

Mr. C.D. van der Wildt
Mrs. M.H.A. Wegelin-Schuringa
Mr. Mohammed Al Aroosi

Library
IRC International Water
and Sanitation Centre
Tel.: +31 70 30 889 80
Fax: +31 70 30 889 84

Report of the Seventh Monitoring Mission
16 - 24 February 1997

Rada Water Supply and Sanitation Project Republic of Yemen



Final report

Republic of Yemen
Ministry of Electricity and Water
National Water and Sewerage Authority

Kingdom of the Netherlands
Ministry of Foreign Affairs
Directorate General for Development Cooperation

Mr. C.D. van der Wildt
Mrs. M.H.A. Wegelin-Schuringa
Mr. Mohammed Al Aroosi

Report of the Seventh Monitoring Mission
16 - 24 February 1997

Rada Water Supply and Sanitation Project
Republic of Yemen

LIBRARY IRC
PO Box 93190, 2509 AD THE HAGUE
Tel.: +31 70 30 689 80
Fax: +31 70 35 899 64
BARCODE: 13937
LO: 823 YERAQ7

Final report

Republic of Yemen
Ministry of Electricity and Water
National Water and Sewerage Authority

Kingdom of the Netherlands
Ministry of Foreign Affairs
Directorate General for Development Cooperation

Abbreviations

Dfl	Netherlands Guilder
DGIS	Netherlands Government, Directorate for International Cooperation
GTZ	German Federal Ministry for Economic Cooperation and Development
NWSA	National Water and Sewerage Authority
MCUPH	Ministry of Construction, Urban Planning and Housing
O&M	Operation and Maintenance
RNE	Royal Netherlands Embassy
YAR	Yemen Arab Republic
YER	Yemen Riyal

Foreword

This report presents the findings of the Monitoring Mission for the Rada Water Supply and Sanitation Project in the Yemen Arab Republic.

The Mission was carried out between 16 and 24 February 1997 at the request of the Directorate General for International Cooperation, Netherlands Ministry of Foreign Affairs.

The Terms of Reference of the Mission are presented in Annex 6.

The Mission consisted of Mr. C.D. van der Wildt (Ministry of Transport, Public Works and Water Management, Rijkswaterstaat, Haarlem, Netherlands), Mrs. M.H.A. Wegelin-Schuringa (International Water and Sanitation Centre (IRC), The Hague, Netherlands) and Mr. Mohammed Al Aroosi (NWSA, Sana'a, Yemen).

The Mission had extensive and fruitful discussions on the Project with the National Water and Sewerage Authority (NWSA), the Ministry of Construction, Urban Planning and Housing (MCUPH), the Royal Netherlands Embassy, the Project staff, the NWSA Branch Office at Rada, the local staff of MCUPH, the Municipality of Rada, Archirodon Construction Co. (contractor for civil works) and the German Federal Ministry for Economic Cooperation and Development (GTZ). The itinerary of the Mission is given in Annex 7 and a list of authorities and persons met in Annex 8.

On February 22 and 23, 1997, the findings of the Mission were discussed with and agreed by the National Water and Sewerage Authority (Annex 1), the Ministry of Construction, Urban Planning and Housing (Annex 2), the management of the Project, the Manager for the NWSA Branch Office and the Manager for MCUPH in Rada.

The Mission herewith expresses its gratitude to all who contributed with their information to the report. The Project prepared the final report and the report on institutional strengthening NWSA Rada Branch, containing up-to-date information, which was very useful for the Mission.

Table of contents

Abbreviations	i
Foreword	ii
Table of contents	iii
1. Summary	1
2. Introduction	3
3. Water Supply and Sanitation	4
4. Surface Rain Water Drainage	6
5. Solid waste collection and disposal	6
6. Decentralization and sector reform	7
7. Institutional aspects	8
8. Customer Relations	9
9. Tariffication and revenue collection system	11
10. Provision of services in two villages	12
11. Proposal for additional Technical Assistance for institutional strengthening of NWSA Rada Branch	13
Annexes	
Annex 1	Agreed minutes of meeting with NWSA
Annex 2	Minutes of meeting with MCUPH
Annex 3	Overview of task descriptions
Annex 4	Tariff structure
Annex 5	Budget additional technical assistance
Annex 6	Terms of Reference
Annex 7	Itinerary
Annex 8	List of authorities and persons met

1. Summary

- The construction components of water supply and sanitation have been implemented in accordance with the parameters and criteria as per the final design report and the plan of operation. Almost all components of the system are functioning very well and in a good condition.
- The manholes on the main sewer line to the treatment plant are suffering extensive corrosion due to high bacterial loads and lack of ventilation. This is caused by low flows of wastewater in the system, which is a result of the low connection rate.
- It is strongly recommended that the customer relations staff visit the houses with a water but not a sewer connection and also motivate the owners to adapt their inside plumbing in such a way that all wastewater flows to the sewer. There may be a need for local by-laws to enable enforcement.
- There is still a discussion going on about a claim of contract 3. The contractor claims an amount of Dfl. 185.000 due to problems caused by the war. The employer refused to pay, because there was a delay of 97 days, on the contract, even before the war broke out. The mission is of the opinion that there is no reason to meet the demand of the contractor.
- The surface drainage system consisting of the asfaltering of the main roads with a 'roof shape' profile, kerbs and sidewalks has been constructed and functions well. However, the roads are covered with dirt, solid waste, stones and sand as a result of the inadequate functioning of the solid waste collection system and the malfunctioning of the sweepers. When manholes are opened to drain the rainwater quickly these materials enter the sewers resulting in blockages in the sewers.
- The solid waste component was transferred to the Municipality of Rada in March 1994 and is deteriorating very fast. The mission is of the opinion that this can only be improved if the management is strengthened, proper budgets are calculated and the municipality can collect revenues from the people for their services.
- The steering committee established to guide the process of decentralization did meet a number of times, but was not enabled to continue meeting and the proposals were not processed anymore. This delayed the process of decentralization. The mission regards the role of the Steering Committee as crucial and strongly recommends its re-establishment.
- To involve the local authorities a supervisory board should be established which can act as a board of directors of the Rada Branch. The independent Rada Branch Office should be audited by NWSA Headquarters at the end of each year. In this way the Headquarters can fulfill its role in the Ministry.
- After the establishment of the NWSA Branch Office in 1994 the staffing has been a continuous problem. The function of Branch Manager has been changed three times already and presently the fourth manager is in position. The positions of the Technical Manager and the Financial Manager have been vacant for a long time. It is of utmost importance that the functions are filled by capable people.
- The three managers are the key to a successful organization. They should be capable and stay on the job for a period of at least three years. With the present salary structure, even with the allowed incentives, it is hardly possible to employ the right people because of the fact that Rada is such a difficult town to operate in. The mission recommends to increase the incentives, if the market for Rada requires this.

