

**STRATEGIC RESPONSES OF NAIROBI WATER AND SEWERAGE
COMPANY TO CHALLENGES OF SUPPLYING WATER TO INFORMAL
SETTLEMENTS IN NAIROBI**

BY

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DECLARATION

This Research Project Proposal is my original work and has not been presented for examination in any other University.

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D61/P/9006/2004

This Research Project Proposal has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

This work is dedicated to my God who has given me the grace to complete this project.

I also dedicate it to my family especially my husband for his unwavering support and guidance.

To my loving children Michael and Jennifer for their continuous encouragement, I say thank you.

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Please accept my sincere appreciation

Thank you and God bless you all.

ABSTRACT

This research project was a case study of strategic responses of Nairobi Water and Sewerage Company to challenges of supplying water to informal settlements in Nairobi. The main objectives of the study were to establish the challenges faced by Nairobi Water and Sewerage Company in supplying water to informal settlement and to determine the strategic responses by Nairobi Water and Sewerage Company to cope with the challenges faced. The need for this investigation was occasioned by the fact that while a fairly reasonable segment of the urban formal settlements have been provided with water, a negligible percentage of water reaches the informal settlements in our cities particularly in Nairobi. Unfortunately over 50% of Kenyan population live in informal settlements with Nairobi alone accounting for approximately 50% of this population. The fact that this population is not covered with enough supply of water is actually against the Kenya Constitution 2010. Nairobi's informal settlements which comprise about 50% of the total city population face numerous challenges of being supplied with portable water by Nairobi Water and Sewerage Company hence there was a need to investigate these challenges and the responses to address them. At the same time there is no known research that has been undertaken which has been taken on the same subject at the same firm. This therefore left a knowledge gap that is addressed by this research. In order to address the objectives of the study, data was collected and analyzed using in-depth interviews by the researcher. The Managing Director and four other senior managers were interviewed. The collected data was analyzed using content analysis technique. The research findings indicated that Nairobi Water and Sewerage Company has faced many challenges. These challenges were found to be political, economic, legal, technological, strategic leadership, financial and staff related. The findings also indicate that the company has responded to these challenges by developing community outreach and participation programs, training of staff, developing strategic plans, partnering with strategic stakeholders and allocating financial resource investments among others on supplying water to the informal settlements. The findings of this study will be of great value in terms of theory and knowledge, policy development and management practice. In terms of theory and knowledge, the findings of this study will be significant in the field of water supply in informal settlements. The research findings will also form the basis for further research as well as act as a source of literature review for future

researchers. The findings of this study will also be of great importance to policy decision making in the water sub-sector. Also the company management will use these findings to review its organisational structure to ensure proper allocation of resources to the informal settlements. Given the ever increasing population and the demand for more water in the informal settlements, Nairobi Water and Sewerage Company require the creation of strategic leadership with a core mandate of creating a learning organization with the capability to readily accept and adopt to environmental turbulence in the water sector. It is within this framework that an effective organizational structure which ensures effective allocation of resources with clear performance indicators on supply of water to the informal settlements is developed. This investigation being a case study may not reflect the general situation in the supply of water to the informal settlements in Kenya and is therefore limited to Nairobi Water and Sewerage Company. Given that Kenya has over 1800 informal settlements, it would be interesting to investigate the major challenges and strategic responses in supplying water to informal settlements in other towns in Kenya.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Availability and proper utilization of water resources have been the bedrock of economic development world over. Water is not only used for agricultural production but also for domestic use and as a source of revenues through tourism of aquatic sceneries. While a fairly reasonable segment of the Urban formal settlements have been provided with water, a negligible percentage of water reaches the informal settlements in most cities in Africa in general, and Kenya in particular. Nairobi being East Africa's business hub and Kenya's capital city has the largest number of informal settlements in Kenya with approximately 1.5 million people who comprise 50 % of the total slum population. These slums are in dire need of water supply. Unfortunately, Nairobi Water and Sewerage Company (NW&SC), the water service provider, has faced several challenges associated with informal settlements such as illegal housing, poor sanitation and lack of electricity supply, among others. This, therefore, calls for a study on the strategic responses of NW&SC to challenges of supplying water to informal settlements (Kenya vision, 2030).

