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Finnish International

ZANZIBAR URBAN WATER SUPPLY PROJECT

PROGRESS REPORT
2nd Quarter 1992

August 1992

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TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	1
1. ECONOMIC AND INSTITUTIONAL DEVELOPMENT	5
1.1 Institution Building	5
1.1.1 Establishment of UWSS	5
1.1.2 Staff of UWSS	5
1.1.3 Management Team	6
1.2 Personnel Management System	6
1.3 Training	7
1.4 Environmental Education	7
2. WATER SUPPLY DEVELOPMENT	8
2.1 General	8
2.2 Updating of Technical Information	8
2.3 Planning and Design	8
2.4 Operation Monitoring	9
2.5 Improvement of Water Supply	10
3. OPERATION AND MAINTENANCE SUB-SECTION	11
3.1 General	11
3.2 Initial Findings	11
3.3 Manning of the Sub-Section	12
3.4 O&M Operation during the Second Quarter	12
3.4.1 Mapping and Network	12
3.4.2 Leakage Detection and Repair	13
3.4.3 Repair and Maintenance Work	13
3.5 Supporting Activities	14

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4.	WATER RESOURCES AND ENVIRONMENTAL DEVELOPMENT	15
4.1	General	15
4.2	Water Resources Monitoring	15
4.3	Environmental Activities	15
4.4	Drilling	16
4.5	Laboratory	17
5.	EXPENDITURE	18

APPENDICES

Appendix 1	House Connection Files
Appendix 2	Collection of Water Charges
Appendix 3	UWSS Staff

EXECUTIVE SUMMARY

GENERAL

This reporting period covers the second quarter of the year 1992 (April - June), and is the first period of the Project with a full long term staffing.

Yet, the operative state of the project has been somewhat provisory. The consolidation of activities is still on-going and also some set backs have been experienced.

INSTITUTION BUILDING

Filling of the key counterpart posts has not progressed as anticipated. Probably the biggest difficulty is to find a Senior Executive Officer who would be clearly authorized to take over the responsibility of urban water supply activities. Also a sudden illness of the Workshop Technician has caused some delays on planned O&M activities. Because allocation of workshop premises in Unguja turned out to be somewhat difficult, the temporary replacement of workshop technician was deemed to be unnecessary.

The most positive progress in Zanzibar Office has been achieved as O&M Engineer joined the Project. He got in June a capable counterpart, Distribution Technician. Their joint working has been efficient and successful. The distribution maintenance team seems to have taken over a leading role concerning maintenance of Zanzibar Town reticulation network.

The functioning of the Pemba Office has been surprisingly successful despite limited human resources and still open and to far extent unsettled institutional position of the Project in Pemba.

Obviously, the concept of the separate operation of urban water supply is not fully adopted. **Department of Water Development seems to have the inadequate capacity of dividing activities to rural and urban at the pace expected earlier.**

Perhaps the most important constraint is to release key professional and skilled staff only for urban water supply, due to limited human resources but it can also be doubted that the entire issue of autonomous urban water authority is not yet fully conceived.

WATER SUPPLY

In terms of water supply, the reporting period was drastically different from the previous one. The long rains delayed until April causing water shortages especially in Unguja. When they came torrent and ample water resources were recovered quickly, but also many technical problems resulted.

Power supply, normally fairly constant in Unguja, was disrupted due to failures of supply quit and transformers.

Torrent rains caused also damages along main supply lines in both islands and at least two major lines, one in Zanzibar Town and one in Wete, Pemba were managed to be repaired only temporarily.

Due to heavy rains, major construction works planned in Wete and Chake Chake were postponed and are expected to start in August.

Vulnerable power supply situation in Pemba did improve during the first quarter, but the second quarter experienced already interruptions due to erratic fuel supply to power plant. Still, it was positive, that rationing of the power was carried out somewhat better than earlier and eg. water utilities were given priority to receive power whenever it was available. In this respect, one may expect improvement as the long waited ADB financed power supply project was mobilized.

Most probably, technical state of power utilities in Pemba will improve drastically in two-three years time, the rest of the problems have to be resolved with rather similar policy decisions (tariffs, management) than required for success of the sustainable water supply.

WATER QUALITY

Co-incident with the heavy rains, Unguja experienced a mild cholera-epidemy, which isolated mainly into the most southern part of the island. The epidemy raised however an alarm and the government reacted quickly introducing restriction especially in food trade.

Although the water supply of Zanzibar Town was not considered to be of great risk to spread the epidemy, the readiness of the water authority to mobilize emergency chlorination was increased and will be maintained in the future.

During the incidence, a continuous hygiene monitoring of water sources was organized but there was no indication of alarming contamination of water supply.

GROUNDWATER SITUATION AND DRILLING

At large, the improvement of water supply in Unguja has been still due to more favorable groundwater situation than result of the technical improvement.

Reliability is to far extent checked by circumstances, notably related to power supply. Technical improvement achieved in Pemba by installation of new pumping facilities has resulted in small relief whenever they have been operational but popularity of hand pumps and easiness to organize and mobilize the urban population to install hand pumps indicates clearly low service level of the present piped supply.

In Zanzibar Town, the first borehole was expected to increase system's capacity substantially. However, the yield turned out to be at its best some 20% of the estimated production.

Therefore, before moving to a new drilling site, an old silted borehole was cleaned and enveloped. Test pump results also confirmed that this borehole is worth of rehabilitation and its commissioning is planned to occur as soon as all required equipments have arrived.

