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Public private partnerships and the poor - case report 4: awami tanks revisited. Study of current working and stakeholders' response: Orangi, Baldia and Surjani Towns, Karachi

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REPOSITORY RECORD

Ahmed, Noman, and Saleemullah Khan. 2019. "Public Private Partnerships and the Poor - Case Report 4: Awami Tanks Revisited. Study of Current Working and Stakeholders' Response: Orangi, Baldia and Surjani Towns, Karachi". figshare. https://hdl.handle.net/2134/9574.

Public Private Partnerships *and the* Poor

Series Editor: M. Sohail

Public Private Partnerships *and the* Poor

Case report 4: Awami Tanks revisited

Study of current working and stakeholders' response: Orangi, Baldia and Surjani Towns, Karachi

Noman Ahmed
Saleemullah Khan

Edited by M. Sohail

Department of Architecture and Planning
NED University of Engineering and Technology, Karachi



Water, Engineering and Development Centre
Loughborough University
2003

Water, Engineering and Development Centre
Loughborough University
Leicestershire
LE11 3TU UK

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Ahmed, N. and Khan, S. (2003)
Public Private Partnerships and the Poor
Case report 4: Awami Tanks revisited
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Orangi, Baldia and Surjani Towns, Karachi
Series Editor: M. Sohail

A reference copy of this publication is also available online at:
http://www.lboro.ac.uk/wedc/publications/

ISBN Paperback 1 84380 046 2

This document is an output from a project funded by the UK Department for International Development (DFID) for the benefit of low-income countries. The views expressed are not necessarily those of DFID.

Designed and produced at WEDC
by Sue Plummer

Acknowledgements

The authors gratefully acknowledge the many different people who have willingly contributed their knowledge, opinion and their time to the development of this work.

Special thanks to the people from low-income settlements of case locations who have contributed to the research and provided their perspectives on the issue. We are greatly indebted to them.

Glossary

Nazim	Mayor (of a town or a union council)
Naib Nazim	Deputy Mayor
Bhishtee	Manual water carrier who, using a water-filled leather sac, climbs the stairs to supply drinking-water to residents of high-rise apartments that have no supply of their own
Awami	Belonging to people/popular
Canister	A plastic or tin container used to transport water manually and which has a capacity of around 15-20 litres
Rangers	Paramilitary troops
Katchi abadi	Informal settlement

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Awami tanks in Orangi Town: updating the facts as per current status – April 2002

Section 1

Introduction

This research on *awami* tanks follows up a study carried out in 2000 and 2001. After the first study, it was observed that the *awami* tanks were expanding in several low-income localities such as Baldia and Surjani Towns, in addition to Orangi Town. It was also observed that after a few months people's attitude towards *awami* tanks changed, both for and against this mode of service for various reasons. Since there was no improvement worth mentioning in the conventional water supply, it became all the more vital to undertake a new review on the performance of the *awami* tanks that are now a few years old.

Several type of stakeholders are associated with the construction, operation, and maintenance of *awami* tanks. They include area residents/users, tanker operators, local organisations, Rangers, KWSB staff, *awami* tank managers (where applicable), local politicians, elected representatives including *nazims*, *naib nazim*, and many others. Since these stakeholders are directly involved in running the system, they were also included in the course of research.

Section 2

Findings

2.1 Methodology

The previous research on *awami* tanks focused on Orangi Town. This work included observational surveys of several low-income settlements. Baldia Town and Surjani Town both had *awami* tanks with similar structure and operational profiles. The team of researchers initially established contacts with the *awami* tank operators who fed into earlier research. They updated the team on the current performance and operational status of the tanks and system. The checklist/questionnaire used for this study is in Annex 2(a). A similar checklist was used in Baldia and Surjani Towns.

The list of stakeholders connected to *awami* tanks was prepared. They included the users, operators, local councilors/*nazims*/*naib nazims*, local politicians, KWSB staff, Pakistan Rangers, local organisations, tanker operators, and hydrant management staff. A checklist for each of the categories was prepared and used by the researchers during the fieldwork (see Annexes 2b to 2k). In addition to consulting individual representatives of the stakeholders, a focus group meeting was held in Orangi and in Baldia Towns. These meetings discussed at length the issues covered by the checklists. (Edited transcripts of these meetings are included in the forthcoming texts.) In order to document the current status of the *awami* tanks, a selected photographic profile was prepared to highlight the various issues dealt with in this research. Most of the fact-finding work was completed between April and July 2002, although some later updating and verification was carried out in August and September 2002.

2.2 Evolution and development of *awami* tanks as a water supply option

The *awami* tanks are examples of informal contract public–private partnerships. They are found mainly in Orangi, Baldia, and Surjani Towns. Orangi Township is situated in the Orangi Hills in the western part of Karachi, and is the city's largest *katchi abadi* or 'squatter' settlement, covering more than 8,000 acres. For the most part the township was created by land-grabbers and middlemen through the illegal occupation and subdivision of state land. Baldia Town is near Orangi and the SITE Industrial Area. Although it began as a plot township under the Karachi Development Authority (defunct since 2002), it was largely encroached upon and controlled by armed land-grabbers from northern Pakistan. These land-grabbers have facilitated the creation of informal settlements by targeting people in desperate need of shelter, and the township grew quickly. Surjani Town was a planned low-income settlement also developed and promoted by Karachi Development

Authority. Although not encroached upon significantly, the settlement has a severe lack of infrastructure, including water supply.

Although Orangi Township was planned and began to be developed in 1965, it has had a piped water supply only since 1984. As it is in the west of the city it has used the rainfed stream, the Hub River, as a water source since 1982. The water supply system project was carried out in three phases and was finally completed in 1995. During this period the supply has been largely adequate and was a major cause of the rapid expansion of the Orangi settlements. Poor rainfall during the past three years has resulted in a drop in the water level in the Hub, however, and supply was directly affected. Today there is virtually no supply, and the west of the city in general and Orangi in particular are suffering severely. While there are no exact figures available Orangi's water needs are estimated to be 60 million gallons per day (mgd). The Hub provided 100mgd, which met most of the area's water needs for Karachi.Two measures have been taken by the KWSB and city administration to tackle the water shortages: tankers are bringing in water, and the pumping facilities from the Indus source have been upgraded or modified. The tanker service is providing water in a number of different ways. In addition the North-East Karachi pumphouse has been upgraded to increase pumping capacity from 25mgd to 50mgd; a 25mgd pumphouse has been built at Khawaja Ajmer Nagri (which directly benefits Orangi); 48" and 36" diameter pipes have been used to link up District West with the Indus source network; new valves have been installed; 12 tubewells have been sunk in Orangi, Baldia, Manghopir, and Surjani Town; and 50 water storage tanks of 10,000 gallons each have been built in Orangi and Baldia (although this includes some of the *awami* tanks built in Orangi and Baldia, many are yet to be built).

Some years ago new pipes were laid in Orangi Town, but the system collapsed in only a few months and there was absolutely no water getting to these areas. At that point local people thought about providing water through *awami* tanks. In some places the government surveyed the areas/locations and built the *awami* tanks, but people also built *awami* tanks themselves and water was distributed from them in the same way.

Initially water was provided by KWSB, but when complaints about the system began to grow supply was handed over to Pakistan Rangers.

2.3 Current status of the operation of *awami t*anks

The following is the feedback from the *awami* tank operators:

2.3.1 M/s. Mohammad Anwar-ul-Haq, Asghar Ali, Mohammad Zakir and Mohammad Aslam

Tauheedi Colony, New L-Block, Al-Mustafa Road,

Sector-11, Orangi Town,

Karachi

14 April 2002

- Supply of water to the tank is very low.
- Last year three tankers per week supplied water. This year there is only one tanker per week.

- People obtain drinking-water only through *awami* tanks. There is no other way of obtaining drinking-water.
- Major problems relating to water supply include overall shortage, poor quality, fatigue/ labour to carry water from *awami* tanks, and inconvenient timings of supply.
- Presently the *awami* tanks are poorly maintained.
- *The awami* tanks in this area were constructed by the government. They have a storage capacity of about 6000 gallons. They have now become dilapidated and are missing their upper lids, so animals (cat or dog, etc.) can fall into the tank, making it extremely unhygienic.
- According to area residents, *awami* tanks are not a permanent solution to the problems of water supply. People are not satisfied with the timing of supply. People only accept them only because of the dire situation.
- *Awami* tanks are not filled according to any timetable, nor do they provide an enhanced quantity, which is essential.
- *Awami* tanks need to be upgraded. They also need to be supplied with more water.
- Although water pipelines can be the permanent solution, there is a need to promote *awami* tanks to similar low-income settlements. This may be done through the assistance of the Rangers.

Surveyor's Observation

This tank has several problems. It is situated between UC-4 and UC-5, and supplies water to residents of both areas. In UC-4, political influence plays a part in who gets water from the *awami* tank, and overall management is unsatisfactory. It was reported that no record is kept of water quantity supplied. The tank has a capacity of 6000 gallons, but the actual quantity of water supplied is between 2400 and 3600 gallons per week. Although there are water pipelines in the entire area, supply is negligible. Many lines are blocked due to lack of maintenance. People buy water from commercial tankers for uses other than drinking. When water is available in the pipes, staff charge Rs.20 per household to release the water. Sometimes the water is also wasted. Most area residents think this system should be controlled by the Rangers. *Nazim* and area councillors may not be able to fulfil this responsibility.

2.3.2 M/s. Mohammad Hafeez, Mohammad Jamshed and Ahmed Khan

***Awami* Tank No. 220**

D-Block, Muslimabad, Sector 11½,

Orangi Town,

Karachi.

14 April 2002

- The *awami* tank has a capacity of 6000 gallons.
- Performance has improved since the previous year. Last year the tankers would dispense water once or twice a week. This year the tanker comes every other day.

- Water tankers supply water to the *awami* tanks. This water is then obtained by households for various domestic purposes.
- The major problems regarding water supply include overall shortage, poor quality, fatigue/labour to carry water from the *awami* tanks to the houses, and the inconvenient timings of supply.
- Present physical condition of the *awami* tank is reported to be satisfactory.
- Residents of our area are fairly satisfied. It is almost impossible for poor people to buy water from commercial sources, thus their only option is to buy water from the *awami* tanks.
- The persistent problems include the fact that there are no specific timings to supply, quantity of water is very limited, and the number of potential user households is fairly large.
- It is suggested that more large *awami* tanks should be constructed. The supply to *awami* tanks should be increased in proportion to the population being served.
- *Awami* tanks cannot be regarded as a permanent solution to water supply.
- There remains a possibility to expand the *awami* tanks service through the Rangers.

Surveyor's observation

Last year water supply was below the desirable level, but this year it is being transported regularly. The frequency of supply remains at every other day. There is no water supplied through the pipelines, so people are sometimes forced to buy water from commercial tankers. This water is saline and expensive. In respect of *awami* tanks people are satisfied that they receive drinkable water. However area residents do not think *awami* tanks are a permanent solution. The permanent solution is provision of water through pipelines. *Nazim* and elected councillors have not played any useful role so far. People appreciate the performance of the Rangers.

2.3.3 Mohammad Khalil, Mohammad Qamaruddin, Ilyas-ul-Haq

***Awami* Tank No. 12, Tauhidi Colony,**

UC-5, Block-2, Sector-11,

Orangi Town,

Karachi

14 April 2002

- Overall situation of water supply is unsatisfactory.
- Water supply was always delayed during the previous year. This year there has not been much difference.
- Water is supplied through the pipelines very rarely, for 5-10 minutes on an occasional basis.
- Most people buy water from commercial tankers for uses other than drinking. This water is saline. People use water from *awami* tanks for drinking.

