

Enhancing Understanding of Utility Services: Improving communication between the residents of Katutura and the City of Windhoek



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Sponsored by:
Desert Research Foundation of Namibia



Enhancing Understanding of Utility Services: Improving communication between the residents of Katutura and the City of Windhoek

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Executive Summary

Namibia was established as a free and independent country in 1990 after its release from the South African apartheid government; the nation has made significant progress with class integration since this time, but continues to face economic, environmental, and social problems. There continues to be a great disparity between rich and poor, and obstacles still exist between races. In both rural and urban regions of the country, many people live in shacks made from corrugated steel with little access to water, electricity, and basic sanitation.

Since Independence, there has been a high number of rural citizens migrating to the capital city of Windhoek, most of whom end up living in shacks in the informal settlements of Katutura. This large influx in population, combined with a lack of job opportunities, has caused the unemployment rate in the Windhoek area to rise to around 30%. The high percentage of the population living in poverty, the lack of knowledge concerning the provision of utilities and services, and challenges in communication between the communities and the municipality all contribute towards problems collecting payment for the utilities and services from the residents. This has led to some communities in Katutura owing as much as N\$140,000 to the municipality.

The Namibia Water Awareness Campaign (NAWAC) report, published in 2005, investigated residents' perceptions in both rural and urban areas of Namibia regarding the affordability and willingness to pay for water services. The researchers found five main reasons to be at the root of non-payment: poverty, misperceptions, mismanagement, misunderstandings, and priorities (Anyim I., et al., 2005). Contributing to misperceptions and misunderstandings are issues such as cultural beliefs, literacy levels, education, and leadership structure, which may all contribute to confusion over the current billing systems. Although the NAWAC report addressed non-payment, there has been no research done in Namibia on the factors which influence a community's understanding of city services and bills.

The goal of this project, sponsored by the Desert Research Foundation of Namibia, was to recommend an awareness raising process to assist communities in enhancing their understanding of city services and billing. To accomplish this goal we

developed a set of research objectives designed to provide us with the necessary information for the development of the process. To complete these objectives, we conducted interviews with city officials and residents of Katutura. Through critical analysis of the collected data from these officials and residents in the communities, we have determined that community leadership and effective communication are among the factors leading to successful payment and understanding of city services.

The first objective was to identify communities in which to conduct our field research, including both communities in high arrears to the municipality and those which are relatively successful at organizing bill payment, either with decreasing debts or no debts at all. We accomplished this objective by making use of semi-structured interviews with city officials. Through these interviews we chose four communities, two in the Goreangab region and two in Okuryangava. Each region contained a community in debt and one with decreasing or no debts.

After completing our first objective, we sought to develop a profile of the leadership, level of understanding, and billing process in each of these communities. We created a list of research questions designed to gauge perceptions and understanding of the provision of city utilities and formulated two questionnaires: one for community leaders and another for residents. We then used the questionnaires to conduct semi-structured interviews and compiled the profiles of each community using the gathered data. Through analysis and comparison of the profiles, we determined what factors influence the success of community-wide bill payment.

Factors Influencing Success of Community-Wide Bill Payment

From the data that we gathered during interviews, we were able to determine success factors in each community.

- **Kahumba Ka Ndola A (Increasing Debt).** The success factor we found to be most prevalent was the community leadership structure, in which the leaders would hold regular meetings each week to discuss issues regarding the payment system as well as community problems.

- **Africa Tongoshili (Decreasing Debt).** The implementation of a prepay water metering system was the only factor which led to successful bill payment and reduction in debt.
- **Onghuuo ye Pongo No. 2 (Increasing Debt).** No success factors were found.
- **Omuthiya (No Debt).** Leadership structure, due to effective communication between the leaders and the municipality and their ability to inform residents about the billing system, was found to be the most important success factor.

Areas for Improvement in Communities Researched

In all communities studied, problem areas were found regarding the understanding of the billing system as well as how the money for services was used by the municipality.

- **Kahumba Ka Ndola A (Increasing Debt).** Miscommunication was evident between the community leaders and the residents regarding why four of the six standpipes were out of service. Residents did not fully understand the fees charged for land, and what other services were included on the land bill.
- **Africa Tongoshili (Decreasing Debt).** Residents were unsure how negotiations surrounding the implementation of prepay water metering were conducted. They also did not understand the purpose of an included N\$80 monthly charge, which is used for fees and paying off outstanding debts.
- **Onghuuo ye Pongo No. 2 (Increasing Debt).** There is a lack of leadership structure in this community, and those who are in a leadership position do not have the responsibility of making sure everyone in the community pays for water. Most residents do not understand what they are paying for, and leaders are not trained to spread understanding.
- **Omuthiya (No Debt).** Almost half of the residents of Omuthiya do not understand what the money they are paying towards utility services is being used for, although this represents a greater comprehension when compared to the other three communities surveyed.

From these findings we have concluded that the root causes of unsuccessful community-wide bill payment and the lack of understanding of city provided services are unsuccessful leadership and ineffective or insufficient communication among all stakeholders. The Settlement Development Subdivision of the Department of Economic Development and Community Services, whose role is to facilitate the election of community leaders and assist in increasing development in Katutura, has tried to address these problems, but lacks the resources for a comprehensive program which promotes effective communication and leadership.

Recommendations

These conclusions have led us to formulate recommendations as part of our third and final objective. This objective was to develop an awareness raising process for communities that were unsuccessful at paying for city services. The following is a list of our recommendations:

- The Settlement Development Subdivision in conjunction with the Desert Research Foundation of Namibia implement a trial program in two or three communities to enhance leadership. This trial program will take one year to complete and assist communities in developing their own solutions to the problems that they face.
- The Settlement Development Subdivision hire an employee to assist residents in addressing any concerns that they might have. This will provide an additional way for residents to have their questions answered regarding community development and provision of services by the municipality.
- The Department of Economic Development and Community Services provide the Settlement Development Subdivision with more resources. The Subdivision currently has only five employees, and hiring more personnel would allow it to become more proactive in fixing problems in communities with ineffective leadership, instead of reacting when asked to intervene by communities or the municipality.

Abstract

The goal of this project, sponsored by the Desert Research Foundation of Namibia, was to recommend an awareness raising process to assist communities in enhancing their understanding of city services and bills. This project investigated the differences in perceptions, comprehension, and communication between communities, to find what factors influence a community's ability to organize bill payment. The findings were used to make recommendations that would allow other communities to benefit from what has been successful in communities with a high rate of bill payment.

Authorship

All sections of this report were jointly written by Jo Bridge, Brenden Brown, Kyle Robichaud, and Ben Thistle. Due to the number of revisions made in every section by all the authors, no one wishes to declare primary authorship of any section or chapter.

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Glossary and Abbreviations

Arrears – the state of being in debt

Boreholes – wells drilled to access groundwater

Bulk Water – water supplied to municipalities

Cost Recovery – obtaining enough revenue to equal costs

Desert Research Foundation of Namibia – a non-governmental organization which conducts research concerning Namibia's environment and inhabitants

DRFN – see *Desert Research Foundation of Namibia*

Ephemeral rivers – rivers which only run after rainfall

Formal Home – a house constructed out of brick

Katutura – the area outside of the city of Windhoek where formerly all the blacks were forced to live.

Old Location – the area where the blacks lived before they were moved to Katutura

Oshiwambo – a tribe located in Namibia

Otjiherero – a tribe located in Namibia

Owambo – see *Oshiwambo*

Namibian Water Corporation – bulk water supplier in Namibia

NamWater – see *Namibian Water Corporation*

Informal settlements – an area with little or no infrastructure and development

Interdisciplinary Qualifying Project – an interdisciplinary project completed by students of the Worcester Polytechnic Institute connecting aspects of science and society

Parastatal – a corporation partially or fully owned by the government

Potable water – water fit for human consumption

Post-pay metering – a system of metering water use where consumers are billed periodically

Prepay metering – a system of metering water use where consumers pay before receiving water

Reservoir – a body of water held for later consumption

Shebeen – informal tavern adjoined to a house in the informal settlements

Stakeholder – a party with a vested interest in an issue

Stand pipes – a water faucet used in informal settlements

Subsidization – the partial payment of a good or service by a party other than the one receiving it

Tariff – a fee charged for a service

Travel Passes – a pass that all non-whites were forced to carry at all times on their person before Independence.

Water Reclamation Plant – a facility that processes wastewater into potable water

Chapter 1: Introduction

Namibia was established as a free and independent country in 1990 after its release from the South African apartheid government; the nation has made significant progress with class integration since this time, but continues to face economic, environmental, and social problems. There still exists a great disparity between rich and poor, and barriers are apparent between races due to differences in language and education. In rural and undeveloped regions of the country, people often live in shacks made from corrugated steel with little access to sanitation, water, and electricity.

In the capital city of Windhoek, these structures can be found in the townships of Katutura, which lie four kilometers northwest of the central business district. Upper, middle, and lower class citizens all reside in Katutura. The majority, however, live below the poverty line with an unemployment rate around thirty-six percent (National Planning Commission, 2001). With such a high percentage of the population living in poverty, the city has had problems convincing people to pay for the utilities provided to them, which may include electricity, water, sewage management, and refuse collection. Currently, some communities in Katutura have little or no debt, while others owe as much as N\$140,000 to the municipality. Compounding this issue are Namibia's arid climate and limited natural resources, which create the need for sustainable approaches to supply, conservation, and equitable distribution and pricing of water and energy.

As part of a recently published study for a Namibian Water Awareness Campaign (NAWAC) that looked into the perceptions of residents in both rural and urban areas of Namibia regarding the affordability and willingness to pay for water services, five main factors were found to be at the root of non-payment: poverty, misperceptions, mismanagement, misunderstandings, and priorities. This report also showed that non-payment stems from a multitude of other community-specific reasons as well, which may or may not apply to all communities (Anyim I., Matros A., Neels C., du Plessis N.P., 2005). Leadership, literacy levels, cultural beliefs, and confusion over the current billing system(s) can all contribute to residents' unwillingness to pay. Through initiatives aimed at better management and increased community involvement the town of Rehoboth was able to reduce its water arrears from N\$7 million to N\$2 million in four years, with the

help of Africon, a private environmental engineering firm. Although there have been instances where communities have successfully reduced their debt, there has been no previous research done on the factors which influence this success, such as the level of understanding among residents.

The goal of our project was to recommend an awareness raising process to assist communities in enhancing their understanding of city services and bills. In cooperation with the Desert Research Foundation of Namibia, we identified four communities in Katutura: two with high levels of debt, and two with little or no money owed to the municipality. Through interviews with residents and community leaders, we compared the issues facing each community and determined what influences a community's ability to organize communal bill payment. These factors were then used to recommend the implementation of a leadership training program, and the creation of a new position within the Settlement Development Subdivision that would address any concerns held by residents.

Chapter 2: Background

Non-payment for city services and utilities, especially water, is a common problem throughout the country of Namibia. There are many possible factors which play roles in determining a community's willingness to pay, including issues such as poverty, cultural beliefs, and Namibia's apartheid history. Within the capital city of Windhoek in the informal settlements of Katutura, some communities have been successful at paying their bills for these services and eliminating arrears owed to the city, and some have not.

In this chapter, we describe the history of Katutura to show how past conditions have shaped communities and how past and present conditions contribute to residents' access to water and willingness to pay. We will describe the different water related institutions, the current pricing schemes, and the metering systems to demonstrate how water is currently managed. We will also describe the additional services provided to the people, detailing aspects of bill distribution and payment collection to give insight into residents' perceptions regarding these services. Finally we describe previous research dealing with issues of service provision, which provides insight into people's perceptions of water and what types of methods have led to increased understanding and payment of water services.

Communities in Katutura

In this section, we will discuss the history of Katutura, and present some current information about its communities and residents.

History of the Settlements in Katutura

Since the late 19th century, blacks and coloreds were segregated in what were known as locations, to keep them separate from the white population. In 1932, the South African government developed what is now known as the Old Location, putting in straight roads in order to segregate the residents by tribes. The people largely accepted this separation and within each section there was a strong sense of community; one resident said "We all lived like one big family. There was hardly any crime" (Pendleton, 1993). As Windhoek expanded, the white developments moved westward until they were almost in contact with the Old Location. This caused the municipality to begin

considering proposals to relocate nonwhites in order to create more space for white residential neighborhoods. In the mid 1950s, the Windhoek municipality finally decided upon relocation, with support from the South West Africa Administration and South Africa.

The government said that in this new settlement there would be better housing with more sanitary facilities, and declared the Old Location a “shanty town” and a “breeding-place of disease” (Pendleton, 1993). However, resistance to the move was almost unanimous, with residents asking why the municipality did not just improve the Old Location instead of moving them further from the heart of the town. In addition to moving further from town and increasing transportation expenses, the residents would no longer own their houses and would pay rent instead. On December 10th, 1959, police shot and killed eleven people who were protesting the move. After this incident three to four thousand residents asked to move to Katutura, even though construction was not yet finished. Wade C. Pendleton, an anthropologist from San Diego State University who conducted research in Katutura from 1967 to 1970, and again from 1988 to 1993, believes that the change in opinion was due to fear of more shootings, and not because of any actual desire to move to Katutura.

This new location was termed Katutura, which means *we do not have a permanent habitation* in Otjiherero. Within Katutura, Pendleton found that there were about 4,000 rental houses in five ethnic sections, a section of dormitory housing designed to accommodate 1,000 people, and a walled compound near the entrance where Oshiwambo contract laborers were housed. The official policy of the municipality, which was strongly influenced by South African policy, was that blacks who lived in Katutura were only there to work in the city, and as soon as they were unable to work due to sickness or age, they were required to leave. Any resident who lost his job would have to return to his rural homeland, and if found without their passbooks would face arrest and possible jail time (Pendleton, 1993).