- The decentralization procedures should allow the Branch Manager to hire and fire the other employees (i.e. under the level of the management team), which may well result in the employment of less people but of better quality, within the same personnel budget. The mission thinks that the Rada Branch Office at the moment is not capable of running the project, as people are not motivated. This has to be changed.
- The new account and billing system is a big improvement if rightly used. When this is introduced, the different staff positions have to be reassessed as the computer system requires less work than before.
- The assistance of GTZ (German Federal Ministry for Economic Cooperation and Development) foreseen after the handing over of the project by the Consultant, which looked very promising in 1995, was found to be disappointing. The German technical team has a priority to assist in the urban water supply projects financed by Germany - so far, no time is left to also support other towns.
- At present there is no section in operation with the tasks which are necessary to run a good customer relation service as the major information activities effectively stopped at the end of 1995. The former information centre in town has become a paying centre where no information activities are carried out. Thus general or specific information is not given to customers and there is no accessible place for women to go to for information or paying.
- A new tariff has been introduced without proper information to the customers. The result of this disregard of the public is a general outcry, refusal to pay the new bill, complete misunderstanding and a growing distrust towards NWSA. It could also lead to reduction of water consumption based on the belief that possibly next month yet another raise will come. This situation is very bad for the sewer system as it needs sufficient water for functioning
- The mission is of the opinion that the information centre in town has to be re-activated as information centre and customer relation office. To facilitate visits and payment of bills by women, it would be good to have two 'women only' days, as was previous the case. If possible the three female staff members can operate the 'town' branch on their own, giving information, customer relations, receiving payments of the bills and continue to be revenue collection office (females also work as bank payment clerks).
- During the mission a new tariff was proposed and agreed upon by the Director of NWSA. (see annex 1). This tariff again incorporates the progressive system and also ensures the capacity to pay for operation and maintenance. The cost for operation and maintenance have been well calculated and described in the report on Institutional Strengthening NWSA Rada Branch of 1997.
- The mission is of the opinion that the consultancy can be extended according to the (during the mission) reformulated proposal of the consultants. This means that for the period from 7 March 1997 until 15 December 1997 two expatriates and some local advisors will be assigned for this work. This however, only under condition that the three management posts are filled by people who have **the required level and skills**, who have to be on location by March 15, 1997. If in doubt, the decision on whether or not proposed staff have adequate level and skills, should be done by a committee consisting of for instance the Director General NWSA , RNE the Chairman of the steering committee and the consultant.

2. Introduction

The Rada Water Supply and Sanitation Project RWSSP addresses sanitary conditions in the rapidly growing town of Rada, a town of approximately 50.000 inhabitants in the Governorate of Al Bayda.

The technical components of the project include water supply, sanitation, drainage and solid waste collection and disposal. The project also includes community information and participation and environmental health education directed at the general population as well as institutional development activities aimed at the authorities which operate the various systems: the Rada Branch of the National Water and Sanitation Authority under the Ministry of Electricity and Water, and the Rada Municipal Offices under the Ministry of Construction, Housing and Urban Planning.

At present nearly all the construction works for the water supply, sewerage, and surface rainwater drainage works are finalized. Formally the liability period for the civil works ends on January 31, 1997. The solid waste component was already transferred to the Municipality Office in March 1994. The former project manager visited the project in the period February 19-26, 1997 in relation to the final handing-over of the works.

The most important activity at the moment is the Institutional Strengthening of the NWSA Rada Branch in view of the delegation of authority from H.Q. NWSA to the Branch. It was decided by NWSA in spring 1996 to take Rada as a test case for decentralization. The actual Technical Assistance is directed to this aim. This activity should end on March 31, 1997. To facilitate the process of becoming autonomous of the Branch and guarantee follow-up after departure of the TA, a Steering Committee was formed. In view of problems with an appropriate staffing of the Branch and with the functioning of the Steering Committee the know-how transfer of this part of the project can not be considered as finalized.

A proposal for extension of the TA in Institutional Strengthening was prepared by the consultant.

The project is being implemented by the Government of Yemen, through the authorities mentioned above, assisted by a consortium of Dutch Consultants (Euroconsult, DHV consultants, Agrovision).

3. Water Supply and Sanitation

The construction components of water supply and sanitation have been implemented in accordance with the parameters and criteria as per the final design report and the plan of operation. Some extensions to the systems were already implemented due to the extension of the urban area of Rada. Almost all components of the system are functioning very well and in a good condition.

It has been noted that there are some deficiencies in the operation of the sewage treatment plant which require minimum operation and maintenance such as cleaning of the screens, removing the scum from the edges of the ponds and to be properly collected and burned.

The manholes (about 65) on the main sewer line to the treatment plant are suffering extensive corrosion due to the presence of the sulfur bacteria which is caused by the release of the hydrogen sulfide from the wastewater. This is happening due to lack of proper ventilation possibilities and the present low flows of wastewater in the system, which is a result of the following two conditions:

- Firstly the construction of house connections both for water supply and sewerage is still in progress. It should be emphasized that the condition that each house has to be connected to the sewerage, if water is provided, should be maintained. Exception may only be made if the physical conditions make it impossible to connect or if it is too costly due to the remote location of the house.
- Secondly it appeared that many houses did not adapt the inside plumbing in order to collect all the wastewater. In these cases only the wastewater from the toilets and bathrooms are offered to the system, while the wastewater from the kitchen is spilled in the garden or in open drains. This is unacceptable both for health reasons and for the proper funding of the sewer system. It is strongly recommended that the customer relations staff visit these houses and motivate the owners to adapt their inside plumbing.

The issue of corrosion of the manholes was thoroughly discussed with the consultant and agreed that it will be further investigated by the consultant. The estimated costs of repair are Dfl. 35.000,-. Because the contractor has constructed the sewer and manholes according to the designs, the repair cannot be claimed from the contractor. It might be a matter of wrong design, for which the consultant is responsible, in which case the costs have to be borne by the consultant.

The foreseen number of house connections were estimated during the design of the project to be 5000 house connections for water and 4500 house connections for sewerage. The actual water supply connections reached about 3162 and the number of sewer connections 2164 (final report), which is far below the anticipated number. Even so, presently connection rate is estimated at 90-95%, which means that the number of people per connection is higher than expected.

The following reasons for this situation have been mentioned for the water supply connections:

- thinking that connections would be free of charge, several house owners applied for more than one connection to the same house. Only when it became clear that connection fees would be charged, they paid for a single connection only
 A good example is the case of an apartment building with 64 apartments and only one connection for water supply. With the new tariff proposal the revenues from this building are probably higher than in case of having individual connections with water meters, as the tariffs are progressive.
- houses have meanwhile collapsed, are otherwise not occupied or under construction
- shops do not apply for water connections

The lower number of house connections will be reflected on the revenue of the water sales, except in case of the 'apartment' buildings. The influence of this has to be carefully calculated and steps have to be undertaken to reverse the situation through the activities of the customer relation section.

With regard to the sewer connections, the following reasons can be found:

- many house owners are hesitant to incur expenses for connecting their in-house plumbing to the sewer house connection pit
- in several cases water is used but no or hardly any wastewater produced, as in the case of concrete block factories, so that no sewer connection is required or even possible
- waste water from car washing is not allowed to enter the sewer system as it contains grease and diesel
- some houses have a technical problem to connect to the sewer system the toilets are located too low to be able to discharge into the tertiary system by gravity

From the start of commissioning the system it had been the intention to have potential customers connect to the sewer system before their water supply would be formally given. This approach had to be discontinued because people started to make illegal water connections because they already had paid for the connection but did not get their meter because the sewer connection had not been approved or done. To get the toilet and kitchen connected to the sewer in most cases involved quite high expenses which not all could pay straight away. A small survey was done with the consultant and the women from the former extension section which led to an immediate increase in connections and where this was not the case, it was at the moment not possible for financial reasons. Thus lack of connection is mainly because of costs, but also because of lack of awareness and lack of enforcement.

The well drilling contract (contract 1) was completed by January 1993. The mechanical/electrical works (contract 3) was completed by January 1995 and the civil works (contract 2) and rain water drainage works (contract 4) by February 1996. The defect liability period for contracts 2,3 and 4 are finished in January 1997. The take-over of the works were carried out jointly by the employers (NWSA and MCUPH), the consultant and the contractors. The amount of the claims to the contractor of contract 2 due to the suspension of works that took place in 1994 due to the war in Yemen is 2.6 M US\$ plus 21 M YR. Amount of 1.2 M US\$ has been paid, the balance of this claim (1.4 US\$ plus 21 M YR) is still outstanding. This contract is coming to an end, therefore it is recommended that the outstanding amounts are paid as soon as possible.

