 12 months to come that will include contract packaging, estimated costs, types of contract, procurement methods and procurement schedules. The Operator will submit to DAWASA a similar annual procurement plan for the DWP. The Operator will submit for review before Effectiveness SBD documents for repetitive works such as supply and laying of pipes. DAWASA will prepare a special procurement plan for the Community WSS component, by aggregating information provided in the appraisals of each sub-project.

7. Implementation arrangements

7.1. DAWASA has recently been granted the status of “Procuring Entity”, which means that it is allowed to procure goods, works and services without prior review of the Central Tender Board, soon to be transformed into a procurement “regulatory agency”. The following procurement arrangements have been agreed for the various components of the project.

7.2. **Priority Work Program (PWP):** DAWASA has already awarded two contracts to the Operator for implementing a PWP focusing on urgent rehabilitation of the water production, transmission and distribution works and also including the supply of about 173,000 meters. The bidding document for the PWP, based on the Bank standard Supply and Installation of Plant and Equipment (SIPE) contract was part of the bidding document for the Lease and the price to be paid by DAWASA for this contract was fixed in the bidding document. The bidding document for the supply of meters, based on the Bank standard Procurement of Goods (POG) contract was also part of the bidding document for the Lease Contract, and the price to be paid by DAWASA for this contract was fixed in the bidding document.

7.3. **Non Delegated Works Program (NDWP):** DAWASA, assisted by the CSC, will be responsible for the procurement of works for the rehabilitation and extension of the water supply treatment plants, transmission mains, service reservoirs, primary distribution system, sewerage network and waste water stabilization ponds and ocean outfall to be financed by AfDB and EIB;

7.4. **Delegated Works Programs (DWP):** Under the Lease Contract, DAWASA will delegate to the Operator the full responsibility for implementing a large program of rehabilitation and extension of the secondary distribution networks. The Operator will identify projects, prepare detailed designs according to agreed criteria, and procure goods and works following DAWASA procurement procedures. The Operator will be in charge of the preparation of standard bidding documents, pre-qualification of contractors, preparation of specific bidding documents, evaluation of bids, preparation and signing – on behalf of DAWASA – of final contracts and supervision of contract execution. Under the Lease Contract, the Operator will be paid “engineering fee” of 5% of the value of contracts implemented for design and procurement activities and 5% for construction supervision; the engineering fee percentages were fixed in the bidding document for the Lease Contract. DAWASA will employ financial and technical auditors to conduct regular audits of the performance of the Operator with regards to the implementation of the DWP; audits will focus on the adherence to selection and design criteria, the compliance with procurement procedures and the overall quality of supervision.

7.5. **Community Water Supply and Sanitation (CWSS) Program:** DAWASA will provide grants limited to about US\$50,000 for Community WSS sub-projects. Four specialized NGOs will assist communities in formulating and implementing CWSS sub-projects. NGOs will be active in each of the three Dar es Salaam municipalities and along the transmission mains. NGOs will be selected on the basis of the relevance of their experience, according to the Bank “Consultant Qualification” procedure. Each NGO is expected to implement about two to three new CWSS sub-projects per year. DAWASA will procure pipes and equipment, using ICB or NCB as applicable. NGOs will select contractors, on behalf of DAWASA; as construction contracts are expected to be in the range of US\$30,000 each, NCB and/or the “local shopping” procedures will be followed. NGOs will be paid by DAWASA a fee for the mobilization of the community, procurement, construction supervision and assistance to post construction management, of about 25% of the sub-project cost (each NGO is expected to be paid about US\$30,000 per year). Auditors will be requested to carry out regular audits of the performance of NGOs including compliance with procurement procedures.

7.6. **Components implemented by MWLD:** MWLD will prepare the terms of references, participate in the evaluation of proposals and supervise execution of the contracts. Through a special arrangement, DAWASA will be responsible for the selection of consultants and sign contracts.

8. Procurement methods

8.1. *Works*: (estimated to cost a total of US\$21.8 million).

- As mentioned above, the contracts for the *Priority Works Program* (PWP) estimated at US\$5.25 million has already been awarded to the Operator;
- For the *Delegated Works Program* DWP (estimated at about US\$13.0 million), Contracts estimated to cost more than US\$1,000,000 equivalent will be procured according to the ICB procedure; domestic preference will apply. Contracts estimated to cost less than US\$1,000,000 equivalent will be procured according to the NCB procedure. For repetitive works, the Operator may pre-qualify contractors, on an annual basis. Contracts estimated to cost less than US\$50,000 equivalent, up to an aggregate amount of US\$2.50 million may be awarded in accordance with the local shopping procedure after solicitation of quotations from at least three qualified domestic contractors in response to a written invitation. The invitation will include a detailed description of the works, including basic specifications, the required completion date, a basic form of agreement acceptable to IDA, and relevant drawings, where applicable. Quotations will be opened and evaluated at the same time. The award will be made to the contractor who offers the lowest price quotation for the required work, and who has the experience and resources to complete the contract successfully.
- For the *Community WSS Program* (estimated at about US\$1.1 million), civil works contracts estimated to cost an average US\$30,000 each will be procured by DAWASA assisted by NGOs mostly in accordance with the local shopping procedures, as described above; and
- For *Major Repairs of Emergency Nature* to be financed by DAWASA under the Lease Contract and that may be carried out either by the Operator or by contractors (estimated to cost US\$1.8 million) direct contracting may be used as per provisions of paragraph 3.7 of the Guidelines. Contracts awarded according to this procedure will be subject to prior review; however retroactive reviews can be requested on a case by case basis. The CSC will certify claims for payment, and the technical auditors will be certify the emergency situation justifying the use of this procedure.

8.2. *Goods*: (estimated to cost US\$10.0 million).

- As already mentioned, the contract for the *Supply of Meters* (US\$5.0 million equivalent) has already been awarded to the Operator; and
- For the *Delegated Works Program* DWP (estimated at about US\$4.3 million), the *Community WSS Program* (estimated at about US\$0.45 million), and *Transitional Expenses* (estimated at about US\$0.2 million) contracts estimated to cost more than US\$300,000 equivalent will be procured according to the ICB procedure; domestic preference will apply. Contracts estimated to cost less than US\$300,000 equivalent will be procured according to the NCB procedure. Contracts estimated to cost less than US\$30,000 equivalent, up to aggregate amount of US\$750,000 may be procured through IAPSO or through shopping procedures by soliciting at least three written quotations from different suppliers, in accordance with the Guidelines and the June 9, 2000 Bank Memorandum "Guidance on Shopping".

8.3. *Consultants*: (estimated to cost US\$23.20 million).

- As mentioned above, the contract of *Project manager for the implementation of the DWP* (valued at US\$3.6 million) has been awarded to the Operator under the Lease contract;
- The selection of the *CSC, Engineering and Financial Advisers to DAWASA and Financial and Technical Auditors* (estimated to cost US\$7.3 million, US\$2.25 million and US\$2.0 million respectively) will take place before Effectiveness, following the QCBS procedure;
- All consulting services contracts costing more than US\$100,000 equivalent for firms will be awarded according to the QCBS procedure. Consulting service contracts estimated to cost less than US\$100,000 equivalent to be awarded to consulting firms may be awarded according to the Consultants' Qualifications selection method. Individual consultants will be selected in accordance with provisions of paragraphs 5.1 to 5.3 of the Guidelines. In exceptional cases, Single-Source selection may be used in accordance with provisions of paragraphs 3.8 to 3.11 of the Guidelines. Shortlists for contracts costing less than US\$100,000 equivalent may consist of national firms only in accordance with provision of paragraph 2.7 of the Guidelines provided that at least three qualified firms are available at competitive costs. However, if foreign firms have expressed interest, they will not be excluded from consideration;
- *NGOs for implementing the Community WSS program* (estimated to a total of US\$0.70 million) will be employed by DAWASA in accordance with paragraph 3.14 of the Guidelines. Several competent NGOs are already active in the WSS sector in Dar es Salaam. NGOs will be selected according to the Consultants'

Qualifications method in accordance with paragraph 3.7 of the Guidelines, initially for a two year period. Each contract with a NGO for an initial two year period is estimated to cost about less than US\$100,000 equivalent.