The race-based policies were slowly relaxed, and by 1981, Windhoek had officially become an ‘open’ city; regulations of mixed marriages, travel passes, and residence permits were eliminated. Blacks could own houses, and were no longer required to live in Katutura. An upscale development called Luxury Hill was built in

Katutura, with larger houses open to anyone who could afford to live there. Although apartheid had officially been abolished before Independence in 1990, Pendleton speculates the mindset still remained and the city planners created Luxury Hill in an attempt to keep well-off black people from moving into the white areas.

After Independence, rural immigrants could move into Windhoek without already having a job, and the unemployment rate in Katutura soared from virtually none during apartheid to 35% in 1991 (Pendleton, 1993). This led to the establishment of an informal sector of employment, consisting primarily of rural immigrant workers. According to Pendleton, in 1992, two researchers, Norval and Namoya, identified five categories in the informal sector: street trading, general repair and construction, taxis, shebeens (private house taverns), and various home-based activities like tailoring, dressmaking, and childcare. In 1968, Katutura had a total of 19,310 residents, one third in houses and two thirds in the contract labor compound. In 1991, Pendleton calculated a total of 91,464 people, an increase of 474%. Pendleton predicted that Katutura would become a suburb of Windhoek, and not just a *location*, although he added that the transformation may take a long time. Pendleton's prediction has been realized, as today Katutura is an official suburb of Windhoek, divided into over 50 communities. Katutura is still inhabited primarily by blacks and coloreds, and now consists of lower, middle, and upper class neighborhoods. Both informal and formal businesses, markets, and shops are spread throughout the suburb, as can be seen in Figures 1 and 2.



Figure 1: Tour Guide Showing Single Quarters Market



Figure 2: Leather worker in Single Quarters Market

Current Statistics of Katutura

All of the statistics and demographic information presented in this section of the report were taken from the 2001 Population and Housing Census compiled by the Namibian Central Bureau of Statistics and National Planning Commission. The report features highlights and analysis on the Khomas region, one of thirteen regions in Namibia, in which Windhoek is located. Our fieldwork was conducted in the settlements around Windhoek, which consists of the constituencies of Katutura East, Katutura Central, and Soweto.

Taking into account all constituencies, an increase was reported in population size and movement to urban areas when compared to the statistics of 1991. The researchers found that in the three constituencies under consideration, the total population was 52,853 or 21% of the total 250, 262 residents in the Khomas region. This represents a 4% growth rate from 1999 and a 5% increase in movement from rural areas into the urban region of Khomas. The overall life expectancy dropped for both males and females from 1991. In the 2001 census, the life expectancy for women and men respectively is 56 and 54 years, compared to 65 and 69 years in 1991. The head of the household in Katutura East, Central, and Soweto was found to be female in 54.6% of the households.

Little to no change was reported in the number of languages spoken, educational level, and percentage in the labor force. Researchers listed five main languages: Oshiwambo (37%), Afrikaans (24%), Nama/Damara (13%), Otjiherero (9%), and English (6%). Although the literacy rate was found to be 95.8% in those constituencies, no actual literacy test was administered and caution must be used when analyzing literacy information. Residents were simply asked, 'Can you write and read in any language with understanding'.

The report also stated that the unemployment rate was as high as 36% in these regions. Students, homemakers, and retirees were not included in the labor. The report also made note that the female unemployment rate was higher for all ages both in urban and rural areas.

Although considerable effort went into this report, one must also be mindful of the limitations of such large-scale studies. The numbers and statistics may not be entirely accurate, especially in the case of literacy rates, as was discussed previously.

Furthermore, it has been five years since this report was published and it is likely that the population and growth rate have changed since 2001, based upon the general trend of migration.

Due to this population boom of relatively impoverished people, the townships in the areas of Katutura East, Katutura Central, and Soweto have a greater number of residents with limited access to proper water, electricity, sanitation, and the necessary infrastructure that is needed for these services. Communities have relied on the use of community members as elected leaders in some of these areas, with the role of making residents' problems known and collecting payment for those supplied services

Water Management and Payment

Namibia is the most arid country in sub-Saharan Africa; approximately 80% of its 842,000 square kilometers consists of desert, arid, and semi-arid land. Rainfall accumulation averages 300 mm annually, but is extremely variable and droughts are common. Approximately 83% of the rainfall that does accumulate evaporates immediately and only 2% of the recovered amount can be used to recharge groundwater or be collected as runoff (FAO, 2005). Since there is so little surface water, Namibia draws its water supply from a variety of sources including boreholes, ephemeral and perennial rivers, reservoirs, and a wastewater reclamation plant. Successful management of water resources will be an important factor in Namibia's success in continuing economic development.

Water Management and Billing

The Constitution of Namibia grants ownership of all water resources to the state and since 1997 the resources have been managed by NamWater, a parastatal organization which supplies bulk water to all of Namibia. (Anyim, I. et al., 2005). According to the Ministry of Agriculture, Water, and Forestry's website, the Namibia Water Corporation Act of October 1997 directs NamWater to manage water resources in a sustainable manner and to provide water at a cost that is affordable to the consumers. The act also stipulates that NamWater be managed on a full cost recovery basis, but payment difficulties in some communities have resulted in large debts owed by communities to the municipality. Many times the prices charged to the communities by the municipality are

determined by consultation with community leaders but in some communities, debts still accumulate. In October of 2004 the debt owed to NamWater was calculated to be over N\$69 million from both municipalities and water point committees in rural communities (Anyim, I. et al., 2005).

According to the Namibian Water Awareness Campaign (NAWAC), the debts to NamWater may also be due to irregularities in the billing schedules. If meters are checked sporadically, and bills are received anywhere from one to ten months apart, then residents are unable to plan ahead in order to have the funds necessary to pay the bill when it arrives (Anyim, I. et al., 2005). NAWAC researchers found that the willingness to pay for water in Windhoek was over 80% in all areas surveyed; however, this does not correspond to the amount of payment in arrears. Although willingness to pay is low in some areas and is partially to blame for debts, other contributing factors include poverty, mismanagement and misunderstanding (Anyim, I. et al., 2005).

Metering systems

The two metering systems used to provide water to the residents of Katutura are called post-pay and prepay. Post-pay water metering is a system in which the water a community uses is metered and the community receives a bill at the end of the billing period to pay for the water they consumed during that period. The method is often used in informal settlements where residents have very small or no incomes and live at or below the poverty line. Water is available through a standpipe on which a simple flow meter is installed to measure water consumption. In 2005, a group of students from the Worcester Polytechnic Institute performed a study on water metering. When investigating post-pay metering, the researchers found that since all of the community members obtain water from the same outlet, individual water consumption is not known. Each household is expected to contribute an equal, fixed amount towards the bill regardless of the households' water consumption, which can vary significantly according to household size.

One of the conclusions of the report was that there were several problems with post-pay metering. The researchers found that in some areas, the billing period was not of constant length. They also found that because everyone pays the same amount for water,

there is little incentive to conserve water or reduce waste. Some residents surveyed stated that the billing did not seem fair, as consumers who try to use less water to still pay as much as more wasteful users. Another problem that the student group established with giving the bill to the community as a whole was that some individuals can choose to not pay for water. While the community leaders can try to persuade those individuals to pay for their water, there is no mechanism in place for enforcement. One conclusion of the study was that unwillingness to pay coupled with widespread poverty causes some residents to be genuinely unable to pay, which creates more difficulty for a community to pay the full water bill. These problems contributed to the decision in 1998 to establish a pilot program to install prepay metering systems in some communities of Windhoek (Assessing Prepay Water, 2005).

Prepay metering is a system in which residents pay for their water before they receive it. This is usually done with a renewable credit card and a water meter to dispense water according to the credit available on the card. According to the descriptions in the 2005 WPI report, the card is taken to a main office where the consumer pays and credit is added to the card. When individuals want to get water from the standpipe, they scan their card on the prepay meter, which deducts credit equal to the amount of water desired. Residents can only obtain an amount of water equal to the credit on their card. Once the balance reaches zero, residents must return to the main office to put more credit on their card. One major benefit of the prepay system that the student researchers found was that individuals or households only pay for the water they consume. The community does not have to subsidize those who do not pay. Individuals who try to reduce their water consumption are rewarded for their efforts, since the credit on their cards lasts longer than those of individuals who are more wasteful. However, prepay metering is not a perfect system. The truly poor who are unable to afford any payment are denied even a baseline amount of water, and as with any new technology the meters sometimes malfunction and are unusable.

Billing and Payment

The billing system is complex and not easily investigated. Some bills only contain charges for water, while others include electricity, taxes, and other fees. Communities negotiate the cost of services with the municipality, depending on the level of

development in that community. Most communities are in arrears, but a few have little to no debt.

According to Mr. Metusalem Ashipala, Project Coordinator in the Settlement Development Subdivision of the Department of Economic Development and Community Services, his division has facilitated formation of a community leadership structure in most of the informal settlements in Katutura. In Katutura, most communities have a leadership structure consisting of a chairperson, vice-chair, treasurer, and secretary. The treasurer delivers household bills and collects the payment from residents. It is also the job of the treasurer to encourage residents to pay the bills, but this is often a difficult task, due to the unwillingness to pay commonly found in communities.

After collecting payment, the treasurer takes the money to a municipal office to pay the bill. As mentioned by Mr. Reynard Steynberg of the Windhoek Department of Infrastructure, Water and Technical Services: Bulk and Wastewater Division, some treasurers upon collecting the monies would then disappear, keeping the money for themselves. The city would still expect payment, but residents would think that they already had paid. The city now requires treasurers to use a standardized receipt book and provide receipts to all residents, which has been helpful in reducing but not eliminating fraud.

Water Awareness and Payment Initiatives in Namibia

In this section we will describe the research conducted as part of a future Namibia Water Awareness Campaign. We then present a case study on the town of Rehoboth, a community successful in repaying its water debts to the local municipality.

Namibia Water Awareness Campaign

Due to the endemic non-payment for water in Namibia, in October 2004, NamWater was owed N\$69 million, over half by town councils. In conjunction with line ministries and stakeholders in the water sector, NamWater established a committee to implement a Namibian Water Awareness Campaign (NAWAC) to address the issue of non-payment and to educate people about the costs of water provision.

All the information in this section is derived from the final report of the NAWAC campaign, *Perceptions on affordability and willingness to pay for water services*, which

was published in 2005. The committee suspected that non-payment was both a problem and a symptom: a problem when an individual is unwilling to pay and a symptom when one does not possess the means to pay. To investigate these suspicions and assumptions, research was conducted in September and October 2004 in seven of the thirteen regions of Namibia, with fieldwork in rural areas and desk work in both rural and urban areas. The seven regions were Erongo, Hardap, Omaheke, Omusati, Oshana, Oshikoto and Karas. The researchers investigated the following issues (Anyim, I. et al., 2005):

- Access to water
- Level of payment
- Community organization
- Quality of water and quantity used
- Maintenance of infrastructure and metering efforts
- Perceptions towards payment and towards suppliers of water
- Water conservation and management techniques

One area of research was directed towards the Community Based Management (CBM) program, established by the Directorate of Rural Water Supply. The Water and Sanitation Policy Act of 1993 provided legal status to CBM of rural water supply and infrastructure. Through the principle of community-run water management, communities have responsibility over their own water supply, and are in charge of completing minor repairs, maintenance, and collecting bills. This is done through Water Point Committees (WPCs), which exist in both rural and urban areas of the country, and are elected by members of the community. The committees consist of between four and eight members, including a chair, secretary, treasurer and caretakers, and most have constitutions which detail their duties. The committees have had varying levels of success in collection of payments. The NAWAC researchers listed several challenges with payment collection including irregular billing from NamWater as previously described. Other challenges that were found include problems with service providers, reluctance to pay, low prioritizing by residents, and poverty. Researchers also stated that residents often held perceptions that the amount they were charged did not correspond with the amount of water consumed. Two other factors identified as influencing your community wide bill payment

were lack of training in bookkeeping and lack of cooperation among community members (Anyim, I. et al., 2005).

Although some WPCs have had problems with collection of payments, their establishment is viewed by the researchers as one of the successes of CBM. However, there has been less success in promoting the concept of water as an economic good and the principle of cost recovery. Researchers found that although most interviewees responded that they understand that they have to pay for water, over 55% did not know why. The validity of these responses is questionable because respondents may give what they perceive to be the correct response even if they do not truly understand why they have to pay for water. The researchers concluded that there are five major reasons for the non-payment of water bills: poverty, priority, misunderstanding, misperceptions, and mismanagement. They recommended that during an upcoming awareness campaign, the following concepts be considered (Anyim, I. et al., 2005):

- Elaborate on the concept of “bringing water to the people”. Explain the process of water supply. Differentiate between boreholes and pipeline water supply.
- Explain who the water suppliers are and the roles and responsibilities of the major water utilities.
- Focus on simplifying the water billing systems from municipalities.
- Provide information on the tariff structure and functions (transparency is important).
- Provide information (pros and cons) on water meter systems.
- Encourage monitoring of water use through reading water meters on regular basis.
- Identify practical measures/ methods on how to conserve and manage water effectively

Successful Repayment of Debts in Rehoboth

Rehoboth is the largest town in the Hardap region, with a population of 21,300 in 2001 (Namibia 2001 Population and Housing Census, Central Bureau of Statistics). Before Independence in 1990, the location in Rehoboth where the black and colored communities lived was fairly small, but after Independence a large number of people began to move into the area. While poverty had always been a problem in this area, the

growing population increased the extent of this problem. People were also now being charged for services that were once supplied free of charge. As a result many people did not pay and large arrears began to accumulate (Conversation with Ben van der Merwe, 2006).

In 2003, researchers from Africon initiated a project to attempt to eliminate high arrears owed for city services. We interviewed Ben van der Merwe, one of the researchers, to determine what was done and what could be learned from their efforts. The researchers initially found that only 50% of the population paid for the water provided by the city. They concluded that there were two reasons for the low level of payment: (1) people had lost faith in the city utility providers and (2) the tariff scheme was inequitable and rates were too high for those who used minimal amounts of water.

The researchers first began to develop a list of the problems that the people were facing with the system. From that list they were able to determine the most important issues that the community wanted to address. A committee was also formed from residents of the community to work closely with the researchers while the project was undertaken. In order to reduce the outstanding debts, the researchers developed good communication and working relations between the three main parties involved: the officials, the committee members and the community.