- The major problems with respect to water supply include overall shortage, poor quality, fatigue/labour to carry the water containers to the houses, and inconvenient timings of supply.
- Present physical condition of the *awami* tanks is satisfactory.
- With the assistance of Rangers, people obtain drinking-water twice or three times a week. Area residents obtain this water in small quantities.
- Supply of water in late hours, short supply, wastage of water during pouring, and the high-handedness of tanker drivers are some of the problems related to *awami* tanks. It is suggested that more *awami* tanks should be built and backed up with proper supply. Lines should be repaired and supply from the lines should be ensured.
- Supply from *awami* tanks is not a permanent solution.
- It is possible to extend the benefits of the *awami* tanks construction to the lower income communities with the help of Rangers.

Surveyor's observation

The situation of this *awami* tank is the same as observed during the previous years. Water through the lines is supplied barely twice a week and for 10 minutes each time. *Awami* tanks are the only source of drinking-water. Water is purchased from commercial tankers at a cost of Rs.200-250 per tanker load for uses other than drinking. The a*wami* tank itself is in need of repair. It leaks, the lid has been stolen, and the taps do not work. Not all the water from the tankers is emptied into the *awami* tanks, because the *awami* tanks are higher. At least two tanker loads of water should be poured into the tank. For now the *awami* tanks are performing their much-needed task. The Rangers' role in this entire situation was generally appreciated. The area residents had reservations about their *nazim* and elected councillors. They were not sure whether these officials would be able to sort out the water supply because of their other pre-occupations.

2.3.4 M/s. Mohammad Wakeel, Mohammad Shamim, Mohammad Luqman, Nazimuddin, and Mohammad Essa

***Awami* Tank No. 19.7, Islam Nagar,**

Block-L, Sector-11, Orangi Town,

Karachi

14 April 2002

- Overall situation of water supply has not improved.
- Previous year the situation was the same. Now the population has increased but the supply has decreased, which remains an ongoing problem.
- For drinking-water there is no alternative to the *awami* tanks. For other uses, people buy expensive saline water from tankers.
- The main problems related to water supply are overall shortage of supply, insufficient quantity, (often) poor quality, fatigue/labour to carry water to the houses, and inconvenient timings of supply.

- *The awami* tanks are in poor physical condition and badly maintained. They have not been repaired since they were constructed. Material is not properly used. The population has grown but the supply has shrunk.
- Residents of the area are not satisfied. Water is not supplied according to the number of residents. Timings of supply are odd and irregular. Water is also lost due to leakage.
- As the population is increasing, there is a need to increase the number of *awami* tanks. Frequency of supply should also be increased.
- *Awami* tanks are not a permanent solution to the problem of water supply. It is better to have supply through pipelines. If that is not available, however, then supply may be guaranteed through *awami* tanks. In the perception of the respondent, the awami tanks are an alternate means of supply in a situation when piped system is not working.
- *The use of awami* tanks may be expanded through the support of Rangers.

Surveyor's observation

People were observed queuing for several hours. Although the tank's capacity is 6,000 gallons, it was reported that it is never filled to capacity. People fill their other water needs by purchasing from commercial tankers, which is a very expensive option for poor people. As there is no schedule for water supply, every household has to delegate to one person exclusively this responsibility for monitoring water deliveries and collecting water.

2.3.5 M/s. Farooq, Naseemuddin and Mushtaq

***Awami* Tank No. 20, Chisti Nagar, Sector-11½,**

Orangi Town, Karachi

14 April 2002

- The current status of water supply using *awami* tanks is relatively satisfactory compared to the previous year.
- There is no other access to drinking-water except through *awami* tanks. Water is not supplied through pipelines.
- Major water supply problems in the area include overall shortage, low quantity of water, fatigue/labour to carry water from the *awami* tanks to the houses, and the inconvenient timings of supply.
- Present physical condition of the *awami* tanks is near satisfactory.
- Residents have increased in number. There is no water supply schedule. As soon as the water comes, the rush of the people begins. People whose houses are near the tank succeed in obtaining more water than others.
- The condition of the a*wami* tanks needs to be improved. More taps should be installed and a schedule should be fixed.
- *Awami* tanks are not a permanent water supply option. However their current role should be enhanced to benefit lower income settlements.
- The assistance of Rangers may be sought.

Surveyor's observation

No visible change in the physical condition of the *awami* tank was noted since last year's visit. It was reported that the distribution/supply to people has improved. The water supply pipelines are mostly blocked. If any water is supplied, it is sucked up by households that have a suction pump, which poor households cannot afford. For the poor the *awami* tanks are the only option. They should be allowed to remain under the control of Rangers. The residents do not feel that the *nazim* and elected councillors are not capable of handling this service.

2.3.6 M/s. Mohammad Sabir, Allaudin, Riazuddin, Rizwan, Imran and Abdullah

***Awami* Tank No. 22,**

Kati Pahari, Baba Wilayat Ali Shah Colony,

Block-L, Sector-11, Orangi Town, UC-5,

Karachi

14 April 2002

- The overall water supply situation is relatively satisfactory.
- The supply from the *awami* tanks has improved since the previous year. Every three days, one tanker supplies 6,000 gallons water which was not the case in the previous year. Also the previous year people had to go by themselves to fetch the tanker from the hydrant.[not quite clear what this means]
- Most people acquire water from the *awami* tank. When people need more water, they buy it from commercial water tankers.
- Major problems with respect to water supply include the overall shortage, the poor physical condition of the *awami* tanks, fatigue/labour to manually carry water to the house, and inconvenient timings of water supply.
- The physical condition of the *awami* tanks is not satisfactory. They are not plastered internally, which gives rise to leakage and wastage. There is no lid covering the tank opening.
- Although *awami* tanks can be a satisfactory means of water supply at least for the time being, they are not a permanent solution.
- Water quantity remains low. During distribution women and children are at risk from possible stampedes. Where there are no young men in a household, the elderly and sick have the same problem.
- At present it would be useful to increase the number of *awami* tanks in the settlements. Instead of increasing the size, it might be better to increase the frequency of supply – morning to evening.
- With the support of the Rangers, the service can be extended to various low-income settlements.

Surveyor's observation

This tank is two years old. It is currently in use, and every three days is filled from a tanker with 6000 gallons of water. Water supply to the *awami* tank is satisfactory, but is not

enough to fulfil the residents' needs To resolve the problem of water supply, lines have to be laid, but even in the existing lines there is no water, so at this time the present arrangement of *awami* tanks is useful. At least it ensures the availability of drinkable water. For all other uses, water has to be purchased from commercial tankers and is saline, which causes many diseases when used for drinking. There is no set schedule for water distribution. Sometimes it comes during the day, other times it may come as late as 2.00a.m. The tank is leaking, and so losing a substantial quantity of water. It needs to be repaired. If the supply frequency is increased to one tanker per day then the situation would be greatly improved. People were sceptical about involving *nazim* or area councillors in water distribution. In their view, it would ask for unwanted interference.

2.3.7 M/s Nowshad Ahmed and Mohammad Salman

***Awami* Tank No. 15, Block-J,**

Muslimabad, Sector-11½,

Orangi Town,

Karachi

14 April 2002

- Overall situation of water supply is satisfactory.
- Situation has improved in comparison to the previous year. Now water is supplied every other day.
- *Awami* tanks are the only mechanism through which water is supplied in these localities. Although water supply lines are laid, no water runs through them.
- The major problems related to water supply include overall shortage, fatigue/labour to carry water from *awami* tanks to households, and the inconvenient timings of supply (usually late in the night).
- The present physical condition of the *awami* tanks is near satisfactory, although some components need repair.
- People in general are satisfied with the performance of the *awami* tanks as there is no water in the lines. Poor households do not have the means to purchase water from commercial tankers. The amount of water available through the *awami* tanks may be low but at least people receive water for free.
- This tank requires repairs. One member of the household is required to follow up the collection of water from *awami* tank[not sure what this means], which wastes a lot of time. Sometimes residents from nearby locations also come to fetch water, which causes scarcity to this locality.
- More tanks need to be constructed so that water may be supplied daily during morning and evening hours.
- *Awami* tanks cannot be considered as a permanent solution for water supply.
- This service could be extended to various low-income communities through the support of Rangers.

2.3.7.1 Surveyor's observations

During the previous year, the supply to *awami* tanks was grossly irregular. Now it arrives every other day. Pipelines have been laid over the entire area but they are empty. They are worn out and require maintenance. The *awami* tank is also in need of maintenance and repairs. The tank also supplies water to the adjacent mosque. More water is needed as the population in the area has grown. Acquiring water is a very difficult task for elderly and women folk because of fatigue and inconvenient hours. The area residents were generally satisfied with the performance of the Rangers, but they were not willing to include *nazim*/ elected councillors in the system of water provision to the area.

2.3.8 M/s Abdul Ahed, Nazeer and Hamid

***Awami* Tank No. 20, Mewati Chowk,**

Sector-11½, Ghaziabad, Orangi Town,

Karachi

21 April 2002

- The overall situation of water supply has been satisfactory.
- It is better than last year, as now the water is supplied every other day.
- Major problems with respect to water supply include overall shortage, the high price and poor quality of water from commercial tankers, fatigue and labour to manually carry water from *awami* tanks to houses, and inconvenient timings.
- The physical condition of the *awami* tanks is satisfactory.
- The *awami* tanks are performing satisfactorily. Since this water is fit for drinking, it is also used for cooking.
- The water tankers have greatly damaged the area streets and roads. People mobilised and carried out the road repairs themselves in order to facilitate the movement of the tankers.
- If the *awami* tank was bigger then perhaps more water could be stored in it.
- *Awami* tanks cannot be considered as a permanent solution to water supply.
- There remains a possibility of expanding the service of *awami* tanks to other low-income areas through the support of the Rangers.

Surveyor's observation

The *awami* tank's performance was found to be generally satisfactory. The water is drinkable, and the only major problem is that there is no timetable for supply. If the capacity of the *awami* tanks were to be increased, then it would be able to store more water and better performance. It is not advisable to involve the area *nazim* and elected representatives, because it is anticipated that their participation will invite outside interference. A major problem of the area is the repair of pipelines. Sometimes the water is supplied everyday. Mr Nazeer has a stamp which he affixes on the receipt provided by the tanker operator. Tank capacity is 6000 gallons while the supply varies from 6000 to 3600 gallons. Whenever water is supplied through the lines, the sewerage of the area is also mixed, thus the water is not fit to use. Leakage from the *awami* tanks adversely affects the roads. It is therefore vital that these leakages are stopped to protect the road

surface. The role of the Rangers is appreciated, but the system should be kept away from *nazims* as they may not be capable of dealing with this situation in any better manner.

2.3.9 M/s Khushi Mohammad, Mohammad Muzaffar, Mohammad Yousuf, Mohammad Shamsuddin, Mohammad Abdu Salam and Shaikh Abdullah

Gulshan-e-Zia, *Awami* Tank No. 1,2,3,

Near Graveyard, Sector, 11½, Orangi Town,

Karachi

21 April 2002

- Overall situation of water supply is dismal.
- Compared to the previous year, the situation has deteriorated. The tanker comes only once a week.
- Presently one person is deputed to visit the office every day. He spends a considerable time visiting the hydrant, but the tanker shows up only once a week.
- Major problems in the year regarding water supply include the overall shortage, the high price and poor quality of water from the commercial tankers, fatigue caused by carrying the water from the tank to the house, and inconvenient timings.
- The physical condition of the *awami* tank is not satisfactory.
- During the previous year, the water was supplied regularly. Now our representative keeps visiting the hydrant but water comes only once a week. The population of the area has also grown.
- If tankers keep coming regularly and provide adequate water, then residents will be satisfied. There is adequate opportunity of supply in Gulshan-e-Zia.
- All the three tanks in Gulshan-e-Zia have been built by the people on a self-help basis, but they are small. If the government could built a bigger tank it would be useful.
- The area needs a big *awami* tank, possibly with a capacity of 20,000-25,000 gallons. It would solve the problem.
- The *awami* tanks are not a permanent solution to water supply problems.
- *Awami* tanks can be used as a service option to external water supply to low-income areas.