8.4. **Training** (US\$0.45 million) will comprise services of individual consultants whose services would be procured as mentioned above, participation in seminars, workshops, or attachments and fellowships. The annual training program and budget will be submitted by DAWASA for review not later than three months before the end of each fiscal year.

9. Bank review

9.1. Table B gives the thresholds for Bank prior reviews:

- Each contract for the supply of goods estimated to cost US\$300,000 equivalent or more and the first two contracts estimated to cost below US\$300,000 equivalent will be subject to prior review as per paragraph 2 and 3 of Appendix 1 of the Guidelines. Other contracts will be subject to post review in accordance with paragraph 4 of Appendix 1 of the Guidelines;
- Each contract for civil works estimated to cost US\$1,000,000 equivalent or more and the first two contracts of value less than US\$1,000,000 equivalent will be subject to prior review in accordance with the procedures of paragraphs 2 and 3 of Appendix I of the Guidelines;
- All terms of reference and single source Consultant contracts will, regardless of the contract amount, be subject to prior review. Contracts estimated to cost US\$100,000 equivalent or more for firms will be subject to prior review in accordance with procedures set forth in paragraphs 2 and 3 of Appendix I of the Consultants Guidelines. With respect to each contract for employment of individual consultants estimated to cost US\$50,000 equivalent or more, the qualification, experience, terms of reference, and terms of employment of the consultants will be subject to prior review. Training and exceptional extensions of non-prior review contracts raising their values to levels equivalent or above the prior review thresholds will also be subject to prior reviews. All consultancy services that are not subject to prior review will be subject to post review in accordance with procedures set forth in paragraph 4 of Appendix 1 of the Consultants Guidelines.

Procurement Methods (Table A)

Expenditure Category	Procurement Method ¹					Total Cost
	ICB	NCB	Consulting Services	Other ²	N.B.F.	
1. Works	32.00 (15.75)	6.40 (3.50)		4.00 (1.90)	64.40	106.80 (21.15)
2. Goods	14.00 (7.75)	2.15 (2.00)		0.25 (0.25)	0.30	16.70 (10.00)
3. Consulting Services (incl. Audits)			21.00 (19.50)	4.00 (3.70)	0.45	25.45 (23.20)
4. Training			0.50 (0.50)			0.50 (0.50)
5. Operating costs of the Operator				5.50 (5.50)		5.50 (5.50)
Equity Contribution by Operator					8.50	8.50 (0.00)
6. PPA Refinancing				1.15 (1.15)		1.15 (1.15)
Total	46.00 (23.50)	8.55 (5.50)	21.50 (20.00)	14.90 (12.50)	73.65	164.60 (61.50)

1/ Figures in parenthesis are the amounts to be financed by the IDA Credit. All costs include contingencies.

2/ Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

Table A1: Consultant Selection Arrangements (optional)
(US\$ million equivalent)

Consultant Services Expenditure Category	Selection				Method			Total Cost ¹
	QCBS	QBS	SFB	LCS	CQ	Other	N.B.F.	
A. Firms	20.85 (19.35)					3.20 (3.00)	0.45	24.50 (22.35)
B. Individuals		0.15 (0.15)						0.15 (0.15)
C. NGOs					0.75 (0.70)			0.75 (0.70)
Total	20.85 (19.35)	0.15 (0.15)			0.75 (0.70)	3.20 (3.00)	0.45	25.40 (23.20)

1\ Including contingencies

Note: QCBS = Quality- and Cost-Based Selection

QBS = Quality-based Selection

SFB = Selection under a Fixed Budget

LCS = Least-Cost Selection

CQ = Selection Based on Consultants' Qualifications

Other = Selection of individual consultants (per Section V of Consultants Guidelines), Commercial Practices, etc.

N.B.F. = Not Bank-financed

Figures in parenthesis are the amounts to be financed by the Bank Credit.

Prior Review Thresholds (Table B)

Expenditure Category	Contract Value Threshold (US\$)	Procurement Method	Contracts Subject to Prior Review (US\$)	
1. Works	> 1,000,000	ICB	All contracts	
	> 50,000 but less than 1,000,000	NCB	First two contracts. Ex-Post thereafter	
	< 50,000	At least 3 quotations	Ex-Post	
2. Goods	> 300,000	ICB	All contracts	
	< 300,000	NCB	First two contracts. Ex-Post thereafter	
	< 30,000	Shopping/IAPSO	Ex-Post	
3. Consulting Services	Firms and NGOs	> 100,000	QCBS	All contracts
		< 100,000	QBS/CQ /LCS	First 2 contracts. Ex-Post thereafter
	Individuals	> 50,000	QBS/CQ/LCS	All contracts
		< 50,000	CQ/LCS/Fixed Budget	Ex-Post (except TOR, shortlist, and contract)
	4. Training & Workshop	>100,000	QBS	All
		<100,000	QBS	Annual plan to be reviewed by IDA

Total value of contracts subject to prior review:

US\$ [51.20 million]

10. Overall Procurement Risk Assessment : Average

11. Frequency of procurement supervision missions proposed: One every six months (includes special procurement supervision for post-review/audits)

The following action plan is designed to mitigate the average procurement risk

Action	Deadline	Responsibility
Training of staff under the Procurement Unit on procurement issues including preparation of procurement strategy and planning as well as contract management	During launch workshop and thereafter on continuous basis	Bank/DAWASA
Training of members of DAWASA Tender Board on procurement issues	Within one year of implementation	DAWASA
Preparation of Internal Instructions articulating the new Public Procurement Law and Regulations	Within one year of implementation	DAWASA
Bank's prior review of the first two (2) contracts below threshold	Early days of implementation stage	Bank
Engineering Advisor working with the Procurement Unit to assist in procurement issues	For the duration of the project	DAWASA
Technical Audits will be carried out on semi-annual basis by a Technical Auditor selected competitively, on issues of procurement and performance of the Operator in the implementation of the delegated works	For the duration of the project	DAWASA

B. Disbursement

12. Allocation of Credit Proceeds (Table C)

Expenditure Category	Amount in US\$ million	Financing Percentage
(1) Works	19.50	100% of foreign expenditures and 80% of local expenditures
(2) Goods	8.60	100% of foreign expenditures and 80% of local expenditures
(3) Consultants' Services including audits	23.10	93%
(4) Training	0.45	100%
(5) Operating Costs of the Operator	5.50	85%
(6) Refunding of the PPA	1.15	Amount due pursuant to Section 2.02 © of the DCA
(7) Unallocated	3.20	
Total Project Costs	61.50	

12.1. All disbursements and withdrawal will be subject to procedures detailed in the World Bank Disbursement Handbook (1992 edition), the conditions of the Development Credit Agreement (DCA) and the procedures specified in the Disbursement Letter. The proposed IDA Credit of US\$61.50 million will be disbursed over five years with an expected Project Completion date of June 30, 2008 and a Closing Date of December 31, 2008. The proposed allocation of Credit proceeds is shown in Table C above.

13. Use of Statements of Expenditures (SOEs)

13.1. All applications to withdraw proceeds from the Credit Account will be fully documented except for expenditures against contracts (a) with an estimated value of US\$500,000 or less for works; (b) US\$100,000 or less each for goods and consulting firms; (c) US\$50,000 or less each for individual consultants; and (d) all community sub-projects and training which may be claimed on the basis of certified Statements of Expenditures (SOEs). Documentation supporting expenditures claimed against SOEs will be retained at DAWASA and will be available for review as requested by auditors and Bank supervision missions.