There is still a discussion going on about a claim of contract 3. The contractor claims an amount of Dfl. 185.000 due to problems caused by the war. The employer refused to pay, because there was a delay of 97 days, on the contract, even before the war broke out. It judges therefore that had the contractor delivered in time as per contract, there would have been no delay because of the war. The engineer supports the employer. Also the mission thinks that there is no reason to meet the demand of the contractor.

4. Surface Rain Water Drainage

The surface drainage system consisting of the asfaling of the main roads with a 'roof shape' profile, kerbs and sidewalks has been constructed and functions well. However, the roads are covered with dirt, solid waste, stones and sand as a result of the inadequate functioning of the solid waste collection system and the malfunctioning of the sweepers. When the rains come, the manholes are opened to drain the water away quickly and the solid waste, stones and sand enter the sewers resulting in blockages in the sewers. The discharge of the rainwater in the streets is also hampered by the amount of waste laying around.

During the discussion with the Governor of Al Bayda and the Deputy Minister of MCUPH it was agreed upon that the Baladiyah of Rada will give priority to the cleaning of these streets. At least before the rainy season, it has to be ensured that the drainage roads are free of solid waste and construction materials such as sand and stones.

5. Solid waste collection and disposal

The solid waste component was transferred to the Municipality of Rada in March 1994. One of the reasons to transfer already at that time was the fact that although the municipality in theory could well continue to carry out the tasks for solid waste collection on its own, the RWSSP team would be available for support if necessary. Now after three years this mission must conclude that the solid waste project is deteriorating very fast.

The one cubic meter containers are still there, but most of the garbage is laying beside the container. Some of the garbage is thrown directly beside the containers and some is taken out by the children, who love to play with the garbage. Education and information by the Baladiyah has completely ended. Therefore, the public motivation to change the children's behavior is very low. Yet women expressed a willingness to pay for solid waste services as they still remember how clean the city was during the active solid waste campaign.

The sweepers employed by the municipality do not get paid for long periods on end. For instance the ministry provided the salaries of 1995 in the beginning of 1996. Because the governor, who has to issue clearance for the checks, did not sign, the budget remained in the banks until the end of 1996. With this kind of procedure the manager of the solid waste is not able to carry out his work. Motivation for work is

understandably low with the sweepers, resulting in a situation where the containers may be emptied by the trucks, but all the garbage around the container is left on the pavement.

It also affects the sweeping of the paved roads which is not done at all, as is mentioned in chapter 4 on surface rainwater drainage.

During a meeting with the governor of Al Bayda, the Baladiyah was ordered to start directly with the cleaning of the roads. This will only work if funds will also be provided. According to the deputy minister the financial system of the ministry has been changed at the beginning of this year as a result of a new decentralisation policy. Now funds for salaries, fuel and spareparts are transferred to the Bank in Al Bayda at the beginning of the year for the whole financial year. The funds can be released if a check is signed by the Governor and the Director of Municipalities of the Al Bayda Governorate. If the funds are insufficient, the project manager for solid waste could request additional funds and if agreed these funds can be released. The deputy minister explained that the ministry has also issued a decree that the Baladiya now can collect funds from residents for solid waste collection - it is up to them to decide how and from whom to collect (for instance commercial buildings, restaurants etc.).

The workshop looks still reasonable, also due to the fact that the RWSSP Team supported the workshop until October 1996. Now the deterioration is already becoming visible. No spareparts and tires. Two compactor trucks are still in working condition, but the mission doubts that this will be long.

The office which was largely paid and furnished by the Dutch government is in a bad condition. Windows are broken and the necessary maintenance has not been done.

The old dumpsite is still used, because the dispute over the location of the selected new site has still not been solved notwithstanding all the promises. Even during the last monitoring mission of 1995, the deputy minister of MCUPH promised to finalize this dispute. The deputy minister was never informed of this issue and promised to look into it.

The mission is of the opinion that the solid waste component can only be improved if the management is strengthened, proper budgets are calculated and the municipality can collect revenues from the people for their services. How this can be best realized has to be assessed by the municipality, also keeping in mind the efforts and experiences in this regard in other towns and cities such as Sana'a and Dhamar.

6. Decentralization and sector reform

After intensive discussions, the Ministry of Electricity and Water decided in June 1996 to decentralize the tasks and authorities of the NWSA Branch offices. For this process, the Rada Branch Office was declared a pilot case.

The process of decentralization was to be guided by a Steering Committee under the chairmanship of the Technical Secretariat for Water and Sanitation Sector Reform and consisting of four other members, employed in NWSA headquarters. In ministerial decree no. 101 for the year 1996, the tasks of the committee are described as follows:

- to assist and support the Branch to implement the proposals concerning its administration
- to pay the necessary visits to the Branch in order to insure the implementation of the proposals
- to forward to the minister, seasonal reports on the degree of achievements relating to the implementation of the proposals

This steering committee did meet a number of times, but was not enabled to continue meeting and the proposals were not processed anymore. This delayed the process of decentralization. The mission regards the role of the Steering Committee as crucial and strongly recommends its re-establishment.

To involve the local authorities a supervisory board should be established which can act as a board of directors of the Rada Branch. The independent Rada Branch Office should be audited by NWSA Headquarters at the end of each year. In this way the Headquarters can fulfill its role in the Ministry.

The big advantage of the independent Branch Office is that the management feels more involved in the operation of their Branch and can adapt its working method to the specific circumstances of the region.

The NWSA Headquarters does not have to go in details but can focus on main issues such as policy guidelines applicable nationally.

The task in the region both technical and financial has to be under full responsibility of the Branch Office. Only when this has been started and effectuated, is it possible to train and guide the Branch Office by a consultant and to extend the present contract for a few months.

To support the decentralization a meeting of the Ambassador of the RNE with the Minister of Planning might be necessary.

7. Institutional aspects

After the establishment of the NWSA Branch Office in 1994 the staffing has been a continuous problem. The function of Branch Manager has been changed three times already and presently the fourth manager is in position. The positions of the Technical Manager and the Financial Manager have been vacant for a long time. It is of utmost importance that the functions are filled by capable people.

The three managers form the management team and are the key to a successful organization. They should be capable and stay on the job for a period of at least three years. With the present salary structure, even with the allowed incentives, it is hardly possible to employ the right people because of the fact that Rada is such a difficult town to operate in.

The mission recommends to increase the incentives, if the market for Rada requires this. It is much better to pay more for capable people than to see the project deteriorating.

The decentralization should allow the Branch Manager to hire and fire the other employees (i.e. under the level of the management team), which may well result in the employment of less people but of better quality, within the same personnel budget.

The mission thinks that the Rada Branch Office at the moment is not capable of running the project, as people are not motivated. This has to be changed. The RWSSP team cannot train and transfer know-how to vacancies.

The new account and billing system is a big improvement if rightly used (see also chapter 8). When this is introduced, the different staff positions have to be reassessed as the computer system requires less work than before.

The maintenance program of the system has still to be worked out in such a way that the planning and inspections lists are clear and understandable for the Arabic speaking maintenance staff. This means an easy to read instruction in the Arabic language, especially made for the different components, such as the water supply, sewerage and treatment plant.

The assistance of GTZ (German Federal Ministry for Economic Cooperation and Development), foreseen after the handing over of the project by the consultant, which looked very promising in 1995, was found to be disappointing. The German technical team has a priority to assist in the urban water supply projects financed by Germany - so far, no time is left to also support other towns.

The problem of the consumer relation section are described in chapter 8.

Apart from the job descriptions of the three members of the management team, which still need to be completed, other job descriptions are given in the annex of the Report on Institutional Strengthening NWSA Rada Branch, written by the consultant (First draft February 1997). Although the job descriptions may need some adaptation when the manager receives the authority to hire and fire the staff below the management team, and when the computerized billing system has been introduced, the tasks descriptions are very clear and good to work with (see annex 5).