Surveyor's observation

At this location, three *awami* tanks were built through self-help by the area residents. The water supply situation has changed since last year. Water was supplied two or three times a week, now the tanker only comes once a week. Area residents have deputed one person for the follow up of water supply from Rangers[not sure what this means]. He visits the hydrant every now and then. Every household receives five canister loads of water. The tanker of 6000 gallons is poured into the three tanks. There are 800 to 900 residents in the area. Initially the management work was done by Khushi Mohammad but now he is sick and old. Now it is done by Mr Yousuf. People obtain water from *awami* tank for drinking. The water for other necessities is purchased from commercial tankers at the rate of

Rs.200-250. This water is saline in nature. Almost no water is released through pipelines; once a fortnight water is released for half an hour. The *awami* tank is the only solution available. Timings of tanker supply are not fixed. People are at least content that the water supplied to them is of drinkable quality.

People were averse to involving the *nazim* and *naib nazim*/councillors. They are not regarded as capable of handling these issues related to water supply.

2.3.10 M/s Aijaz Ahmed, Niaz Ahmed and Ali Reza

Awami Tank No. 110, (A-110, B-110, C-110),

Gulshan-e-Zia, Sector-11½, Orangi Town,

Karachi

21 April 2002

- The overall water situation is much better than the previous year. Now the water is supplied every other day by a tanker of 2400 or 3600 gallons.
- Major problems regarding water supply include the overall shortage, inconvenient timings of supply, and high price of water from commercial tankers.
- The physical condition of the tanks is nearly satisfactory. The area has three tanks, A, B and C. On tank A, there is no lid, and water is being taken from tank B using buckets. There are no proper repairs.
- One suggestion is to make one big tank instead of several small tanks and also develop capacity for storage.
- *Awami* tanks are not a permanent solution for water supply.
- Through *awami* tanks, the problems of water supply in low-income areas can be adequately addressed through *nazims*/councillors.

Surveyor's observation

The performance of this *awami* tank is satisfactory because the Rangers have registered this tank in their record and have given them a spot register which contains driver's names, tanker no., quantity of water supply, person receiving water and his signature, etc. The Rangers' tankers come regularly. A 6000-gallon tanker is divided into three tanks. The situation of the water lines is dismal. Although it is perceived that *awami* tanks are only a temporary solution, the efforts are always demanded to provide water through pipelines. However, one problem is that there is no fixed time for the arrival of the tanker. Water from commercial tankers is used for washing and cleaning purposes. Initially an *awami* tank was built at the mosque. It was closed after people complained. If that is re-opened then people will start getting adequate water. If five or six more *awami* tanks were constructed of 3600 gallons each it would improve the supply situation. People who are involved in the management of *awami* tanks say that it is a great responsibility. Follow-ups are required during inquiry of drivers,[not sure what this means] etc. which are all demanding tasks. They are of the view that this task should be handed over to *nazim*/*naib nazim*. Rangers have done commendable work but their job is safeguarding the borders, not supplying water.

2.3.11 M/s Augustus and James

Christian Colony, *Awami* Tank No. 108,

Ghaziabad, Sector-11½, Orangi Town,

Karachi

21 April 2002

- Overall supply of water has improved compared to the previous year.
- Major problems with respect to water supply include overall shortage, high price and poor quality of water from commercial water tankers, and the inconvenient timings of supply.
- The physical condition of *awami* tanks is near satisfactory.
- As there are four *awami* tanks in Christian Colony where water is regularly provided, the the overall situation of water supply is satisfactory for now.
- The *awami* tank does not have a lid. The danger of a child or an animal falling into it remains. Internal cleanliness and maintenance is also required to keep the water clean.
- If there were two big *awami* tanks in the area, it would usefully extend the supply period.
- The expansion of *awami* tanks service to other low-income areas could be done with the help of the Rangers.

Surveyor's observation

The supply situation is satisfactory but the condition of the *awami* tank itself is bad. Pipelines are damaged in several places. For this reason, whenever the water is released, it gets wasted. The *awami* tank 108 belongs to the Catholic Church. People have also built *awami* tanks through the self-help. According to the priest, the responsibility remains with the elected representatives. They must see the system and work to improve the situation.

2.3.12 Father Bin Yameen, Alder Masih

***Awami* Tank No. 109, Christian Colony,**

Ghaziabad, Sector-11½, Orangi Town,

Karachi

21 April 2002

- Overall situation of water supply is satisfactory.
- Compared to last year, the situation has improved. Water is supplied by the tankers every other day. The Rangers dispense it themselves, unlike last year when one person was deputed for continuous management.
- In the current situation, the *awami* tanks are the only water supply. There are pipelines but there is no water.
- Major problems of water supply include often poor quality of water and inconvenient timings.
- Overall physical condition of the tanks is satisfactory.

- The *awami* tanks service is very important. There has been no water in the pipelines for the past 12 years, so most people had to buy water. As most people are poor, the *awami* tanks are a major help.
- It is desired that one tanker each morning and evening time should supply water. People in this area obtain water in a peaceful manner. If there were more tanks of a larger size it will be very useful for the area.
- It is expected that in future, shortage of water and greater consumption are likely to cause problems. For this reason, it is vital that more *awami* tanks are built.
- *Awami* tanks are not permanent solutions to water supply.
- With the assistance of the Rangers, the water supply can be extended to other low-income areas.

2.4 Stakeholders' response

The following is the response of various categories of stakeholders with regard to the performance of *awami* tanks.

2.4.1 Users

The 'Users' category is comprised of area residents. The residents were not satisfied with the quantity of water supplied since it barely covered their drinking water needs. They were also not satisfied at receiving water only twice a week on average. As the number of residents had grown, this frequency of supply was much below the desired level. It was a matter of growing concern among the residents that they had to pay a substantial amount to buy water from the tankers which could not even be used for drinking. The piped network worked in some households but the supply was almost non-existent. Thus in any case people had to resort to the *awami* tanks for their drinking water.The unpredictable timings of supply caused a great deal of inconvenience, particularly as supplies usually arrived during the night and early morning.

According to the user's feedback, in some cases the lack of a proper system for acquiring and distributing water from the *awami* tanks caused a great deal of confusion and even quarrels. When the water tanker arrived people would flock to the site and water could not be distributed in an organised manner. Where a local elder or a small community organisation was managing distribution the situation was found to be reasonable.

A substantial advantage of the water supplied through the *awami* tanks was, according to area residents, the fact that it was free, and so suitable to their socio-economic status.

Areas where residents were organised normally undertook the operation and maintenance on their own and regarded their tank as their own asset. On the contrary, places where the people did not consider the *awami* tanks a common asset, maintenance was poor and decay swift. Users also reported damage to the streets and lane from the heavy supply trucks, and considered this to be a major handicap and side effect of the supply to *awami* tanks.

Residents noticed that households situated near to the *awami* tanks benefited more than those who live further away or up steep hills, as those nearby could make more trips to and from the tanks.

2.4.1.1 Mr Shakeel Ahmed Ansari

House No. 3293/A, Lane-2, Sheet-6,

Ghaziabad, Sector-11½, Orangi Town,

Karachi-75800

05 May 2002

- We do not take water from the *awami* tanks now. We used to about a year ago.
- The water from the *awami* tanks was used because it was clean and drinkable.
- Initially Rangers used to supply it to the local mosque, but they do not do it any more.
- Rangers are the key agency involved in the present situation.
- We have to buy water at the rate of Rs.300 per week.
- Total price of water spent per month ranges is Rs.1000-1200.
- One major problem with to the *awami* tanks is that they are too small. Whenever they are filled, it causes chaos.
- If there were larger underground tanks the situation would be much better.
- *Awami* tanks are certainly not a permanent solution to water supply.
- Two years ago we used to get water from Siddiq-e-Akbar Masjid (*awami* tank). Now we get water from tankers at the rate of Rs.200-300 per tanker. Every month two or three tankers are needed.
- There is a pipeline which serves a family of 8. The water comes for 30 minutes once every 10 days. There is no fixed time. This water barely lasts two days.
- Mr Haseebullah (Area Councillor) said that the tanks were built three years ago by Edhi Welfare Centre in association with KWSB. About 20 such tanks were built in different locations of Sector 11½. Most of them were 6000-gallon tanks. Mewati Chowk, Data Chowk, Ghaziabad, Christian Colony and Ali Nagar all had a tank. These tanks were completed in 1999. The Executive Engineer of KWSB Mr Safdar Imam positively contributed to their development, along with the Edhi Welfare Centre.
- In 1998-99 there was a great shortage of water, which is why these arrangements were made. The *awami* tanks were built because of the lack of water both from the Hub Dam and in the pipelines. Even this alternative was not very successful, however, as in some places the *awami* tanks were providing water daily whereas in others they had water only on alternate days or even once a week. In a few areas the residents appointed one person to manage the performance of the *awami* tanks. The desired solution is either provision through underground pipelines or, in UC-5/6, the creation of five or six large underground water reservoirs to store up to 50,000 gallons of water. In a few places people have made underground tanks for their own household use, but the government could build more better quality tanks for this purpose.
- In some places, the former Sindh Governor, Mr Mamnoon Hussain, had built such tanks with the assistance of the Karachi Chamber of Commerce and Industry. They are now dilapidated and need to be repaired.

2.4.1.2 Mr Qamaruddin

(Near Graveyards' *Awami* Tanks)

House No. 2270, Lane-13,

Gulshan-e-Zia, Sector-11½, Orangi Town,

Karachi

05 May 2002

- We get between 5 and 10 canister loads of water from the *awami* tanks each trip. This has been the case for the past three years. The water is clean and drinkable.
- There is no water in the water supply lines. We use the *awami* tanks as no other option is available.
- Water is supplied to the *awami* tanks once in a week.
- People in the community manage and run the *awami* tanks.
- For routine use, we have to buy water from tankers at a cost of Rs.200-250. Sometimes the price goes as high as Rs.500.
- People look after the *awami* tanks on self-help basis.
- People have to do constant follow up of obtaining water[not sure what this means] from the Rangers. They have to go personally to fetch water tankers at the Rangers' hydrant.
- KWSB and the area's elected representatives, including the *nazim,* play no role in the supply of water through *awami* tanks.
- There are supply problems. Initially two tankers per week used to be provided; now there is only one. Water is extremely scarce, and supply needs to be improved until there is a daily delivery.
- If larger *awami* tanks are built, up to a capacity of 35,000 gallons, it might solve the problem.
- In normal circumstances *awami* tanks are not a permanent solution.

2.4.1.3 Mr Ali Reza

House No. 542, Lane-16,

Sector-11½, Orangi Town,

Karachi

05 May 2002

- Water from the *awami* tanks is obtained daily, up to 20 or 25 canister loads. This water is drinkable and free.
- There is no time or frequency fixed for water supply through the pipelines.
- The *awami* tank is managed and maintained by the residents themselves.
- For uses other than drinking, people buy water from commercial water tankers at a rate of Rs.180-250 per load.