14. Special Account

14.1 To facilitate disbursement of eligible expenditures for works, goods and services, GOT will open a Special Account in a commercial bank acceptable to IDA. The Special Account will be managed and administered by DAWASA and will cover IDA's share of expenditures. The authorized allocation of US\$5.0 million will cover an estimated four months of eligible expenditures financed by IDA. Replenishment of funds by IDA will be made upon production of evidence of satisfactory utilization of the advance, as reflected in the SOE or in the full documentation for payments above the SOE thresholds. To the extent possible, IDA's share of expenditures will be paid through the Special Account. If ineligible expenditures are found to have been made from the Special Account, the Government will be obligated to submit evidence that it has refunded their cost with the next request for replenishment. In addition, if the Special Account remains inactive for more than six months, GOT may be requested to refund to IDA the amounts advanced.

14.2. **Disbursement under DAWASA Subloan to the Operator:** A first application of US\$1.625 million will be submitted upon payment of the initial equity contribution of US\$2.50 million to the capital of the Operator, which is a condition of Effectiveness. Each subsequent withdrawal application will be equal to 100% of such paid up share capital and commercial loan accounts paid of which the IDA Credit will finance 85% within the overall limit of US\$5.5 million equivalent, and will be supported by evidence that the Operator has used the funds earlier disbursed for eligible works, goods and services procured according to acceptable commercial practice. Applications to withdraw proceeds from the Special Account for the financial assistance to be extended by DAWASA to the Operator will be supported by the evidence certified by the Operator's auditors of the paid up share capital made by its shareholders and commercial loan accounts paid into the Operator.

14.3. **Project Account:** In order to ensure the timely provision of counterpart funds, DAWASA will establish before the Credit becomes effective a Project Account at a commercial bank acceptable to IDA; MOF will make deposits of Tshs500 million by Effectiveness plus Tshs250 million during the first project quarter, sufficient to finance expenditures forecast for the first four months of operations. DAWASA will then replenish the Project Account every quarter, with sufficient funds to meet DAWASA's share of expenditures for the coming quarter. Funds under the Project Account will be applied only for the purpose of the project.

14.3. **Supervision:** During project implementation, the Bank will ensure that the project maintains satisfactory financial management arrangements through reviews of SOE and quarterly FMR.

C. Financial Management

15. Project implementation arrangements

15.1. DAWASA will be the implementing agency of the project and will have the overall responsibility for guiding, supervising, monitoring, evaluating and reporting on project components. Project financial matters will be managed and coordinated by DAWASA Finance Department, which is being reorganized to realign its processes to meet the project reporting requirements. Under the Finance Department, four managers will be responsible for the following main functions:

- Contract Management (contract monitoring and accounting);
- Accounting (general ledgers, fixed assets and store accounting, annual accounts and Financial Management Reports);
- Finance (disbursement, cash management, billing and collection, capital management and payroll); and
- Planning and studies (budgets and cash forecasts).

15.2 The organizational chart and department responsibilities are included in the Project Operational Manual (POM). The Finance Department will be responsible for managing the project accounts, ensuring that project expenditures are incurred in accordance with established procedures and maintaining adequate supporting documentation for verification by supervision missions and external auditors. It will handle all financial management, including the preparation and submission of monthly withdrawal application requests, quarterly Financial Monitoring Reports (FMR) and annual project accounts. Details of the project implementation and financial arrangements are clearly stipulated in of the POM: Project Administration (volume 4); Project Implementation Plan (volume 1); and Financial Management Manual (volume 2).

16. Financial management assessment

16.1. During appraisal, a Bank Financial Management Specialist (FMS) assessed DAWASA financial capabilities and that of the project-coordinating unit currently implementing the IDA funded USRP Project (Cr. 2867-TA). DAWASA organizational structure and financial management systems in place are adequate to handle project accounting and reporting on the use of IDA funds.

16.2. ***Financial management risks arising from the Country Financial Accountability Assessment (CFAA):*** The CFAA carried February 2001 concluded that the central and local governments financial management systems present high fiduciary risk due to:

Non-compliance and follow-up on auditor's report recommendations;

Limited budget execution;

Inadequate monitoring of public funds;

Lack of human capacity;

Poor accounting records and record management;

Inadequately resourced external audit department both from the financial and human resources points of view; and

Weak government information technology (IT) policy.

16.3. ***Progress made by the government since last CFAA:*** Significant improvement in public sector accounting and reporting has been achieved, with donor assistance. They include:

- The introduction of computerized Integrated Financial Management System (IFMS) to all central ministries and to a few local authorities;
- The enactment of the new Public Act No. 6 of 2001 and Public Procurement Act No. 3 of 2001;
- The development of financial guidelines and procedures; and
- The training of all ministries' accountants, internal auditors and accounting officers on these new guidelines.

For the first time in FY01/02, the annual public accounts were produced within the statutory period. In addition, GOT has taken the CFAA action plans as a basis to develop a revised Public Financial Management Reform Program (PFMRP), which sets out a methodology to mitigate the fiduciary risks and strengthen the country's financial accountability framework. This program is planned to be undertaken in the next FY with the donor support, including IDA.

16.4. **Risks mitigations incorporated in the project.**

- DAWASA independent Internal Audit Unit conducts annual reviews of DAWASA internal controls that cover procurement, disbursement and financial accounting and reporting. The Internal Auditor will also conduct quarterly audits of all project disbursement and an annual risk assessment to identify current and developing risks that could affect project completion, results or contract obligations. The auditors' report will be submitted to the DAWASA Board and the Bank; and
- An initial advance sufficient to cover the needs for counterpart funds for four months of operation will be deposited into the Project Account before effectiveness.

16.5. **Major strengths** observed during the review.

- An adequate financial management and control arrangements are in place for the implementing of the project; and
- There will be two annual project audits undertaken each year: the interim and final audit report.

Based on the above assessment the overall financial management risk is rated as *medium* and the project financial management system is adequate for the project to be presented to the Board.

17. Accounting and financial arrangements

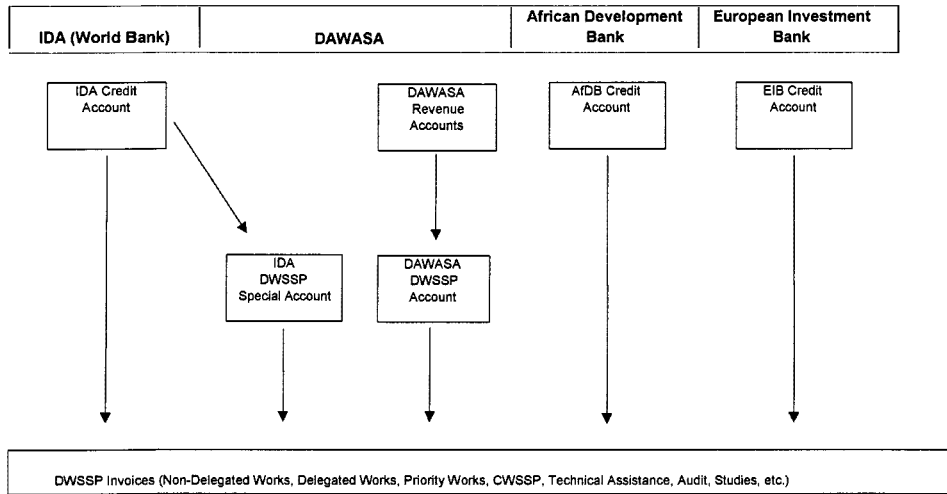
17.1. **Overview:** DAWASA accounting and financial arrangements are covered in the POM, which was reviewed and found adequate for implementation of the project. The manual gives an outline of the financial management procedures and reporting including FMR and auditing.