Meanwhile the drilling continues within Kijito Upele catchment area.

MATERIAL SUPPLY

Materials ordered in late 1991 have mostly arrived and the second round of pipe and fitting orders have advancing. Increasing acquaintance of the state and condition of the reticulation networks have caused substantial purchase of materials required for repairs and it will be of great concern, how future purchases are prioritized.

The delayed and erratic transport of goods due to the shipments via Dar es Salaam Harbour has eased as the project has been able to find a regular vessel calling at Zanzibar once or twice in a week and effective shipping agent reducing also substantially turn-over time in Dar es Salaam.

Efforts have been made to find reliable and well stocked material suppliers within Tanzania, however, so far with rather limited success. Major purchases have had to be done either from Kenya or from Europe.

FINANCIAL SITUATION

Finance of the project during the reporting period is rather close with the budget.

Investment vote is still the biggest expenditure and purchases done so far, have been to far extent stocking basic tools and materials.

VISITS TO THE PROJECT

During the reporting period, Mr. E. Ovaskainen, a hydrogeological advisor to the Project worked 6 weeks for the preparation of the hydrogeological report and drilling programme.

The sectoral advisor of Finnida, Mr. H. Wihuri paid a short visit to the Project in April with the special emphasis on discussion with the representatives of the Zanzibar Government and the Project Staff.

1. ECONOMIC AND INSTITUTIONAL DEVELOPMENT

1.1 Institution Building

1.1.1 Establishment of UWSS

Preparations for reorganizing the tasks and responsibilities among the urban and rural water supply sectors within the DWD of Unguja were commenced during the reporting period.

The existing procedures for installing house connections and for revenue collection were studied (Appendix 1 and 2) with observation that the current procedures give a good basis for further development.

Organizing and staffing for Operation & Maintenance Unit has been underway. Preparations for delegating Saateni pumping station management to the UWSS were started.

However, in Pemba the development in this respect has not been that promising. There seems to be some reluctancy delay within the DWD to make the administrative decisions on the necessary reorganizing of tasks and personnel.

Unfortunately, any person of the high seniority for the post of Manager of the UWSS has not been found, which hampers to some extent the progress of institutional development. The present situation where the Director of the DWD as a Manager for the UWSS cannot be sustainable in the long-run due to the enormous workload of that post.

1.1.2 Staff of UWSS

The total number of staff of the Urban Water Supply Section (UWSS) were 64 in Unguja and 15 in Pemba up to the end of June 1992. For Unguja 15 new employees and 2 for Pemba were recruited mainly due to the intensification of drilling and operation and maintenance activities.

A staff roster is produced monthly by the Administration. The staff composition with changes during the 2nd quarter of the year is shown in Appendix 3. The watchmen of the expatriates' houses are not the staff of the UWSS, although included in the roster.

The process of filling the posts of Chemist, PR-Officer, Training Officer and Consumer Officer is expected to be completed in a couple of weeks. The Department of Administration and Manpower Development has orally accepted the new posts by merging a number of vacant posts of lower cadre. Hence, the posts will be established at first to the DWD and then transferred to its UWS Section. The qualified candidates for the posts have already been selected.

Seven long-term advisors worked for the Project for the whole reporting period and one short-term consultant for a month.

1.1.3 Management Team

During the reporting period, Management Team had met four times. The meetings take place twice a month. They are intended to be the main instrument for the short-term planning and progress appraisal of the UWSS's activities.

Permanent issues on Agenda are sectorial progress reporting and human resources development. Task delegation from the DWD to the UWSS have been under discussions in each meeting.

It has also been agreed that the Heads of the units conduct regular meetings with their staff in order to improve the flow of information and to prepare issues for the Management Team.

1.2 Personnel Management Systems

The systems developed for staff administration are in full use and the systems are running smoothly. Signing of the contracts of direct employment has been going on, leave roster has been prepared and personnel data updated as intended. Forms for appraising work performance in the connection of granting increments have been introduced on a trial basis by the Management Team.

1.3 Training

Six trainees completed their on-the-job-training in Kakamega, Kenya in May and started their work for the UWSS. Each trainee gave a report in writing on their activities during training. The experiences gained were very positive. The trainees seem to have achieved practical skills applicable directly in actual working situations in Zanzibar. The training also appeared to improve their occupational self confidence by diversifying their work experience and working methods. At the craftsman level systematic practical training is apparently one among the best means of learning.

The Secretary of the Unguja Office worked one week in Pemba together with the Secretary of the Pemba Office. The purpose was to instruct the Pemba Secretary on practical office affairs and to establish systems for files, registers, correspondence and other secretarial duties. This on-the-job training was planned to supplement her theoretical training achieved in the course of "Office Administration and Supervision" in March 1992.

Assessment of training needs has been going on within various units. Each unit is supposed to carry out task analysis, job analysis including job descriptions and skill analysis in order to specify needs for training. Management Team has supervised the process. Unit meetings have been held in order to clarify the concept of training needs. The process will be more or less continuous and intended to result in clarifying the division of labour between various units and in revising an organization chart to meet present requirements.

1.4 Environmental Education

The TV drama called 'Usilolijua' i.e. 'Something that you don't know' was completed as scheduled in the agreement with TVZ. It has been presented twice in TVZ so far. Titling in English is underway.

The video film answered very well the expectations set for it. This first attempt to attract people's attention to water hygiene will get sequels in the form of advertisements, documentaries etc.