Johnson, Scholes and Whittington (2008) define strategy as the direction and scope of an organization over the long term, which achieves advantage in a changing environment through the configuration of resources and competencies with the aim of fulfilling stakeholder expectations. Strategies are interventions that address the changes in the business environment. They are the framework through which an organization can assert its vital continuity while managing to adapt to the changing environment to gain competitive advantage (Ansoff, 1984). Strategic responses

therefore, are the approaches organizations come up with to deal with the risks challenges and changes that have been identified in their operating environment (Ansoff and McDonnell, 1990).

The implementation of response strategies in the informal settlements in most towns has not been very successful due to issues of land tenure, illegal housing and poor drainage systems. While the populations in these areas continue to increase, the supply of clean water has become elusive. This challenge cannot continue to be ignored and solutions must be found since water is a social and economic good. It is also, noteworthy that there is no known research that has been carried out to establish strategic responses of NW&SC to challenges of supplying water to informal settlements

1.1.1 Strategic Responses

Strategy is the direction and scope of the firm over the long term; which achieves a competitive advantage for the firm through its configuration of resources within a challenging environment to meet market and other stakeholders' expectations (Chandler, 1962). The purpose of strategy is to provide the directional cues to the organization to permit it to achieve its objective, while responding to the opportunities and threats within its environment. Normally, different organizations have different strategic responses to the environment. The selection of a proper response is highly dependent on a particular condition and sufficient information must be gathered to determine the type, location, and behavior of the environment. Response success will depend on the preparedness of the organization. Effective and sustainable responses need time, training and resources (Hamel and Prahalad, 1987).

Depending on the physical and environmental conditions, not all responses are appropriate and some may cause damage or unacceptable change. Strategic responses may be integrated or combined. Strategic choices involve the choosing of available options which may be pursued. According to Scholes et al (2008) strategic choices are decisions about the organizations future and the way in which it needs to respond to the many pressures and influences. The organization has to choose and consider between lasting solutions, scope and how they will be pursued. Without analyzing the options, managers can continue to do what they have always done and miss out on clarity, understanding, transparency and accountability for investment decisions. Therefore, strategies developed must be communicated, agreed upon and coordinated.

1.1.2 Business Challenges

Drucker (2007) states that organizations theory assumes that institutions are homogeneous and therefore the entire enterprise should be organized the same way. However, in any one enterprise there is need for a number of different organization structures to coexist side by side according to the task. With the advent of globalization, the business community has been faced with numerous challenges. These are economic, technological changes, competition resource management, marketing, policies, mitigating risks, staffing, ICT and financial crises. These are some of the most common challenges facing firms. Some of these challenges can be addressed by managing the design process through good designs and products. Organizations must have the ability to move with the times, face challenges positively and be able to change.

Hodge and Anthony (1988) define organizational change as an alternative in the status quo and if organizations do not change to cope with changes in the external

environment they may face serious problems and even die. Conner (2013) also notes that there are eight challenges that businesses of all sizes face and these are issues of integrity, resource management, increased competition, marketing, uncertainty regulation, risk management and finding the right staff. Other challenges include political changes, changes in customer tastes and preferences, increased employee demands and even threats of international terrorism among others.

Hess (2011) says that growing a business presents a whole set of challenges for entrepreneurs and that most businesses experience the same or similar challenges and therefore no need to reinvent the wheel but to learn from those who have gone before. After studying 54 high- growth companies he states, “What I found was that these successful companies faced very similar challenges when it came to growing, but what sets them apart from those that didn’t survive or didn’t reach the same level of success is how they approached that growth.” Hynes (2009) states the primary challenges of a firm’s growth are sourcing financing, staff retention adjusting to different roles in managing the enterprise and measuring the scale and impact of the business.

1.1.3 Informal Settlements

The United Nations Habitat defines informal settlements as residential areas where a group of housing units have been constructed on land to which the occupants have no legal claim or which they occupy illegally or unplanned settlement and areas where housing is not in compliance with the current planning and building regulations and any unauthorized housing, (UN 1996). These areas also comprise shanty towns, squatter/slum settlements sometimes illegal or unauthorized people living in houses

built of plywood, corrugated metal, sheets of plastic and cardboard boxes. These areas often do not have proper sanitation, water supply, electricity or telephone services. Informal settlements vary in size, populations and ethnicity, social, economic and cultural characteristics but share a characteristic of poverty with most of the residents earning less than a dollar a day.