- The role of the Rangers is commendable. There is no corruption and water is supplied regularly.
- Neither KWSB as an institution nor its staff have a role to play in the supply to *awami* tanks.
- With respect to operations, *awami* tanks are too small for the population that they supply. More water needs to be available and service needs to be provided every day. There is no lidon the *awami* tank.
- There is state land available in our area, and if four or five large tanks were built in the area it would improve the situation.
- *Awami* tanks are not a permanent solution to the issue of water supply.

2.4.1.4 Mr Niaz Ahmed

House No. 559/B, (Near *Awami* Tanks No. 110),

Gulshan-e-Zia, Sector-11½, Orangi Town,

Karachi

05 May 2002

- Up to 20 or 22 canister loads of water is obtained at a time from the *awami* tanks. This has been the case for three years.
- As there is no water in the municipal pipelines, drinking water is only available from the *awami* tanks.
- The *awami* tanks are supplied by tankers every other day. Water tankers of 2,400 or 3,600 gallons are usually used. The whole system is managed by the area residents. The water is free. When free water is not available, people have to buy it for Rs.400 per tanker. This is also done by the people themselves.
- Rangers play a useful role in the distribution and management of the system.
- KWSB has no role to play in this whole exercise.
- Some of the *awami* tanks have been built on privately owned land. This is not an appropriate practice. The tank is deteriorating quickly. It has no lid so dirt and dust fall inside.
- The *awami* tanks need to be well constructed and large, at least 6,000 gallons, and they should be built on state land.
- *Awami* tanks are not permanent solution to the problem of water supply.

2.4.1.5 M/s Hyder, Mohammad Aslam and Mukhtar Hussain

Near *Awami* Tank No. 110, Lane-11,

Gulshan-e-Zia, Sector-11½, Orangi Town,

Karachi

05 May 2002

- Six canister loads of water are available per household from the *awami* tank. This has been the case for two years.

- This water is used because some people do not have any storage in their houses. It is clean and drinkable.
- Water is supplied to the *awami* tanks either daily or every other day.
- The *awami* tanks are managed mainly by the Rangers, whose role is commendable.
- For other uses, people purchase water at the rate of Rs.200-250.
- The *awami* tanks are maintained by the area residents themselves.
- KWSB does not have any role to play.
- At an *awami* tank as many as 100 people gather to obtain water. This causes problems and often damages the tank.
- If the government constructs more and larger tanks and the water was delivered daily the situation would be improved.
- With respect to the issue of permanent supply, it is obvious that the pipelines that have already been laid should be used. If that option does not work out, then *awami* tanks can be used a temporary alternative.

2.4.1.6 Mr Ali Haider

House No. 557, Lane-17,

Sector-11½, Orangi Town,

Karachi

05 May 2002

- About 20 to 30 gallons of water is obtained from the *awami* tank each time, and this has been the case for the past two-and-a-half years.
- *Awami* tanks are the preferred choice because water does not come through piped connections and the water from the *awami* tanks is drinkable.
- Water from the *awami* tanks is usually available on alternate days. Tanker loads of 2,400 or 3,600 gallons are delivered to the tanks.
- Rangers are responsible for water supply to *awami* tanks.
- Rangers have improved the supply to a great extent. KWSB has no specific role in this system.
- For uses other than drinking, the saline water from commercial tankers is obtained at the rate of Rs.200-300.
- Area residents look after operation and maintenance of the tanks.
- Area councillors and Union Council *nazim* have no time to follow-up water issues.

2.4.1.7 Mr Mohammad Shamim

House No. 543, Sector-11½,

Orangi Town,

Karachi

05 May 2002

- Ten to 20 canister loads of water are obtained from *awami* tanks each time. This has been the case for the past three years.
- Water from the *awami* tanks is preferred because it is drinkable, clean, and free. It does not harm the health of the users and is available every other day.
- Management of the system is under the supervision of Rangers.
- In summers water is sold at a higher price, from Rs.250 to 300.
- Area residents take responsibility for maintenance.
- Rangers are responsible for the supply of water through tankers to the *awami* tanks. They also visit occasionally and check the grievances of the people.
- It is not known what role KWSB has to play.
- Elected representatives have no role – their role is not even desired.
- Maintenance is inadequate and the *awami* tanks are becoming dilapidated, which creates problems. Women face grave consequences as they have to carry water over larger distances.
- The frequency of supply to *awami* tanks needs to be increased. More *awami* tanks should be constructed to meet the demand.
- *Awami* tanks are not a permanent solution.

2.4.1.8 Mr Mohammad Mustafa

House No. 560/A, (*Awami* Tank No. 110),

Sector-11½, Orangi Town,

Karachi

05 May 2002

- Some 25 to 35 canister loads of water are obtained at a time from the *awami* tanks. This has been the case for the past two years.
- Water from the *awami* tanks is preferable because it is drinkable and free.
- Tanker loads of 2,400-6,000 gallons supply the *awami* tanks, subject to availability.
- Rangers are responsible for management.
- Rangers ensure either daily supply or at least alternate days to the designated *awami* tank.
- About Rs200-300 per month has to be spent purchasing water from commercial tankers for all uses other than drinking.

- Area residents undertake the operation and maintenance.
- KWSB has no role to play. Similarly area councillors and/or UC *nazim* do not play any role.
- The *awami* tanks have not been cleaned for some time, and they need to have some leaks repaired.
- Big underground storage tanks should be built on adequately large plots, such as 120 or 200 sq.yds. A proper-sized overhead tank should also be built to facilitate the smooth distribution of water.
- *Awami* tanks are not a permanent solution. Water has to be provided through pipelines. If this is not possible, then distribution from the *awami* tanks should be ensured every day.

2.4.1.9 Mr Mohammad Tayyab

House No. 560/A, (*Awami* Tank No. 20),

Sector-11½, Orangi Town,

Karachi

05 May 2002

- About 15-20 canister loads of water are obtained from the *awami* tanks. This has been the case for the past 3 years.
- *Awami* tanks are used because there is no water in the pipelines.
- About 6,000 gallons water are supplied each time to the *awami* tank.
- In addition to drinking water, we have to buy water at the rate of Rs.200-250 per commercial tanker of saline water for other uses.
- The tanks are looked after on a self-help basis.
- Rangers are responsible for the management of *awami* tanks.
- KWSB has no role to play in this state of affairs.
- UC *nazim*/*naib nazim* have no role in this setup. Their role is also not desirable because they may not prioritise it.
- Several problems have been observed. The *awami* tank is leaking, which leads to wastage. There is a great rush for water around the tank which causes scuffles. Water is often not distributed fairly, so people quarrel with one another.
- A larger tank with a capacity of about 25,000 to 30,000 gallons should be built.
- *Awami* tanks are certainly not a permanent solution to the issues of water supply.

2.4.1.10 Mr Bashir Ahmed

House No. 559/A, Gulshan-e-Zia,

Sector-11½, Orangi Town,

Karachi

05 May 2002

- About 20 to 25 canister loads of water are obtained from the *awami* tanks each time, and this has been the case for two years.
- The *awami* tank is preferred because there is overall water scarcity. As *awami* tanks are a source of sweet (drinkable) water they are a viable option. For other uses, saline water is purchased from commercial tankers.
- The *awami* tanks are filled with tanker loads of 2,400 or 3,600 gallons, normally every other day.
- The *awami* tanks are managed by the Rangers.
- The Rangers are doing a commendable job.
- Other than *awami* tanks, water is purchased at a price of Rs.200 per commercial tanker.
- KWSB does not have a role in this system.
- UC *nazim* or councillors do not have a role to play in this setup.
- The *awami* tanks are in need of repair. They are leaking at certain points.
- If the *awami* tanks were maintained properly and their size increased, the level of service would be improved.
- At present, as water is not supplied through pipelines, the option of efficient *awami* tanks is better than nothing. Otherwise they are not a permanent solution to the problem.

2.4.1.11 Mr Mohammad Ghayas

House No. 527, (*Awami* Tank No. 116)

Lane-16, Sector-11½, Orangi Town,

Karachi

05 May 2002

- About 20 to 22 canister loads of water are taken from the *awami* tanks each time, and this has been the case for the past two-and-a-half years.
- Drinking water is obtained from the *awami* tanks. No water is supplied from the water pipelines laid down in the area.
- Water is supplied on alternate days through *awami* tanks.
- About 3,500 gallons are poured into the *awami* tanks each time.
- Area residents look after the operation and maintenance of the tanks.

- Drinking water comes from the *awami* tanks. For other water needs people have to buy saline water from commercial tankers at the rate of Rs.200-250.
- Operation and maintenance is done on a self-help basis.
- The Rangers have an important role to play in the overall provision of water.
- Not aware of the role of KWSB.
- UC *nazim*/councillors do not play a role in this system of supply.
- Sometimes the frequency of supply is altered, which adversely affects efficiency.
- In order to improve the efficiency of the *awami* tanks, they should be larger and they should be supplied daily.
- In case of desperation, the tanks are the only available solution. However it would be better if water was supplied through the pipelines. All the time, water supply remains a major concern at the back of our mind.

2.4.1.12 Mr Haji Mohammad Akhter Bhatti

***Nazim*, Union Council-04,**

Sector-12, *Nai* Abadi,

Saeedabad, Baldia Town,

Karachi

23 July 2002

- About 4 or 5 canister loads of water are taken from the *awami* tank each time.
- This has been the case for the past three years.
- The *awami* tank is supplied with about 1,200 to 6,000 gallons per tanker load.
- People resort to *awami* tanks because in these areas there is an absolute scarcity of water. Since these areas are at the edge of the settlement they do not receive water through the pipelines.
- There is no timetable for the supply and consequent distribution of water from the *awami* tanks.
- The tank is not filled regularly. It may be filled every other day or once a week.
- Rangers manage the system.
- The track record of the Rangers in distributing the water is not good.
- Not aware about KWSB's role.
- Area councillor/*nazims* are not included in this system.
- *Awami* tanks are not a permanent solution to the problem.
- Some of the *awami* tanks were built by the Karachi Chamber of Commerce and Industry, a few by the Corps-05 of the Pakistan Army, and a few by the government.
- We have no involvement with the *awami* tanks in this area. The edge areas of Baldia Town have been provided with *awami* tanks. We have no idea about the quota of water

allocation in this area. About 10 *awami* tanks have been constructed with the assistance of the Rangers and Karachi Chamber of Commerce and Industry. The usual size is 22'x 18'x 5'. Most tanks have a capacity of 6,000 gallons. Water is not poured according to any set timetable.

- Several *awami* tanks are in desperate need of repair but no attention is paid to them. There is water in the pipelines, but not on a regular basis. In areas which are at the farthest end and where the *awami* tanks are, there is no water in the pipe lines at all. People have to use *awami* tanks. Sectors 8 and 14, which constitute *nai abadi* (new settlements) are mostly dependent on *awami* tanks. The system of *awami* tanks is run by the Rangers without any local supervision. When we ask for information they refuse, saying that this is not our (*nazim*'s) problem. Whenever we file an application or make a complaint, it is ignored. When people do not get regular water, they agitate and blame the *nazim* and elected councillors.

- When water is scarce people buy it from the Rangers at a cost of Rs.300-450[1] per tanker load. At one point they tried to fix a quota of Union Councils but it had to be abandoned immediately.

- It is vital for improve performance that they consider our suggestions as we are representatives of people. Some people consider the role of Rangers as dubious as they might be providing water only to a handful of people. Water supplied by the tankers and the pipelines is clean while the water from commercial tankers is saline in nature. The *nazims* should either be given the authority or their office should be abolished. Corruption needs to be eradicated from the process.