2. WATER SUPPLY DEVELOPMENT

2.1 General

Appurtenances, fittings and other equipments ordered late 1991 for the rehabilitation work in order to increase the capacity and improve reliability of the existing facilities has started to arrive into Zanzibar. Arrangement to establish a store Pemba has been made to stock gradually also reasonable material store there.

Extensive rehabilitation works are yet to until completion of the detailed study on operation of distribution system in Zanzibar Town has advanced enough to have concrete planning details. Minor rehabilitation and maintenance work is however rather progressing well in Pemba. Due to the complex system in Unguja, the project is mainly involved in a break-down maintenance service in collaboration with the DWD maintenance group; however areas of high risk are at present identified for a proper design to introduce preventive maintenance of the most critical parts of the distribution system.

2.2 Updating of Technical Information

The process of updating the state and functioning of the existing water supply of Zanzibar Town is progressing well.

The pace of investigation work was increased. An additional field group was established after the arrival of O&M Engineer.

Site plans for Kaburi Kikombe, Mwembe Mchomeke, Kianga, Bububu, Mbweni, Welezo, Chunga and Saateni were updated and final drawings are in preparation.

Design and planning capacity of Pemba Office is still so limited that extensive system studies cannot be commenced. Only a regular monitoring of some key storage tanks has continued there as planned.

2.3 Planning and Design

Damages caused by heavy rains did force to take the survey team to investigate condition and risks along the main transfer lines in Welezo Valley and Mtoni.

Welezo line cut into two places and repaired temporarily, was surveyed in full length and detailed design of permanent repairs and reinforcement of the line in critical points was commenced.

The crucial Mtoni line was not actually damaged, but as the course of Mtoni river sifted nearer the line, the risk area was surveyed and repair plan for this site is now under preparation.

Preparation of standard drawings for the planned rehabilitation works has continued, presently the standard drawings of well head and pipe support has been prepared.

The artesian well at the Mkoani Port is under observation and data on yield are collected in relation to the tide variation.

As the flow is artesian, the preliminary plan is to utilize the spring based on overflow minimizing risks at over-abstraction. However the preliminary observations indicate that the safe yield is sufficient to develop the spring for supply at some 1500 users.

List of some items required for the most urgent work in Pemba system (Mtemani, Mkoani, Machomanne etc) and Kijito Upele has been prepared and tendered.

2.4 Operation Monitoring

Pressure measurements in Zanzibar Town continued as planned, due to increased groundwater storage, quantity of water distributed via Saateni Booster Station increased, resulting better pressure and supply especially in lower part of the Town.

Intake flow measurements were done when the pumps were changed. Daily monitoring of pumping time in various intakes continued, however, training and follow up of operators still need special attention as monitoring results arise some doubt in accuracy.

Hand pump monitoring was introduced in Pemba to check efficiency and proper usage of the pumps provided. A regular observation of water storage in Pemba continued but these observations do not serve much for operational planning as the water supply is so often intermitted.

2.5 Improvement of Water Supply

The submersible pump has been removed for Kaburi Kikombe and later installed in Bububu Spring. Kaburi Kikombe was then installed with new pump of lower capacity.

Efforts to improve Mkoani Water Supply continued by installing new distribution line to Mapinduzi flats. The situation was reported satisfactory and water flows to the 4th floor. The ten years abandoned borehole (M4) is now equipped with riser pipe and pump, but the power line requires some repairs before the borehole is operational. Expanded yield of this borehole is some 5 m³/h.

Chake Chake water system was improved by installing pumps into Changaraweni borehole and booster stations of Fidel Castro and Machomanne. In addition to it, two hand pumps were installed in two different local wells.

Wete system was improved by installing new pump at Gawani and Bungumi intakes and two hand pumps in two hand dug wells. Route for new Gawani rising main has been located but excavation work stopped due to heavy rains.

General water supply situation in Zanzibar Town has been better than during the first quarter of the year due to recovery of the groundwater resources resulting in doubling of yield of Bububu and Mtoni springs. However, some severe damages of power cut caused interruption of all boreholes for several days but after repair of the power supply, the functioning of the water supply in Zanzibar Town is reported to be satisfactory.

At large, the water supply situation in Pemba is of different nature. Assessing the existing production capacity after rehabilitation of some key utilities, Wete and Chake Chake Towns should receive adequate supply and even demand of Mkoani Town, after finishing all on-going technical improvements, should be much better.

At the present power supply situation, the utilization degree of the existing facilities is low, anything between 0-30% at any given time.

Only positive move, experienced during this reporting period and concerning the power supply, was a decision of Power Authority to give priority for water supply whenever, the power is available.

3. OPERATION AND MAINTENANCE SUB-SECTION

3.1 General

Activities in the O&M sub-section only started in March 1992 as the long term O&M Engineer reported on duty. During the first three months the main emphasis have been on creating the working pattern and systems for the sub-section, collecting and organizing the staff and assessing their further training needs and requirements.

A field teams were established and an information system for leakage and damage reporting was inverted between the Department of Water Development and the Project. The result is that repairs are now organized in more controlled manner.

Physical activities have been concentrated to the emergency repairs and mapping of the existing main distribution lines and its appliances in cooperation with the Department. The results are surveyed closer by the Design and Planning sub-section. As a result some major rehabilitation works are on the planning stage.

This mapping activity and the feedback from the network repair works have revealed that a substantial effort has to be placed on extensive rehabilitation of certain distribution network sections.

3.2 Initial Findings

Assuming the duties of O&M Engineer, the most important task of him has been to closer analyze the present setup and function of O&M activity.