One of the ways the researchers attempted to improve communications was through the creation of a new customer care center where the people could ask questions and voice the problems they had with their monthly bills or service. They also attempted to increase residents' understanding of the new billing system under development by holding workshops and training people how to read their bills, their water meters, and inform them of what to do if the water pipes or meters need maintenance. Quarterly meetings were set up to assess the progress of the campaign and to address any questions or issues brought up by the residents. Additionally, newsletters were used to transmit information to residents of Rehoboth.

The goal of the program was the repayment of arrears in Rehoboth, and the system that was developed has been successful. The old debts that the community had developed were placed into a special account where they could be paid off and would not accumulate any interest. Residents were required to pay for the water and services that

they used each month, as well as pay off a portion of the debt. If someone did not pay their bills by the 15th of each month they would be charged a late fee. If by the next payment period they had not yet paid their water bill, water was reduced to a trickle, making it inconvenient to obtain a substantial amount of water. From an original debt of N\$7 million in 2001, all but N\$2 million had been repaid by 2005 (Anyim, I. et al., 2005).

The success of the campaign was largely due to the community committee that was developed. The people that were chosen from the communities to be a part of the committee were able to communicate effectively with the rest of the community. The committee members were trusted by the residents and were able to represent the community well when working with officials. Through the committees, the researchers were able to work closely with the committee members to develop a variety of tariff schemes that would allow the community to pay for the services and eventually pay off their debt. The final decision on which tariff to use was made by the committee members giving them a sense of ownership to the program.

The results of the campaign illustrate that community-wide debt can be reduced through the inclusion of residents in the decision making process. The researchers were able to act on residents' suggestions directly and enable the community representatives to make decisions for their communities.

Chapter 3: Methodology

The goal of our project was to recommend an awareness raising process to assist communities in enhancing their understanding of city services and bills. In order to accomplish this goal, we developed the following objectives:

1. Identify communities with a wide range of levels of success in paying for city services
2. Develop profiles of the perceptions and comprehension concerning bill payment in those communities, and determine what factors play a role in the success of community-wide bill payment.
3. Develop an awareness raising process to help enhance community understanding of the provision of city services.

In this chapter we explain the purpose of our objectives and how we completed each of them. For our first objective, we conducted interviews with city officials and professionals in the water and community development sectors. To answer the questions posed by our second objective, we held interviews with residents and leaders of the previously identified communities. In order to complete our third objective, we analyzed the data gathered from prior interviews, determined what were the factors that contributed to the successes of some communities, and created a process to assist communities with less success at paying bills.

Identifying the Communities

Our first task was to identify communities in Katutura that would provide insight into the factors that influence payment and non-payment for city services. We sought this information through interviews and interactions with city officials. We first spoke with Mr. Ferdi Brinkman and Mr. Reynard Steynberg from the Department of Infrastructure, Water and Technical Services to determine what services are supplied to the communities and what problems the city has had with payment for those services. They provided us with copies of bills and debt levels for various communities in Katutura. We then spoke with Mr. Metusalem Ashipala from the Department of Economic Development and

Community Services, currently a project coordinator for the Settlement Development Subdivision. The purpose of this meeting was to learn about community organization and to receive assistance in choosing communities that have been successful at payment for city services. Due to our limited time frame for data collection, we chose four communities in total, two in high arrears and two with little or no debt, out of a total of 33 community groups in the settlements surrounding Windhoek. We requested information from city officials on the leadership structures in these communities, but were unable to get more than a list of contact information for leaders in two of the four communities.

Building Profiles of Communities

In order for us to recommend a successful awareness raising process that would enhance people's understanding of city services and bills, we sought information on the billing system, the role of the leaders, and the current understanding and perceptions of city services in each of the four communities. We also researched basic information such as employment, income, and length of residency in community. In order to address these areas, we created five research questions:

- What perceptions do community leaders have regarding non-payment, and do they think that it is a problem?
- What steps have been taken to encourage payment of bills, and how successful have they been?
- How do residents regard the payment for city services, specifically water?
- How bills are distributed to residents, and how well are they understood?
- What types of communication exist between residents, leaders, and the city?

We developed separate questionnaires for both community leaders and residents, designed to answer the research questions we created. Before entering the communities to conduct interviews, trust building measures had to be considered.

Trust Building Measures

Before conducting fieldwork, we took part in an interview on Katutura Community Radio. The purpose of the interview was to introduce our research team to

the communities of Katutura. The radio host questioned us about where we were from, the purpose of our research, and what the outcomes of the project will be.

When interviewing residents from the communities, we developed a specific script that was repeated to each interviewee prior to questioning. This was done in order to effectively convey the reasons for our interviews (see APPENDIX B: Community Leader Questionnaire). It was apparent during the first few interviews that some residents were hesitant to speak with us so we made sure our translators emphasized that we were students to ensure that we were not mistaken as representatives from the municipality. In this script, we also explained the purpose of our research as well as how our results would be used and implemented. We emphasized the importance of this script to the translators because we planned to ask opinions on sensitive topics, and any potential doubts from the residents about the purpose of our project and where we came from could substantively change the responses we received.

Development of Questions for Community Leaders and Residents

We used the research questions we created as a basis for the development of our questionnaires. Two questionnaires were developed, one for community leaders and one for residents. The community leader questionnaire was designed to answer three open-ended questions on how the system of billing and paying works, to paint a general picture of the issues and to allow us to generate more specific follow-up questions based on the responses we received (see APPENDIX B: Community Leader Questionnaire). The follow-up questions were aimed to determine the level of communication between the residents and the leaders as well as between the leaders and the municipality.

The resident questionnaire was designed to determine what services were provided to each community and how the communities' billing systems operate, as well as residents' perceptions of the quality of service, opinions of the service providers, and the role of the community leaders. The questions were specific in nature and organized so that the interview would flow similarly to a conversation. We pre-tested this questionnaire with a member of the DRFN living in Katutura; this aided us in rewording some of the questions to be more indirect and less invasive. We also received feedback on the organization of the questions and the length of the questionnaire, which helped us to create a more efficient line of questioning.

Interviews with Community Leaders and Residents

We conducted community leader and resident interviews separately to establish greater validity among the responses given and to minimize the extent to which responses were influenced by the presence of others. In order to contact the community leaders and residents prior to conducting our fieldwork, we obtained community leader contact information from the Settlement Development Subdivision. We attempted to contact leaders in all four communities but were only able to successfully reach two communities. During brief phone conversations facilitated by the translators, we were able to set up specific meeting times to visit those leaders. After talking with the leaders, we then interviewed as many residents in the same community as time allowed. In the communities for which we received no contact information, we began the interviews with residents and during the questioning we asked where to find the leaders. By first interviewing the leaders, we sought to gain a better understanding of how the community has approached the problem of payment for city services.

The interviews were conducted for both residents and community leaders with one person clarifying the questions and the second recording the interviewee's responses. After a few interviews, the translators felt comfortable enough to ask the questions without one of us first stating them. This change in interview procedure greatly reduced total interview time and seemed to put the residents at ease. The translators we employed were fluent in Afrikaans and either Oshiwambo or Otjiherero. To begin the interview process, the translator first translated our introduction script to introduce the resident to our project and then asked the individuals if they were willing to participate in our study.

Limitations of Fieldwork

Some limitations we faced while completing this project were a small sample size, limited time frame for interviewing, group interviews which might have biased answers and the possibility of miscommunication during translations.

Within the communities in which we worked, we were able to interview a small portion of the population given our limited time in the field. We attempted to interview approximately fifteen residents in each community and two or three community leaders. Although we did not interview enough residents for statistically valid conclusions, our questions were more qualitative than quantitative. We also aimed to interview the head of

the household; however, interviews occurred between the hours of 15h00 and 18h00 which was not always the best time to speak with these individuals, most of whom had day jobs and did not return until 18h00 or later.

We were unable to contact leaders in two of the communities prior to interviewing. As a result, the leaders were unable to inform the residents of our arrival and the purpose of our research. Because most residents were curious about why we were in their community, a crowd would often form while we were attempting to conduct individual interviews. We are uncertain if opinions changed when more than one person was giving a response. This occurred during both resident and community leader interviews.

Since we were unfamiliar with the local languages, we were assisted by translators fluent in Oshiwambo, Otjiherero, and Afrikaans. With the use of translators, it is likely information may have been altered or misinterpreted when speaking with residents and leaders. Additionally, one of the four translators spoke Otjiherero and Afrikaans, while the majority of residents in the communities in which we worked spoke Oshiwambo. This may have led to inaccurate information and miscommunication of responses.

Analysis Methods

In order to analyze the information gained from interviews, we focused on patterns or themes in responses to the questions we asked residents and community leaders. Since questions were geared towards uncovering problems and successes with leadership structure, communication, and the billing and payment system in each community, patterns within these three topics were assessed.

When examining leadership structure, we took notice of action or inaction by leaders to help their communities understand the billing and payment system. Effective communication between the residents and leaders as well as between the leaders and the municipality was assessed based on differences in responses from questions asked to residents and leaders. If community leaders understood what was included on monthly bills and where that money was going, yet those in the community did not, we concluded that the gap in communication occurred between the residents and the community leaders. For those communities which are currently reducing debts, particular attention

was given to how this had come about and if this at all was attributable to strong community leadership, effective communication, an understanding by residents of issues surrounding service provision, or a combination of the three aspects.

Development of a Process to Enhance Understanding

From the data that we gathered while completing our field work, we concluded that leadership and communication were the most appropriate areas to address in order to strengthen communities and increase their ability to organize community wide bill payment. From this, we decided to develop a process that would strengthen community leadership, because strong community leadership is able to enhance the understanding among residents of the issues surrounding the provision and billing of city services. We define strong leaders as having the confidence to organize regular meetings, and the initiative to work towards making sure that everyone in the community is aware of what services are provided, what they cost, and what that money goes towards. A strong leader should also be able to communicate with both the residents and the municipality to address issues in the community and be able to enforce bill payment.

We used this definition as a guideline when conducting our fieldwork and interviews with community leaders to assess their strengths and weaknesses. Based on those attributes, we were then able to recommend means by which leadership could be strengthened, or used as an example for other communities which lacked an effective leadership structure. From our interviews with community leaders, we have defined communication between leadership and residents as being effective when both residents and leaders share the same knowledge about those services they receive, what they are paying for, and understand the need for payment.

We developed a list of the various challenges faced in each of the four communities researched in respect to leadership and communication. We decided upon several possible methods to address these factors based upon our findings. We presented our tentative research and findings to a collection of interested parties, including the city officials responsible for the provision of water, and for the continuing development of informal settlements. Based upon their feedback, we chose one method that would be feasible to execute, and developed a plan to implement it, which will be explained in the next two chapters.

Chapter 4: Findings

Our research into four communities in Katutura revealed a number of challenges related to communication and leadership as well as some successes. We found what factors influence awareness and attitudes regarding payment for city services, focusing on perceptions held by both leaders and residents, comprehension of the billing and service systems, and the flow of communication between the residents, leaders and the municipality. In this chapter we will present profiles of the four communities, after which we present an analysis of the factors we found to influence bill payment.

Community Profiles

From our interviews with city officials, community leaders, and residents in each of the four communities, we gained insight into the current financial status of each area, the roles and responsibilities of the community leaders, and the knowledge held by residents and leaders in regards to the current billing system and utility services. The results of these interviews aided us in recognizing what issues were predominant in each community with respect to billing and payment and what processes or factors contribute to high or little arrears.

Kahumba ka Ndola A: Goreangab Dam

Kahumba ka Ndola A is a community located in the Goreangab Dam region a few kilometers outside of central Windhoek. There are approximately 100 shacks in the community, twenty of which were included in our study. We spoke with four community leaders and sixteen residents throughout the area, with an average age of 36 years. Of the 20 people interviewed, twelve were male and eight female. Prior to conducting our field work, Mr. Ferdi Brinkman, Chief Engineer from the Department of Infrastructure, Water, and Technical Services, informed us that the community was in arrears with the municipality and was not successful in paying off its water debt. Interestingly, he stated that two of the standpipe accounts in the community were paid in full, yet there are still two others which owe around N\$30,000 to the city. Several meetings have been held by the Settlement Development Subdivision with the residents and leaders of Kahumba ka Ndola A. These meetings were meant to explain to the community the debt that they

owed the municipality. However, a Project Coordinator in that subdivision stated that nothing has come of those meetings and the community is still in arrears.

Community Structure

From our interviews with community leaders in Kahumba ka Ndola A, we discovered that the core community leadership structure was organized into a chairperson, secretary, treasurer, and vice-treasurer. We spoke with those leaders about their primary job responsibilities. The chairperson responded by saying he represents the community at city meetings concerning issues which had been brought up by the residents at their weekly Sunday meetings. The secretary's role is to keep track of these issues and log what was discussed. The treasurer and vice-treasurer collect money from the community members and give each person a receipt, which serves as verification for payment of water. We were unable to determine if those leaders interviewed were also members of the community water point committee which is responsible for the collection of water bills and fees.

All of the leaders have lived in the area for at least eight years, but have held their positions for no more than one year. Interviews were conducted separately for the chairperson and treasurer but when we interviewed the vice-treasurer and secretary, all four leaders were present at the meeting. This collective interview may not have yielded valid information due to a possible reluctance of the leaders to disagree in front of outsiders. However, this may also be a sign that the community leaders were all equally informed and knowledgeable about their community.

Services, Utilities, and Land

Kahumba ka Ndola A currently receives water, refuse collection, and sewerage management services from the City of Windhoek. With the exception of a few homes hooked up illegally, the community is not provided with electricity. Water and sewage services are provided communally to all residents on the same bill, while refuse collection is optional for each household.