Huchzermeyer (2004) states that liberal and Marxist frameworks have contributed to the understanding of informal settlements where the Marxists have focused on the socio-political rather than physical dimension and the liberal focused on understanding the coping mechanism and survival of the residents of the informal settlements. Huchzermeyer and Karam (2006) argue that the complexity and diversity of informal settlements have important implications for policy in the participation of residents in decision making, integrated approach, regulation and procedures for land tenure and use. These scenarios present major challenges to water and sanitation provision. In South Africa's unplanned urban or peri-urban settlements, the challenges have been addressed by market-driven delivery of new housing units which have required that residents be relocated, to newly developed sites.

1.1.4 Water Sector in Kenya

In 1972, the role of the Minister was to promote the investigation, conservation and proper use throughout Kenya of the water resources and the provision of water supplies in Kenya, and to secure the effective exercise by any authority or person under the control of the Minister (The Water Act Cap 372, 1972). This law gave the Minister of Water absolute powers in the investigations, conservation and development of water resources. In 1974 the National Water Master Plan was

developed. In 1999, Kenya developed a policy framework to address challenges that hampered the “water to all by 2000” national slogan which was coined from the National Water Master Plan. The master plan had expressed the aim of ensuring that portable water was made available, at a reasonable distance, to all households by the year 2000. The policy framework clearly stated that the Government will continue to ensure that acceptable standards are adhered to in the whole process of providing water as well as waste water disposal through the development of properly organized and efficient systems of sanitation (Sessional Paper No.1 of 1999).

To achieve this goal the Government created Water Services Boards to be responsible for the efficient and economical provision of water services but through an agent licensed by the Water Services Regulatory Board (The Water Act 2002). These agents commonly known as Water Service Providers are registered under the Companies Act, CAP 229. According to current Water Services Regulatory Report No. 4 (2011), there are sixty six water companies operating in Kenya. In the Bill of Rights, the Constitution 2010 recognizes human rights to water and sanitation which entitles the people in informal settlements to get water of good quality, quantity, at reasonable distance and cost.

1.1.5 Nairobi Water and Sewerage Company (NW&SC)

The Nairobi Water and Sewerage Company was established in December 2003 under the Company Act Cap 486 as a wholly owned subsidiary of the Nairobi City Council. It became operational on 17th May 2004 under the Water Act of 2002. The company is engaged purely in providing water and sewerage services to the residents of Nairobi whose services were previously offered by the Water and Sewerage Department of the Nairobi City Council. The company has operational autonomy to enable it to run

efficiently and has an independent Board of 12 Directors constituting of professional individuals drawn from private sector organizations professional bodies, the NGO sector and the City Council.

Currently, of the three million residents of Nairobi, only 50 per cent have direct access to piped water, the rest obtain water from kiosks, vendors and illegal connections. The Nairobi Water Company's mandate is to ensure that all residents receive water regularly and efficiently and that the water reaching the customers is of the highest quality. The company is a role model among other water companies established across Africa. The company's Vision Statement is "Satisfaction of all our customers with water and sewerage services" and the Mission Statement is to, "Provide sustainable water and sewerage services that exceed customer needs." The Core Values of the company are customer focus integrity, empowerment, creativity and innovation, teamwork and effective communication.

The Company has a tall order of achieving its vision especially with the challenges of the informal settlements such as Mathare which is characterized by inadequate access to basic services such as water, roads, electricity, security and issues of land tenure. The Mathare- Kosovo Model (2010) states that the only form of drainage is open sewers and the only toilets found pose a great health threat due to poverty and the poor living conditions. The Nairobi river is highly polluted and mainly transports solid and liquid wastes which lead to poor hygiene, poor sanitation and many water borne diseases.

1.2 Research Problem

The utmost fundamental question facing management in modern times is how to address environmental turbulence in organizations. Both profit and non-profit organizations have been bombarded with rapid changes in technology, increased unpredictable changes in customer tests and preferences and ever changing and uncertain competitive environment. A company must maintain a strategic fit between what the firm has to offer and what the environment dictates (Miles & Snow, 1978). The firm has to choose and consider between lasting solutions, scope and how they will be pursued. To this end, business managers must constantly come up with strategic responses to these challenges. Strategic responses enable firms to critically analyze their strengths and weaknesses so as to tap opportunities and deal with the threats in the environment. Strategic responses strengthen strategic leadership in effective management of change, innovation, globalization and information technology among others (Zajac & Kraatz, 2007).