The O&M activities of the Department have seriously been hampered by the lack of funds in purchasing material and tools. The manpower is mainly on-job trained and actually quite skilled keeping in mind the limitations. Further training, especially for more modern working methods is strongly recommendable as is organized execution, planning and supervision of the work.

The O&M system has long been running on haphazard basis and no records for the period starting from early seventies and prolonging to late eighties do not exist. Nearly same goes to the constructed new pipelines, plans are at best only descriptive not exact.

Borehole intakes are running without any documented recording. The pumps are circulated from well to well without any preceding plan and technical consideration.

The preventative maintenance is hardly existent due to lack of funds and very old and failing appliances. This situation forces the Department to do only the most urgent emergency jobs and leave the less urgent ones aside.

3.3 Manning of the Sub-Section

The present O&M field groups of the project consist of only the minimum repair personnel and for the future operations it is totally short handed. The manning schedule of the sub-section is under planning stages and shall be submitted for further discussions in August 1992.

This manning schedule shall be based on dividing of the sub-section to Distribution Network Division and Pumping Station and Intake Division.

When preparing the manning schedule of the sub-section, the training levels of each proposed post shall also be decided.

For the present staff well supervised on-job training for better working practices, working safety, better reliability of the water supply and new working methods are strongly recommendable. Especially training of the electricians is imperative.

From the Department one technician have been seconded to the Project as a counterpart of O&M Engineer in the beginning of June. This technician is quite familiar to the distribution network of the Zanzibar Town, consequently the efficiency of the network repair team has increased and it is at present handling 1-5 leakages per day.

3.4 O&M Operation during the Second Quarter

3.4.1 Mapping and Network

One group has been mapping the existing distribution network from the beginning of April. This action started from Welezo reservoirs and have been progressing steadily according to the available 1:2500 maps. In this stage the primary and secondary mains down to 3" (DN 80) size are mapped together with appliances. The method is to spot existing valves and reveal the pipeline out by digging after every 200 m.

Until the end of June about 10% of the whole network is mapped and the operation is expected to last at least one year. Yet is already now noted that this work exposes nearly daily pipes, valves, connections and operation habits not recorded in any means, only memorized by the individual persons.

3.4.2 Leakage Detection and Repair

One group containing 3-5 people depending of the request have been active in leakage detection and repair of the distribution network since beginning of April. The pace was slow at the beginning but due to growing experience and development of the cooperation with the Department especially in June the leakage repair have been quite successful. More than 40 pcs. of small to medium size pipes have been repaired until the end of June.

The technician seconded from the Department have been especially useful in developing this activity so far.

Further on the reporting and recording of the leakages and their repairs shall be developed. Until now at least one very fragile delivery main have been revealed by the low key recording system prevailing now.

The customers service due to be established during the third quarter of 1992 is expected to give large amount of information and knowledge of the leakages as well as O&M activities in the network.

3.4.3 Repair and Maintenance Work

In cooperation with the fitters from the Department the idle existing pump in the Saateni pump house, which was formerly equipped with now defunct diesel engine was newly equipped with electrical motor and starter. The pump is ready for operation but due to slightly lower rotation velocity of electrical motor the capacity of the pump is unsatisfactory. A new impeller in order to increase the head of the pump is now under purchase.

Torrential rains of last rainy season caused damages in may parts of the Zanzibar Town and one such occurred along the main transmission pipe in Welezo Valley cutting the line in two different places. The emergency repairs were carried out but loser inspection of the pipeline revealed more suspectable places for this kind of damage. Hence, the line was surveyed and major repair plan is now under preparation.

New pump and electrical appliance installation in Kijito Upele is bound to start in near future when new submersible pumps arrive to the island in July.

3.5 Supporting Activities

The planned rehabilitation of the Mabluu workshop has not been possible as there had been difficulties to vacate the premises.

Further on, the entire viability of the plan was reconsidered and it was concluded that management and administration of the workshop at Mabluu may cause difficulties as so many other activities have been concentrated there.

The alternative plan was discussed and several options were studied. There are idle premises suitable for workshop purposes in the town but their availability could not be obtained.

This has forced the Project to consider temporary solution and the most viable was assumed to be a joint workshop with the Forestry Department. Negotiations for this option was started with relevant authorities and at the same time the decision was made to develop a vacant plot allocated for the Ministry to be a centralized point of all activities of the proposed Urban Water Authority.

However, the extend of this decision is beyond budgeted resources for minor rehabilitation of Mabluu and hence, this development may take considerable time and resources causing necessarily some kind of short term solution for the workshop activity.

The sudden illness and resulting long recuperation leave of the Maintenance Technician responsible for the workshop operation but his sound healing did unnecessary to recruit a replacement for him.

The material stock did start to increase steadily as the purchases ordered late 91 and at the beginning of the year started to arrive.

Managing the transport via Dar es Salaam Harbour has caused delays of several weeks in transshipping but this problem seem to be solved as the Project was able to find a shipping agent operating regularly to Zanzibar.

4. WATER RESOURCES AND ENVIRONMENTAL DEVELOPMENT

4.1 General

The most important activity during the reporting period has been on groundwater; further studies, interpretation of collected data and drilling.

Monitoring of groundwater table has continued as well as quality monitoring, in addition to that closer studies an environmental state of surroundings of all intakes was carried out.

4.2 Water Resources Monitoring

Monitoring of local wells boreholes and springs continued as planned, only that after analyzing the results, it was concluded that number of local wells of the monitoring schedule can be reduced.