- Three years ago, in different areas of Baldia Town, 10 *awami* tanks were built with the government's assistance. They each had a capacity of 6,000 gallons (22' x 18' x 5'). Now the quota of *awami* tanks is substantially reduced. Water is not supplied to the tanks on time. Maintenance is also not done. As water pressure in the pipes is very low, the water does not flow appropriately. In Sector 4 and Sector 8 (Nai Abadi), community involvement is very limited. We have no record as to how much water was provided in each of these tanks. As *nazim* we sent letters to the headquarters but they were entirely ignored. People do not get even their minimum share of water. People have to buy 2,400 gallons of water for Rs.300. KWSB has no role. Rangers are performing this work, but our area residents think they only allocate water tankers to a selected few, apparently their favourites. There is no involvement of area residents and area representatives. The *nazims* should either be allowed to exercise their powers as stipulated by law or their offices should be abolished, because as they will be unable to fulfill people's expectation they will become unpopular.

2.4.1.13 M/s Mohammad Shahid, Abdul Rehman and Qamar Usman

Lane-17, Sector-11½,

Baba Wilayat Ali Shah Town, Orangi,

Karachi

24 July 2002

- The *awami* tanks receive 6,000 gallons of water at a time.

1. This refers to the purchase from water tankers working under Rangers monitoring. Under rare circumstances they are also allowed to commercially sell sweet water after paying the reserve price to Rangers.

- This has been the case for the past three years.
- The *awami* tanks are used because there is almost no water in the water pipelines.
- Water is supplied to the *awami* tanks every other day and sometimes daily.
- The system is basically managed by the Rangers.
- For uses other than drinking, consumers buy water from commercial tankers at a rate of Rs.250-500. Area residents look after the operation and maintenance.
- Rangers have the vital duty of water distribution. KWSB has no role to play.
- There are no problems associated with the *awami* tanks, but a few people tend to monopolise operations without regard to the others.
- If the water was distributed fairly, then the *awami* tanks would have no problem.
- It is, however, not a permanent solution. Water from the *awami* tanks is a relief for those who have to use saline water. Drinkable water is otherwise very expensive. Water from the *awami* tanks is free. A muscle man has obtained partial monopoly. He is an agent of land grabbers who wish to exercise control on the distribution of water to display his power. For every canister load he charges Rs.10, thus the cost of water [is no longer free[?]. There is no account of this money. Some households get more water than others.
- It is not desirable to involve area councillors and *nazims*. The task must remain with the Rangers.

2.4.1.14 Master Jawaid Masih

President, Christian Community,

***Awami* Tank No. 22**

C-Block, Christian Colony,

Ittehad Town,

Karachi

- The *awami* tanks receive between 3,600 and 6,000 gallons of water at a time, and this has been the case since 1999.
- *Awami* tanks are being used because there has been no alternative. There are no pipelines in the area.
- There is no timetable of supply. Sometimes the water comes once a week, though lately the service level has improved slightly.
- The Rangers are responsible for water distribution.
- Operation and maintenance is done on a self-help basis.
- *Nazim* and councillors have no role, though they are now trying to acquire a role.
- Six months ago there was an acute shortage of water. Now the water comes without any delay.

- If the water is supplied regularly then there is no problem. However when the gap increases then problems arise and there is no drinking water. People have to resort to saline water in desperation.
- As we do not have any pipelines in our area, *awami* tanks are the only option.

2.4.1.15 M/s Amir Shafquat and Sajid Salik Pervez

Butt *Awami* Tank No. 1,

Lane-17, Block-C, Christian Colony,

Ittehad Town,

Karachi

23 July 2002

- There are no water pipelines in the area, therefore people have to use the *awami* tanks.
- The *awami* tanks are filled every third day.
- Operation and maintenance of the tanks is done on a self-help basis.
- For uses other than drinking, commercial tankers provide saline water at a rate of Rs.250-500.
- The role of the Rangers is to distribute the water.
- Elected representatives do not have much of a role. However, the UC *nazim* (Mr Majeed Butt) constructed this *awami* tank.
- This *awami* tank was built by a social worker of the area (who later became the elected mayor of the union council). The land was provided by an area resident.
- Since the area is not leased, supply through the *awami* tanks is the best possible option.
- Three communities reside in the area, Christians, Punjabis, and Pathans.
- Adjacent to the tanks, three handpumps are installed – one each is used exclusively by Christians, Punjabis, and Pathans.
- The tank has one manager (Mr Haq Nawaz Bajwa) who is responsible for the overall maintenance of the tank.
- As soon as the *awami* tank is filled Mr Bajwa starts the motor which indicates that water has arrived.

2.4.1.16 Mr Sadiq Fauzi

General Council,

***Awami* Tanks No. 1 & 2,**

UC-2, Baldia Town,

Karachi

24 July 2002

- The councillor is one of those elected representatives who are very active in acquiring water.

- Initially very little water was supplied to these tanks. The headquarters of the Rangers had to be approached every time. Now the water is being supplied to both the tanks regularly.
- It is not certain how long this water will continue to be supplied.
- He has called a meeting during the next month inviting all the stakeholders to review the situation.

2.4.1.17 M/s Sangi Majan, Abdullah, Haji Syed Ahmed Khan and Liaquat Ali

Mastana Chowk, Block-B, Ittehad Town,

Karachi

24 July 2002

- The system of *awami* tanks has been used for the past three years.
- There is no other system of water supply in the area. People have to either purchase saline water from the commercial tankers or get water from the *awami* tanks.
- Water is supplied to the *awami* tanks every other day. Usually 6,000 gallons is supplied at a time.
- There is no specific delivery time.
- Rangers and area residents manage the *awami* tanks.
- People have to spend about Rs.500-1000 on water from *awami* tanks for purposed other than drinking. Unlike in Orangi, people have to purchase water from awami tanks. People have appointed on volunteer to manage these operations.
- The principle task of the Rangers is to distribute water.
- *The awami* tanks should be larger. Area residents are willing to provide land.
- *The awami* tanks are not a permanent solution to water supply.
- Tank No. 23, Mastana Chowk, Block-B, Ittehad Town was built by Army Corps-5. KWSB identified the location some three-and-a-half years ago. Scarcity of water has emerged as a problem some two months ago. Now, however, about 6,000 gallons water is supplied almost daily. Sometimes the entire tankerload of water is not poured into the tank. In such cases the remaining water is poured into the adjoining tank. As people have large families they need this water for drinking water. The rest of their water they buy from commercial tankers.
- If a larger tank were built then the drinking water problems could be minimized.

2.4.2 Operators

This category includes the local community organisations or individuals who have been involved in the management of the *awami* tanks. The study was done in the three locations Baldia, Orangi, and Surjani Towns. It was found that in Baldia and Surjani supply from water pipelines was almost non-existent, therefore *awami* tanks were the only option for drinking water supply.

The role of the Rangers in the supply was found to be largely efficient. Rangers have been able to streamline the distribution of water to *awami* tanks. Their monitoring and control

of the tanker operators has been instrumental in bringing discipline to the overall process of supply. With a few exceptions in Baldia where the Rangers were criticised for serving a few selected households, their role in the management of the *awami* tanks has been positive. The local organisations were highly critical that the *nazims*/*naib nazims*/ councillors played no role, but they were also of the view that they should not be involved in the water distribution process because their involvement would cause political interference with various rival groups in the area.

In some places where *awami* tanks has been operating for a few years, service levels have improved. In Christian Colony, Ittehad Town, for example, frequency of supply has improved to more than once a week. Similarly in some locations in Sector-11½, Orangi, the frequency of supply in some areas has improved. Registration of an *awami* tank by Rangers Authorities and a marginal rise in the level of water in the Hub Source are cited as the reasons for this improvement.

Different types of *awami* tank have been built for various reasons. Some tanks have been constructed by Rangers in association with KWSB. This was done in areas where the KWSB network was not operational due to the lack of water or where pipelines had not been laid down. *Awami* tanks were also built by private business groups such as the Karachi Chamber of Commerce and Industry, which was made aware of the water supply problems by one of the former provincial governors of Sindh. Some tanks were built in the mosques/graveyard while in some cases the tanks have been built on private land with the assistance of a local resident. In one isolated case, a *nazim* also got an *awami* tank built in the area. Local organisations were concerned on that tanks built by the government are ill-maintained because the people do not own them. They are only repaired when it is extremely urgent.

The absence of organisation or caretakers at some sites was another factor worth noting. At the places where any organisation was looking after distribution the overall performance of the *awami* tank, including the frequency of supply, was better than others. Even in otherwise heterogeneous communities, such as Christian Colony, the presence of a caretaker was useful. In this community, Christian, Punjabi and Pathan users wished to have separate access to drinking water due to their cultural orientations. Because of the presence of a caretaker, this works reasonably well.

The local organisations considered *awami* tanks a temporary solution. The ultimate hope was to acquire a piped water supply in future. This aspiration had evolved due to the overall background of urban living common to most residents. Carrying water manually from any location was viewed as a sign of underdevelopment and could only be accommodated a temporarily. There was an absolute consensus of respondents from all the three localities that only piped supply was a permanent option.

2.4.3 Local councilors/*nazims*/*naib nazims*

The elected representatives did not have the authority to affect water supply in their official capacity. Neither the Rangers nor KWSB had any institutional obligation towards them. They were, however, of the view that since water was a core developmental issue, their inclusion in the process was vital. The elected representatives interviewed were skeptical of the role of Rangers who, they said exercised nepotism in the allocation of water to the various areas. They also criticised the government's lack of initiative in not devolving KWSB to the local level which would have caused a great deal of change.

However local councilors/*nazims* were not trusted enough by their communities, who almost unanimously agreed that the councilors/*nazims* should not have any role in water supply through *awami* tanks. In sum, the elected representatives have yet to prove their usefulness, both to the people and to the authorities responsible for supply.

2.4.4 Local politicians

Generally speaking, local politicians were skeptical of the use of *awami* tanks. They were of the view that the overall water supply system should be improved by refurbishing the piped supply system and increasing the quantity. People have to maintain the overall system of *awami* tanks themselves without any outside support. In their view, the overall water supply position has sharply deteriorated due to rising numbers of people. The local politicians viewed with concern the performance of Rangers. They criticised them for being irregular and uneven in their treatment of different user groups.

The politicians made a point about the poor planning and execution of the major water supply works carried out in these locations. A large reservoir was built on a hilltop in Orangi to supply water to the adjoining areas through gravity. However the reservoir itself needed to be filled by pumping devices, which were difficult to run because of electricity shortages. Besides, the amount of water needed to fill this reservoir was not even available in Orangi, thus this massive investment of Rs.140 million could never have produced the desired results.

The politicians assign greater importance to the revival and strengthening of the piped water supply system. They consider the *awami* tanks as a very interim solution with no potential for long-term use.

2.4.4.1 Mr Abdul Haq

Unit Area Incharge,

Muttahida Quami Movement (MQM),

Ghaziabad/Gulshan-e-Zia,

Sector-11½, Orangi Town,

Karachi

17 June 2002

The interviewee did not agree to follow the structured questionnaire. He did agree to discuss the overall performance of *awami* tanks.

The *awami* tanks are usually located far away from the houses. It requires a great deal of labour from the household members to carry the water from the tank to the home. For this reason, people avoid using *awami* tanks and purchase water from commercial tankers at a cost of about Rs.200 per week. MQM played a vital role in the distribution of water. It is also helping in the distribution of water from various *awami* tanks. Five gallons per house is normally allowed that the majority of households get some water.