Such strategies create competitive advantage which delivers more value to the customers through meeting and exceeding their expectations. (Porter, 1980) identifies cost leadership, differentiation and focus strategies as the generic competitive strategies which could be utilized by firms in the face of environmental turbulence.

While environmental turbulence cuts across the businesses community, the water subsector where NW&SC is a major player, has received much of the impact. Supplying portable water to informal settlements in Nairobi by NW&SC has been a great challenge especially in the last five years. This is because these illegal settlements lack basic infrastructure, sanitation and permanent housing in addition to growing criminal ravaged population. Nairobi, with close to 50% of the total informal settlement in Kenya, has a population of over 1.5 million people. This number which

has been swelling by the day is in dire need of water, thanks to rural – urban migration, influx of internally displaced persons of the 1997-98 and 2007-08 post-election violence, Somali war and increased levels of poverty.

Improvement in accessing water has social and economic benefits to the people of Nairobi's informal settlements and NW&SC has to respond to the challenges. It is also important to point out that while substantial literature exists on firm's responses to the environment, limited research has been undertaken on the strategic responses by NS&WC to challenges of supplying water to informal settlements. Abdulahi, (2000) looked at the strategic responses by Kenyan firms following liberalization while Miriti (2010) researched on responses of Fidelity Insurance Company Limited to challenging environmental conditions. Ogutu (2010) carried out research on corporate governance practices in the water sector in Kenya, while Okoth (2005) carried out research on the competitive strategy employed by the sugar manufacturing firms in Kenya. Nthusi (2012), on the other hand undertook a study on the strategic responses by Access Kenya Limited to the changing environment. All these researchers save for Ogutu's (2010) point out the responses which firms have adapted to the ever changing business environment.

There is no research that has looked at strategic responses by Nairobi Water and Sewerage Company to supplying water to informal settlements which is a major challenge and of great interest therefore, this leaves a huge knowledge gap for research. On the above basis, there is need to undertake research to address two fundamental issues; first, what the challenges faced by Nairobi Water Company in supplying water to informal settlement in Nairobi are and secondly, what are the strategies adopted by Nairobi Water Company to cope with them.

1.3 Research Objectives

This research addresses the following research objectives;

- i. To establish the challenges faced by Nairobi Water and Sewerage Company in supplying water to informal settlement
- ii. To determine the strategic responses by Nairobi Water and Sewerage Company to cope with the challenges faced.

1.4 Value of the Study

Oosthuizen, (2002) states that academic research might appear irrelevant to companies when seen in isolation but the value of academic research only becomes clear from a holistic perspective; that it is the collection of rigorous and organized investigations that produce valuable findings, which then become relevant to companies. It is hoped that the findings of this study will be significant to theory development and management policy in the field of water supply and company management at NW&SC. The research findings will form the basis for further research as well as act as a source of literature review for future researchers.

It is noteworthy that no known research has been carried out to establish the strategic responses of NW&SC to the challenges of supplying water to the informal settlements. Any research would therefore contribute to building management policy. The responses would form the basic best practices in water management in the informal settlements.

The researchers and academicians would in future use the findings of this study as the basis upon which management theory could be built. The theory will address fundamental issues on community participation, private sector participation and water conservation among others. Similarly, the findings will be of great importance to

policy decision making in the water subsector. It is hoped that the findings of this study will uncover unique strategies that are adopted by NW&SC as they supply water to informal settlements and such unique strategies could be replicated throughout Kenya.

The findings will also highlight the challenges faced by NW&SC in supplying water to informal settlements as the basis for decision making. It is also hoped that the responses NW&SC has adopted to handle the challenges will be brought to the surface and serve as a basis for corrective strategies on effective supply of water to the informal settlements. The findings will also form the foundations for guiding management practice in developing a strategic management manual for supplying water to informal settlements in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter gives the introduction of the literature review of the study. It captures the concept of strategy. Various authors who explain out the concept of strategy are highly listed. The chapter, also, brings on board the exciting literature on strategic responses. This is in addition to the environmental challenges that firms face, the literature on the ambulant nature of the challenges firms face is also covered in this chapter. Finally the chapter captures environmental challenges and organizational responses among others.