During the visit of groundwater hydrogeologist, collected groundwater data was analyzed and at the same time, geological sounding were carried out within Kijito Upele catchment area, indicating that planned drilling area is rather homogenous pertaining to geological information. Hence, there is no constraining geological factors in selection of drilling sites.

Special monitoring on behavior of water table was carried out at Dimani Cave in order to establish effect of tide and risk of salt water intrusion into the cave, which abstraction has been proposed to be increased.

Similar study was commenced also in Mkoani at an artesian well developed during the harbour construction. In both cases, final conclusion are under preparation.

4.3 Environmental Activities

The normal water quality monitoring has continued as planned. As an extra activity, during the cholera-incident, daily sampling and analyze of hygienic quality of the most critical sources (Bububu and Mtoni Spring and Kaburi Kikombe Borehole) was carried out as a precaution measure.

Sampling confirmed that the hygienic quality did remain unchanged and risk of public water supply as cholera vector was not pronounced.

However, the episode did reveal that there is a need of standby facilities in order to increase readiness for this kind of incidence. Consequently, dosing equipments and small chlorine stock were purchased enabling quick establishment of chlorination at any intake.

Pit-latrines survey for both islands has now completed, aiming to get acquainted with potential sources of pollution for the urban water sources. This study helps in protection planning and maintenance of safe water supply.

The groundwater contamination is mostly caused by human activities done right at the water sources and their surroundings. This is due to the fact that the sources have no protected areas around. Bad settlement of people at the urban areas caused people to build their houses very close to the water sources and most of these houses have no latrine of any kind. Those houses with latrines are dug deep down to the water table and this could cause the risk of groundwater pollution. At large, protection of catchment areas of sources is land use issue and requires legislative measures by authorities responsible for construction and land use.

So far and in accordance of the environmental assessments, hygienic contamination is probably the major risk to quality of existing sources, only exception is Miembeni Spring in Chake Chake where high concentration of Nitrate is matter of concern.

The obvious reason to that may be open drainage of the upper part of town into the very valley and catchment at the spring.

4.4 Drilling

The drilling of the new borehole at Kijito Upele was completed in August but the test pumping did give disappointing yield compared to the expected one. Later on, it was discovered that this attributed to inaccurate information pertaining to geological condition and observed from the existing borehole.

Consequently, the old borehole was cleaned form silt and enveloped with the new filter backing and screens.

After rehabilitation, the well was test pumped indicating a safe yield of at least 30 m³/h and resulting in decision to re-equip the well as a production sources.

Further, geological survey around Kijito Upele area confirmed the potentiality of the catchment and drilling continued at a new site downstream the present well field.

The visiting hydrogeologist completed hydrogeological report to guide programming the drilling activities.

This study was supported by geo-soundings and soil-sampling carried by the Department of Geology of University of Dar es Salaam.

4.5 Laboratory

The water quality laboratory is still located in the old premises as the preparation and furnishing of the new laboratory in Saateni is progressing slowly.

The laboratory building and furniture are now more or less ready but plumbing and purchase of equipments are under process.

Due to extensive hygiene monitoring during cholera-incident, stock of required chemicals for hygiene analyses was exhausted and there was interruption of planned monitoring programme for three weeks.

5. EXPENDITURE

Expenditure of the 2nd Quarter of the year 1992 has, at large, occurred as planned and in balance with the annual budget being in total 53.5% of the allocation for the year 1992.

There has been a rapid increase of the investment, largely on items meant to improve and benefit the reliability of the water supply.

Increasing activity on the network maintenance has however, revealed that the present pipe and fitting stock is inadequate and purchases of the remaining quarters may have to be concentrated on items required to consolidate fast moving repair stock.

The remaining portion of the local component for fiscal year 91/92 of the Government of Zanzibar was paid in May with the advance payment of TAS 3.46 million for the next fiscal year.

The breakdown of the quarterly and accumulative expenditure is given in the following table:

ITEM	EXPENDITURE FIM	EXPENDITURE FIM ANNUAL BUDGET	INCURRED %
Consultancy; fees and expenditure		5,470,000	
1st quarter	1,416,333.13		25.9
2nd quarter	1,199,193.54		21.9
Total	2,615,526.67		47.8
Local personnel; wages & expenditure		209,000	
1st quarter	57,021.99		27.2
2nd quarter	53,918.47		25.9
Total	110,940.35		53.1
Services and recurrent; foreign		910,000	
1st quarter	70,937.00		7.8
2nd quarter	132,857.82		14.6
Total	203,794.82		22.4
Services and recurrent; local		1,166,000	
1st quarter	222,710.63		19.1
2nd quarter	300,447.01		25.8
Total	523,157.64		44.9
Investment; foreign purchases		4,585,000	
1st quarter	1,025,135.52		22.4
2nd quarter	1,783,961.65		38.9
Total	2,809,097.17		61.3
Investment; local purchases		1,290,000	
1st quarter	65,315.52		5.1
2nd quarter	958,714.43		74.3
Total	1,024,031.95		79.4
GRAND TOTALS		13,630,000	
1st quarter	2,857,455.68		21.0
2nd quarter	4,429,092.92		32.5
TOTAL	7,286,548.60	13,630.000	53.5