8. Customer Relations

Before the extension expert left in August '95 a workplan was made for the section and carried out in as far as possible under a branch manager who was against employment of female officers. The major information activities effectively stopped at the end of 1995, while the female extension officers stopped working when the project stopped paying their salaries and the branch manager/NWSA was not willing to pay them from their own budget. During the time they stopped, most of the materials prepared - especially the materials for health education - and the beautiful model house were either thrown away or severely damaged.

Yet against these odds and the fact that at the time the extension work effectively stopped there were only 600-700 connections, the information to customers has been quite effective - spot checks in town during the mission revealed that women are aware of the requirements for in-house plumbing to connect to the water and sewerage lines (in the areas surveyed almost all houses were connected to the water and sewer system), they are aware of the operation of the system and understand the tariffication as applicable up to October '96. This is all due to the work carried out till December 1995.

At present there is no section in operation with the tasks which are necessary to run a good customer relation service. Although the tasks for such a section have been clearly

spelled out in a number of documents (monitoring mission '95, final report Extension and training section '95, institutional strengthening NWSA Rada Branch '97) the section has basically ceased to function. There is a staff who is called customer relation officer, but his tasks concerns mainly supervision and organization of the meter readers, checking on printing of the bills (done in Sana'a), distribution of the bills and explanation of the system when people come to complain. Yet this person is located in the Branch office of the NWSA away from town - thus not easy to reach. The former information centre in town has become a paying centre where no information activities are carried out. Thus general or specific information is not given to customers and there is no accessible place for women to go to for information or paying.

In October '96 a new tariff was introduced. The consultant prepared an information leaflet explaining the new tariff and the reasons for it, but this leaflet was never distributed, nor were information sessions held to explain it to the public (in this society the written word always needs to be accompanied by an oral explanation). The result of this disregard of the public is a general outcry, refusal to pay the new bill, complete misunderstanding and a growing distrust towards NWSA, also leading to reduction of water consumption based on the belief that possibly next month yet another raise will come. This situation is very bad for the sewer system as it needs sufficient water for functioning.

People also do not understand their bills as they have not been explained and quite complicated. Luckily this will change soon as the branch is going to have their own billing system prepared by the project. However, there are many mistakes made in the bills and people find it very hard to get an answer to their complaints:

One man was used to have a water bill of about YER 500-600 and in November was charged YER 10.000. He went to the NWSA branch where he was told that there was a new rate and that this increase was possible. He was told to check the water meter. This he did and he found that the reader had made a mistake of more than 30 m³. He calculated his own bill, but it took him two more times and a lot of threatening to have his bill changed to the 22 m³ which he actually used for which he paid the 2027 without any complaining.

The watermeter numbers are not Arabic and this turns out to be a larger stumbling block than expected - the readers easily turn around the numbers or make mistake in the reading. Moreover, the checking is not done properly and enormous changes in consumption due to faulty reading are not discovered in a systematic way.

Sometimes people who go to complain about their bills (faulty or not faulty) get their bills changed by a NWSA staff member without there being a procedure for it (for instance revoking the minimum charge of YER 400 in case of use below 5 m³). This of course becomes known and enrages the uninformed customers even more.

The mission is of the opinion that the customer relations branch has to be re-established and should have the following tasks:

- timely informing customers, men and women, on changes in the services (interruption, tariff changes)

- providing information on the proper use of the water supply and sewerage facilities
- facilitate customers, men and women, to get information, ventilate their complaints and report leakages and blockages
- monitoring of reasons for people to disconnect the services
- monitoring the incoming information and taking steps as and when required to adjust services and procedures
- reminding customers on their responsibilities (paying, not tampering with the facilities, not using facilities illegal) in order to ensure continuity of the branch
- motivating customers who have not yet connected to the system (especially sewer) to connect all waste water outlets from the house, where possible

The consultant has estimated a need for two customer relation officers, one man and one woman. However, in the Rada situation a woman can never work alone with a man, nor work alone. Hence there are two female customer relation officers needed, with the third acting as a back-up. Two can carry out administrative work as well. The mission is of the opinion that the information centre in town should be re-activated as information centre and customer relation office. To facilitate visits and payment of bills by women, it would be good to have two women only days, as was previous the case.

9. Tariffication and revenue collection system

From the start of the Branch operations, the billing has been done by the NWSA Headquarters while customer details were kept manually at the Branch. The system is characterised by slow billing procedures, lack of awareness by Rada staff of the importance to collect and to provide up to date data, late feedback of billing errors and consequently low billing efficiency - 200-300 customers have never been billed! The consultant has developed a new computerised billing system which is now ready for use. In setting up the system, the whole customer database had to be rechecked and where necessary corrected. The system has a built-in check on water meter replacements and excessive differences in consumption.

The tariff which was introduced at the time of connection was too low, but was meant to get people used to pay on a regular basis and also because the tariff basically could only worked out well when the number of connections became known. Thus the tariff needed adjustment and a proposal based on operation and maintenance cost was made and adopted by the Minister of Electricity and Water on June 1996. However, this tariff was never introduced. In October '96 a new tariff was established, proposed by the community leaders and Branch staff. This tariff was realised in the October bills, received in December '96. The tariff system was changed with a minimum charge of YER 401, regardless of amount consumed, based on the calculation of YER 30/m³ for the first 10m³ and a fixed sewer charge of YER 100 per connection (see annex 5). For the small consumer who uses less than 5 m³ and used to pay only about YER 50 (YER10 m³ for the first 5 m³) this is an enormous increase. And this will specifically affect the poorer sections of society who are to a large extent women with small children whose husbands work elsewhere or widows. For those consuming up to 10 m³ the difference is less but still jumps from YER 175 (5 x 10YER plus 5 x 25YER for 10 m³) to 400 YER. It is estimated that 50% of the customers consume less than 10m³ per

month. But the system of a minimum charge can quite easily result in less careful consumption of water. Despite the fact that there is sufficient water for years to come, it does no harm to be careful with a commodity which is so sparse in Yemen.

During the mission a new tariff was proposed and agreed upon by the Director of NWSA. (see annex 1). This tariff again incorporates the progressive system and also ensures the capacity to pay for operation and maintenance. The cost for operation and maintenance have been well calculated and described in the report on Institutional Strengthening NWSA Rada Branch of 1997.

10. Provision of services in two villages

Al Qusair Water Supply

Al Qusair is a small village, located in the centre of the protected well field of Rada. The village water supply used to come from a shallow well provided with pump and connected to a piped water scheme partly financed by and implemented with supervision of RIRDP. Due to overpumping of the well field for agricultural purposes the well has fallen dry since 1989. During the negotiations on the water rights and water supply for Rada and the protection of the well field, the concerned local and central authorities made promises to the population of Al Qusair to do something about their water supply, especially because the neighbouring villages all do have an adequate water supply. This has not yet been done and the villagers have become rather threatening towards the project.

Because the well field is protected, the village is not allowed to drill their own well. It is proposed to connect them with a pipe connection to well 3, adjacent to their village. The connection will be made complete with appurtenances and provided with a water meter (installed inside the well 3 compound). Materials for pipeline, valves and appurtenances are available in the storage of the NWSA Rada Branch and the implementation of the works will be executed by a local contractor under the supervision of the NWSA Rada branch and in accordance with plans already made in principle by RWSSP. Further the RWSSP will render some assistance with the supervision. There will be no costs involved. Of course the Qusair population have to pay for the water used as per readings of the water meter at well 3 on a monthly basis (bulk water supply against tariff to be agreed).

Dar al Nadjd sewer system

The population of the village of Dar al Nadjd, located about 3.5 km east of Rada alongside of the sewer transmission main, has a long outstanding "claim" to be provided with a sewer system. The villagers supported their demands regularly verbally very strongly and even with physical actions. Their actions were based on promises made by the local government and local community leaders both verbally and in writing. RWSSP has ensured that there is a possibility to connect to one of the manholes in the transmission main, complete with over crossing.