The community is now serviced with six communal water standpipes and six toilets. However, both community leaders and residents stated that only two of the standpipes and toilets are in working order. After a subsequent meeting with Mr. Ferdi

Brinkman, we found that the municipality shuts off standpipes in communities with unresolved debts, such as Kahumba ka Ndola A. From our interviews, it was apparent that residents were uncertain why only two of the six standpipes worked. When we spoke with Mr. Metusalem Ashipala, he informed us that the leaders had requested that some standpipes be shut off, which none of the leaders told us. This conflicting information from the residents and the leaders suggests to us that there is a lack of communication between the community, the leaders and the municipality with regards to this issue.

The community leaders also informed us that some residents were part of a savings group in conjunction with Shack Dwellers Federation; the residents had bought some of the land in the community and now pay a monthly housing fee as a type of mortgage. Once enough money has been collected within the community and this mortgage has been paid, the city has plans to build formal housing. Community leaders told us that these houses would include individual standpipes and electricity. This would allow residents to use refrigerators, stoves, lights, and television. Through our interviews, some residents stated that they were unsure of when this new housing project would be built. One resident told us that all households in the community must pay off their debt before any new homes can be built, but we are unsure whether this is an official policy or not.

Billing System and Residents' Comprehension of the System

Kahumba ka Ndola A receives two types of bills: one for the communal water points that is billed to the treasurer and a second for land fees, sewage, and refuse collection that is billed to each individual resident. For those residents in the savings group, housing fees are N\$100 per month. However, it was stated by residents that not all members of the savings group pay this amount and instead they give whatever funds they can. Since the community is still on the post-pay water system, the treasurer receives one communal bill every month, and it is her job to collect N\$20 from each household. As previously stated, the treasurer then distributes receipts and pays the municipality the money collected from the community. From interviews with community leaders we determined that some residents still refuse to pay for water services.

The treasurer stated that the N\$20 per month for water is not enough to pay for water services, leading to an increasing debt. This was the only community leader to tell

us that the community was in debt. The other leaders gave the impression that N\$20 was enough to cover the amount billed to the community each month. We were shown the communal water bill by the treasurer, and the amount of money collected was insufficient to cover the monthly bill owed to the municipality. She has kept a record of who has not paid for water, but has not yet given this information to the municipality; it was uncertain if she had plans to do so or not.

When residents were asked what their total monthly expenses amounted to, the average was N\$498 per month/household. However, this only represents twelve of the sixteen respondents; the other four did not know their monthly expenses. Most residents stated that it was difficult to cover these costs given the high unemployment rate among those households interviewed.

When asked if residents knew what services they were paying for, all mentioned water but some were unsure if they were being charged for sewage, refuse, and land costs. Eight households stated they were paying for land and one was unsure if they were being charged for street cleaning and sewage maintenance on the same bill. Others claimed they were receiving separate refuse bills and many seemed unsure of what exactly they were paying for other than water. When interviewing one of the households, we were actually shown an individual bill which had land fees, street cleaning, and sewage all included. However, the members of the household were unaware of the street cleaning and sewage fees. It is clear that the community understands the water payment system, but it seemed as though many of the residents were unaware of the community's debts. Furthermore, from these interviews one cannot say water is the primary issue; much of the confusion and misperceptions involve land, refuse, and sewage costs and the associated billing structure for those services.

For those residents who do not pay for water, there exists a thirty day grace period in which they are allowed to pay off their debt, and if after this time nothing has been paid they will be forced off the land by the municipality. Interestingly, despite such threats from the city, this has never happened and people continue to occupy the land despite their non-payment.

Residents' Perceptions of Community Leaders

As part of the questionnaire, we assessed the opinions held by the residents towards the existing community leaders. In Kahumba ka Ndola A, where there is a considerable amount of debt, this information was used partly to determine what the leaders were doing effectively and not so effectively in order to reduce the community's arrears.

When asked their opinion of the community leaders' role in managing service provision, ten of the sixteen residents stated that the leaders were doing a good job, two did not approve of what they were doing, three were unaware of their role, and one had no idea community leaders existed. Because of the small sample size, it is hard to determine if the leaders are well regarded, or if they are addressing the problems with service provision in the community. However, the community is still in debt and there has been little done to eliminate this problem; this may indicate that the leaders are more focused on other tasks such as getting proper housing for the community, even though this will not be possible until the debt for water is paid off.

Problems and Areas for Improvement

A theme throughout our case study of Kahumba ka Ndola A is the ineffective communication between the residents, leaders, and the city. Through the interviews we learned that residents are unaware of why their standpipes are shut off, are confused over some aspects of the billing system, do not know when the new housing units will be built, and are largely unaware of the debt they are in. Only one community leader mentioned the fact that they owed the municipality money, and from our fieldwork and interviews, we saw no evidence of a plan to fix this problem. Additionally, almost all residents stated that they would like electricity for their homes, but believe they have no way of making their voices heard to the city.

One thing that all the community leaders told us was that they have a hard time talking to the municipality and the government. It has been their experience that when they attempt to go and talk to people at the municipality they get shuffled around from one person to the next and never are able to get anything accomplished. The treasurer also told us that they do not know how to voice their opinions to the government. She mentioned that they have no way of getting to the government and if they got there they

would not be sure who to talk with. She told us that there is a representative or councilor from the government for the community, but said no one had ever seen or heard from him or her.

Africa Tongoshili: Goreangab Dam

Like Kahumba ka Ndola A, Africa Tongoshili is a community located in the Goreangab Dam region. We spoke with two community leaders and fifteen residents throughout the area, ten female and seven male with an average age of 32 years. Unlike Kahumba ka Ndola A, Africa Tongoshili is currently on its way to eliminating its debt. In October 2005, the community owed the municipality N\$70,000 for water and other services, but since then it has reduced that amount to N\$30,000. According to Mr. Ferdi Brinkman, this debt reduction was accomplished through the implementation of a prepay water system made possible through the election of new community leaders. These elections were facilitated by the Settlement Development Subdivision. Mr. Ferdi Brinkman also stated that Africa Tongoshili's water debt will likely be paid off within six months if the community continues to sustain their current payments required by the prepay system.

Community Structure

In Africa Tongoshili, we spoke with the chairman and the secretary of the community, both of whom had lived in the area for about nine years. We spoke with both at the same time rather than on an individual basis. Although each confirmed what the other said, we cannot be sure that they both were actually in agreement. The chairman stated that he represents the community at municipal meetings concerning any problems or issues brought to him about the utility services the community receives. The secretary informed us that she is in charge of collecting fees for land and refuse and issuing receipts to households for these services. From an interview with an official from the Settlement Development Subdivision, we were told that Africa Tongoshili is a constituted community which means that every member in the community has agreed to pay fees for settlement on the land.

One thing we found interesting about this community is that the residents had a wide variety of opinions and comments about the community leaders, despite the drastic

reduction of debt. Some of the residents who believed the leaders were doing a good job stated that they felt this way because of the implementation of the prepay water system. Other residents said the leaders do not give them feedback from the municipality about issues. Some residents stated that the city is active in the area, and that it is not uncommon for officials to attend a meeting, but many said that community meetings are infrequent and irregular; they occurred only when problems emerge with payment.

Services

Africa Tongoshili is provided with prepay electricity, prepay water, sewage, and refuse services. Almost all of the residents stated that the service is fair-to-good in terms of quality, and that when problems arise the city is prompt to respond and complete the necessary repairs. All households pay N\$100 per month to receive prepay water, of which N\$20 pays for water itself, and the rest contributes towards paying off the debt, as well as various other fees and charges. If residents need more water than is paid for by the first N\$20, they can recharge their card and put more money on it. Residents also have prepaid electricity, which is paid directly to the city. The leaders collect payment for land, refuse, and sewage fees, which are all on the same communal bill delivered to the community. The residents are issued a receipt for the payment from the secretary who also delivers the money to the appropriate office at the municipality.

Although most residents understood what they were paying, most were unsure of why they were paying, and where their money was going. When asked, residents responded that they paid land fees to the leaders, but not all were sure whether sewage and refuse were included in that fee or not. Residents also told us that those who do not pay for services are evicted, and reported that this has been done twice already. Twelve of the fifteen residents interviewed stated that their monthly expenses were not easy to cover, and about half did not think the service fees were fair and affordable. In particular, many people said that the N\$100 fee for water each month was too expensive, and most were unsure of what the extra N\$80 was being used for. Additionally, when asked what the service fees were used for, twelve of the fifteen residents could not give an answer.

Perceptions about the quality and timeliness of maintenance and repairs made by the city were mixed. One resident stated water service is good and that repairs are made frequently, and several residents stated that the city cares more about this area than others

in Katutura. However, many people said that the toilets are poorly maintained and leaking, and that the city rarely comes around to fix problems. We observed the toilets in a state of disrepair, and noticed sewage leaking out of the toilet facilities onto the dirt roads, in close proximity to the residents' shacks. Another problem mentioned by residents was that the electricity service was unreliable, and would often shut off between seven and ten in the evening, which was when most residents want to use their electricity.

Problems and Areas for Improvement

Even though the community is making progress with respect to debt, there are still problems relating to awareness and communication. Most of the problems facing Africa Tongoshili can be related to ineffective communication between the community leaders, residents, and the city. A frequent complaint is that the price of water is too high, but there is a lot of confusion over what the N\$80 fee is used for; some people know it is for paying off debts, some think it is a tax, while others don't know at all. Although city officials sometimes attend meetings, most people said that meetings were not held regularly.

Common complaints voiced by residents include unreliable electricity, poor toilet facilities, and little to no interaction among the community leaders, residents and the city. Another problem is the level of unemployment, which can make paying even modest amounts for services challenging. We noticed that residents who moved to the area more recently had more confusion and misunderstanding, which suggests a need to increase education and interactions with new arrivals.

Omuthiya: Okuryangava

Omuthiya is located in the suburb of Okuryangava a few kilometers outside of the City of Windhoek. There are approximately 235 houses within the community, each housing an average of five people. A total of sixteen residents and two community leaders were interviewed, ten of which were male and eight female. Of the four communities in which we conducted interviews, Omuthiya was the only one with little or no debt owed to the municipality, and we considered it the most successful community in our study. This may be partly due to the community's history; when first established there was only one house located in the area. While this house did have a significant

amount of debt, the residents were able to pay it off and continue to pay for the water that they were consuming, and as more houses were built, the community was able to remain debt free. For this reason, Omuthiya has an advantage over the other communities that we worked in, which all have been in arrears for a significant amount of time. Although Omuthiya had this advantage, we were more interested in how the residents in this community were able to remain debt free, rather than how this history affected the development of the community.

Community Structure

Within Omuthiya there is a chairman and a treasurer who organizes bill payment and collection, represent the community to the municipality, and help to solve any problems that may arise. These leaders are elected by the people in the community. We were told by community leaders and residents that leaders hold bi-weekly meetings to discuss issues and relay information obtained from the municipality. It was stated by both residents and community leaders that leaders talk to residents about why it is important to pay for water and try to make them understand the importance of payment.

If one of the residents does not understand bill payment or a topic that has been discussed at a meeting, the community leaders will sit down with that individual and help to clarify what is misunderstood. We were informed by the chairman that in his community he stresses the importance of paying for water. The chairman explained to us that he believes that people who are not willing to pay do not understand why it is important. We learned that the leaders try to make clear to the residents that once they acquire their own house they will have to pay significantly more for water and other services than they do now. He emphasized that it is better to learn how to pay for the services currently provided so that when residents own their own homes they will be capable of paying the increased costs.

Services, Utilities, and Land

The only services that Omuthiya is provided with are communal water standpipes and toilets. It was not determined if all residents pay for land, although a few mentioned they give whatever money they can for land fees. The majority of people told us that they only pay for water; however, a few mentioned that the water bill recently increased and

now includes payment for sewage. The community does not receive electricity, although some homes are equipped with solar panels. One resident that we spoke with stated that she wishes there were more toilets in the community; too many people are now using the same facilities.

Billing System and Residents' Comprehension of the System

In Omuthiya, each household pays N\$30 a month for water and gives an extra one dollar to pay for the taxi ride to deliver the money to the municipality. We were informed by a resident that the water fee has just increased from N\$20 to N\$30 to include sewage. The treasurer goes around the community to collect the money from the people and to issue receipts. It is also her responsibility to sit by the tap to ensure that people who have not paid do not receive any water. However, we were told by residents and the leaders that if people are unemployed and do not have the money to pay for water that month, the community leaders will negotiate a deal. Half of those residents interviewed understood what the money for water was used for; this is significantly greater than all other communities researched and signifies successful communication in Omuthiya on this particular issue.

Residents' Perceptions of Community Leaders

All but one of the sixteen residents interviewed in Omuthiya told us that the community leaders were responsive to problems, competent in obtaining information from the municipality and willing to negotiate bill payment. The one resident who responded differently stated that the leaders did not have a particular job in the community. This was the only community with such a widespread consensus on this particular topic.

Problems and Areas for Improvement

Omuthiya was found to have the least amount of problems relating to service provision and awareness out of all four communities researched, however, there still exist areas for improvement. The chairman mentioned in one of the interviews that it is not easy to communicate with the municipality. It has been the leader's experience when going to the municipality that he is usually redirected, and finds it hard to find someone willing to talk about issues relevant to the community. This suggests to us that

communication between the community and the municipality could be improved. The chairman also told us that city officials will lie to him and tell him something just to get him to go away. One community member told us that individuals from the Community Development Office are not easy to work with, although we are unclear why.

Onghuuo ye Pongo No. 2: Okuryangava

Onghuuo ye Pongo No. 2 is a community located in the Okuryangava region a few kilometers outside of central Windhoek. We were able to estimate that there are approximately 250 homes that are a mix between informal shacks and cement houses. Fifteen of these households were interviewed and included in our study. Prior to conducting field work, Mr. Brinkman confirmed that the community was in arrears with the municipality and was not doing well paying off the debt; we were unable to determine the total amount owed. Because this community is broken down into formal and informal houses, we will discuss these topics separately.

Formal Housing

During our visits to this community we interviewed six households within the formal section of the community. From our observations we estimate that roughly ten to fifteen percent of the housing is formally constructed. Unlike in the more informal parts of the community, all of the houses were constructed on well defined plots of land and located on formally constructed dirt access roads.