TASK DELEGATION / 3.6.1992

A. HOUSE CONNECTION FILES

1. Existing Procedure

- a) A customer sends his CCM branch a letter where he requests 1) installation of house connection or 2) connection for building a house.
- b) Branch sends the letter to DWD with its comments.
- c) Customer comes to DWD Office, gets an application form and fills it in.
- d) DWD asks Ministry of Health for a statement concerning a pit latrine.
- e) Before any permission for connection
 - DWD's inspector goes to the site and checks where to make the connection and how
 - Drawing-unit does drawings for the connection.
- f) DWD makes the decision (Mr. Seif Yakoub).
- g) Customer comes to DWD to pay for the permission.
 - 1) house connection, if one has a pit latrine; Tshs 300/=
 - 2) house connection without a pit latrine; Tshs 300/= per month
 - 3) connection for construction plot; Tshs 300/= per month
- h) The application, permission and drawings are passed on to the consumer files.
- i) In principle, DWD's fundi should make the connection to the main pipe line, but in practice private fundis employed by a customer do that work as well. Private fundis give also guidance in materials which are bought by a customer.

2. Present Staffing

- House connection files: Mr. A. Suleiman (STD VIII), Mrs. Shinuna Omar (Form III) and Mrs. Fatma Bakar(?)
- Drawings: Mr. Maulid H. Kinange (F.T.C.), Salim H. Salim (F.T.C.), Mrs. Fatma O. Saleh (FORM III + 2 years Gulioni Technical School, Miss Zakia M. Moh'd (see Mrs. Fatma), Mrs. Firdaus R. Rabii (cartographer)
- One Inspector is checking sites with Mr. Kinange and Mr. Salim

Notice! 40 - 60 applications were estimated to come in per month.

B. TRANSFER OF THE FILES**1. Summary of Actions Linked with House Connections in UWSS**

- customer services
- recording the applications
- sending for a statement to the Ministry of Health
- informing a responsible unit on applications
- maintaining the register of house connections

- checking the site
- drawings
- giving technical guidance to customers

- decision making on a connection

- charging for decisions
- keeping account on the charges collected
- passing on the collected revenues to Treasury

2. Staff Needs

- 1) Administrative person for serving customers, handling applications, maintaining the register (full-time job)
- 2) Technician for checking the site, drawings, giving technical guidance for customers
- 3) Decision-maker
- 4) Collector for charges

3. Actions of Transfer

- nomination of the responsible employees
- separation of the urban files from the rural ones
- furnishing a place for files
- remove them to Maisara
- elaboration of a register system for the urban files and check the effects of the change to the rural one
- informing customers about the change

4. Development Needs

- updating the files by surveying legal and illegal connections

TASK DELEGATION / 15.6.1992

COLLECTION OF WATER CHARGES

1. Existing Procedure

1.1 Registration of Customers

A permission for constructing a building or for changing the use of an old one is granted by Municipality Council of Zanzibar. Tourist Corporation gives its statement on hotels, guest house etc. to the Council.

Municipality Council or any other institution do not inform directly to DWD on permissions. Hence, Revenue Office of DWD is alone responsible for the accuracy of the consumer register.

a) Recording new customers (Mr. Simai) in urban areas

Old buildings

- 1) A customer comes to DWD to announce a connection.
- 2) Inspector of Revenue Office (Mr. Jaffar) discovers an institution which is not registered and reports

New buildings

- 1) Information comes directly from house connection files of DWD
- 2) Inspector's observations in the field and reporting

Ships

- 1) One employee (Mr. Salum Bakar, Ass. Plumber) works full-timely at the harbour. He distributes water at the request of Zanzibar Shipping Corporation or the owners of private ships and collects the charges from the latter.

b) Rural areas

- 1) Northern District Officer and Officer for Central and Southern Districts inform Revenue Office about new customers.

1.2 Tariffs

- 1) GOZ gives yearly the target for revenue collection.
- 2) Head of Revenue Office (Mrs. Miza) decides how that amount will be collected and makes minor revisions in charges.
- 3) The principles are as follows:

Hotels

- small hotels, less than 20 beds:
1040/= - 2000/= /month
- middle hotels, 21 - 50 beds:
2500/= - 4000/= /month
- big hotels, 51 - 250 beds:
7000/= - 13000/= /month
- Additionally, swimming pool, laundry, kitchen, garden etc. are taken into account while estimating consumption.
- There are a number of cafes (called hotels in swahili) which serve only refreshments and food. They are charged 150/= - 200/= per month.

Ships

- Big ships pay according to the tons of water they take at the harbour; insiders 100/= per ton and outsiders 200/= per ton. Government ships are not paying anything although they take water in average 200 tons per trip. From private ships only 6000/= - 7000/= are collected per month due to small amounts of water they take (1-3 tons per trip).

Others

- Industry, cafes, bakeries, police stations etc. pay according to consumption estimates made by Inspector.
- 4) All background information for charging is collected by Inspector. He passes it on to Mrs. Miza for the determination of a charge.
 - 5) The last increase in tariffs took place in July 1991 when for instance, minimum charge for small hotels was raised from 520/= up to 1040/=.
 - 6) There is no tariff policy in writing.

1.3 Billing

- 1) Customers can select to pay monthly or yearly in advance. In the latter case two months are given free.
- 2) Revenue Collector (Mrs. Ziada) makes the bills. Billman (Mr. Khamis) delivers them. Some of the customers come to Mabluu to pay, with or without a sent bill. The majority of the bills are collected by Billman.
- 3) Bills have to be paid in 15 days. In the case of non-payment water is disconnected.
- 4) About 80 - 100 bills are sent out per month. Daily about 20 bills are due to be paid. Out of them 3-5 are not paid in time.
- 5) A prescribed form for a bill is used. If a customer pays without a bill he will be given a receipt.