At present it is proposed to provide them with PVC sewer pipes (about 1800 meter 4 inch/100mm PVC) and fittings from NWSA Rada branch stock. Further cement blocks, cement and concrete materials have to be provided, enough for 50 house connections, still to be purchased. Further concrete (materials) have to be provided and purchased for the embedding of the PVC pipes and for pipe supports. Implementation and labour (costs) will have to be paid by the villagers, inclusive eventual local contractor's cost.

NWSA Rada branch will supervise the works, with assistance/advise of RWSSP Engineering staff. NWSA/RWSSP will also render some assistance with design and planning of the system.

The total cost are estimated to be Nfl. 85.000. These rather high cost are mainly due to the high costs for proper (concrete) embedding of the PVC pipes for adequate protection of the piped system and concrete pipe supports, which have to be used in this rocky area.

The RWSSP/NWSA Rada branch will look after the financial matters and make payments in instalments in ratio with the progress of works. In case the local population of the village is obstructing the works in any way all support/assistance by RWSSP/NWSA RADA branch will immediately be stopped. This is also the case if villagers of Dar al Nadjd are sabotaging or vandalising any systems or works already implemented by RWSSP for the city of Rada and already handed over to NWSA Rada branch.

11. Proposal for additional Technical Assistance for institutional strengthening of NWSA Rada Branch

Now the construction of the system has been completed, the operation and maintenance is of crucial importance for the sustainability of the project. Although the institutional building of the staff of the Office was part of the consultation for a long time, there was hardly progress made. A main reason is that the staff to be trained was just not appointed or stayed only a short time on their positions.

Now after strong pressure, the nomination of staff members has started. An adequate billing system is now ready for use. Training of the financial and administration people is necessary not only to understand the new billing system, but also to adapt to the new requirements of this system.

A ready made accounting system, suitable for the branch's operations has been bought and will be implemented. A financial information system still has to be developed. Also the institutions for operation and maintenance have to be worked out for the workers in the field in the Arabic language.

The mission is of the opinion that the consultancy should be extended according to the reformulated (during the mission) proposal of the consultants. This means that for the period from 7 March 1997 until 15 December 1997 two expatriates and some local advisors will be assigned for this work. This however, only under condition that the

three management posts are filled by people who have **the required level and skills**, who have to be on location by March 15, 1997. If in doubt, the decision on whether or not proposed staff have adequate level and skills, should be done by a committee consisting of for instance the Director General NWSA , RNE the Chairman of the steering committee and the consultant. Other conditions which the mission supports are mentioned in the Proposal for additional technical assistance (Annex 5)

The total cost will amount to Dfl 586,300. It should be studied if these costs and some costs for extra activities (possibly reconditioning of manholes of the sewer system and the activities in Dar Al Nadgj) can be paid from the remaining funds of the three civil works contracts and Technical Assistance contract.

The already approved extension of Technical Assistance to the Alhasaba Sanitation Project (Mr. Tibor Peczely) also will be paid from these funds. When the remaining funds are insufficient, or can not be made available, an additional budget for Technical Assistance should be allocated.

During discussion with the sector specialist Mr. J. Blom, it was decided that the extension of Technical Assistance can be proposed for approval under the condition that the last payment will be made in 1998 instead of in 1997.

ANNEX 1

AGREED MINUTES OF THE MEETING WITH NWSA

SANA'A, 23 FEBRUARY 1997

Present:

Dr. Mohammed Achmed Al Saidi	Director General NWSA
Mr. Pieter Dorst	DCM RNE
Mr. C.D. van der Wildt	Chairman of the mission
Mrs. M. Wegelin-Schuringa	Mission member
Mr. Mohammed Al Aroosi	Mission member
Mr. R.F.M. de Gier	Project Coordinator RWSSP
Mr. J. van Hoorn	Project Manager RWSSP

During this meeting all present agreed that in the framework of the decentralization, the NWSA Rada Branch will be a pilot case. In view of this, the following main issues were discussed and the following decisions were agreed upon:

Tariff setting:

The proposal of June 1996, signed by the Minister of Electricity and Water, was never implemented. Instead, the Branch in consultation with some local leaders, proposed a different tariff system and subsequently applied it as of October 1, 1996. This tariff has created confusion and has not been accepted by the majority of the population. In consultation with local leaders and the manager of the Branch, a new tariff system has been worked out (see annex 1). Both parties present have agreed to this proposal, which will be retroactively applied as of October 1, 1996.

Staffing of NWSA Branch:

During the mission it was agreed that an urgent need existed to fulfil the still vacant positions of the technical and financia/administration mangers. it was then also agreed that at the latest by March 15, 1997, those persons have to be appointed and on location in Rada, who comply with the required level and kills. It was noted that on the 22nd of February, 1997, the said positions were fulfilled.

To be able to employ the right people in these positions in Rada, it is agreed that the existing incentives will be reviewed. Other personnel below the level of these managers will be hired and fired by the Branch manager with the understanding that the organization will be optimized.

Consumer relation section:

It was agreed that the consumer relation section will be reestablished and will be staffed by personnel who have been trained during the project for this tasks and who are able to reach the different target groups.

The reaction of the consumers to the tariff effectuated by october, 1996, has shown that there is a dire need for a proper information system. This has also been put forward by the community leaders and the NWSA Rada Branch manager.

Billing and accounting system:

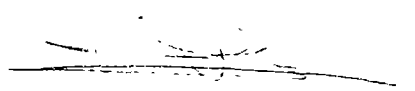
In view of the pilot status of the NWSA Rada Branch, the new billing and accounting system will be applied.

Tax exemption:


The Director General informed those present, that the NWSA as an organization has recently been exempted from tax payments and custom duties related to the execution of their work and its operation and maintenance activities. This means that the materials necessary for the first agreed extension works (district 20 and 24) can be imported.

The RNE and NWSA stressed the importance of decentralization in general and the successful performance of the Rada pilot scheme in this respect particularly. RNE emphasized that further investments in the urban water supply and sanitation field will be depending on the performance of the pilot scheme.

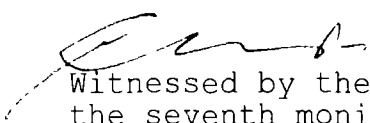
Signed on February 23, 1997



Mr. Pieter Dorst
Deputy Head of Mission
Royal Netherlands Embassy
Sana'a, RoY



Dr. Mohammed Ahmed Al Saidi
Director General
National Water and
Sanitation Authority
Sana'a, RoY



Witnessed by the chairman of
the seventh monitoring mission
Mr. C.D. van der Wildt

Projected revenue out of tariffs (based on December 1996 consumption)

No.	Description	Connect.		Consumption		Up to 01.10.96		Agreem. June 1996		Proposal February 97		
		No.	%	December 1996 m3	%	Tariff/ m3	Total revenue	Tariff/ m3	Total revenue	Cons.	Tariff/ m3	Total revenue
1	House connection											
	- 1 - 5 m3			4 500	11	10	45 000	35	157 500	4 500	25	112 500
	- 6 - 10 m3			9.520	23	25	238 000	75	714 000	9 520	50	476 000
	- > 10 m3			20 428	50	35	714 980	130	2 655 640			
	- 11 - 15 m3									5 548	80	443 840
	- > 15m3									14 880	130	1.934 400
	- fixed fee/ month	3 006									100	300 600
		3 006	93	34 448	84	29	997 980	102	3 527 140	34.448	94,8	3 267 340
2	Mosques, hospitals, schools, governmental institutions *)											
	- 1 - 25 m3			177	0	25	4 425	30	5 310	177	30	5 310
	- > 25 m3			600	1	40	24 000	45	27 000	600	45	27 000
	- fixed fee/ month	17									200	3 400
		17	0,5	777	2	37	28 425	42	32 310	777	46	35 710
3	Commercial connections *)											
	- 1 - 10 m3			990	2	30	29 700	75	74 250	990	60	59 400
	- > 10 m3			4 705	11	30	141.150	130	611.650	4.705	130	611 650
	- fixed fee/ month	193									200	38.600
		193	6	5 695	16	35	199 275	120	685 900	5.695	125	709 650
		3.216	100	40.920	100	30,0	1.225.680	104	4.245.350	40 920	98,1	4.012.700