From our interviews with the residents we discovered that most were either unaware of any leadership within the community or said that the leaders were unresponsive and disinterested in their concerns. The residents told us that they interacted with the municipality directly and received no assistance from the community leaders. Because they receive a private bill for water, they do not contribute to the communal water bill, like the people in the informal sections. This may be one reason why residents do not have the same interactions and relationships with community leaders as is evident elsewhere. The leadership gap suggests that this lack of interaction with representatives in the community might be one of the reasons why people have problems understanding their bills and the services that they receive.

Each house has an individually metered private standpipe, and every month they each go to the municipality, receive their bill, and pay there. Most residents responded that they pay between N\$200-400 for water each month and because they have privately metered standpipes, we believe they do not contribute to the communal debt. This monthly fee is much higher than the amount paid in the informal communities and is an important concept that must be realized by the residents who wish to move into the formal areas. One complaint we heard from several houses was that their bill did not depend on how much water they consume. One resident mentioned that when he was away for a month and was not using any water, he still received a similarly sized bill. We believe this is because the municipality estimates water consumption every other month, to reduce labor costs for meter readings. If true, this implies a lack of comprehension among residents about how the municipality bills for water, which may be remedied through increased involvement with community leaders. There is also some uncertainty as to what other services the community may or may not receive. One resident mentioned that refuse collection was optional, and all houses had prepaid electricity service. Some of the residents indicated to us that they pay for land, street cleaning, sewage removal, and refuse disposal; however, it was not clear from all of the interviews that people actually know that they are paying the municipality for these services or if they actually do pay for them.

Common complaints about the municipality included that they were not helpful, unable to explain the bills, and did not make repairs in a timely fashion. Only two of the six respondents expressed no complaints regarding the city and provided services, however, one of these residents works for the city. Overall, we found that there was a general lack of understanding of the services provided to the people we interviewed. Most residents knew that they were charged for water and electricity while a few believed that refuse was included in their water bill. The challenges they face in communicating effectively with the municipality may be part of the reason why there is a lack of understanding of the services provided.

Informal Housing

We interviewed seven households located in the informal regions of the community, where the majority of the people reside. The area has no clearly defined

roads or plots of land and most houses are built very close together. The residents receive only a communal water bill from the municipality. Within this section of the community the leadership structure is broken down into groups of 20 houses, each having its own community leader responsible for any problems that arise. There is also a head community leader who acts as the treasurer and collects the bills.

We spoke with two of the community leaders in charge of 20 houses. When asked about their individual job responsibilities, both leaders stated that they are responsible for bringing people in the community together. They try to keep the peace among the people and solve problems that arise. If there is a problem among residents they will listen and talk to them but if there is trouble in the community and they cannot handle it they will call the police. However, some residents stated that the only role the leaders had was to quiet down the local bars throughout the community. These leaders do not have any responsibility regarding bill payment or issues about the provision of water.

One leader told us that meetings are held every two weeks to discuss issues relating to noise disturbances in the community and not about payment, billing, or their current debt. However, five residents told us that meetings are usually held once a month and one resident stated that community leaders do not communicate with the municipality about their problems. Additionally, we were told by some residents that if leaders informed the city about their problems, nothing was ever done.

The municipality only provides Onghuuo ye Pongo No.2 with communal water. Some of the people pay for water and also mentioned to us that they give what they can for land. It was not clear to us, however, if people were required to pay for land and some simply did not pay or if payment varied depending on the location where you lived in the community. We discovered that the amount of money paid to the municipality for water varies between N\$30-50 a month, but one resident stated he pays as much as N\$100 a month.

After speaking with the community leader from the neighboring community of Omuthiya, we learned that most people in Onghuuo ye Pongo No. 2 are confused as to whether or not they are still required to pay for water. He told us that this is because the municipality informed the people that they would soon be receiving prepay water service. Most of the residents believed this to mean that they did not have to pay until the change

happened; this suggests that residents have misperceptions about how the transition would work.

Problems and Areas for Improvement

We found Onghuuo ye Pongo No. 2 to be the community with the most problems. Most of these are related to ineffective leadership, in both the formal and informal areas. In the formal areas we heard complaints about the price of water being too high, the need for electric meters in their homes, and that the city should not estimate the price of water. Residents in both areas of the community mentioned that the city does not come to fix things fast enough. In the informal areas the people also said that they would like the price of water to be lower and that they would like their own taps.

Analysis of the Factors Involved in Bill Payment

Through analysis of the communities in which we worked we discovered that there are many factors that can influence a community's understanding of the pricing and provision of services. From the community profiles we developed, we found that an effective way to increase the payment for services is to have leadership that can communicate to residents the need to pay for the services that they receive. If residents want to increase their standard of living to include more formal housing and an increased development level, they will have to pay much more for services than they currently do. If they are not paying for their current services, the municipality will not provide improvements. The installation of prepay water metering will increase the rate of payment, but it is not related to understanding of the importance of paying, which means that if services are provided that are not prepaid, the underlying issue of non-payment will remain.

Another finding was that it is ineffective to turn off water standpipes in an attempt to get people to pay if the people don't know why they are shut off. If people understand that they are turned off because they did not pay their bills or they have accumulated too much debt then this could be an effective measure to encourage bill payment. If people understand that increased bill payment and elimination of arrears can lead to an increase in services, then this could result in an increase in payment for existing services.

Communication is a major factor in raising understanding of payment for services and in order to analyze the differences between the four communities and what factors play a role in the success of community wide bill payment, we developed a model of the ideal flow of information between the stakeholders. This model, shown in Figure 3, includes the municipality, the community leaders, and the residents. No community that we researched was effective in all areas, and different communities had different weak links. In order to compare all of the communities, we will discuss the different flows of information, and examples of communities which were effective or ineffective for each pathway.

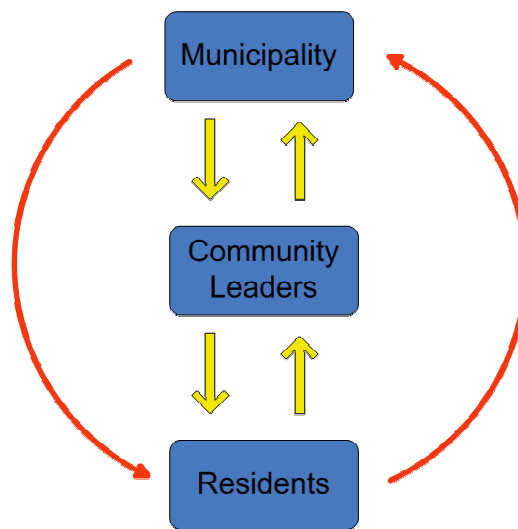


Figure 3: Stakeholder interaction model

Municipality and Community Leaders: The first pair of information pathways is between the municipality and the community leaders. From the municipality to the leadership structure, there should flow information on outstanding debt, scheduled repairs and maintenance, and provision of services. There should also be answers to any questions, and city officials should periodically attend community meetings. In addition the municipality should provide bills for any communal services within the community. The leaders should take to the municipality any questions they receive from residents, undertake negotiations concerning increasing development, the payment for services, and submission of payment for communal service provision.

Community Leaders and Residents: The second pair of information pathways is between the community leaders and their residents. Residents should provide payment for any communal services, and report any concerns or problems with malfunctioning infrastructure, as well as ask any questions they would like answered by the municipality. Community leaders should provide information that they have received from the municipality to the residents, as well as answers to any questions that residents have. They should explain service provision and billing information, and hold regular community meetings.

Municipality and the Residents: The third category of interaction is between the municipality and the residents. Residents should be able to contact the municipality with the same sort of concerns and questions that they ask the community leaders, about malfunctioning infrastructure, or any other sort of question. They should also pay for any privately metered service provision directly to the municipality. The city should provide clear and easy to understand bills for privately metered services, answers to any questions asked by residents, and make timely repairs when needed.

From this model we found that to effectively communicate that understanding and payment are important, a strong and effective leadership structure is necessary. The leadership has to understand the importance of bill payment to effectively encourage the community to pay their bills, and to increase the level of understanding in the community. To do this we found that it is a good idea to hold weekly meetings to explain issues with the billing and payment systems. However, weekly meetings alone are not enough to increase understanding, especially if communication is ineffective. The leadership should be able to communicate well with both the municipality and the residents.

Chapter 5: Conclusions and Recommendations

From our findings, we have developed conclusions and recommendations for the various stakeholders involved. We will first explain our conclusions and what they are based upon. We will then give recommendations which address the gaps in communication and need for improvements in the existing community leadership. These recommendations are addressed to our sponsor, the Desert Research Foundation of Namibia, and to the Settlement Development Subdivision of the Department of Economic Development and Community Services in Windhoek.

Conclusions

In this section we present our three conclusions, which are based upon our understanding of the four communities in which we conducted our field work.

Lack of understanding of billing and service provision

From our interviews with the residents of the communities in which we conducted our research, we found there to be an overall lack of understanding of the billing system and provided services by both residents and community leadership. We found this lack of understanding to be common both in debt-ridden communities and in communities that have been more successful in avoiding debt. For example, in Kahumba ka Ndola A, which is in debt, we found that the leadership had an incomplete understanding of why they were in arrears, and of what must be done to improve the situation. In Africa Tongoshili, which is reducing their debt, water is distributed with a prepay system in which residents have to pay an additional charge towards paying off previous debt, but most residents do not know what that money actually goes toward. We found that residents are lacking understanding of how much money is required for full payment of services, the level and status of community-wide debt, how billing and payment are organized, and what the money paid for city services is spent on. Because this sort of confusion was common in all four communities we studied, we conclude that there is a lack of understanding of the billing system and of those services provided to residents in Katutura.

Communication Gaps

From the level of confusion over the provision for services among residents and community leaders that we observed, we conclude that in all communities except for the one with no debt, there is a gap in communication between all three involved parties: the municipality, the community leadership, and residents. For the purposes of this project, we defined effective communication as situations where we received the same response or information from all involved parties. In Kahumba ka Ndola A, residents that we interviewed told us that four out of the six toilets and standpipes were not in working order and the municipality has yet to fix them. However, after speaking with a representative from the Settlement Development Subdivision, we learned that the leadership asked that they be shut off in order to reduce water consumption, due to an inability to manage the additional taps. This could indicate a gap in communication between the leaders who asked to have the standpipes shut off and the rest of the community. Currently, most information that residents can access comes only through their community leaders. Because of these communication gaps, we conclude that residents need to be able to access information directly from the municipality, in addition to the existing communication through their community leaders.

Strong Leadership as Key Success Factor

From the results of our field work in Katutura, we conclude that in order to reduce arrears without installing prepay water metering, effective community leadership is needed. We have found that strong leadership can be the basis for a high level of community-wide awareness of the provision, pricing, and billing of city utilities and services. Strong leadership entails having the confidence to organize regular meetings, and the initiative to work towards making sure that everyone in the community is aware of what services are provided, what they cost, and what that money goes towards. A strong leader should also be able to communicate with both the residents and the municipality to address issues in the community and be able to enforce bill payment.

In one community with no debts, the chairman said that he personally worked to ensure that all residents were aware of the reasons why it is important to pay for city services, specifically water. In the communities without strong leadership, we found that the residents lacked an understanding of what is provided by the city and how they are

charged. We found that the sole reason that Africa Tongoshili is able to pay off its debts is through implementation of prepay water metering; we believe this is not a viable model for other communities because it requires a specific metering system that may not be applicable or ideal everywhere. There is no correlation between prepay metering and a good understanding of billing and service provision, and although prepay meters may increase the level of bill payment, the situation in Africa Tongoshili suggests that it does not strengthen and prepare a community to overcome other challenges and achieve new goals. From these findings, we conclude that strong community leadership is necessary to tackle existing problems such as non-payment for water, as well as confront new problems as they emerge.

Recommendations

From the above conclusions we have formulated recommendations for the DRFN and the Settlement Development Subdivision in Windhoek. As the office responsible for assisting communities in developing and organizing themselves, this subdivision is most suited to help communities reduce gaps in communication and understanding. The purpose of these recommendations is to improve the level of communication between the parties concerned with the provision and billing of city services in Katutura, as well as enhance the leadership in communities.

We recommend that the Settlement Development Subdivision, in conjunction with the Desert Research Foundation of Namibia, implement a trial program in two or three communities to enhance leadership.

The following is a proposal that we developed in response to the shortcomings which we identified in the researched communities.

Title: Enabling Effective Leadership

Goal:

The goal of this program is to give community leadership the skills necessary to solve problems without the need for outside assistance. This will be done by helping community leaders in Katutura find a solution to the problem of how to pay off the debts

owed to the municipality for provision of utility services.

Anticipated Outcomes:

- Substantial reduction in debt and successful payment for current provision of services
- Strengthened community leadership able to address future challenges on their own
- Validation of this program as an effective approach to leadership development

Duration: This program will take one year to complete.

Introduction:

Communities throughout Katutura are currently struggling with many problems. To address these problems a comprehensive program has been developed that will provide capacity within the leadership to provide solutions to problems as they arise. One symptom of these issues is the large debt for water services in many communities. Many of these issues stem from a lack of communication, bill payment, and understanding.

Over the past two months, a team of researchers from Worcester Polytechnic Institute were hosted by the Desert Research Foundation of Namibia, and completed a project in Katutura to determine what factors influence a community's ability to successfully organize community-wide bill payment. They concluded that increased awareness among residents of what services are provided, how much they cost, and how payment is determined positively impacts successful bill payment. They recommended that this awareness is best spread through strong leadership. For the purposes of their report, they defined strong leaders as having the confidence to organize regular meetings and the initiative to work towards making sure that everyone in the community is aware of what services are provided, what they cost, and what that money goes towards. They also found that strong leadership should be able to communicate with both the residents and the municipality to address issues in the community and be able to enforce bill payment.