2.2 Concept of Strategy

Strategy is the direction and scope of the organization over the long term which delivers a competitive edge for the firm amidst an ever changing business environment. Effective strategy configures a firm's resources and core competencies so as to adequately meet the firm's goals and objectives. Strategy creates a culture in the firm in which the firm only focuses on the value adding priorities in its mission and vision (Scholes, 2008). Competitive strategy is aimed at creating a goodness of fit between the firm's internal resources capabilities and the environmental challenges faced (Aosa, 1992).

Environmental challenges are as a result of environmental turbulence. Turbulence is witnessed in rapidity of change, unpredictable and discontinuous customer change patterns in their preferences and tastes, changing technologies and threatening actions of competitors among others. Strategy therefore is a mechanism used by general

management to reposition the firm in such a manner that it is capable of productively engaging with the environment and thereby become successful (Ansoff, 1984). Strategy incorporates strategic planning which anticipates new trends and builds in flexibility to adapt to environmental change by constant adjustment to contingent plans.

Strategy is a ploy, plan, position or perspective intended to outmaneuver competitors (Mintzberg, 1994). Strategy is the direction and scope of an organization over the long term which achieves an advantage in a changing environment through the configuration of resources and competencies with the aim of fulfilling the stakeholder expectations, Johnson et al; (2008). Strategy is also viewed as a pattern which brings together organizational policies, activities, goals and objectives to holistically realign the firm's resources to address environmental opportunities and threats (Quinn, 1996). Strategy constitutes the road map of the organization which clearly defines the reasons for the firm's existence, where the firm aspires to be and its direction with the overall objective of maximizing stakeholders concerns.

The overall goal of strategy is to effectively utilize the internal firm capabilities so as to create a competitive position in the firms overall market (Aosa, 1992). The aim of competitive strategy is not only to create profitability, but also a sustainable competitive strategy which helps position the firm ahead of its competitors in the industry. Strategy creates a superior performance for a firm through effective moderation of environmental challenges and offerings of products of great quality. While Ansoff and Mc Donnell (1984) see strategy as a road map of an organization, Mintzberg (1994) views it as a plan, ploy, pattern, position and perspective.

Scholars such as Chandler (1962) identify the link between structure and strategy. A competitive strategy incorporates a well-orchestrated structure which provides speedier performance. Porter (1985) argues that while strategies which change industry structure can improve a firm's performance, overall such strategies could also be counterproductive by destroying industry structure and profitability. This double edged sword of strategy therefore requires critical analysis and strategic leadership in the management of business organizations and environmental turbulence. The concept of strategy keeps on changing to adapt to the environmental turbulence and organization have to adapt to the changing environment. It is for this reason that contemporary managers keep on shifting strategy gears to adapt from the intended strategy to emergent strategies or vice versa depending on the environmental change requirements.

2.3 Strategic Responses

Organizational change is the adaptation of an idea or behavior by organization (Draft, 1983). Strategic responses are the approaches devised by firms to deal with environmental turbulence and remain competitive in the long run. Strategic responses are the approaches which organizations make to deal with the risks, challenges and changes that have been identified and quantified in their operating environment. Such responses are of great significance as they help focus on only those areas of great priority to the firm, thereby providing the basis for measurement and evaluation of the firm's performance (Pearce and Robinson, 1991).

Firms faced with environmental unpredictability must come up with the best strategic choices to tap on the opportunities provided by the environment and handle the threat arising. They need to start with use of tools such as SWOT analysis or situational

analysis as a basis for matching the firm capability with environmental demands. In any event, a mismatch between firm capability and external environmental demands is a clear case of a plan to fail by the firm (Aosa, 1992). Strategic responses can be said to be matching the activities of an organization to the environment in which it operates. Strategic responses affect the long term direction of the firm and require large amount of resources. The choice of responses depend on the speed with which a particular threat or opportunity develops in a specific environment (Nthusi, 2012).

Firms, therefore, need to adopt properly tested strategic responses to deal with environmental uncertainty. Porter (1985) had identified cost leadership, focus and differentiation as the key competitive strategies which could be adopted by firms. Other responses which could also pass as being strategic which firms could use include effective management functions such as strategic planning, leadership and change management. This is besides restructuring process re-engineering and strategic innovation, among others. Emerging and new technologies, market entry and new product strategies could also be utilized as strategic responses by firms to changing business environment.