17.2. **Accounting system:** The DAWASA Act of 2001 requires DAWASA to maintain its accounts on an accrual basis in accordance with International Accounting Standards (IAS), which conform in all material respects with the accounting standards issued by the Tanzanian National Board of Accountants and Auditors. To automate the accounting system, improve reporting and internal controls, DAWASA is implementing the "Pastel" accounting system which will be used for all project transactions. The system will enable DAWASA to generate the financial data, in particular expenditures by contract, project component and funding source, needed to prepare the project FMR.

17.3. **Project accounting:** To segregate project sources and uses of funds, DAWASA will maintain separate general ledgers for each external financing and for DAWASA. The general ledgers will be consolidated at the end of each quarter and at the end of the year to produce a consolidated FMR. The separate general ledgers will facilitate the preparation of special purpose financial statements by financier. A complete explanation of DAWASA's accounting policies and procedures is included in the Financial Management Manual (FMM).

18. Sources and flow of funds

18.1. All external funds for the Dar es Salaam WSS project will be made available to GOT. GOT will pass 60% of these funds to DAWASA as grant and/or equity to finance the Community WSS program, all consultant services and part of the Immediate Capital Improvement Program (CIP). The remaining 40% will be on-lent to DAWASA at 11.5%, repayable in Tanzania Shillings (Tshs) over 15 years, with a five year grace period. DAWASA will contribute the local portion of the construction component, representing approximately 10% of the Immediate CIP. DAWASA will also provide up to US\$5.5 million of IDA funds to the Operator to finance its start-up costs; this financial assistance will be reimbursed over the Lease term in Tshs, with five-year grace, at an interest rate of 11.5%.

Figure 1: Flow of funds

18.2. A schedule of project cost by major component and funding source is included below. The African Development Bank has already signed an agreement with the Government of Tanzania to loan 36.94 Million Units of Accounts (US\$46.83 Million) and provided a Technical Assistance Fund grant of 1.31 Million Units of Account (\$1.6 Million) - total of 48.43 at the current exchange rate of one Unit of Account equal to 1.26777 \$US.

Table 1: Financing Plan

Source of Funds	Amount US\$ million	Percent
World Bank (IDA)	61.50	37.0
African Development Bank	48.00	29.0
European Investment Bank	34.00	21.0
External funds		
DAWASA	12.60	8.0
Operator	8.50	5.0
Total	164.60	100.0

19. Financial planning and budgeting

19.1. **Ten-year financial forecasts:** DAWASA will update ten-year financial forecasts in December each year; such forecast will be used as the basis for the rolling three-year business plan discussed below. The financial forecast will be updated annually and submitted to the Board of Directors and financiers as part of the annual budget review cycle.

19.2. **Rolling three-year business plan:** To facilitate planning and budgeting, DAWASA will prepare each year a rolling three-year business plan. The plan will be submitted for approval to DAWASA's Board of Directors and forwarded to the Ministry of Finance and the financiers not later than March 31 each year.

19.3. **Annual budget:** DAWASA will prepare a detailed annual budget, including revenues, expenses and cash flows. The document will include supporting schedules assigning budgets to departments and include pro-forma financial statements for the coming year. The project annual budget will be submitted for review to the Bank no later than March 15 each year, to enable DAWASA incorporate the project budget into DAWASA main annual budget. This will then be submitted to DAWASA's Board of Directors for approval no later than 30 April each year.

20. Financial reporting

20.1. **Annual financial statements:** DAWASA's fiscal year ends on June 30. As per the DAWASA Act, DAWASA is required to submit audited financial statements to MOF and the financiers of the project at the latest six months after the end of its fiscal year. The financial statements, i.e. income statement, balance sheet and cash flow statement, and footnotes will be prepared on a historical cost or valuation basis in accordance with International Accounting Standards. No later than December 31 each year, DAWASA will submit an Annual Report to GOT and IDA, which will include its audited financial statements and that of the Operator and include a comprehensive performance review. DAWASA will also prepare separate special purpose financial statements for each external financier, including: (a) sources and uses of funds; (b) use of funds by project activity; (c) project balance sheet; special account statement (if applicable).

21. Financial monitoring reports (FMR)

21.1. The project will prepare and submit quarterly FMR for DAWASA management, MOF IDA, and financiers within 45 days of the end of the reporting period. FMR will be used as financial reporting inputs into the overall project monitoring progress report. These would include: financial reports, physical progress reports, and procurement reports.

- **Financial reports** will show: (a) quarterly and cumulative cash inflows and outflows, and (b) expenditures reported according to project activities, and according to procurement and disbursement categories;
- **Physical progress reports** will include information on the state of implementation of project activities, linking these to the financial reports. Indicators for monitoring technical progress are included in the POM;
- **The procurement report** will include: (a) the status of procurement of goods, works, and services; (b) a comparison of procurement performance against the procurement plan agreed upon with the Bank during negotiations or in subsequent reviews; and (c) the identification of specific problems and recommended solutions.

21.2. During appraisal, formats for quarterly FMR for project monitoring purposes were reviewed by the Bank FMS and found adequate for project implementation and were agreed upon during the negotiations.

Table 2: FMR Reporting Schedule

Reporting Period	Submission Period
July – September	15 November
October – December	15 January
January – March	15 April
April – June	15 July

22. Auditing arrangements

22.1. **External audit:** A local external auditor currently audits DAWASA's financial statements. DAWASA is in the process of engaging an internationally accredited auditor acceptable to the Bank, who will mobilize at the same time as the Operator. His TOR includes financial audits as well as technical audits of the performance of the Operator. The TOR for financial audits is included in the FMM. There will be two annual project audits undertaken each year: one for activities up to December (interim audit), and the other at the end of the fiscal year (final audit). The auditors will also prepare a management letter to outline any weaknesses identified during the audit and make recommendations for improving them. The audits will be conducted in accordance with International Standards on Auditing and the auditor will express opinions on:

- DAWASA financial statements, including income statement, balance sheet, cash flow statement and notes to the financial statements; and
- Project special purpose financial statements, prepared for each external financing source (IDA, AfDB, EIB), including audits of SOE and special accounts, as appropriate.

22.2. The auditor will also conduct a series of special purpose audits on the following:

- Financial assistance provided by DAWASA to the Private Operator, including the application for withdrawals and covenants;

- Billing and collection by the Operator and transfer to DAWASA of the DAWASA Tariff, as well as of bills outstanding on the Commencement Date of the Lease that are collected by the Operator on behalf of DAWASA and the calculation of the Operator collection fee;
- Payments made by the Operator and fees claimed by the Operator under the DWP, and compliance with the Lease contract;
- Operation of the Connection Fund, including the timely deposit of collected fees into a special account and the withdrawal of funds for the sole purpose of building social water connections.

22.3. The audited financial statements, audited project financial statements and annual management letter will be submitted to the financiers within six months of the closing of the fiscal year.

22.4. **Internal audit:** DAWASA also has an Internal Audit Unit that reports directly to the CEO. The Internal Audit Unit will conduct additional special audits to ensure that controls function appropriately. The Internal Auditor's responsibilities will include:

- Annual assessment of DAWASA internal controls covering procurement, disbursement and financial accounting and reporting;
- Review of all procurement activities to ensure compliance with the Procurement Act of 2001 and financier procurement regulations;
- Quarterly post-audit of all project disbursement;
- Assessment of the DAWASA accounting system in operation to ensure compliance with the provision of the Financial Management Manual;
- Annual risk assessment intended to identify current and developing risks that could affect project completion, intended results and contract obligations.