*) = in agreement June 1996: separate tariff for mosques, all others same tariff a commercial connections

ANNEX 2

MINUTES OF THE MEETING WITH THE MINISTRY OF CONSTRUCTION, URBAN PLANNING AND HOUSING

MCUHP Office in Sana'a, February 22, 1997

Present:

Mr. Al-Dafie	Deputy Minister
Mr. Mohammed Mohayya	Project Manager Solid Waste, Rada Municipality
Mr. Hiysami A. Al Hiysami	Director General MCUHP Al Bayda Governorate
Mr. Pieter Dorst	Depury Head of Mission, RNE
Mr. C.D. van der Wildt	Chairman of the mission
Mrs. M. Wegelin-Schuringa	Mission member
Mr. Mohammed Al Aroosi	Mission member
Mr. R.F.M. de Gier	Project Coordinator RWSSP
Mr. J. van Hoorn	Project Manager RWSSP

Dump site for solid waste:

The mission expressed dismay about the fact that the new dump site is still not functioning. This has been an issue for the past 7 years. The old dump site is not good as the waste infiltrates into the aquifer from which the water is being pumped. The vice minister said he had never heard about this issue and he promised to discuss it with his staff and will try to solve the problem.

Office of the Baladya:

The office is in a terrible state of disrepair. Windows are broken, furniture is taken out. The vice minister promised to ensure that repairs are carried out and the building is kept in a proper way.

Funds for operation and maintenance:

The mission remarked that the sweepers have not been paid salaries for a long time and that naturally their work is not done properly. The vice minister explained that the financial system of the ministry has been changed at the beginning of this year as a result of a new decentralization policy. Now funds for salaries, fuel and spareparts are transferred to the Bank in Al Baida at the beginning of the year for the whole financial year. The funds can be released if a check is signed by the Governor and the Director of Municipalities of the Al Baida Governorate. If the funds are insufficient, the project manager for solid waste can write him and after evaluation and agreeing on the need, additional funds can be released.

Surface drainage:

The roads have to be kept clean as during the rains solid waste gets flushed into the sewer system because people open the manholes. The project has twice done a cleaning campaign, but this is the responsibility of the Baladya, who claims not to have the funds to carry this out. The asphaltting of the secondary roads has not been completed and the

equipment needed for completion is being used outside Rada, obviously there are funds to operate the equipment. It was agreed that the equipment which was kept with the contractor will be handed over to the Baladia. The vice minister explained that the ministry has issued a decree that the Baladia now can collect funds from residents for solid waste collection - it is up to them to decide how and from whom to collect (for instance commercial buildings, restaurants etc.).

Streetlighting cables:

The proposal put forward by the consultant and agreed upon by the different parties concerned in Rada (contractors, baladia, project) is accepted vis-a-vis the division of payments between the partners. However, the amount to be paid needs to be raised, because the streetcables have to be underground wherever possible. It is agreed that a total amount of YER 3.34 million will be paid under condition that the money is spent in Rada. The proposal will be rewritten for signature by all parties.

Wheels for solid waste containers:

It is agreed that the wheels for the solid waste containers will be provided by the project.

Operation and maintenance:

The vice minister stated that the deputy minister for municipalities Mr. Al Zabaidi will visit Rada monthly or at least quarterly to supervise the solid waste collection and cleaning of the surface drainage roads.

Visit of Mr Rosingh:

It was agreed that the project would ask Mr Rosingh, project manager of Dhamar Solid Waste Project would be asked to visit Rada and to assist the Project Manager Solid Waste in Rada in the planning of his operations.

ANNEX 3 TASK DESCRIPTIONS

1	Management Team	1
1 1	Branch Manager	1
1 2	Technical Manager/Head of Water Production Section	2
1 3	Financial Manager	3
2	Finance Section	4
2 1	Head of Finance Section/General Accountant	4
2 2	Custom Accountant	5
2 3	Cashier	6
2 4	Meter Reader	7
3	Administration Section	8
3 1	Head of Administration Section/Procurement Officer	8
3 2	Store Keeper	9
3 3	Consumer Relation Officer	10
3 4	Administrative Clerk	11
3 5	Computer Clerk/Operator	12
3 6	Office Cleaner	13
4	Water Production Section	14
4 1	Mechanic/Electrician	14
4 2	Operator	15
5	Water Distribution Section	16
5 1	Head of Water Distribution Section	16
5 2	Supervisor Water Supply Repair and Maintenance Team	17
5 3	Plumber	19
5 4	Labourer	19
5 5	Driver/Messenger	20
6	Wastewater Section	20
6 1	Head of Wastewater Section	20
6 2	Supervisor Sewer Maintenance Crew	21
6 3	Labourer Sewer Maintenance Crew	22
6 4	Labourer Wastewater Treatment Plant	23
7	Security Section	23
7.1	Head of Security Section	23
7.2	Well/Compound/Reservoir Guards	24
7.3	Wastewater Treatment Guard	24

RWSSP

Tariff structure NWSA Rada branch

No.	Description	Tariff according to decision Minister 01.07.96 (not implemented)	Tariff actually implemented period April 95/ September 1996	Tariff as per 01.10.96 (actual)
1	<u>Domestic consumption</u>			
1.1	- 0 - 5 m3	35/ m3	10/ m3	-
1.2	- 6 - 10 m3	75/ m3	25/ m3	-
1.3	- > 10 m3	130/ m3	35/ m3	-
1.4	- 0 - 10 m3	-	-	30/ m3
1.5	- 11 - 15 m3	-	-	80/ m3
1.6	- > 15 m3	-	-	180/ m3
1.7	- fixed charges/ month	-	-	100 YR
1.8	- minimum rate/month	-	-	400 YR
2	<u>Commercial consumption</u>			
2.1	- 0 - 10 m3	75/ m3	30/ m3	75/ m3
2.2	- > 10 m3	130/m3	30/ m3	150/m3
2.3	- fixed charges/ month	-	-	200 YR
2.4	- minimum rate/month	-	-	-
3	<u>Mosques and governmental institutions</u>			
3.1	- 0 - 25 m3	30/ m3 *)	-	30/ m3
3.2	- > 25 m3	45/ m3 *)	-	130/m3
3.3	- 0 - 20 m3	-	25 m3 *)	-
3.4	- > 20 m3	-	40 m3 *)	-
3.5	- fixed charges/ month	-	-	200 YR
3.6	- minimum rate/month	-	-	950 YR
	*) = mosques only			

JH/ January 1997

Table 1 : Involvement of Consultants in Proposed Activities (R= Responsible for activity; A = Assist in activity)

Activity	Expatriate Staff		Local Consultants				GTZ
	Team Leader/ Fin Adm Specialist	Instr dev Specialist/ Pub Health Engineer	Civil Engineer/ Com Rel expert	Water supply management specialist	Internal auditor/ accountant	Computer Expert	GTZ Water Supply Techni- cians
	van Hoom	Trommelen	Salah	M Saeed	Abd Sherba	A. Arman	
Project Management	R						
Liaise with Steering Committee, GTZ/NWSA and RNE	R						
Implementation of decentralisation proposals	R	A					
Training in Sewer Maintenance				R			
Training in Control of Unaccounted for water				A			R
Assistance to Branch in Contracting activities	R		A	A			A
Implementation Computerized Accounting System	R				A	A	
Implementation of Computerized Billing System	A	R			A	A	
Implementation of Computerized Stores System	R	A	A	A	A		
Training in Budgeting, financial mngt reporting	R				A		
Implementation of Customer Relations System		R	A				
Implementation of Reporting System	A	R	A				
Supervision software development techn information system		R					
Development of In-House Training System		R					
Establishment of Supervisory Board with Local Participation	R		A				
Consolidation of Activities	A		R				