2.4.4.2 Mr Mohammad Jamal

Member, Sunni Tehrik, Dawat-e-Islami,

Union Council No. 6,

Ghaziabad, Gulshan-e-Zia,

Sector-11½, Orangi Town,

Karachi

16 June 2002

- Usually *awami* tanks are functional when constructed in the mosques. People get water from them and there are no other source of drinking water.
- Low-lying areas of Orangi receive water twice or three times a week through pipelines. The higher and far flung areas are not supplied, however. It causes a great deal of problems for the residents.
- Water never flows through the pipelines. People have to buy water.
- Rangers arrange for the supply of water to the *awami* tanks.
- Rangers have a very limited role to play.
- For extra use people buy water from the commercial tankers. It costs Rs.200-300.
- KWSB staff are never in the area.
- People have constructed large underground tanks in their houses. They buy water twice a month, but this is not drinkable. Work is in progress towards laying water supply lines. Work was even done during the holy month of Ramzan (the previous year). It was thought that the water problem would be resolved but it did not happen. Perhaps the work was not carried out under proper supervision. Where trenches were dug, they have been filled again with earth. Only paperwork for some projects is being undertaken.

2.4.4.3 Mr Qamar-uddin Ansari

President, Pakistan Peoples Party,

Union Council No. 6,

Ghaziabad, Gulshan-e-Zia,

Sector 11½, Orangi Town,

Karachi

16 June 2002

- There presence of *awami* tanks is negligible. Most people buy water from tankers.[2]
- In reference to the water supply issues of Orangi Town, the funds that were allocated for the area by the previous government should be used to improve the piping system. Also a pumping station should be built in UC-6 so that the people in this area can get water properly.

2. These tankers refer to those that supply non-drinkable water from illegal hydrants.

- There is no water in the pipelines. Every month 1 or 2 tankers a bring 900-1,200 gallons of water. It costs Rs.150-300.
- Rangers supply water to *awami* tanks, however they are only responsible for the delivery. Maintenance of the *awami* tanks is done by the community themselves.
- People have to run after the Rangers to acquire tanker loads of water for the *awami* tanks.
- KWSB has no role to play in the overall water supply issues in Orangi Town. They have refused to undertake any type of maintenance of pipelines.
- In the locality, there are about three *awami* tanks. These were constructed on the basis of self-help. The frequency of supply by the Rangers is irregular. People have to obtain water through their own efforts.
- It was reported that Rs.140 million was allocated for the construction of a reservoir, pumps, and a pumping station (located close to the German Mission School). However it is estimated that Rs.40-50 million may actually have been spent. The remaining money must still be available with the government. The government should be asked to spend the remaining amount on the overall improvement of the water supply system in Orangi.

2.4.4.4 Mr Haseebullah Iraqi

President, Pakistan Muslim League,

Gulshan-e-Zia, Sector-11½, Orangi Town,

Karachi

16 June 2002

In Ghaziabad, Orangi Town, the water supply is facilitated through the Indus source which supplies water to Orangi for 12 hours per day. According to allocation, UC-6 is supposed to receive water for six hours, but after passing through UC-8 once or twice a week the supply is either released for one hour or simply does not come at all.

- Water is supplied through the pipelines once or twice a week (as mentioned above).
- People receive 10 to 12 canister loads of water per household through the *awami* tanks.
- The supply of water through the pipelines is negligible.
- People have to purchase water from tankers for uses other than drinking. They buy up to 900-1,200 gallons at the rate of Rs.150-300.
- People maintain the *awami* tanks on a self-help basis.
- Water supply to the *awami* tanks is facilitated by the Rangers through tankers. KWSB staff does not bear any responsibility.
- Rangers have been delivering water satisfactorily.
- The *awami* tanks are a temporary solution. As long as the Rangers are undertaking the job, it will work well.
- Under no circumstances can the *awami* tanks be regarded as a permanent solution. At best it is a temporary solution, for several reasons. Water tankers are large and cannot

enter the narrow lanes. They are very heavy vehicles and damage the lanes and streets. It might be useful for UC *nazim*, along with Town *nazim*, to arrange a meeting with the KWSB staff so that a water distribution schedule could be prepared for the entire Orangi Town where pipelines exist. If distribution is done according to a timetable then a better solution can be found. If storage tanks are constructed on the amenity plots and water is supplied from them to the households through the pipelines according to a pre-determined timetable, it would help the people. It is also not correct to say that Rs.140 million was spent on the construction of the water infrastructure. After the entire system was built including the reservoir, primary, secondary and tertiary lines, valve systems, pumping systems, etc, about Rs.7 million was unspent which was returned. If this fund is re-appropriated then a much-needed disconnected line can be built again.

2.4.4.5 Mohammad Ismail

Member, Pakistan Peoples Party

Gulshan-e-Ghazi/Gulshan-e-Zia,

Sector-11½, Orangi Town,

Karachi

16 June 2002

- We do not only get water from *awami* tanks. We often buy it.
- Our locality comprises a population of 150,000 people. Because there is no water in the pipelines, it is a major problem.
- There is rarely any water in the pipelines. When it does come it is turbid and has an unpleasant odour. It does not arrive according to any timetable either.
- Rangers provide water to the *awami* tanks.
- Rangers play a useful role, however the quantity of water supplied is inadequate.
- For their routine use people buy water from the tankers which costs between Rs.150 and Rs.300 per tanker load.
- *Awami* tanks are maintained by the people themselves.
- KWSB has no role to play in the water supply through *awami* tanks.
- In overall terms, the performance of water supply through *awami* tanks is erratic and in need of improvement.

2.4.5 KWSB staff

The KWSB staff were not keenly involved in the process of water supply to the *awami* tanks for several reasons. One, KWSB was not comfortable with the takeover of hydrant management by the Rangers. It was considered as an intrusion on their working authority. While KWSB extended support by identifying locations for *awami* tanks, it did not take any initiative to expand its role beyond the bare minimum required. Two, as discovered from the previous studies, the supply of water to *awami* tanks was an entirely humanitarian effort which had limited scope, at least in the near future. Therefore KWSB did not assign any importance to this operation. And third, since a sizable number of users in Orangi, Baldia, and Surjani had defaulted on their KWSB water bills, as was discovered

in previous studies, so KWSB was not prepared to extend any further assistance than the bare minimum.

Mr Shakir Ali

Sub Engineer, Treatment Plant-One (TP-1),

KWSB, Haroonabad, SITE,

Karachi

11 May 2002

- The Sindh Governor Mr Mamnoon Husain constructed the *awami* tanks in Orangi Town. A few tanks were built by the Edhi Welfare Trust. A few more were built by Corp-5 of the Pakistan Army.
- The planning, engineering design, etc. was facilitated by the KWSB. Locations were also identified by the KWSB.
- The entire running and management of hydrants is handled by Pakistan Rangers.
- The water supply comes from Khwaja Ajmer Nagri Pumping Station through the Hub Dam. Engineering Corps-5 and Rangers have been handling it since 1998.

As per initial information, 20-22 *awami* tanks were constructed in Orangi Town.

2.4.6 Pakistan Rangers

- Name of staff: Lt Col Nisar Ahmed Hashmi, Wing Commander
- Address: Headquarters, 93 Wing ASGR, Saeedabad, Baldia Town, Karachi,
- Date of interview: 10 September 2002
- *Association with the supply to* awami *tanks – brief background*

In September 1999, because of the low water levels in the Hub Reservoir, Baldia, Orangi Towns, and a few other areas of North Karachi were deprived of their water supply from the reservoir. The water supply system, which was dependent on water from the Hub Reservoir, was shifted to the Indus water supply system. Water supply from the Indus source to these affected areas was scheduled after 10 days for 18 hours only, which was definitely insufficient to meet the bare minimum essential requirement of the residents of the affected areas. Seeing this sad situation, the civil administration started supplying water to these areas through a water tanker service using a handsome budget of Rs.140 million.

Initially this task was assigned to KWSB, but they were unable to run it successfully, so this colossal assignment was given to the Pakistan Rangers. To reduce the problem, the Rangers, with the help of the Army, constructed 105 community tanks of 6,000-10,000-gallon capacity. Thanks to this facility locals started getting fresh and sweet water close to their residences through community water tanks.

- *Views on the problems of water supply in Orangi and Baldia*

Major portions of these areas comprise *katchi abadis*. More than 60 per cent of the population/areas is without proper infrastructure or water supply lines.

- *Views of the performance of the* awami *tanks with respect to the following:*
  - Frequency of supply: 2,200 tankers of 1,200 gallons capacity are delivered on daily basis.
  - Quantity of water made available at a time: 2.64 MGD.
  - Hours (night and daytime delivery): 18 hours (from 06:00 hours to 22:00 hours).
  - Management of *awami* tanks: Rangers in coordination with Town *nazim,* UC *nazims* and councillors.
  - Money/financial contribution for water purchase: This scheme is funded by Pakistan Rangers.
  - Operation and maintenance of the tanks: Pakistan Rangers/councillors.
- Role of KWSB in the overall respect of water supply: No role at present.
- Role of Rangers in the supply to *awami* tanks: Organising the functioning/operation of hydrants and monitoring the distribution of water tankers in the assigned area through Rangers deployed in the area.
- Suggestions for improving the performance of the *awami* tanks:
  - Distribution of water tankers through elected members of area.
  - Enhance water supply hours and KWSB must ensure supply byproperly maintaining the infrastructure of water supply lines.
- *Awami* tanks are a temporary solution to provide immediate respite to the general public.

2.4.7 Local organisations

The local organisations accepted the temporary use of *awami* tanks in the absence of a piped water supply. These organisations, which include *masjid* committees that manage *awami* tanks, were skeptical about the low quantity of water supplied to *awami* tanks. Despite the fact that the routine operation and maintenance is done by the area resident/ local organisations, the governmental agencies have been adamant in not increasing the quota of water supply to *awami* tanks. Thus the people only resort to *awami* tanks in situations of dire need. They demand that supply through the piped system is restored eventually.

It was found that these committees, and the public-spirited members and office bearers of such organisations, take responsibility for water supply to the *awami* tanks. They had various tasks to perform. Chasing the Rangers to send the tankers on time, liaising with the valve man to release water in the rare event of a supply in the pipelines, operation and maintenance of *awami* tanks, and management of distribution are all performed by these committee members. It was obvious that the system was functioning due to the continuous efforts of the *mohalla* committee members. These committees were largely informal and at times possessed no formal organisational structure, but their role was vital in assessing the overall supply situation in the area.

2.4.7.1 M/s Ali Sher, Mohiyuddin and Zafar Iqbal

Union Council, Baldia Town, Hazrat Bilal Road,

Near the Last Bus Stop of X-10 mini bus,

Karachi

- The *awami* tanks are filled by tankers with between 2,400 and 6,000 gallons of water. This has been the case for the past three years.
- This area has water pipelines but there is no supply. *Awami* tanks fulfill temporary basic needs.
- There is no fixed supply schedule.
- About 4 to 5 canister loads of water are supplied to each household.
- Rangers are responsible for water distribution.
- *Awami* tank operations do not have any timetable which causes great problems for the residents. Neither the time nor the days are known to people.
- If a timetable wa worked out, days identified and time observed, then perhaps the tanks would be more useful.
- *Awami* tanks are not a permanent solution.
- As the pipelines are available, the KWSB should ensure the supply of water through the lines. Otherwise the Rangers should be instructed to undertake this vital task. They have proved their utility by ably distributing water to the area residents.

2.4.7.2 M/s Abdul Hannan and Rehman Hashmi

President and General Secretary,

Bandagi Welfare Organisation,

Gulshan-e-Zia, Sector-11½,

Near Liaquat Chowk, Orangi Town,

Karachi

- Area residents are obtaining water from the Ghaziabad *Awami* Tanks.
- There is no permanent *awami* tank in Gulshan-e-Zia.
- Most of the area residents purchase water which is saline from commercial water tankers.
- Twice or three times a week, 6,000 gallons of water is poured into the 3,000-gallon sections.
- The entire distribution is handled by the Rangers.
- For commercial tankers, the price is between Rs.150-300.
- The area residents undertake operation and maintenance on a self-help basis.