Annex 7: Project Processing Schedule

TANZANIA: Dar es Salaam Water Supply and Sanitation Project

Project Schedule	Planned	Actual
Time taken to prepare the project (months)	25	60
First Bank mission (identification)	05/10/1998	05/10/1998
Appraisal mission departure	02/01/2000	02/28/2003
Negotiations (field)	04/01/2000	03/13/2003
Board Presentation	06/01/2000	05/27/2003
Planned Date of Effectiveness	08/01/2000	07/15/2003

Prepared by:

The project was prepared by a Project Coordination Team (PCU) headed by a senior GOT official, reporting to the MWLD. Privatization of DAWASA's operations was handled by the Presidential Parastatal Sector Reform Commission (PPSRC) and the DAWASA Divestiture Team (DDT) that comprised members from the Ministry of Finance (MOF), MWLD, DAWASA and the PCU. The technical aspects of the project were prepared by DAWASA and MWLD. An IDA mission identified the project in May 1998 at the request of GOT; GOT formally accepted IDA proposal to support PSP under the form of a medium term Lease rather than a long term Concession and to coordinate the financing of the rehabilitation program in November 1998.

Preparation assistance:

The Bank has so far provided about US\$4.10 million to support preparation of the project including: about US\$2.20 million from Cr. 2507-TA (Public and Parastatal Sector Reform Project) which is managed by PPSRC to finance the DAWASA divestiture advisors; about US\$1.15 from two PPAs to finance a Project Coordination Unit (PCU), the preparation of bidding documents, and Technical Assistance (TA) to DAWASA; and a combined total of US\$0.75 from two other Bank financed projects (PPSDP and USRP) to finance additional TA to DAWASA.

Bank staff who worked on the project included:

Name	Specialty
Alain R. Locussol	Lead WSS Specialist; Team Leader
Solomon Alemu	Sr. Sanitary Engineer
Francis Ato Brown	Sr. Sanitary Engineer
Fook Chuan Eng	Sr. Financial Analyst
Sumila Gulyani	Sr. Urban Economist
Wambui Gichuri	WSS Economist
Mukami Kariuki	Sr. WSS Specialist (Community WSS)
Muthoni Kaniaru	Counsel
Steve Gagnis	Finance Officer
Nick Van Praag	Communication Advisor
Rafik Hirji	Sr. Water Resource Specialist
Arne Dalfelt	Sr. Environmental Specialist
Dan Aronson	Lead Social Scientist
Elizabeth Kleemier	Social Assessment (Consultant)
Mercy Sabai	Financial Management Specialist
Pascal Tegwa	Sr. Procurement Specialist
Vedasto Rwechungura	Operations Officer
Rowena Martinez	Operations Officer
Perla San Juan	Program Assistant
Peer Reviewers	
N. Jane Walker	Quality Anchor (Project Design)
Richard Verspyck	Quality Team Member (Economic Analysis)
Ventura Bengoechea	Quality Team Member (Institutional Arrangements)
Aldo Baietti	Quality Team Member (Financial Analysis)
Andrew Macoun	Quality Team Member (Technical Aspects)

Annex 8: Documents in the Project File

TANZANIA: Dar es Salaam Water Supply and Sanitation Project

A. Project Implementation Plan

Draft Project Implementation Plan

B. Bank Staff Assessments

Project Preparation Aide Memoires and Back to Office Reports

Financial Management Assessment

Procurement Capacity Assessment

Project Information Document

Integrated Safeguards Data Sheet

Financial and Economic Analysis Data

C. Other (Documents/Studies carried out by DAWASA and MWLD)

Draft National Water Policy (MWLD, 2001)

Social Assessment Study (Kleemier, 2002)

Environmental Assessment Study (Elmcrest-MMK, 2002)

Resettlement Framework Paper (DAWASA, 2002)

Draft Project Operational Manual (DAWASA, 2002)

Vol 1: Project Implementation Plan

Vol 2: Financial Management Manual

Vol 3: Procurement Manual

Vol 4: Administrative Manual

Vol 5: Safeguards Manual

Vol 6: CWSS Operational Manual

Detailed Designs and Tender Documents of Investment Program (Elmcrest-MMK, 2000)

Final Bidding Documents for Private Operator (STWI, 2001)

Development Contract between MoF and DAWASA (2001)

Lease Contract between DAWASA and Biwater/Gauff (2003)

Revised DAWASA Act (2001)

EWURA Act (2001)

MWLD Water Supply and Waste Disposal Design Manual (MWLD, 1997)

Draft Urban Water and Sewerage Policy (MWLD, 2000)

MWLD Annual Reports (1996, 1997, 1998)

Annex 9: Statement of Loans and Credits
TANZANIA: Dar es Salaam Water Supply and Sanitation Project

Project ID	FY	Purpose	Original Amount in US\$ Millions				Cancel.	Undisb.	Difference between expected and actual disbursements ¹	
			IBRD	IDA	SF	GEF			Orig	Frm Rev'd
TZ-PE-47761	1999	TAX ADMINISTRATION	0.00	40.00			0.00	38.27	0.00	0.00
TZ-PE-2789	1998	HUMAN RESOURCE DEV 1	0.00	20.90			0.00	14.68	1.50	0.00
TZ-PE-2804	1998	AGRIC RESEARCH	0.00	21.80			0.00	18.94	0.63	0.00
TZ-PE-2753	1997	NAT EXT PROJ PH.II	0.00	31.10			0.00	18.82	7.42	0.00
TZ-PE-2821	1997	SAC I	0.00	131.50			0.00	24.15	24.98	27.46
TZ-PE-38570	1997	RIVER BASIN MGM.SMAL	0.00	26.30			0.00	17.41	4.39	0.00
TZ-PE-46837	1997	LAKE VICTORIA ENV.	0.00	10.10			0.00	6.98	1.57	0.00
TZ-PE-2758	1996	URBAN SECTOR REHAB	0.00	105.00			0.00	76.50	16.21	0.00
TZ-PE-2812	1995	MINERAL SECTOR DEV.	0.00	12.50			0.00	2.97	1.41	0.00
TZ-PE-2770	1994	ROADS II	0.00	170.20			0.00	146.15	142.95	0.00
TZ-PE-2801	1994	ASMP	0.00	24.50			2.48	5.87	5.70	0.00
TZ-PE-2756	1993	POWER VI	0.00	200.00			0.00	37.48	15.32	0.00
TZ-PE-2780	1993	TELECOM III	0.00	74.45			0.00	15.57	16.15	16.07
TZ-PE-2788	1993	PRIV. PUB. SECT. MGT	0.00	34.90			0.00	2.73	0.66	0.00
TZ-PE-2817	1993	FIN.& LEGAL MGT PROJ	0.00	20.00			0.68	3.87	4.07	2.58
TZ-PE-2757	1991	RAILWAYS RESTRUCTURI	0.00	76.00			10.97	18.33	25.43	-1.80
TZ-PE-2786	1991	PETROL REHAB	0.00	44.00			0.00	14.77	12.60	12.29
Total:			0.00	1,043.25			14.13	463.49	280.99	56.60

TANZANIA
STATEMENT OF IFC's
Held and Disbursed Portfolio
31-Jul-1999
In Millions US Dollars

FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1989	TASCO	0.88	0.00	0.00	0.00	0.88	0.00	0.00	0.00
1991	Mufindi Tea	0.43	0.00	0.00	0.00	0.43	0.00	0.00	0.00
1991/97	TPS Zanzibar	1.01	0.10	0.19	0.00	1.01	0.10	0.19	0.00
1993	TPS (Tanzania)	7.00	1.04	0.87	0.00	7.00	1.04	0.87	0.00
1993/96	AEF Tanganyika	0.19	0.00	0.00	0.00	0.19	0.00	0.00	0.00
1994	AEF Moshi Lthr	0.00	0.00	0.25	0.00	0.00	0.00	0.19	0.00
1994	AEF Nomad Safari	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00
1994	AEF Raffia Bags	0.33	0.00	0.00	0.00	0.33	0.00	0.00	0.00
1994	Eurafrican Bank	0.00	0.00	0.73	0.00	0.00	0.00	0.73	0.00
1994	Tanzania Brewery	0.00	0.00	6.00	0.00	0.00	0.00	6.00	0.00
1994	ULC Leasing	1.88	0.00	0.95	0.00	1.88	0.00	0.76	0.00
1995	AEF MIC Tanzania	0.30	0.00	0.00	0.00	0.30	0.00	0.00	0.00
1995	AEF Tanbreed	0.70	0.00	0.00	0.00	0.70	0.00	0.00	0.00
1996	AEF Contiflora	0.35	0.00	0.00	0.00	0.35	0.00	0.00	0.00
1996	AEF Milcafe	0.21	0.00	0.00	0.00	0.21	0.00	0.00	0.00
1996	AEF Zainab Grain	0.80	0.00	0.00	0.00	0.80	0.00	0.00	0.00
1996	IHP	1.41	0.00	0.60	0.00	1.41	0.00	0.60	0.00
1997	AEF Aquva Ginner	0.68	0.00	0.00	0.00	0.68	0.00	0.00	0.00
1997	AEF Hort. Farms	0.70	0.00	0.00	0.00	0.70	0.00	0.00	0.00
1997	DATEL	2.25	0.00	0.51	0.00	1.35	0.00	0.48	0.00
1997/99	AEF Pallsons	0.78	0.00	0.00	0.00	0.78	0.00	0.00	0.00
1998	AEF Blue Bay	1.50	0.00	0.00	0.00	0.50	0.00	0.00	0.00
1998	AEF Drop Zanziba	0.32	0.00	0.00	0.00	0.32	0.00	0.00	0.00
1998	AEF Maji Masafi	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
1998	Tanzania Jubilee	0.00	0.00	0.29	0.00	0.00	0.00	0.29	0.00
	Total Portfolio:	22.77	1.14	10.39	0.00	20.87	1.14	10.11	0.00

FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic
	Total Pending Commitment:	0.00	0.00	0.00	0.00

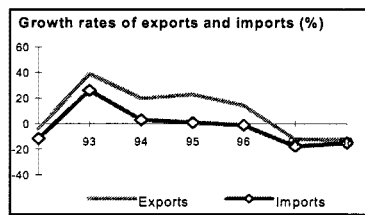
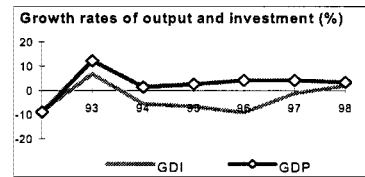
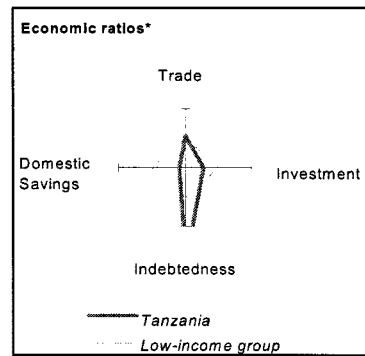
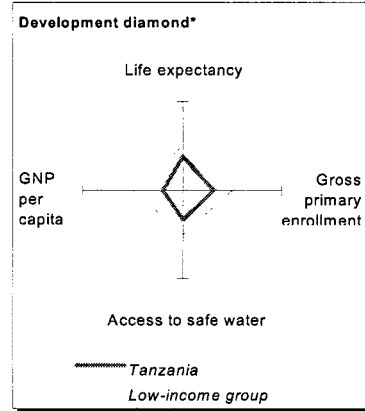
Annex 10: Country at a Glance

TANZANIA: Dar es Salaam Water Supply and Sanitation Project

	Tanzania	Sub-Saharan Africa	Low-income	
POVERTY and SOCIAL				
1998				
Population, mid-year (millions)	32.1	628	3.515	
GNP per capita (Atlas method, US\$)	210	480	520	
GNP (Atlas method, US\$ billions)	6.7	304	1.844	
Average annual growth, 1992-98				
Population (%)	2.8	2.6	1.7	
Labor force (%)	1.9	2.6	1.9	
Most recent estimate (latest year available, 1992-98)				
Poverty (% of population below national poverty line)	..	..	..
Urban population (% of total population)	26	33	31	
Life expectancy at birth (years)	48	51	63	
Infant mortality (per 1,000 live births)	85	91	69	
Child malnutrition (% of children under 5)	31	..	..
Access to safe water (% of population)	49	47	74	
Illiteracy (% of population age 15+)	28	42	32	
Gross primary enrollment (% of school-age population)	66	77	108	
Male	67	84	113	
Female	66	69	103	
KEY ECONOMIC RATIOS and LONG-TERM TRENDS				
	1977	1987	1997	1998
GDP (US\$ billions)	..	3.8	7.1	7.9
Gross domestic investment/GDP	..	39.8	16.3	16.0
Exports of goods and services/GDP	..	10.2	17.6	15.8
Gross domestic savings/GDP	..	20.1	5.4	6.0
Gross national savings/GDP	..	16.2	4.3	4.4
Current account balance/GDP	..	-2.7	-11.9	-14.1
Interest payments/GDP	..	1.2	0.6	0.5
Total debt/GDP	..	146.0	101.6	89.4
Total debt service/exports	8.3	35.4	12.0	13.5
Present value of debt/GDP	75.3	..
Present value of debt/exports	405.0	..
	1977-87	1988-98	1997	1998
<i>(average annual growth)</i>				
GDP	..	2.9	4.0	5.3
GNP per capita	..	0.1	1.4	0.2
Exports of goods and services	..	10.3	-12.3	-12.8

	1977	1987	1997	1998
STRUCTURE of the ECONOMY				
<i>(% of GDP)</i>				
Agriculture	..	59.2	47.3	46.3
Industry	..	11.9	14.3	14.1
Manufacturing	..	6.8	7.1	6.8
Services	..	28.9	38.4	39.5
Private consumption	..	67.2	84.6	85.2
General government consumption	..	12.7	10.0	8.8
Imports of goods and services	..	30.0	28.5	25.7
	1977-87	1988-98	1997	1998
<i>(average annual growth)</i>				
Agriculture	..	3.5	3.1	2.7
Industry	..	2.1	6.7	6.8
Manufacturing	..	1.7	4.9	4.9
Services	..	2.3	3.4	2.3
Private consumption	..	2.8	2.6	2.1
General government consumption	..	-5.0	-18.3	-9.8
Gross domestic investment	..	-0.2	-1.1	1.9
Imports of goods and services	..	0.2	-17.7	-15.0
Gross national product	..	3.1	4.2	2.9

9/22/99

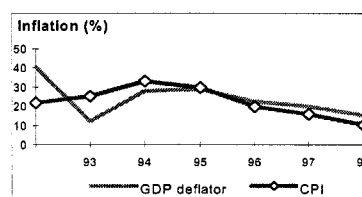


Note: 1998 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

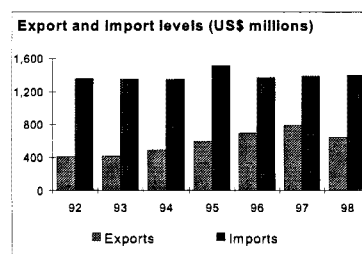
PRICES and GOVERNMENT FINANCE

	1977	1987	1997	1998
Domestic prices				
(% change)				
Consumer prices	11.6	29.9	16.1	10.4
Implicit GDP deflator	..	..	20.0	15.3
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	16.1	13.5	12.3
Current budget balance	..	-2.1	1.0	1.5
Overall surplus/deficit	..	-8.5	-1.6	-2.2



TRADE

	1977	1987	1997	1998
(US\$ millions)				
Total exports (fob)	..	426	794	645
Coffee	..	147	118	111
Cotton	..	36	138	91
Manufactures	..	51	102	68
Total imports (cif)	..	1,099	1,388	1,402
Food	..	86	57	84
Fuel and energy	..	157	194	138
Capital goods	..	552	503	551
Export price index (1995=100)
Import price index (1995=100)
Terms of trade (1995=100)