This program is intended to strengthen the existing leadership through:

- Helping the chairperson gain the confidence to hold regular community meetings
- Sharing knowledge of the community's current status:
 - Payment of bills for city services
 - Level of debt owed to the municipality
 - What requirements must be met before the municipality will increase the development level in their community

Not all communities face the same challenges, and to allow for expansion of this program, it is designed in a modular fashion so the appropriate sections can be implemented to address each community's unique set of problems. The Settlement Development Subdivision of the Department of Economic Development and Community Services in the City of Windhoek will assist in choosing two or three appropriate communities with the following qualifications:

- An increasingly large outstanding debt
- An existing leadership structure that does not communicate effectively with either residents or the municipality

Choosing communities immediately after the election of new leadership would be helpful but not required. In a community with newly elected leadership, the leaders may be more willing to attempt new approaches to their problems, because they are not wedded to the existing practices.

Methodology:

This program will be divided into six phases: assessments, meetings, brainstorming, choosing a solution, implementation, and evaluation. This program will be facilitated by a pair of researchers funded by the Desert Research Foundation of Namibia.

1. Assessments of the identified communities

This will take one month, and will consist of deskwork and interviews of:

- Department of Infrastructure, Water, and Technical Services to determine what services are being provided in the chosen communities, and what problems this department has identified in the communities, including level of debt and any maintenance issues. The researchers will also ask questions about how this department communicates with residents.

- Department of Finance to determine the level of debt, and processes used for distribution and payment of bills, as well as what avenues of communication currently exist for residents.
- The Settlement Development Subdivision to gain insight into the leadership structure and challenges faced by the chosen communities, as well as past work and future plans for these communities.
- Community leaders to assess their role in the community, present efforts to improve awareness and reduce debt, level of understanding, and the historical context within the community.
- Residents to determine their level of awareness regarding provision and billing of water services and perceptions of communication with all other stakeholders.

2. *Meetings with the leadership*

This will take three weeks and will consist of weekly meetings, each with two components: an educational field trip and informational sessions. The purpose of the field trips is to provide an enjoyable activity which will act as an incentive for community leaders to attend these meetings. The purpose of the informational sessions is to share knowledge with the leadership regarding their status from the view of the municipality. The field trips will include water-related sites such as the Goreangab Dam, the Goreangab Water Reclamation Plant, and the Gammans Water Care Works, where leaders will learn about the processes that take place. In the informational sessions, the researchers will begin making the leadership aware of what issues and problems face their community:

- The knowledge of their current status regarding payment of bills for city services and the level of debt owed to the municipality
- What requirements must be met before the municipality will increase the development level in their community

The facilitators will also convey the importance of raising the awareness of the residents in their community. After this information sharing, the facilitators will ask the leadership to share what goals they have for increased development, such as installation of electricity service, construction of formal housing, or privately metered

standpipes.

3. *Brainstorming of solutions by the leadership to the identified problem.*

This will take two months, and will be done through a participatory problem-solving process that takes place in the community, where the leadership develops their own solutions. Some of the activities involved will be:

- Trips to talk with the leadership from other communities identified as good models by the Settlement Development Subdivision to provide inspiration to the leadership about what is possible
- Meetings with officials from the Department of Infrastructure, Water, and Technical services, and the Settlement Development Subdivision to ensure that the ideas being developed are feasible

After the brainstorming process, the leadership will be assisted in developing a few different possible solutions. These trial solutions will then be prepared for a community-wide presentation.

4. *Choosing one solution, and generating acceptance of that solution by the municipality and the residents.*

This stage will take two months. One goal of this process is to increase confidence by community leaders in their ability to solve problems on their own, so the facilitators will help them complete this objective with minimal oversight.

This objective will be carried out through three meetings:

- Initial meeting with residents. This meeting will be well publicized and the importance of attending stressed to all residents, to get as high of a turnout as possible. In the meeting, the community leaders will present on the problems faced by the community, including both their perspective and the perspective of the municipality. They will then explain the goals that they defined for the community, and then describe the possible solutions that they developed. With help from the facilitators, they will hold a discussion on those solutions, with a goal of building consensus for one solution in particular.
- Negotiations with municipality. After the community leaders have identified the desired solution, the researchers will facilitate meetings with

the Department of Infrastructure, Water, and Technical Services. The leaders will propose their solution to the accumulated debt, and a reasonable timetable for an increase in development in the community. They will explain the community support for this solution, and then negotiate an agreement with the Department.

- Final meeting with the community. The purpose of this meeting will be to make everyone in the community aware that this is a binding agreement, and that whatever schedule for the repayment of the debts is shared community-wide. The community leaders will again be encouraged to ensure that as many residents attend as possible, so that when the community decides to enter into this agreement with the municipality, everyone feels included and shares ownership.

5. *Implementation of the chosen solution*

Although it is hard to predict the length of time needed for implementation, it is assumed that it will take approximately six months. After a binding plan has been agreed upon by all parties, the facilitators will work as a neutral party to resolve any conflicts that come up, and to make sure that the plan is moving forward. In bimonthly meetings, they will urge the chairman in each community to hold regular weekly meetings with the residents, and together with the Settlement Development Subdivision act as a conduit for any concerns in the communities. Additionally, as an incentive for leaders to participate in the program a certificate of completion can be given at the end of the process.

6. *Short and long term evaluations carried out*

This will be completed concurrently with the above phase. During the implementation of the negotiated plan, researchers who implemented the program will conduct an initial evaluation based on three criteria:

- How effectively information was transferred to leadership through the initial meetings
- How well the facilitation process worked in the creation of possible solutions
- How well the leadership did in conducting community-wide meetings

This evaluation will be carried out through two actions:

- Scheduling bi-monthly meetings with the community leaders to keep track of the progress made, and provide support where necessary
- Attending regular community meetings

The long term evaluation will be conducted one year after the start of the pilot program. There will be two criteria for success:

- Substantial reduction in debt and successful payment for current provision of services. To assess this, the researchers will interview city officials and access municipal billing data to determine if debts are being paid off and current bills paid in full.
- Strengthened community leadership able to address future challenges on their own. To assess this, the researchers will interview the community leadership, residents, and analyze their own experiences at community meetings.

Timeline

Assessment	1 month
Meetings	3 weeks
Brainstorming	1-2 months
Generating Acceptance	1-2 months
Implementation	6 months or more
Evaluations	1 week for initial evaluation, 1 month for long-term evaluation a year later

We recommend that the Settlement Development Subdivision of the city of Windhoek hire an employee to assist residents in addressing any concerns that they might have.

We concluded that there is a gap in communication between residents and the municipality. For residents, there is limited access to city departments and officials; the only means for them to voice their problems and concerns is through the leadership structure. Almost all residents surveyed said that they did not know where to go if they

had questions about what they were billed for. Some residents told us that if they tried to find someone in the municipality to answer their questions, they were shuffled around without getting a satisfactory answer. Although there are phone numbers listed on the back of the water bill, in communal post-pay settlements only the treasurer receives the bill, and not all residents know about the phone numbers.

When speaking with Mr. Metusalem Ashipala of the Settlement Development Subdivision, we learned that the Subdivision receives calls and visits from residents with a variety of concerns best addressed by other municipal offices. However, because they are contacted frequently by residents, we recommend that an employee in the Settlement Development Subdivision be responsible for the following:

- Responding to any calls from residents
- Directing them to the appropriate office
- Ensuring that their concerns are addressed

This would provide an additional way for residents to access information, which would reduce the reliance upon community leadership.

This employee would also have to be available to work in the evening and on weekends as this is when residents are not at work and will wish to ask questions. Additionally, this person would be responsible for any secretarial duties that might need to be done in the office. This would allow the other members of the staff to focus more of their time on their responsibilities.

We recommend that the Department of Economic Development and Community Services provide the Settlement Development Subdivision with more resources.

Both of our recommendations focus on adding responsibilities to the Settlement Development Subdivision, but it currently does not have the resources to carry out these tasks. This is the office in the City of Windhoek that is most suited to develop competent leadership and effective communication within the settlements. At this time, the Settlement Development Subdivision only has five employees, which is half of the planned staffing level. The subdivision facilitates community meetings, leadership training, and elections of new leaders every two years. By adding more employees, the Subdivision could become more proactive in fixing problems in communities with

ineffective leadership, instead of merely reacting when asked to intervene by a community or the municipality. In addition to more employees, we recommend that the Settlement Development Subdivision be provided with enough funding to organize an annual awareness campaign in Katutura on the provision and billing of city services. This campaign will provide yearly reinforcement to support their on-going efforts to raise awareness. These recommendations would allow the Settlement Development Subdivision to more effectively carry out their mission of assisting communities in their development.

Recommendations for Future Work

In the course of our research, we encountered questions that need answering, but were outside the scope of our project. One topic that deserves additional research is described below.

We recommend that the Department of Finance and the Department of Infrastructure, Water and Technical services investigate ways to improve residents' access to information regarding the provision and billing of services.

There exists a widely held perception among residents we surveyed that the municipality is not responsive to the residents' concerns. Whether or not this is true, research should be done to investigate how to correct this perception, and to improve accessibility if the perceptions are found to be true.

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Appendix A: DRFN Profile

The Desert Research Foundation of Namibia is an organization involved in the management and use of natural resources of Namibia. The organization concentrates on the agriculture, energy, and water sectors of natural resources. The DRFN works with government, non-government, and community based organizations such as the Ministries of Agriculture, Water, and Rural Development, the city of Windhoek, the Northern Namibian Environment Project. The DRFN is also a co-partner, together with the Ministry of Environment and Tourism, in running the Gobabeb Training and Research Centre. The DRFN carries out its mission by involving communities in participatory learning to develop sustainable management practices and by engaging managers and policy makers in dialogue to improve the policy and regulatory framework for sustainable development. The DRFN also builds a body of knowledge to improve our understanding of arid and semi-arid lands, and builds the capacity and commitment to manage natural resources.

The DRFN has established a number of sub-groups within its structure, including the water desk, land desk, and energy desk. These desks take charge of the projects concerning their respective aspects of Namibia. The desks accomplish their objectives with community based programs, environmental impact assessments, and environmental education and awareness. Within these desks a wide variety of staff are employed in various areas, including post-doctoral researchers, post graduates, graduates, diplomats, field assistants, volunteers and laborers. A board of trustees oversees the desks and formulates the policy of the DRFM. A body of representative directors from various desks, projects and other DRFN divisions makes up the general management strategy.

The DRFN collectively puts out a number of publications available on their website, some concerning research and some educational, such as *Local Level Monitoring for Enhanced Decision Making*, a tool for improved decision making by farmers in Namibia, and *The Forum for Integrated Resource Management: Putting Communities at the centre of their own development process*.

The DRFN also does consulting work. Most of the work is concentrated in the field of environmental impact assessments. This work is conducted through the

consulting arm of the DRFN, the Environmental Evaluation Associates of Namibia. The EEAN is a group of professional consultants with experience in research and training in the fields of environmental research and development. The EEAN has extensive contracts and relationships with key persons within the Namibian government and other interest groups and is committed to training Namibians in techniques of environmental evaluation and the sustainable development of Namibia.

In conjunction with the organization's central mission, the DRFN seeks to promote sustainable use of water resources, specifically with issues over demand and effective management. Furthermore, through the foundation's Water and Environmental Resources in Regional Development (WERRD) branch they undertake projects which balance societal needs and the current natural resource systems within Namibia.

The DRFN staff is made up of a diverse group of professionals with expertise in journalism, design, editing, conference organization, and facilitation services for all aspects of sustainable development policy and implementation. The organization states that it also calls upon scientists, doctors, farmers, students, as well as governmental and non-governmental directorates for assistance when needed.

The foundation, as stated previously, has various structural levels and subgroups within each program. To focus on the problems and/or tasks, there are four distinct groupings which aid in problem identification and resolution: community-based programs, education and training programs, environmental programs, and research-information sharing. Tools used in these subgroups include: surveys, conferences, training, and environmental/resource assessments.

Appendix B: Community Leader Questionnaire

Community Leaders Questionnaire

WPI IQP Billing Awareness Program: Perceptions of Residents' Willingness to Pay for City Utility Services

We are a group of students from the United States who are working with the Desert Research Foundation of Namibia. We will be working in various communities of Katutura for the next two weeks to try and improve communication regarding the understanding of bills and payments for city services like water and electricity. We would like to learn about the communities concerns towards the bill payment system. Our report will attempt to suggest ways for the city to communicate better with you; however, we do not work for the city or the government. We would appreciate your honest opinions and any information you give us will be kept completely confidential. Please do not feel that you need to answer all of our questions.

Date:

Location:

Interviewer:

General Information

1. Age:

2. Sex: Male or Female

3. What position do you hold in the community?

4. How long have you held this position? _____

5. How long have you been living in this community? _____

6. What are your job responsibilities? Do you receive payment from the city?

Service Providers and Payment for Services

Open-ended Questions:

7. How does billing work?

8. How does payment work?

9. How well do you think it works?

Then ask follow up questions to make sure key issues are answered.

10. (If problems) Why do you think that happens? What might make it better?

11. (If no problems) What do you think makes this system work so well?

a. How long has it been used?

b. How was it started?

12. How do residents receive bills?

13. Where do residents go with questions about payment for city services and utilities?

14. Can the residents understand the bills?

15. Does this community have a problem with non-payment for bills?

a. If so, what fraction of the community does not pay?

16. What do you think is the opinion in this community of payment for city services?

17. What do you think would help create better understanding of the billing and payment system?

18. Are there any other factors that contribute towards success of community wide bill payment?

19. What do you do to encourage residents to pay their bills?

20. Are there steps to take to try to reduce the arrears owed to the city?

21. What interaction do you have with city service providers?

22. What is overall impression of the city service providers in terms of responsibility, promptness, fairness?

Appendix C: Resident Questionnaire

Residents Questionnaire

WPI IQP Billing Awareness Program: Perceptions of Residents' Willingness to Pay for City Utility Services

We are a group of students from the United States who are working with the Desert Research Foundation of Namibia. We will be working in various communities of Katutura for the next two weeks to try and improve communication regarding the understanding of bills and payments for city services like water and electricity. We would like to learn about the communities concerns towards the bill payment system. Our report will attempt to suggest ways for the city to communicate better with you; however; we do not work for the city or the government. We would appreciate your honest opinions and any information you give us will be kept completely confidential. Please do not feel that you need to answer all of our questions.