- Rangers only send water when they are asked. One area resident approaches the Ranger's office in the early morning, and they normally respond by allocating water tankers.
- KWSB has no role although water pipelines are present.
- Elected representatives, including councillors and *nazims*, do not have any role to play.
- Residents of Gulshan-e-Zia obtain water from the two or three nearby *awami* tanks only for drinking purposes. Rest of the water is purchased commercially for other uses.
- The *awami* tanks that were built earlier either by the government or its associated organisations are in the Rangers' records and thus are supplied. However tankers that were built by the people through self-help are often not registered with the Rangers and therefore are not supplied. This requires the attention of the Rangers.
- The system of *awami* tank works in such a way that an area resident has to go to the Rangers' camp very early in the morning. There is usually already a long queue. After a routine waiting time of about four to five hours, he obtains the permission to get the tanker. This happens about twice a week, and so proves that it is not a permanent solution. The permanent solution is only through the pipelines already laid down. Either large-scale underground tanks should be built in the area and connected to a pumping station that can supply for one or two hours a day or alternatively a new connection should be established to the main line.
- Another suggestion is that the line connecting Kalri and Hub Dam source, which passes through Manghopir, could be extended to this area to provide water on a regular basis. A line of 36-inch diameter is required. Estimates to cover this proposal have already been prepared by the KWSB, and came to Rs.20 million. It will benefit several Union Councils/area including Ghaziabad, Gulshan-e-Zia, and other adjoining areas. The CBO gave a similar proposal to the city government with revised cost estimates and mentioning the possible beneficiaries, but no decision was taken. Previously a large water reservoir was built with the assistance of the Asian Development Bank, but because of the lack of water in the source it could not be used.

2.4.7.3 Mr Mohammad Islam

Member, Masjid Committee,

Union Council No. 6,

Ghaziabad, Gulshan-e-Zia,

Orangi Town,

Karachi

- There are three *awami* tanks but the supply to them is irregular. The tanks have existeds for the past eight years.
- The tank constructed by the Rangers contain clean water, while the water purchased from the commercial tankers is saline and smells bad.
- The household supply per week varies from 6 to 8 canister loads.
- Management of *awami* tanks is done by the Rangers.

- Water is purchased for all uses other than drinking. This water is purchased at the rate of Rs. 50-350 per tanker load.

- Rangers have a reasonable role to play in the whole management of the water supply.

- KWSB and the elected representatives do not have any role to play in the water supply.

- Ever since the *awami* tanks were constructed their operation and maintenance has been in the hands of the area residents. The water from the *awami* tanks is drinkable while that supplied by the commercial tankers is saline and of very poor quality. In very dire situations the people have to use it for drinking.

- The existing situation causes great inconvenience and hardship to the people. After much struggle they are able to get water once or twice a week, up to 8-10 canister loads per household. At the height of summer, this is grossly inadequate. This extremely poor section of society has to purchase water from the commercial tankers. *Awami* tanks are not a permanent solution.

- A possible solution could be that in every union council, an overhead tank could be built and connected to the overall area. Through pumping or tankers the supply could then be made to the households. This could be a better solution.

2.4.7.4 Mr Mohammad Shamsuddin

General Secretary, Ghaziabad Falahi (Welfare) Committee,

Gulshan-e-Zia, Ghaziabad, Sector-11½,

Orangi Town,

Karachi

16 June 2002

- KWSB has no role in the whole process of *awami* tanks. If they had done something, then the situation might not have been this grave. It must be a responsibility of the KWSB that wherever water is being lost or wasted, it should take measures to stop it.

- *Awami* tanks have not been of any use to the common people or residents of the area. Their management was not in the right hands. The distribution was also not judiciously done. The quantity of distribution is not uniform. It will go on becoming illegal. When people congregate to acquire water, it is never properly done. People quarrel and fight with one another just to acquire a pail full of water. This process could have been organised properly. In areas where water is already coming through pipelines there is no need to construct *awami* tanks. This is a temporary solution. Committees should be formed at the level of Union Council with the *nazim* and councillors and they should be entrusted with this responsibility. They should be involved, being the elected representatives of the area. Rangers may be asked to continue with their respective activities of water supply to the tanks.

2.4.7.5 M/s Nazeer and Sajid Ahmed

Area Welfare Organisation, Surjani Town,

Sector 7-D, Surjani Town,

Karachi

26 July 2002

- There has been no water supply for one-and-a-half years.
- Rs. 300-600 is spent buying water from tankers.
- KWSB has no role in the overall situation.
- Rangers are supposed to play a role in distribution but they are not performing that role.

- In the past, people used to receive water from the *awami* tanks but now the tankers are in short supply and the availability of water is also limited. We stopped using *awami* tanks. For the past one-and-a-half years these tanks have been lying idle and garbage is collecting in and around them. Area residents are so fed up that they are thinking of dismantling the *awami* tanks. As currently the supply of water through tankers is in the hands of the Rangers, they are very severely criticized.
- A small meeting of an area organisation comprising members from Sectors 7A, 7B, 7C and 7D of Surjani Town was held.
- *Awami* tanks were built three years ago. They were financed by the Karachi Chamber of Commerce and Industry. KWSB identified the location and the Rangers supervised the construction.
- The first six months went very well. Every day a 6,000-gallon tanker would come and water was distributed amongst the residents.
- Over time the frequency of supply started declining.
- We sent several applications to the Rangers' office but to no avail.
- Water pipelines have been laid in the area. Water is not supplied through the lines at all. On very rare occasions water has been supplied for only two minutes.
- The purpose for which *awami* tanks were built has not be fulfilled. People have either to buy water from tankers or run after the Rangers. Per household expenditure reaches Rs.600 per month, which is extremely high. The water quality is poor (obtained from commercial tankers).
- If the water supply system is handed over to *nazim* or area councillors, it may become worse. They have neither the powers to address the problems nor the resolve to help us.
- We should be invited to a forum along with the elected representatives where we can have an open dialogue.

2.4.7.6 M/s Mohammad Hashim and Liaquat Ali

President Mohalla Committee,

Sector-7A, Surjani Town,

Karachi

26 July 2002

- The *awami* tanks in the area were built by the Karachi Chamber of Commerce and Industry and are supervised by Rangers.
- For the past one-and-a-half years there has been no supply to the *awami* tanks.
- The Rangers were supposed to manage the system, but now they do not play any role.
- Rangers facilitated the supply through the pipelines of a maximum of 400 gallons per time but without irregularly.
- For traditional household-level supply, every household has to spend Rs.300-600 per fortnight or Rs.600-1200 per month.
- The *awami* tanks need to be repaired before they can be used again.
- KWSB and *nazims*/area councillors have no role to play.

2.4.8 Tanker operators (from KWSB Hydrants)

2.4.8.1 Mr Mohammad Jumman

Representative of Ghulam Nabi Contractor,

North Nazimabad Hydrant,

Karachi

10 September 2002

- The *awami* tanks were constructed by Rangers in Orangi, Surjani, and Baldia Towns about three years ago.
- These tanks were built mostly in areas where the water supply situation was very poor.
- Our tankers supply water to the *awami* tanks under a contractual arrangement. We supply at the rate of Rs.300 for a 1,200-gallon tanker, 450 for 2,400 gallons and Rs.700 for 3,000- gallons. These rates are the same as tanker supplies from other localities.
- It is usually tough to work in these areas. People often get very hostile towards our staff.
- We receive supply slips from the Rangers' staff at the hydrants. We supply as much water as we are asked to.
- We do not receive any payment from the area residents. All the payments are made by the Rangers' staff to us on a periodic basis.

2.4.8.2 Mr Mohammad Ahmed Khatak

Water Tanker Operator,

Islam Chowk, Orangi Town,

Karachi

- We only supply water from the regular hydrants of KWSB. Water from illegal hydrants is saline and damages the hull of our tanker trucks.
- We supply water to the *awami* tanks, but only during the night.
- We supply to *awami* tanks according to the instructions received from the Rangers.
- The roads and streets are not very developed in Orangi and Baldia. Our trucks are damaged by the to bad paths.
- *Awami* tanks are not properly constructed. In some cases, it is not even possible to discharge water into the *awami* tanks because of inadequate level difference.

2.4.9 Tanker operators (illegal hydrants)

2.4.9.1 Mr Baloch

Tanker Operator,

Sector-11½, Orangi Town,

Karachi

13 September 2002

- We obtain water from Sakran, a location on the border of Sindh and Balochistan provinces.
- The water is taken from a tubewell.
- This water is saline.
- Water tankers are sold to households, construction sites, and commercial buildings. It is cheaper than the water supplied from KWSB hydrants.
- Our tankers are regularly harassed by the police. We have to pay them a small share of the price charged for the tanker.
- Residents use tankers according to the size of their underground water tanks. Usually 1,200-gallon tankers are in demand. These tanks cost Rs.200 and are supplied on a cash payment basis.
- We do not supply to *awami* tanks as that is done by the contracted water tankers through Rangers' supervision.

2.4.9.2 Mr Ghulam Mohammad Khan

Tanker Operator,

Sector 11½, Orangi Town,

Karachi

13 September 2002

- Orangi Town has a very poor water supply. The demand is fulfilled through tankers.
- Most of the tankers are operated individually. Few are owned by groups.
- Wear and tear costs in tanker operation is very high because of the bad roads.
- Most people want the 1,200-gallon tanker as their underground tanks in their houses are small.
- Harassment by the people and demands for extortion money is routine.

Section 3

Analysis

3.1 Status of water supply

The overall status of water supply is unsatisfactory. Orangi Town is situated in Karachi West. Its main source of water was the Hub River which ran dry around 1996-97. Although attempts were made to connect it to the Indus Source which supplied water to the rest of the city, there was not enough water. The tail-end settlements continued to receive a negligible water supply. The government tried to solve these shortcomings. Water supply pipelines were laid, but they became worn out because of the lack of water. Most pipes would require repair before they could be used. The government also built a 100,000-gallon water reservoir in Ghaziabad. The tank was built by KWSB and the supply was supposed to be the Hub River source. As the source itself dried out, however, the water reservoir did not function. For all practical purposes, the tail-end settlements – which includes Gulshan-e-Zia, Ghaziabad, Mansoor Nagar, Gulshan-e-Bihar, Rais Amrohi Colony and Frontier Colony – face acute water scarcity with almost no piped supply. The little supply there is is insufficient for need. People in these areas obtain water from two sources – they get drinking water from the *awami* tanks and they purchase water from commercial water tankers from the informal sources. This water expenditure is about Rs.600-700 per month on the average.

The situation in Baldia and Surjani Towns is no different. Piped infrastructure was laid down in most parts of Surjani and some parts of Baldia. However due to the scarcity of water at the source, there is practically no reliable water supply through the pipes. The residents have to resort to alternate sources of supply such as *awami* tanks and/or commercial water tankers. The tanker supply costs over Rs.600 per month.

From this situation it is obvious that the government's water supply provision is totally inadequate and unreliable. The residents have to spend a sizable amount to buy water for daily use (other than drinking). The free water from the *awami* tanks provides drinking water.

3.2 Issues in water supply

3.2.1 Overall shortage

The overall shortage of water is an issue in all three localities studied. This shortage has been caused by several reasons. Much of the study area was linked to the Hub River source, as mentioned earlier. As the Hub was entirely dependent upon rainfall, which has not been adequate during the recent past, it went almost dry. In addition, when the water

level rose and water was released into the pipelines, it was mainly lost because most of the pipelines broken. Thus the water supply could not function effectively. Similarly, places which were at the tail-end did not receive water as it was stolen on the way through illegal connections. The absence of adequate pumping facilities was also a reason commonly reported and observed in the study.