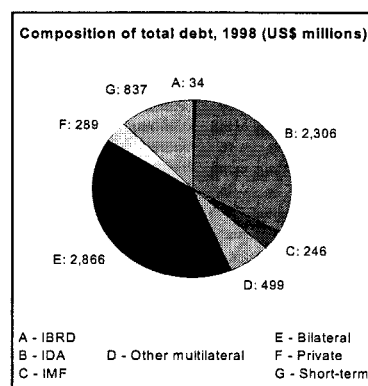
BALANCE of PAYMENTS

	1977	1987	1997	1998
(US\$ millions)				
Exports of goods and services	645	442	1,274	1,125
Imports of goods and services	811	1,277	2,040	2,118
Resource balance	-165	-834	-767	-993
Net income	-21	-149	-101	-156
Net current transfers	116	..	26	30
Current account balance	-70	-102	-842	-1,120
Financing items (net)	230	97	1,114	1,120
Changes in net reserves	-160	5	-272	-1
Memo:				
Reserves including gold (US\$ millions)	..	..	460	502
Conversion rate (DEC. local/US\$)	..	51.2	599.5	637.8



EXTERNAL DEBT and RESOURCE FLOWS

	1977	1987	1997	1998
(US\$ millions)				
Total debt outstanding and disbursed	3,527	5,508	7,177	7,077
IBRD	113	325	34	34
IDA	145	801	2,306	2,306
Total debt service	55	157	158	158
IBRD	9	47	24	24
IDA	4	10	32	32
Composition of net resource flows				
Official grants	135	481	434	..
Official creditors	189	140	189	189
Private creditors	30	38	-15	-15
Foreign direct investment	0	-1	158	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	102	23	150	150
Disbursements	63	95	183	183
Principal repayments	4	28	36	36
Net flows	59	67	147	147
Interest payments	9	29	20	20
Net transfers	50	38	127	127



THE UNITED REPUBLIC OF TANZANIA
THE MINISTER FOR FINANCE

Telephone: 2112854.
Fax: 117790.
In reply please quote:



THE TREASURY,
P.O. Box 9111,
DAR ES SALAAM,
TANZANIA.

Ref. No. **Ref: TYC/B/40/101**

28th March, 2003

Ms. Judy O'Connor
Country Director (Tanzania and Uganda)
World Bank Country Office
Dar es Salaam

Dear Ms. O'Connor,

Letter of Urban Water Supply and Sewerage Sector Policy

1. I am writing on behalf of the Government of the United Republic of Tanzania to request a credit of US\$61.50 million from the International Development Association (IDA) in support of the US\$164.60 million proposed Dar es Salaam Water Supply and Sanitation Project (DWSSP). The project will be co-financed by the African Development Bank (ADB) and the European Investment Bank (EIB) to the tune of US\$48.0 million and US\$34.0 million respectively. The Government contribution to the project amounts to US\$12.6 million while the selected private professional operator – City Water Services Ltd equity stands at US\$8.5 million. The development objective of the project is to provide a *reliable, affordable and sustainable* water supply service and improve the sewerage and sanitation services in areas served by the Dar es Salaam Water and Sewerage Authority (DAWASA) that includes Dar es Salaam and part of the Coast region. This will help improve public health and well being in a city prone to cholera outbreaks or other water borne diseases and support productive activities of the country's main economic centre.

Background

2. This letter of sector policy represents the essential elements of the urban water supply and sewerage component of the National Water Policy (NAWAPO, 2002) that has been approved by the Government. The Government of Tanzania's overriding policy goal is to reduce poverty in the country. This goal is outlined in the Poverty Reduction Strategy Paper (PSRP). One of the seven priority areas of the PRSP is the Water and Sanitation Sector, which is seen as key to effectively reducing poverty. NAWAPO is thus set within the overall policy framework of the PRSP and vision 2025 and represents an important corner stone for meeting the Millennium Development Goals for the water sector which entails reducing by half the number of urban population without access to potable water supply and sanitation services by 2015.

3. The main objective of the urban water policy is to provide sustainable, reliable and affordable water supply and sewerage services to all water users in urban areas. The specific objectives of the policy includes creation of an enabling environment and appropriate incentives

for the delivery of services, development of an effective decentralized institutional framework that also ensures autonomy of water supply and sewerage entities and development of effective legal and regulatory framework for all sector players including the private sector.

4. NAWAPO is an outcome of many a policy, institutional, legal and regulatory framework changes, which have taken place in the sector since the launching of the national water policy of 1991. These changes are associated with liberalization of the economy, as well as the need for having improved services to the people. NAWAPO has been factored into the Medium Term Strategic Plan for improving urban water and sanitation services in the country. This Plan will soon be operationalized through the water sector development strategy and investment programme currently under preparation.

5. Legislation and supporting regulations have been enacted at different times to regulate urban water supply and sewerage programs. Among them is Water Laws (Miscellaneous Amendments) Act No. 8 of 1997, which amended the National Urban Water Supply Act No. 7 of 1981 to form Dar es Salaam Water Supply and Sewerage Authority (DAWASA). This was followed by the Water Laws (Miscellaneous Amendments) Act No. 1 of 1999, which reformed DAWASA, the DAWASA Act of 2001 which made DAWASA comply with the regulatory requirements of the Energy and Water Utilities Regulatory Authority (EWURA) Act also enacted in 2001. The EWURA Act has set the broad framework for regulating water and energy services in the country.

Current Status of the Urban Water Supply and Sewerage

6. The population of Tanzania is estimated at 34.6 million people, of which about 8 million live in urban centres. The urban water supply coverage is 73%. The service delivery in 18 out of 21 urban centres has improved substantially since the establishment of the Urban Water and Sewerage Authorities (UWSA) in 1998. Annual revenue collection (excluding DAWASA), for example, has more than doubled from Tshs 4.5 billion in 1998 to Tshs 11.7 billion in June 2002. However, there are still some resource constraints, especially financial, for major rehabilitation and expansion of the infrastructure.

7. Less than 10% of the urban population is connected to a sewerage system and only 10 out of 21 regional urban centres are seweraged, covering mainly the Central Business Districts. Recently, under the Urban Sector Rehabilitation Programme (USRP), the sewerage systems in five municipalities were rehabilitated and two new ones were constructed. As coverage is low, most people use septic tanks and pit latrines. Sludge disposal from these onsite sanitation facilities is a problem particularly for those towns which have no sewage treatment plants. Soon there will be carried out studies on water supply and sanitation in these towns to address this issue. The contributing factors to the existing unsatisfactory situation in urban areas include:

- Rapid population growth due to rural-urban migration. Statistics indicate that the urban population is increasing at an average rate of 4.3% per annum which is much higher than the average national growth rate of 2.9%
- Inadequate financial resources for investment.
- Old age of the existing water supply systems resulting into higher losses due to leakages.
- Inadequate management capacity

8. The above constraints notwithstanding, the merging of water supply and sewerage under one institution is a move in the right direction intended to give sanitation more attention. Every urban water supply intervention now considers sewerage as well.

Key Policy Issues in the Delivery of Urban Water Supply and Sewerage Services (UWSS)

9. The overall policy objective of the Government of Tanzania (GOT) is to improve public health, the environment and support economic activities in urban areas of Tanzania. The GOT will create the enabling environment and appropriate incentives for the delivery of reliable, sustainable and affordable water supply and sanitation services by shifting from the provision of UWSS services to the facilitation and financing of UWSS services.