Rural areas

- 1) The bills are given to the Officers in charge of the districts and they pass them on to the customers concerned.
- 2) They come to pay to Mabluu.

Ships

- Zanzibar Shipping Corporation (ZSC) operates with Government ships and foreign ones. When ships need water ZSC informs DWD's employee at the harbour.
 - 1) Foreign ships pay directly to the ZSC which passes on the money to DWD. ZSC owes a lot of money to DWD.
 - 2) DWD's employee, Mr. Salum collects the charges in cheque or in cash from private ships after 3-4 trips and sends them to DWD.
- Proposals for improvement presented by Mr. Salum:
 - . There should be a water meter at the harbour. At present it is impossible to control how much water actually is taken.
 - . Small boats should be charged as well. They use a lot of water free of charge at the moment.
 - . DWD should have its own hose pipe for distributing water to ships from the tap. Although many ships have a hose pipe of their own there are a number of those which do not have. More water could be sold in that case.

1.4 Disconnections

- 1) It is one Plumber's duty (Mr. Ali Makame) to disconnect water in the case of non-payment and re-connect after being paid. Revenue Collector informs him.
- 2) There are 3-5 disconnections per day.
- 3) For re-connection a customer has to pay 100/= as fine at Revenue Office.

1.5 Accounting

- 1) Revenue Supervisor (Mrs. Miza) receives the money in cash. Revenue Collector (Mrs. Ziada) takes care of receipts.
- 2) Every day before 3.30 p.m. the collected money with receipts are to be sent to Cashier of DWD for checking and keeping accounts.
- 3) Cashier returns the money back to Revenue Office, from where a) the money is taken to the Bank and b) the receipts to the Ministry, 3) after getting the bank statements the Ministry sends the receipts to Revenue Office, where they are filed for Auditors.

2. Present Staffing

- Supervisor for Revenue Office, Mrs. Miza Khamis Juma (Form III) determines the charges, receives and checks the money.
- Revenue Collector, Mrs. Ziada Saleh Juma (STD VIII) writes the bills, controls the payments and gives orders for disconnecting or reconnecting.
- Billman, Mr. Khamis Ali Bakar (STD VIII) delivers the bills and collects revenues.
- Revenue Clerk, Mr. Simai Pandu Simai (STD VIII) records new customers and keeps the register.
- Inspector, Mr. Jaffar Haji Ngosani (STD VIII) collects data for consumption estimates by visiting institutions.
- Plumber, Mr. Ali Makame Ali (STD VIII) disconnects and reconnects in the case of non-payment
- Assistant Plumber, Mr. Salum Bakar Ussi (no formal education) delivers water at the harbour and collects charges from private ships.

URBAN WATER SUPPLY SECTION / UNGUJA

STAFF June 30, 1992

* new employees
- retired
o resigned

Unit & Name	Job Title	Seconded from DWD Date	Directly Employed Date	Resignation Date
ADMINISTRATION				
Haula K. Issa	Adm. Officer	02.02.90		
Said S. Magram	Chief Accountant		15.11.89	
Said S. Abdalla	Purchase & Store Keeper		01.05.90	
Farhana Mitha	Secretary		06.02.90	
Ahmad Abdalla	Office Servant		28.12.89	
Minne Rashid	Cleaner		02.03.90	
Said Mkona	Driver	15.11.89		30.06.92 -
Omar Said	Driver	17.05.90		
Kombo Juma	Driver	05.02.91		
Mzee Haji	Driver	16.09.91		
Mabruk Juma	Driver	15.10.91		
Omar Suleiman	Tractor Driver		15.02.92	
Ramadhan Nuhu	Tractor Driver		15.02.92	
Mwinyi Khamis	Security Officer		15.02.89	
Suleiman Ali	Watchman - Maisara		01.07.90	
Mussa Ali	Watchman - Maisara		10.10.91	
Ali Suleiman	Watchman - Maisara		15.02.90	
Juma Ali	Watchman - Maisara		01.09.90	
Ali Khamis Ali	Watchman - Maisara		01.12.91	
Khamis Mussa	Watchman - Maisara		01.06.91	
Said Mohd	Watchman - Maisara		01.03.92	
Jonas Antoni	Watchman - Mtoni		15.11.89	
Tabora Ali	Watchman - Mtoni		15.11.89	
Khamis Nasib	Watchman - Mtoni		15.11.91	
Abass Abdalla	Watchman - Mtoni		21.12.91	
Mjanga H. Bakar	Watchman - Mtoni		09.02.92	
Mussa Miraji	Watchman - Mbweni		15.01.90	
Simon Hilal	Watchman - Mbweni		01.12.91	
Daniel Matayo	Watchman - Mbweni		08.11.90	
Abdalla Kayamba	Watchman - Mbweni		21.12.91	
Jecha Nyange	Watchman - Kilimani G/H		21.12.91	
Abdalla Mussa	Watchman - Kilimani G/H		07.01.91	
Bakar Rajab	Watchman - Kilimani G/H		01.12.91	
Said Yaha	Watchman - Kilimani G/H		01.12.91	
Khamis Ramadhan	Watchman - Kilimani G/H		10.10.91	
Batuli Haji	Garden - Kilimani G/H		09.06.92 *	