February 1997

Figure 2 : Barchart of Activities

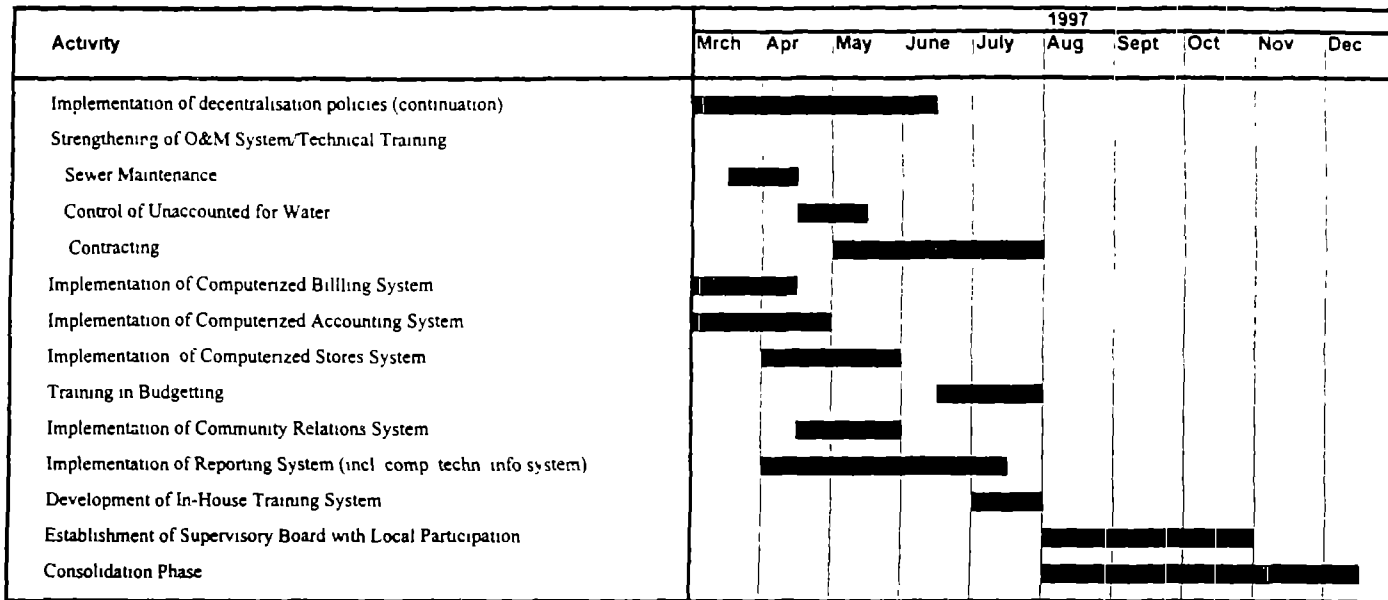
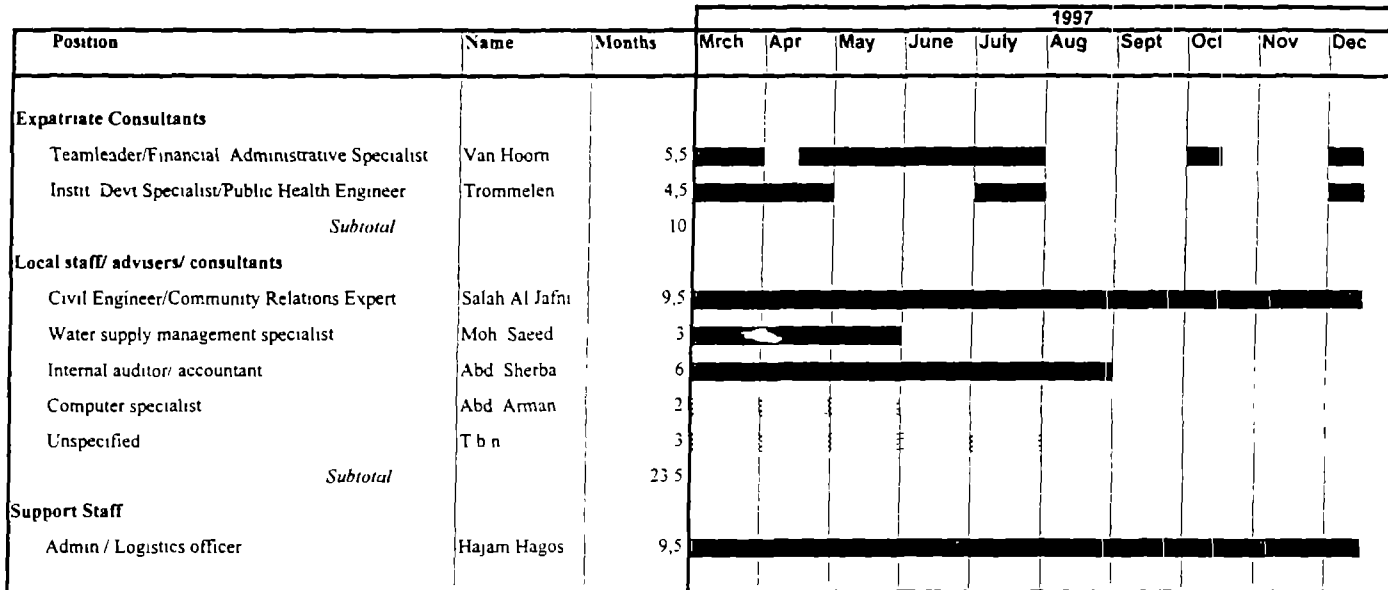


Figure 3 : Barchart of Consultants Staff



█ = intermittent

Logical Framework

Narrative Description	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Development Objective (goal)</p> <p>Adequate public health conditions in Rada town by provision of adequate water supply and waste water collection and treatment</p>	<p>Customers served with reliable water supply of good quality, sufficient quantity</p> <p>Customers served with sewerage facilities</p>	<p>Reports, field inventory</p>	<p>Community is willing to connect to the water supply system</p> <p>All people can be enforced to connect to the sewer system</p>
<p>Immediate Objectives (purpose)</p> <p>Build Institutional capacity at Branch level</p>	<p>Ability to cover its O & M costs</p> <p>Efficient collection of revenue</p> <p>Efficient and reliable provision of services</p> <p>Ability to keep system in good condition</p> <p>Quantity (l/cap), quality, and reliability of water supply, unaccounted for water</p> <p>No overflows of sewer system and adequate waste water treatment</p>	<p>Reports</p> <p>Reports compared with standards</p> <p>Reports compared with standards</p> <p>Observation of physical condition of system</p> <p>Reports, measurements</p> <p>Reports, measurements</p>	