Date:

Location:

Interviewer:

Questions

1. Age:
2. Sex: Male or Female
3. What is the name of your community? _____
4. How long have you lived in this community? _____
5. How many people are in your home? _____
6. How many household members are currently employed? _____
7. How much do your total monthly expenses amount to? _____
8. Can you cover these expenses? _____
9. Are you charged for the following services? And if so, how?
Water _____ Sewage Management _____
Electricity _____ Refuse Disposal _____
Street Cleaning _____ Other _____

10. Do you pay those charges? _____
11. What happens if you don't pay? _____
12. Do you think that the service and utility costs are fair? _____
- a. What is the money paid towards city services used for?

13. Describe what is on each bill. Are any services combined on one bill?

14. If you have a question about the bill, can anyone explain it to you? Who?

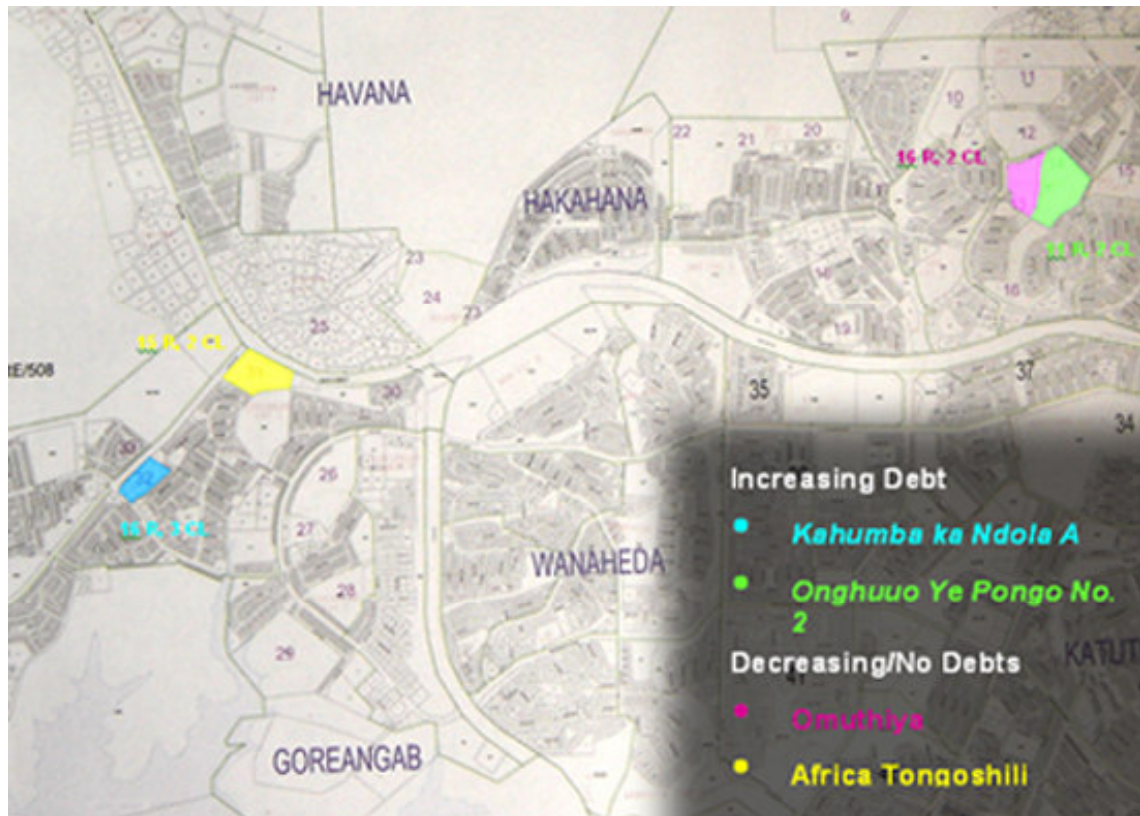
15. Where do you receive the bill, and how do you pay the bill?

16. How often do you receive the bill? Regularly? _____
17. What is your overall impression of the service providers in terms of
responsibility, promptness, fairness?

18. What is role of the community leader in helping with bills and payment? Does
that work well?

19. Are there ever community meetings? How often, and what is discussed?

Appendix D: Map of Chosen Communities



Appendix E: Africa Tongoshili Survey Results

	Age	Sex	People in Household	Currently Employed	Emp. Type	Monthly Expenses
3-Apr						
26	29	M	3	1	Service Station	370
27	27	F	8	4	Factory and market	600
28	30	F	4	0	-----	600
4-Apr						
29	32	F	6	0	-----	1000
30	30	M	8	2	-----	600
31	25	F	2	0	-----	300
32	53	F	4	1	-----	800
33	23	M	3	1	-----	3000
34	25	F	3	1	-----	Don't Know
35	46	M	7	3	-----	600
36	30	M	4	2	-----	250
37	22	M	9	2	-----	500
38	15	F	5	1	-----	600
5-Apr						
A	44	F	4	2		Don't Know
B	44	F	5	0		500
RESULTS	Avg	M	average	average		Average
	32	6	5	1		600
		F	Average % of members employed			
		9	27 %			

Easy to Cover	Costs fair	Money used for	Role of Leader	Rates for Services
No	No	Infrastructure	Don't Know	W(\$20/M),E(\$230/M),Land(\$120/M)
No	No	Not Sure	Bad Job	W, E, R(\$50/M), Sew
No	No	Not Sure	Good Job	W, E, R, Land, Sew
No	No	-----	Ok	W, E, Land
No	No	Not Sure	Good job	W(\$20 plus addtl \$80),E, Land, Sew
Yes	Yes	Not Sure	Good Job	W, E, Land
No	Yes	Not Sure	Good Job	W, E, Land
No	Yes	Not Sure	Good Job	W, E, Land
Yes	Yes	Pay Workers	Good Job	W, E, Land
No	Yes	Not Sure	Good Job	W, E, Land, Sew
Yes	Yes	Not Sure	Good Job	W, E
No	Yes	Not Sure	Don't Know	W, E, Land, Sew
No	No	Not Sure	Don't Know	W, E, Land, Sew
No	No	Not Sure	Bad Job	W, E, R, Land, Sew
No	No	Not Sure	Good Job	W, E, R, Land, Sew, SC
Yes	Yes	Not Sure	Good Job	Just Water & Elec
3	7	12	9	1
No	No	Infrastructure	Ok	W, E, Land
12	8	1	1	6
		Pay Workers	Bad Job	W, E, Land, Sew
		1	2	4
		No Answer	Don't Know	W, E, R, Land, Sew
		1	3	2
				W, E, R, Sew
				1
				W, E, R, Land, Sew, SC
				1

Combined Bill	How often	Impression	How long lived	Do You Pay
-----	-----	Fair	0.1	-----
Gives money to CL, Sew comb with Water	Monthly	Good	4	-----
Pay Comm Leaders, Sew included in R and Land	-----	Fair	8	-----
W and E Prepay, Pay Land to CL and get receipt	-----	Fair	8	Yes
W and E Prepay, Land and Sew	Monthly	Fair	8	Yes
Pay land to CL and get receipt	Monthly	Good	5	Yes
Pay land to CL and get receipt	Monthly	Good	8	Yes
Pay land to CL and get receipt	-----	Fair	6	Yes
Pay land to CL and get receipt	Monthly	Fair	0.4	Yes
Pay land to CL and get receipt	-----	Good	8	Yes
Pay Community Leaders and they give to Muni	-----	Fair	7	Yes
Don't know if owner gets bill, get a Rec from muni	Monthly	Poor	0.3	Yes
Pay land/sew to CL and get receipt	Monthly	Good	6	Yes
Pay land to CL and get receipt	Monthly	Good	4	Yes
SC, R, Sew included in bill, pay to CL	Monthly	Good	8	Yes
Don't get bills	Pay to CL Monthly	Good	Avg	
Prepay Water and Elec		7	5	
Pay Land to CL		Fair		
		7		
		Poor		
		1		

What happens if don't pay

Meetings

Debts accum and they tell you to leave
Debts accum and they tell you to leave
Move you to location without W & E
Move you to location without W & E
Chase you out of area

Have to move from area
Have to leave area, cant take house
Have to leave area
Have to leave area

Community leaders only encourage you to pay your debts, not regular occurrence
Not regular meeting, just tell residents to pay bills, don't discuss problems
Discuss Problems but not a regular occurrence
Discuss Land and Bills, not a regular schedule
Only held when problems arise, CL take problems to muni but res don't get feedback
not regular meetings
CL always get feedback from muni and get them to come fix problems
Don't Know
Don't Know
Mainly just to encourage bill payment, only occasional

Remove you to another area
Kick you out

Not this year, only bill payment, people from Muni come and answer quest.
This year no meetings since prepay was installed, no meeting since October

For this Area, if don't pay, you get thrown out

Mixed Opinions about meetings

Appendix F: Kahumba ka Ndola Survey Results

Interview #	Age	Sex	People in Household	Currently Employed	Emp. Type
Kahumba ka Ndola A 29-Mar					
1	27	M	9	-----	Contract Work
2	20	M	5	4	Taxi
3	55	M	4	1	Minist Work, Trans., & Com
4	30	M	3	2	Contract Work
Kahumba ka Ndola A 30-Mar					
14	65	M	2	1	Cleaner
15	34	M	3	1	Construction
16	38	F	8	1	Driver
17	34	F	12	3	-----
18	25	F	4	2	Taxi, Labor for sugar compa
19	27	M	4	2	Chef
Kahumba ka Ndola A 31-Mar					
20	36	F	4	1	Construction
21	31	M	7	2	Street Cleaners
22	34	M	4	1	Self Employed(shoes?)
23	45	F	2	0	-----
24	28	F	8	1	Cleaning Company
25	25	M	2	0	Contract Work
RESULTS	Avg	M	Average	Average	
	35	10	5	1	
		F		Average % of household members who are employed	
		6	27 %		

Monthly Expenses	Easy to Cover	Costs fair	Money used for	Role of Leader	Rates for Services W, Land, Sew, E, R, SC
\$300	No	Yes	Not Sure	Good Job	W, Sew, R
Don't Know	Yes	Yes	Not Sure	Good Job	W, R
Don't Know	No	Yes	Not Sure	-----	W, Sew, R
\$500	Yes	Yes	-----	Good Job	W, Sew, R
\$645	No	Yes	Not Sure	Not Involved	W(\$20), Land, R(\$225)
\$800	No	Yes	Not Sure	Good Job	W, Land, Sew, R, SC
\$1,100	No	No	Not Sure	No Leader	W, R(\$40)
Don't Know	-----	Yes	-----	Good Job	W, Land
\$300	No	Yes	Not sure	Good Job	W, Sew, R
\$400	No	No	Not Sure	Good Job	W, Land(\$100/M), Sew
\$500	No	Yes	Infrastructure	Good Job	W, Sew, R
\$320	No	No	Not Sure	Don't Know	W, Land, Sew
		Water- Yes			W(\$20), Land(\$100/M), Sew
\$300	No	Land-No	Not Sure	Good Job	
Don't Know	---	Yes	Not Sure	Don't Know	W, Land, Sew, R
\$500	No	Yes	Not Sure	Bad Job	W, Land
\$320	No	Yes	Not Sure	Good Job	W, Land, E
Average	Yes	Yes	Not Sure	Good Job	Water, Sew, Ref
\$499	2	12	13	10	5
	No	No	Infrastructure	Bad Job	Water & Land
	12	4	1	1	2
	No Answer		No Response	Not Involved/Don't Know	Water, Land, E
	2		2	5	1
					Water, Land, Sew
					3
					W, Land, Sew, R
					1
					W, Land, Sew, R, SC
					1
					Water & Refuse
					2
					Water, Land, Refuse
					1

Combined Bill	How often	Impression	How long lived
-----	-----	Fair	
-----	-----	Good	
Refuse on Separate	Refuse - Monthly	Poor	
Water to leaders	Refuse - 2 Mon.	Poor	
Communal Water, Sep R	-----	Poor	
Communal Water, Sew in W	Monthly	Poor	
Water expenses to Munic.	-----	Poor	
-----	-----	Fair	
Assumed Sew paid with Land	Monthly	Fair	
-----	-----	Good	
Individual	Monthly	Good	7
Community Bill	Not regular	Fair	7
Sew assumed included in Land	Pay money to Leaders	Fair	4
Land, R, Sew on bill	Monthly	Poor	17
Pay money to Leaders		Poor	10
All on one bill	Monthly dist. By Leaders	Good	2
		Good	Average
		4	8
		Fair	
		5	
		Poor	
		7	

Appendix G: Omuthiya Survey Results

	Age	Sex	People in Household	Currently Employed	How long lived	Monthly Expenses
M1	38	F	9	2	9	\$1,000
M2	41	F	7	2	12	\$500
M3	41	M	8	1	15	\$1,400
M4	26	F	3	1	4	\$500
M5	34	F	6	2	14	\$700
M6	35	M	4	0	12	\$300
M7	25	M	4	3	3	\$500
M8	29	M	3	3	4	\$500
M9	18	M	8	1	5	\$500
M10	21	M	4	1	2	\$300
M11	34	F	2	1	-----	\$500
M12	34	M	3	1	6	\$500
M13	19	M	6	1	12	\$400
M14	37	M	7	6	16	Don't Know
M15	35	F	4	1	9	\$1,000
M16	25	F	4	0	1	\$200
RESULTS	Avg	M	average	average	Avg	Average
	31	9	5	2	8	\$587
		F	Average % of members employed			
		7	32 %			