Water Sources and Infrastructure

10. The Government recognizes that water sources are finite and should be managed both as a social and economic good. The Government further realizes that water sources for most urban water supplies are inadequate. The infrastructure for most urban water and sewerage systems are old, inadequate and are not functioning to their capacity thus cannot cope with increasing demand and emergencies. Further, the impact of human activities on the environment has increased the pollution risk on the water sources. The Government is taking measures to allow demarcation of the water sources to enable UWSA process and acquire title deeds of the land around the sources. Further, the Government will ensure that:

Development of new water sources for urban water supply will consider environmental impact assessment and stakeholder consultation to design the mitigation plan.

Necessary measures shall be taken to ensure that urban areas have adequate water supply and sanitation facilities. The sanitation facilities will vary from sewerage systems to hygienic onsite sanitation coupled with proper sludge disposal mechanism.

Acquisition of necessary financing for rehabilitation and expansion of the systems will be undertaken.

- Development and expansion of the water supply systems shall consider both the development of sewerage systems and general environmental sanitation.

Services for Low Income Groups and Community User Groups

11. People living in under privileged urban and peri-urban areas rarely benefit from adequate water supply and sanitation services. They cannot afford to have piped water connection because of high connection costs. The wastewater they produce is not collected and disposed hygienically. It is the responsibility of the Government to ensure that:

- Water supply and sewerage entities provide low income groups with appropriate services. Water supply and sanitation needs of the poor are promoted in initiatives which encourage public/private partnership.
- Appropriate social equity considerations are put in place so that basic level of water supply and sanitation services is provided to the poor at affordable costs.
- Use of simplified sewerage systems in the peri-urban areas is promoted.
- Non Governmental Organizations and Community Based Organizations are encouraged to participate in financing as well as assist Water User Associations develop and manage community water and sanitation services in low income urban areas.

- Small Scale Independent providers are recognized and mainstreamed in the provision of UWSS services.
- Wherever possible UWSAs shall promote social connection policies that allows first time small diameter domestic connections at rates affordable to both consumers and operating entity.
- There shall be minimal survival supplies of water of five (5) cubic metres per month to be subsidized by higher consumption and without compromising sound commercial and sustainable operations.

Water Demand Management

12. Comprehensive water resources management shall be the framework of all UWSS development in Tanzania. All projects/programs shall meet the basic test for efficiency in the use of water resources. Demand management through appropriate pricing shall become standard practice in Tanzania. Pricing, allocation rights from Basin Water Offices to UWSAs as well as comprehensive metering and promotion of conservation practices shall be enforced. In particular, the following will be done:

- Proper tariff setting, metering, leakage control and mass education on better use of water and its conservation
Promotion of low capacity cisterns
- Including water issues in primary schools curriculum.

Waste Water and Environment

13. The Government is aware of the need to protect the environment against all sorts of destruction, and pollution including that due to wastewater. Wastewater management shall go hand in hand with water supply development. All water supply schemes shall be evaluated against considerations of wastewater management and sewage treatment in the UWSA area of operation. These considerations as well as a development of a comprehensive environmental impact assessment will be an essential part of the regulatory arrangements.

Financing and Cost Recovery

14. The Government is aware of its limited financial resources for investment, operation and maintenance in the UWSS subsector and hence will ensure that:

Local and external financial resources for capital works are mobilized.
All water users pay for water supply and sewerage services.

Pricing of water supply and sewerage services shall be translated into customer friendly tariff and cost recovery strategies that reflect the short-term, the operation and maintenance costs and in the long term the depreciation cost, and amortization of capital investment.

- GOT budget subsidies to UWSAs operation and maintenance (O&M) costs will be discouraged. However, in the short-term such subsidies may be considered on a case by case basis. Subsidies will be time bound and directed at investments and operating arrangements in the UWSA's business plan which will return the UWSA to positive operating margin in the shortest possible time.
- All water produced and water supplied to every customer shall be metered.

- Private water sources will not be allowed in the operation area of a utility unless with the consent of regulating authority.
- Where a sewer line exists, UWSAs will work with Local Governments to pass bye laws that enjoin properties within 30 metres to connect at affordable cost.
- Where there is a distribution system with adequate and reliable water supply, customers will be encouraged to connect. Cost of providing new connections (through a social connection policy) will be made affordable to encourage more connections.

Legal and Regulatory Framework

15. After the approval of NAWAPO, the Government has started the process of revisiting all water legislation in that:

- Existing laws related to water and sewerage in urban areas are reviewed, conflicting laws related to UWSS are identified and harmonized and different pieces of water and sewerage legislation are consolidated into one.

An independent regulator (EWURA) is in the process of being set up and that sector specific legislation based on EWURA broad framework, to safeguard interests of the operator and the customer, is to be undertaken.

The general public is empowered by law to institute cases of environment damage in courts of law. The law also allows complaints by general public to be raised against the suppliers of WSS services.

Institutional Development, Decentralisation and Capacity Building

16. The role of the Government has changed from that of a provider of services to that of a facilitator for service provision in the sector. In this endeavour, the Ministry responsible for water has undertaken major reforms in the urban sub-sector that have improved service delivery appreciably in the last eight years. Eighteen autonomous UWSAs have been established so far. The rationale is to have them operating sustainably and on sound commercial principles to attract private sector involvement in the medium term. The Government will ensure, through the Ministry responsible for water using expertise and experience gained in the reforms, that:

- An appropriate institutional framework to ensure establishment of decentralized autonomous entities for management of water supply and sewerage services in all urban centres is in place. To this end GOT will continue to promote and consolidate the concept of autonomous and decentralised Urban Water and Sewerage Authorities (UWSAs) in UWSS services areas.
- Such autonomous entities might not necessarily follow local government boundaries but should have governance frameworks that ensure full participation of service area beneficiary

Local Government(s) as well as guarantee broad representation of consumers on its governing Board.

The UWSAs will operate in a manner that promotes the maximum efficiency in the day to day operations through a regime of performance contracts between GOT and the respective UWSA as well as between the UWSA and its operating entities (public or private).

- On a case by case basis, UWSAs could seek permission from the Ministry in charge of water to associate, merge or consolidate their operation in order to promote economies of scale in their operations.

- The Institutional set up is accompanied by reforms that promote integrated approaches, taking into account changes in procedures, attitudes, behaviour and the full participation of women at all levels

There is an acceleration of institutional and capacity building efforts in technical, legal, financial and economic management of UWSS sub-sector at all levels.

- Staff up to the lowest level, are properly trained and deployed.
- New entities of user groups and co-operatives will be promoted and established.

Private Sector Participation (PSP)

17. The Government has embarked on the process of reforming and restructuring the economy and the civil service. The Government has now endorsed the participation of private sector and other stakeholders in provision of water supply and sewerage services. Private sector participation, including options for full concessions, Lease operations, management and services contracts are recommended for the management of urban water supply and sewerage services.

18. The process of involving private sector in the DAWASA's operations is nearing completion. The lessons learnt in the last five years of the process offer a good experience and learning ground for PSP involvement in the other UWSAs. Each private sector transaction will however be appraised on its own merit and opportunity for economies of scale for joint management of multiple UWSAs will be acceptable.


Promotion of Hygiene and Behaviour Change

19. UWSS services are about improving the health and well being of users. Relevant hygiene promotion for positive behaviour transformation shall be factored in the operational practice of all UWSA operations. Appropriate linkages with Ministry of Health, Local Government, existing programs, and other private sector and media groups shall be encouraged.

Conclusion

20. The Government will ensure compliance with the above policy reforms. A Technical Advisory Committee involving all key UWSS stakeholders is already in place to guide the implementation and provide appropriate forum for annual reviews of the operations of all UWSAs and the implementation of these policies. In the process, the GOT will develop within the MWLD a credible Management Information System (MIS) to track developments in the sector and accumulate best practices for the implementation of the Urban WSS Strategy and Investment Programme with the view of reducing the proportion of people without access to safe drinking water at the end of the project period.

Yours Sincerely,



Basil P. Mramba (MP)
MINISTER OF FINANCE

Map Section