Narrative Description	Objectively Verifiable Indication	Means of Verification	Important Assumptions
<p>Outputs</p> <p>Implemented Decentralisation Policies</p> <p>A model for the establishment of decentralized NWSA branches</p> <p>Staff trained in the operation of the newly implemented administrative systems and water supply and waste water facilities</p> <p>Training capacity to transfer knowledge to new staff</p> <p>Properly functioning and improved (computerized) administrative and financial systems</p> <p>Properly functioning customer relations system</p> <p>Properly functioning reporting system</p> <p>Established Supervisory Board</p>	<p>Availability of staff incentives, autonomy to control revenues, set tariffs, recruit and release staff</p> <p>Availability of report</p> <p>Enlarged human resource performance</p> <p>Availability of Training Programme and Guide</p> <p>Enlarged human resource performance of management to train new staff</p> <p>Availability Training Budgets</p> <p>Use of System</p> <p>System run without major shortcomings</p> <p>Systems are more efficient than manual systems</p> <p>Timely availability of reliable data</p> <p>Availability of Decree, number of Board Meetings</p>	<p>Interviews with Branch Management, reading of Decrees</p> <p>Report reading</p> <p>Job assessment/interviews with staff</p> <p>Read materials</p> <p>Job assessment/interviews with staff</p> <p>Check budget</p> <p>For all - interviews with staff - observation of demonstration of software</p> <p>Interview with Management and Head of Sections Reading decrees, interviews</p>	<p>People are willing and able to pay higher tariffs</p>
<p>Activities</p> <p>Implementation of decentralisation proposals (continuation)</p> <p>Strengthening O&M system</p> <p>Implementation of computerized billing system</p> <p>Implementation of computerized accounting and stores management system</p> <p>Training in Budgeting</p> <p>Implementation of Community Relations System</p> <p>Implementation of Reporting System</p> <p>Development of In-House Training System</p> <p>Establishment of Supervisory Board with Local Participation</p>			<p>Proper functioning of the Steering Committee</p> <p>Availability of Water Supply Technicians (GTZ)</p> <p>No delays in formalizing crucial proposals</p> <p>Commitment of NWSA HQ to assist in implementing proposals</p>

Narrative Description	Objectively Verifiable Indication	Means of Verification	Important Assumptions
Inputs Technical Assistance Counterpart Staff Logistics	Team leader (5.5 months), Institutional Development Expert (4.5 months), local staff/Consultants/Advisers (23.5 person months), Support Staff NWSA Rada Branch staffed according to organisation chart at start of assignment Office space for Consultants at NWSA Branch office, and transport	Observation of presence and performance of specialists Observation of presence and performance of staff Visit to Branch	Availability of qualified and motivated counterpart staff

ANNEX 6 TERMS OF REFERENCE

The Rada Water Supply and Sanitation Project RWSSP addresses sanitary conditions in the rapidly growing town of Rada, a town of approximately 40.000 inhabitants in the Governorate of Al Bayda.

The technical components of the project include water supply, sanitation, drainage and solid waste collection and disposal. The project also includes community information and participation and environmental health education directed at the general population as well as institutional development activities aimed at the authorities which operate the various systems: the Rada Branch of the National Water and Sanitation Authority under the Ministry of Electricity and Water, and the Rada Municipal Offices under the Ministry of Construction, Housing and Urban Planning.

At present nearly all the construction works for the water supply, sewerage, and surface rainwater drainage works are finalised. Formally the liability period for the civil works ends on January 31, 1997. The solid waste component was already transferred to the Municipality Office in march 1994. The former project manager will visit the project in the period February 19-26, 1997 in relation to the final handing-over of the works.

The most important activity at the moment is the Institutional Strengthening of the NWSA Rada Branch in view of the delegation of authority from H.Q. NWSA to the Branch. It was decided by NWSA in spring 1996 to take Rada as a test case for decentralisation. The actual Technical Assistance is directed to this aim. This activity should end on March 31, 1997. To facilitate the process of authonomization of the Branch and guarantee follow-up after departure of the TA, a Steering Committee was formed. In view of problems with an appropriate staffing of the Branch and with the functioning of the Steering Committee the know-how transfer of this part of the project can not be considered as finalised.

A proposal for extension of the TA in Institutional Strengthening was prepared by the consultant.

The project is being implemented by the Government of Yemen, through the authorities mentioned above, assisted by a consortium of Dutch Consultants (Euroconsult, DHV consultants, Agrovision).

For the monitoring of the project, the Netherlands government has chosen for a 3-member team of advisors, two from the Netherlands, consisting of Ir. C.D. van der Wildt (chairman) and Mrs. Drs. MHA. Wegelin-Schuringa (member) and from Yemen Ir. Moh. al Aroosi.

The progress of the project since 1986 may be illustrated by the list of reports included in progress report January-May 1996, by that progress report itself, by the report in institutional development May 1996 - February 1997, and by the Final Report.

Objective and tasks of the Mission

The objective of the mission is to obtain an independent view of the project achievements to date, by conducting discussions with the relevant Yemen national and local authorities like for example the Executive Chairman and Director Generals of NWSA, the Chairman of the Steering Committee, the Governor of Al Baida, the Director of Municipality Rada, the beneficiary population as presented in the local consumer committee, the personnel of the Branch and the Municipality, the staff of the consultant, the representatives of the contractors as far still present and the representatives of the Netherlands Embassy. The mission will study the relevant project- and other documents, concentrating on the material of the last two years.

The tasks of the mission are:

1. Assess the overall progress and the handing-over process of the technical works during the last two years.
2. Assess the functioning of the technical installations.
3. Review the institutional development (manpower development, financial/administrative procedures, O&M procedures, customer relations, etc.) of the Rada Branch of the NWSA and identify and analyse constraints for this development.
4. Review the status of consumer involvement and involvement of local authorities in the functioning of the Rada Branch.
5. Review again the in March 1994 handed-over solid waste component.
6. Review the proposal for extension of institutional strengthening activity of the project in the light of the original scope of work and targets of this activity and the observations made under point 2 and 3.
7. Review the status of the contracts and related claims.
8. Review the tariffication and the cost recovery of the system in Rada.

ANNEX 7

ITINERARY OF MONITORING MISSION, FEBRUARY 16 - 24, 1997

Sunday February 16:

Arrival of Dutch mission members in Yemen

Monday February 17:

Briefing at RNE

Visit to NWSA

Visit to GTZ

Briefing by consultant

Tuesday February 18:

Transfer to Rada

Discussion with female staff of Branch office

Field visit to well fields and storage reservoir

Discussion with Branch Manager

Wednesday February 19:

House visits in Rada

Teaparty/information session with women in Rada

Visit to town branch office/information centre

Discussion with contractor

Visit to treatment plant

Thursday February 20:

Discussions in Branch office

Discussion with community leaders

Discussion with staff RNE

Qat session with staff NWSA Rada Branch

Reading of reports

Friday February 21:

Transfer to Sana'a

Visit to manager Dhamar Solid Waste Project

Writing of report

Saturday February 22:

Discussion at GTZ

Discussion at MCUPH

Discussion/debriefing at NWSA

Writing of report

Sunday February 23:

Debriefing at RNE

Discussion with NWSA

Discussion with consultant and RNE

Writing of report

Transfer to airport

ANNEX 8
LIST OF AUTHORITIES AND PERSONS MET:

Royal Netherlands Embassy:

Mr. Arend van Meerburg	Ambassador
Mr. Pieter Dorst	Councillor, Deputy Head of Mission
Mr. Joep Blom	First secretary

GTZ:

Mr. Sigmar Sender
Mr. Digby Davis
Mr. Anwer Sahoooly

National Water and Sewerage Authority (NWSA):

Dr. Al Saidi	Director General
Mr. Ahmed Idrees	Deputy Director General
Mr. Saif Moqbil	Project Director

Ministry of Construction, Urban Planning and Housing (MCUPH):

Mr. Al Dafie	Vice Minister
Mr. Hiysami A. Al-Hiysami	Director General MCUPH), Al Bayda Governorate
Mr. Mohammed Mohayya Municipality	Project Manager Solid Waste, Rada

Ministry of Planning and Development:

Mr. Jaffer Hamed Mohammed	Deputy Minister
---------------------------	-----------------

Consultant and staff NWSA Rada Branch:

Mr. Jack van Hoorn	Project Manager RWSSP
Mr. R.F.M. de Gier	Project Coordinator RWSSP
Mr. Abdus Salaam	NWSA, Rada Branch Manager
staff	NWSA Rada Branch

Governor of Al Bayda

Residents of Rada:

Sheikh Ali Nassiri
Men
Women