Easy to Cover	Costs fair	Money used for	Role of Leader	Rates for Services
No	No	Infrastructure	Good Job	W
No	Yes	Infrastructure	Ok	W, E
No	Yes	Namwater	Good Job	W, Savings
No	No	Namwater	Good Job	W, Land
No	Yes	Municipality	Good Job	W, Land
Yes	Yes	Municipality	Good Job	W
No	Yes	Don't Know	Ok	W, Land
No	Yes	Don't Know	Good Job	W, Land, Sew
No	Yes	Don't Know	Good Job	W, Land
Yes	Yes	Infrastructure	Good Job	W
Yes	Yes	Don't Know	Good Job	W
No	Yes	Don't Know	Ok	W, Land
No	Yes	Don't Know	Good Job	W, Land
No	Yes	Municipality	Good Job	W
No	Yes	Don't Know	Good Job	W
No	Yes	Infrastructure	Good Job	W, Land
Yes	Yes	Don't Know	Good Job	W
3	14	7	13	6
No	No	Infrastructure	Ok	W, E
13	2	4	3	1
		Namwater		W, Savings
		2		1
		Municipality		W, Land
		3		7
				W, Land, Sew
				1

Combined Bill	How often	Impression
W(\$30/M)	Monthly	Good
W(\$100/M)	Monthly	Poor
W(\$30/M), get receipt from CL after payment	Monthly	Fair
W(\$30/M), Land(\$50/M) get receipt, always have to pay off previous month first	Monthly	Poor
W(\$30/M), try to pay CL any way possible, CL likes if you tell him if you have a problem	Monthly	Good
W(\$20/M), getting prepay soon, currently pay CL	Monthly	Fair
W(\$30/M), Land(\$50/M), water may pay for others debts, pay for land at city	W-Monthly Land-Whenever	Good
Thinks Sew is included in water, W(\$30/M)	W-Monthly	Good
CL issues receipt for water payment W(\$30/M)	Monthly	Good
W(\$30/M), get receipt from CL after payment	Monthly	Good
W(\$30/M), don't have to pay for land each month	Monthly	Good
Not fixed amount for land	Monthly	Good
Get receipt from CL when pay	Monthly	Fair
W(\$30/M) pay to CL and get receipt	Monthly	Poor
W(\$30/M), Land(\$100/M) pay to CL and get receipt	Monthly	Good
	Pay to CL Monthly	Good
		10
		Fair
		3
		Poor
		3

Appendix H: Onghuyo ye Pongo Survey Results

Interview #	Age	Sex	People in Household	Currently Employed	Emp. Type	Monthly Expenses
30-Mar						
5	---	M	10	3	NSDS, Police, Garage	2000
6	---	---	8	4	-----	500
7	---	F	6	1	School Cleaner	400
8	---	---	4	2	Electricity, Municipality	600
9	---	---	4	-----	Selling Driver, Trainer @	500
10	---	M	2	2	Hospital	800
11	---	---	4	2	Police	-----
12	---	---	3	0	Selling	600
13	---	---				
7-Apr						
	22	M	2	2	-----	300
	42	F	5	1	-----	500
	Avg Around 35		Avg 5	Avg 2		Avg \$689

Easy to Cover	Costs fair	Money used for	Role of Leader	Rates for Services	Combined Bill
No	No	City of Windhoek	Don't Trust	W	Prepay Water(\$20/M)
No	No	Not Sure	-----	W(\$50/M), E(\$250/M)	Municipality Water & Refuse, Pick up
No	No	Not Sure	Not Effective	W, E(prepay)	-----
No	No	Not Sure	Not Involved	W, E(prepay)	-----
No	Yes	-----	No Leader	W, E, R	Separate
Yes	Yes	Not Sure	Not Involved	W(fixed), E(prepay), R(\$70)	W, R, Sew
-----	-----	Not Sure	Not Involved	W(Prepay \$300), E(prepay \$300)	Separate, mailed
No	No	Not Sure	Not Effective	W	
Yes	Yes	Not Sure	Good Job	W, Land	Pay CL for Land
No	Yes	City of Windhoek	No Help	W	Post-pay(\$30/M)
Yes 2	Yes 4	Not Sure 7 City of Windhoek	Not Involved 3	W 3	Prepay Water and Elec
No 7	No 5 No Response	2 No Answer	Not effective 3	W, E 4	
No Response 1	1	1	No Leader 1	W, E, R 1	
			Good Job 1	W, E, R, Sew 1	
			No Answer 1		
			No Help 1		

How often	Impression	How long lived
-----	Fair	-----
Monthly	Poor	-----
Monthly	-----	-----
-----	Poor	-----
-----	-----	-----
-----	Poor	-----
Monthly	Poor	-----
-----	-----	-----
-----	-----	-----
Monthly	Good	3
Monthly	poor	14
Monthly	Good	
	1	
	Fair	
	1	
	Poor	
	5	
	No	
	Response	
	2	

Appendix I: Interview with Cathline Neels

Friday 17 March 2006

Attendees: Cathline Neels, Jo Bridge, Brenden Brown, Kyle Robichaud

Summary of meeting with Cathline Neels, Thursday 16 March, 2006

- Experience/background:
 - Used to work for MAWRD/MAWF – DRWS
 - One of the principle researchers on the NAWAC report, she has also implemented campaigns on education about new water infrastructure in rural areas.
 - Educated in gender studies

- **Gender issues**

In the North, WPCs are more successful when women run them, but not in the south, due to regional differences in culture. If run by a man, especially if he is related to the chief, no one will attend a meeting he calls. Gender of extension officer matters too.

In meetings, separate by gender, and keep the two groups out of sight of each other. Otherwise, women may be afraid to speak up because they could get beaten later by their husband. Do not have all meetings separated, though, or else people may begin to think that it's only a women's issue or only a men's issue.

- **AIDS**

If they train local people, then come back in a year, often they will be dead due to AIDS, and they must begin again with training someone else. This leads to a lack of continuity, and high training expenses which are wasted.

Increase of water consumption in rural areas due to AIDS: Breadwinner comes into the city to make money, gets lonely, sleeps around and gets AIDS. Returns to rural community, and because he is sick, needs a lot of water to wash sheets and towels, but he cannot work, so household cannot pay for water. In some

communities widows do not have to pay for water, but then there is sometimes the suspicion that women will kill their husbands through witchcraft to avoid paying the water bill. One way for widows to pay for water is to plant tomatoes or other crop that needs water around the standpipes, so that they absorb wasted water, and then sell the tomatoes to pay the water bill.

- **Governmental relationships to rural communities**

Lack of government cooperation: Ministry of Health has no extensions, only the MAWF. Lack of cooperation leads to mistrust of government because of conflicting messages, so residents only trust NGOs.

Meetings are more successful when the extension officer runs meetings instead of outsiders, because the extension officer will still be there when the outsiders leave.

Communities are suspicious of the answers and explanations from engineers

- **Advice and recommendations**

Make sure that we send summaries of our report to the people we interview, and to tell people that the report is for Namibia, not for our college.

If the local leader/bill collector has a bike or personal transport, they can remind everyone about upcoming due dates for bills.

It is important to ask for payment often, and not just sit back and passively collect monies sent in.

When talking with residents, don't say "The DRFN said..." type statements, instead ask blameless abstract questions.

- **Background information:**

Example of prices in rural areas: N\$10 per household flat rate, plus N\$.50 per goat, N\$1 per cow.

Problems related to alcohol: People won't sell livestock to pay water bill, but will sell livestock for less money to pay for alcohol.

Priorities: People will pay other bills to private firms first, because the firms may sue, whereas the government will just shut off water, which they can still get from their neighbor.

Katutura is mostly segregated by tribe. There is friction between mixed/colored people and blacks, because pre-Independence mixed people had slightly more privileges than black people, and now, colored parents think better of a marriage to a poor white person than a successful black person.

Appendix J: Meeting with the Department of Infrastructure, Water and Technical Services

16 March 2006

**Attended by: Ferdi Brinkman; Chief Engineer: Bulk and Waste Water
Reynard Steynberg, Jo Bridge, Brenden Brown, Kyle Robichaud**

- **Payment**

There is a problem with non-payment through out the entire country, not just with the poorest communities. This stems from the days when people did not have to pay for water they just had to pay for the land where they lived. Today, some people pay more then they need to for water to help try and get rid of the debt owed to NamWater.

Currently, 60% of the water meters are post-pay. If the use of prepay was to be widely established the municipalities would go into debt. This is because people would only pay for their water and not their taxes. Currently, with the post-pay system, people receive a bill which includes the amount of money that they need to pay for water and the taxes they owe. On some bills, there are more changes then just water usage.

- **Bills**

There are many different types of bills given out to different communities depending on what they agreed upon to pay with the city. The different charges that could be on a bill are: rights and taxes, water, sewer, electric and refuse. What is on a community's bill also depends upon the type of development the community is. Different development levels mean that there are different types of bills.

Often people also can't read their bills and they don't understand what they are paying for. They also don't understand why they need to pay taxes if they are already paying for water or other services. It is also hard to tell people to conserve water when the damns are overflowing.

- **Systems**

Financially, prepay is a success but in reality it is a failure because people don't pay their taxes and the municipalities would go into debt. With the post pay system, people

get a bill with the amount that they own for water and also the taxes they owe. With this system there is someone in charge of watching the tap for the community so that other people don't use it. With the prepay system it has been found that the machines break easily.

- **Community Development Officers**

Whether or not a community is successful in paying their bills is often dependant on the Community Development Officers, CDO's. For each community there can be many different CDO's for different issues such as bill collection. If the CDO is good and is able to motivate the people then bills will be paid. But some times they are corrupt and do not encourage the people to pay their bills or they keep the money for themselves and run off with it.

- **Awareness Campaigns**

Awareness campaigns don't work. The schools campaign to help teach kids about water conservation and to help the schools save water was a failure. Only a few schools actually finished the program. What works best in communicating information to the people is small group meetings with not more then four people. Mass meeting don't work because people come to the meetings with their own agendas and the purpose of the meeting never gets accomplished. People also don't tend to go to meetings and they only seem to react when their water is shut off.

Appendix K: Interview with Metusalem Ashipala

Metusalem Ashipala

24 March 2006

Settlement Development

His job was to facilitate development in informal settlements, and in meetings and elections of leadership.

Community leaders:

Every informal settlement has leadership structure, including Chair, vice-chair, secretary, treasurer, and a water point committee. Within that structure, someone is responsible for collecting bill payments from residents, and recording it in a city-standard receipt book, which they must bring when they settle debts with the city. One reason why they are increasing prepay is to reduce fraud and mismanagement of money.

Community leaders are reelected every two years.

There exists training workshops where leaders are trained on communal water point management (attended by water point committee), bookkeeping (attended by treasurers), and leadership (Chair, vice-chair, secretary).

Communities that do not receive a specific service such as electricity are not billed for that service. Streetlights can be billed for.

In communities with communal water taps, each community receives one bill, and decides amongst themselves how much each person should pay.

In pre-pay, the Development/Settlement people, if requested, can facilitate negotiations within the community.

Need to clarify whether or not prepay communities pay bills

When people live in areas that are more than they can afford, they feel like they are overcharged.

Water rate changes are published in the media, and if Settlement Development holds any meetings around that time, they will bring additional information on the changes.

In the informal areas, water is never cut off for non-payment, because it would be unfair for those who already paid, and because water is essential for life. Water is cut off in private homes for non-payment.

There is a flat interest rate/fee of \$5 per billing period, no matter how much is owed.

Kahumba ka Ndola A – not successful at paying arrears, several meetings have been held by Settlement Development

Omuthiya, in Okuryangava, only community with a credit, not debt.

Appendix L: Radio Interview Plan

Radio Interview 23 March 2006

Who We Are:

We are students from the United States who are working on a project with the Desert Research Foundation of Namibia from March 13th through May 5th. Our university is near Boston, Massachusetts and is largely focused on engineering and science. There are 19 other students from our university working in Windhoek on various projects to assist the city and other non-governmental organizations.

Project Description:

We are here today to announce that we will be working in certain communities throughout Katutura throughout the next few weeks to speak with residents. Our questions will mainly deal with the problems they have with the billing system used for the city provided utilities and services. We will only be gathering information from the communities concerning the billing system. Once we have gathered sufficient information, we will then use this information to help the city and communities better understand the billing systems and what can be done to improve them.

***Key Point: We will not be using our information to make the community pay more money than what they already owe.

Appendix M: Copy of City Water Bill

TAX INVOICE (COPY)
INVOICE NUMBER 860395200603

Erf 1255 GG

Street


Building

KAHUMBA KANDOLA A
 P O BOX NONE
 WINDHOEK

COM
 PRINTED BY: YDA 12/04/2006 09:14

CITY OF WINDHOEK

Client No



WHK00860395 (0)


Date of Statement

15/03/2006

Last Day for Payment

17/04/2006

VAT Registration Number:



City of Windhoek

PO Box 59
 Windhoek
 Namibia


Vat Registration
 Number

PLEASE SEE NOTES
 ON
 REVERSE

Electricity Deposit	Water Deposit	Bank Guarantee
N\$ 0.00	N\$ 60.00	N\$ 0.00

	Amount	Vat
Balance brought forward - 15/03/2006	190.10	
RECEIPT jga3430 ON 17/02/2006	66.60-	0.00
RECEIPT jga6974 ON 15/03/2006	190.10-	0.00
WBS0: WATER BASIC for COMMUNAL WATER POINT (PRIVATE), 15/02/2006->15/03/2006 15mm Ø meter inlet; Inst No: 169156	0.00	0.00 (0%)
WCS0: WTR CONSUMP: 23/01/2006->21/02/2006=29 days; Met-no:38262863 Read:875->875=0kl; ave = 0.00kl/day; 0kl @ N\$8.7	0.00	0.00 (0%)

90+Days	60 Days	30 Days	Current	Total Due	N\$
0.00	0.00	0.00	66.60-		66.60-

Tel	Work:	Home:
Client No		KAHUMBA KANDOLA A P O BOX NONE
 WHK00860395 (0)		WINDHOEK

Date of Statement	15/03/2006
Total Due	N\$ -66.6
Amount Paid	N\$

PLEASE RETURN THIS SECTION WITH YOUR PAYMENT