3.2.2 High price of vended water

Water vending in Orangi and other locations was taking place at two levels: through Rangers'-regulated KWSB hydrants or through informal hydrants. The water was transported through tankers. According to the supply system worked out by the Rangers/ government agencies, the rates of supply through the officially designated hydrants were fixed as follows:

1,200 gallons water loadRs.250.00

2,400 gallons water loadRs.450.00

3,600 gallons water loadRs.700.00

6,000 gallons water loadRs.1100.00

These rates applied to those individuals and communities that wished to purchase these tankers through the Rangers. However since the tanker contractors associated with the Rangers have to serve compulsory demands for which they are paid a fixed rate by the government, they have very little chance to sell sweet water on commercial terms.

The saline water from the informal water hydrants was sold at a slightly lower price. However, the average price remains as follows:

1,200 gallons water loadRs.200.00

2,400 gallons water loadRs.300.00

3,600 gallons water loadRs.500.00

This price is almost three times the billing cost of water fixed by KWSB, that is Rs.73 per 1,000 gallons. Therefore the area residents find it very difficult to purchase water, being low-income communities.

3.2.3 Low quantity

Overall water supply is extremely low from both from the lines and the *awami* tanks. Wherever water supply is undertaken through pipelines, it does not flow for more than 15-30 minutes. This supply, where it is received at all, only happens about once every ten days. Elsewhere it is either less or simply non-existent. Similarly the overall frequency of supply from the *awami* tanks is much lower. For instance in Gulshan-e-Zia, one *awami* tank supplies water twice a week per household. Each time the quantity is about 10-12 canister loads (150-180 litres). This means that the daily supply per capita per day for a family of six is 8.6 litres. The minimum standard set by the Water and Sanitation Programme is 63 litres per capita per day. Thus people are only getting one-seventh of what is ordinarily required. This situation prevails in almost all the areas of Orangi,

Baldia, and Surjani Towns with marginal exceptions such as Gulshan-e-Zia (*Awami* Tank No.110). The amount of water and scale of scarcity also depends on the number of households per *awami* tank obtaining water at a time. The quantity obviously decreases when there are many households per tank, as in Baldia and Surjani Towns. This leads people to question the usefulness of *awami* tanks as a water supply mechanism.

3.2.4 Poor quality (from saline source)

Water from informal sources is obtained through the various illegal boreholes made by water entrepreneurs. The water is either brackish or saline and certainly not fit for drinking. Because of the lack of options, area residents buy these tankers for all uses except drinking. Thus daily chores such as bathing, washing, and even cooking are done with this water. Because of its high salt content, the water causes skin and other kind of diseases which are spreading fast. And in situations where the *awami* tanks provide inadequate water, residents sometimes have to drink this water, which was found to be injurious to health.

3.2.5 Physical condition of *awami* tanks

The physical condition of most of the *awami* tanks was found to be unsatisfactory. Several common problems were identified. Tanks in Orangi, Baldia, and Surjani Towns were leaking. In some cases the leakage is significant, but since the water is distributed immediately on arrival, the storage time is reduced so there is a limited possibility of leakage. Several tanks have been designed and built without following the basic principles of construction. These tanks are generally dilapidated.

3.2.6 Performance of *awami* tanks

There are several aspects about the performance of the *awami* tanks that need to be reviewed. First, the timing of supplies from the tankers to the *awami* tanks should be fixed. The water tankers arrive at any time, morning or night. This is very inconvenient, as people have to wait for a long time and then adjust their routines and immediate domestic chores when the water arrives. It also makes them late for work and tired when they have had to get up during the night to get their water. Second, the overall quantity of water available from the *awami* tanks is rather meagre, not more than 10 to 12 canister loads or 200 litres per household. This water quantity can have to last for between two days and seven days depending on the household's location. In any case, it is not enough to cover the household's drinking water needs, and the related chores of cooking and even washing utensils cannot be carried out. In some cases, where the supply is particularly unpredictable, people have to use the commercially bought saline water for drinking, which is a severe health hazard. Third, *awami* tanks are often located far from households. The residents have improvised small-scale carts to transport their water-filled tin or plastic containers. It is still very tiring, however. If a household has only three containers then it has to make three or four trips to transport their 10 to 12 canister loads of water. They also have to fill and load their containers at both the tanker and their house – which is heavy work. Because of this many households only use the *awami* tanks in dire circumstances. And finally, the *awami* tanks are augmented by commercial tankers and/ or pipelines. Under no circumstances were the *awami* tanks the full picture. They are only an option when supplies of water from the other sources are unavailable to fulfil the household's other water requirements.

The level of satisfaction of the various stakeholders will be assessed in the forthcoming descriptions.

3.2.7 Possibility of upgrading *awami* tanks

A vast majority of respondents were in favour of improving the overall performance of *awami* tanks by fixing their existing problems. The commonly cited measure of upgrading involved either building a larger *awami* tank in the area or increasing the capacity of an existing tank. It was also stressed that the tanks should be supplied at least daily. There was a consensus among all the residents that *awami* tanks were not a permanent solution – just a temporary measure to meet the emergency needs.

Section 4

Conclusions and recommendations

4.1 Conclusions

4.1.1 *Awami* tanks are fulfilling the most important need of supplying drinking water to all the locations where they exist, while water vendors of different types provide water for other uses that is not fit for drinking under any circumstances. Wherever *awami* tanks are built, the potable water from the KWSB hydrants is channelled to the residents. In other words, *awami* tanks are contributing to the overall public health of the area residents.

4.1.2. The area residents of all three localities, Orangi, Baldia, and Surjani Towns, perceive the *awami* tanks as a temporary measure. They are not regarded as a permanent solution even in the most water-deficient areas. People's perception of a proper water supply service remains that of an underground piped system. Despite the fact that such pipes have been laid in almost all the areas and that due to overall water scarcity, these pipes are not performing, the popular perception remains. *Awami* tanks were constructed as an experimental solution to an ongoing problem – at least that's how people see them. People believe the real problems are the lack of water, corruption, mismanagement, and misplaced distribution priorities, so the solution is to improve and fix the piped system.

4.1.3. With a very few exceptions, residents are satisfied with the management and monitoring work done by the Rangers. Several factors have helped to build this image. Rangers are an outside agency with apparently no specific stakes in the local affairs. Thus, it is believed, they treat all the area residents uniformly without prejudices. Previously, distribution of water from the hydrants was greatly influenced by local and city-level political groups. This gave rise to favouritism on the basis of political affiliations in the process of service provision. People who were against a certain powerful group were made to suffer. Rangers were able to control it. Besides Rangers, with their military clout, were also able to control the performance of water tanker operators/tankers and streamline their charges, which were totally arbitrary during the initial stage. They were also able to check the KWSB's employees who were not performing their duties of hydrant management.

4.1.4. The tankers – both KWSB and private commercial – have greatly damaged the roads and streets. The tankers are heavy vehicles, doubly so when loaded with water. Few of the roads in Orangi have been properly developed, and so are easily damaged. Sewerage manholes and their covers are sometimes located at the edge of the streets and lanes, and as they are at or slightly above the surface

level, they are damaged by the vehicles. This all adds to the overall management costs in the area.

4.1.5. The *awami* tanks that were built by the government through the Rangers are in a rather dilapidated state. Area residents and communities do not own these tanks and expect the government to look after their operation and upkeep. Since the government does not have the funds, they are left to their fate. When the deterioration gets really bad the tanks are abandoned.

In other situations, such as tanks which area residents built or helped fund, people look after their tanks – and their investment – well.

4.1.6. Water supply from the *awami* tanks provided to the various areas is not adequate. The supply does not even fulfil the need for drinking water. People spend a sizable amount of money on water every month. In some cases, people spend Rs.600-1000 per month, a sizeable chunk of their income. The quality of this water is very poor and not fit for drinking.

4.1.7. The *nazims* and councillors are largely indifferent to the process of water supply through the *awami* tanks. With very few exceptions, such as where n*azims* have been able to support the repair, maintenance and even construction of some tanks, the overall input of *nazims* and councillors is non-existent. Besides, since the n*azims* and councillors belong to strong political groups, people do not want n*azims* and councillors to be involved in the process.

4.1.8. The piped system that has already been laid has become dilapidated at several points. Lack of use over many years, lack of maintenance, and limited lifespan of the hardware are the main reasons for the situation. In some cases uneven settlement patterns and soil anomalies also damaged the piped system. Continuing water scarcity has also contributed to the dilapidation.

4.1.9. People want larger *awami* tanks because they do not believe it is possible to get a regular or continuous supply.

4.1.10. Inappropriate supply schedules cause a great deal of anxiety among the residents. People have to stay awake late at night causing hardship for people who have to go to work or children going to school. In some locations it also causes security problems.

4.2 Recommendations

4.2.1 In order to make the *awami* tanks more effective and useful, the frequency of supply should be increased, at least enough to fulfill drinking water needs. This can only be done if the Ranger authorities study the water consumption requirements to obtain the baseline information for provision of water.

4.2.2. Research needs to be carried out to establish the possibility of reviving the piped water supply. This would entail a detailed stocktaking of the infrastructure, their viability, and also whether the system could be extended.. This study should also measure the extent of the *awami* tank service that will be needed in future. As a starting point, such a study may target Orangi Town, but later all *awami* tank locations could be included.

4.2.3. The Rangers should be retained, but efforts should be made to increase the interaction between them and the users. The Rangers might also be requested to conduct preliminary studies to catalogue the physical status of the *awami* tanks in different locations. The operation and maintenance of the tanks should be improved by this action.

4.2.4. More *awami* tanks need to be constructed, especially in areas where more people live or where other sources of water do not exist. This development should be coordinated with the overall water supply system but only where *awami* tanks are needed.

4.2.5. Community organisations that are facilitating the water supply system in some manner should be supported and allowed to grow. As these organisations may have little capacity, good relationships should be built to involve them in all the water supply related matters to improve their capacity.

Annex A

Awami tanks in Orangi Town: updating the facts as per current status – April 2002

1. Name of the Interviewee

_____

b) Date of Interview

_____

c) Address

_____

_____

d) Current status of water supply

4.1 Has water supply improved during the past year

_____

_____

_____

4.2 If yes, then through which mode?

a) Through pipe lines _____

b) Through tankers _____

c) Through awami tanks _____

d) Other (please specify) _____

4.3 If, no then what is the status of current water supply?

_____

_____

4.4 What are the major problems faced in your area regarding water supply?

a) Overall shortage _____

b) Water is not available at all _____

c) High price of water _____

d) Low quantity _____

e) Poor quality (which is not drinkable) _____

f) Poor performance of awami tanks _____

g) Fatigue/labour to manually carry water from awami tanks _____

h) Inconvenient timings of supply (late night)_____

i) Any other reason (please specify)

_____

5. What is the present physical condition of the awami tank/s in your area.

a) Very good _____

b) Satisfactory _____

c) Poor/ill maintained _____

6. If the answer of 5 is (c) then please give reasons.

_____

_____

_____

7. Are you satisfied with the overall performance of the awami tanks?

_____

_____

_____

8. Problems related to awami tanks

_____

_____

_____

9. Is there a need to upgrade the awami tanks (for example, in capacity and size).

_____

_____

10. Can awami tanks be considered as a permanent solution of water supply

_____

11. Is there a possibility of expand the awami tanks for the benefit of lower income settlements. _____

12. If the answer of 11 is yes, then how can the awami tanks be expanded in the other locations?

    a) Through self help _____

    b) Through the help of Rangers _____

    c) Through the help of nazims/naib nazims _____