Unit & Name	Job Title	Seconded from DWD	Directly Employed	Resignation
		Date	Date	Date
Mabrouk Bakar	Watchman - Kiungani		03.09.91	07.04.92 °
Othman Mwinyi Usi	Watchman - Kiungani		01.02.92	
Othman Juma	Watchman - Kiungani		21.12.91	11.04.92 °
Ramadhan Sungura	Watchman - Kiungani		01.01.92	09.06.92 °
Moh'd Ali Hamad (temp)	Watchman - Kiungani		08.04.92 *	
Makame Ibrahim	Watchman - Kiungani		01.06.92 *	
Ramadhan Ali	Watchman - Kiungani		01.10.91	
Petric Antony	Watchman - Kiungani		01.02.92	
Dominie	Watchman - Mazizini		01.01.92	
Emmanuel Matias	Watchman - Mazizini		29.11.91	
Joseph Majuly	Watchman - Mazizini		01.01.92	
Alfons Kumagu	Watchman - Mazizini		01.02.92	
Jems Muaya	Watchman - Mazizini		01.02.92	
Ali Juma	Watchman - Saateni		27.08.91	
Antony Peter	Watchman - K/Upele		30.01.92	29.05.92 °
Vuai Haji	Watchman - K/Upele		30.01.92	
Moh'd S. Ahmed	Watchman - K/Upele		05.02.92 (temp)	
Hija Ramadhan	Watchman - K/Upele		09.06.92 *	
Omar Moh'd	Watchman - K/Upele		05.06.92 *	
Khamis Ali Khamis	Watchman - K/Upele		08.06.92 *	
Ali Othman Ali	Watchman - K/Upele		06.06.92 *	
Mussa Ali Mussa	Watchman - K/Upele		03.06.92 *	
PLANNING & DESIGN				
Ali Suleiman Amour	Engineer	03.02.92		
Ali Abdu Ali	Technician	21.03.90		
Juma Ali Othman	Technician	23.05.91		
Abdalla A. Abdalla	Technician	23.05.91		
Hamdu Haji	Ass. Surveyor	23.05.91		
Charib Khamis	Draughtman	01.03.90		
OPERATION & MAINTENANCE				
Ali Haji Juma	Surveyor	23.05.91		
Moh'd Khamis Rajab	Plumber	27.04.92 *		
Hafidh Suleiman Makame	Water Technician	22.06.92 *		
Jumane A. Suleiman	Labourer, daily paid		27.04.92 *	
Hassan M. Hassan	Labourer, daily paid		27.04.92 *	
Abdalla M. Abdalla	Labourer, daily paid		27.04.92 *	

Unit & Name	Job Title	Seconded from DWD Date	Directly Employed Date	Resignation Date
DRILLING				
Hamad J. Bakar	Hydrogeologist	20.10.90		
Saleh Mzee	Technician	15.11.89		
Aziz Ahmada Hija	Driller	13.01.92		
Saleh Juma	Driller	13.01.92		
Henry Paulo	Driller	13.01.92		
Mgeni Moh'd	Driller	13.01.92		
Moh'd Amour Moh'd	Technician	13.01.92		
Hassan Ali Hassan	Welder	12.02.92		
LABORATORY				
Sanura M. Abdalla	Lab. Technician	27.04.90		
Ameir Nahoda	Lab. Technician	01.07.90		
Omar Mambo	Lab. Technician	01.07.90		
WORKSHOP				
Ali Abass Kiringe	Plumber	01.10.91		
Haji Faki Khamis	Electrician	01.10.91		
Moh'd K. Khamis	Plumber	06.02.92		
Juma M. Mlekwa	Mason	06.02.92		
Khamis Kombo	Tank Fundi	06.02.92		
Amour Haji	Store Keeper	06.02.92		
Asha A. Salum	Store Assistant		13.04.92 *	
Mfaume M. Mfaume	Electrician		24.04.92 *	
Rajab Khamis	Store Keeper	07.05.92 *		
Juma Alawi	Mechanical Technician	07.05.92 *		
Khamis Saleh	Mechanical Technician	07.05.92 *		

URBAN WATER SUPPLY SECTION / PEMBA

STAFF

June 30, 1992

* new employees
- retired
o resigned

Unit & Name	Job Title	Seconded from DWD Date	Directly Employed Date	Resignation Date
ADMINISTRATION				
Moh'd A. Moh'd	Water Engineer	01.03.90		
Moh'd Juma Khamis	Hydrogeologist	01.03.90		
Abdulkadir A. Kadir	Water Technician	01.03.90		
Yahya J. Hamad	Mechanician	28.08.91		
Fadhila Saleh Ali	Secretary	01.06.90		
Masoud Juma Simba	Clerk	01.03.90		
Mohd' Ali Saleh	Water Technician	01.03.90		
Hamad M. Rashid	Electrician	07.05.92 *		
Rashid Suleiman	Driver	01.05.92 *		
Bimkubwa Moh'd	Office Cleaner		01.03.91	
Said Salum Hemed	Mechanician		28.03.90	
Moh'd Tamim Ali	Watchman		02.04.90	
Ali Abdalla	Watchman		02.01.92	
Moh'd Amour Ali	Watchman		04.04.90	
Khamis Jamal Khamis	Watchman		20.03.91	
Masoud Tamim	Watchman		30.11.91	
Othman Abdalla	Watchman		30.09.91	
Nassor Moh'd	Watchman		12.12.91	
Khamis Hamad	Watchman (temp)		16.06.92 *	
Sharif Hamad	Watchman			