Deliberate or active control measures by management as the firm move forward could also be helpful during environmental uncertainty. Strategic leadership must control employee behavior so as not to deviate from the intended strategies. Firms can also adapt planned as well as entrepreneurial strategies when dealing with the changing business environment. At the same time firms can use consensus strategy which is a product of several individual actions deliberately hosted by some actors. This leads to collective action whereby employees read and act from the same page.

In the long run, such a strategy helps minimize resistance to change thereby leading to attainment of the firm's goals more effectively. Strategic responses provide a coherent blue print to bridge the gap between the realities of today and the desired future state. Strategic responses are actually a calculation of overarching objectives, concepts and resources within acceptable parameters of risk so as to create more desirable failure results that might otherwise not exist if left to chance or in the hands of insensitive management. It is the right application of a firm's resources so as to effectively achieve the desired outcomes from specific business environment over time (Kimberley and Evanisko, 1981).

2.4 Business Challenges

Organizations are not self-serving but draw inputs from the environment, add value to those inputs and release the products back into the environment. The environment of an organization poses both opportunities and challenges to the firm. There are environmental factors which affect both the internal management operations and even the overall strategic and business goals of the firm. For most of the business firms, competition remains the greatest challenge to firms (Jones, 2004). Porter (1984) has identified the key industry competitive factors which affect firm profitability and profit maximization as a function of the five forces of competitive pressure which affect a firm's rate of return on investment relative to its cost of capital. Three of the five competitive forces are the sources of horizontal competition. They include competition from new entrants, competition from substitute goods and services and competition from existing rivalry.

Business firms are also affected by socio-economic, political and legal variables. Societal beliefs and cultures have a direct impact on the consumption patterns of households and whole communities. The constitution together with additional legislation for example, Acts of parliament on issues such as taxation and business protectionism affect business operations to a lesser and greater extent. The states of the economy especially levels of inflation, economic recession, interest and exchange rates as well as government and wage levels directly or otherwise affect business operations.

The ever changing technologies for example e-commerce, intranets and extranets in addition to the digital era affect business to a large extent. Firms also face ethical challenges. What is considered to be morally right or wrong by customers for example a poor human rights record will affect businesses in one way or the other (Holling, 2001). There are also internal challenges facing firms. The physical infrastructure and communications do affect the firm. Also, the changing needs and wants of employees also affect the way of doing business by firms. Equally, there are other internal challenges facing firms such as strategic leadership, management of change processes, organizational culture, branding and attitude among others. Today's environment is faced with unpredictable customer behavior patterns. For instance the likes, preferences, opinions, dislikes and lifestyles of the y- generation are ever changing.

The generational gap, age gaps and life cycle stages of the families affect consumption patterns. At this level, the competitive terrain becomes stiff with large scale firms who enjoy a competitive edge (Tushman and Romanell, 1985).

Economic sabotage, fraud, corruption and global meltdowns affect businesses to a larger extent (Pfeffer & Salancik, 1978). Changes in the social environment pose great challenges to business firms. The ever increasing changing needs and demands of customers, in addition to unpredictable weather patterns pose real time challenges to business firms (Burns, 2000). The challenges are not only in terms of opportunities presented but also in terms of threats posed to the firms. This calls for firms to align their internal capabilities to effectively tap on these new opportunities such as increased demands for goods. Firms also require strategic leadership to handle the threatening tactics of competitors. Environmental threats, unless continuously analyzed and proactively addressed, have the ripple effect of inhibiting firm success (Pearce & Robinson, 2005). Environmental complexity and nature poses greater levels of dynamism which must be addressed. Firms need to understand whether their environment is heterogeneous or homogeneous, simple or complex, and stable or unstable, so as to respond effectively. This is because the level of challenges in the environment is a function of the complexity and nature of that environment (Neil, 1986).

Equally, organizations face challenges in the macro and micro environment. The micro environment consists of competitors, market intermediaries, suppliers and the public among others. All these groups affect the costs, quality and overall business operations of the firm. This in itself constitutes a challenge to the firms. The micro environmental analysis could make a revelation of the competitive challenges faced which affects the firm's customer portfolio, its competitive positions, reputation among creditors and suppliers and ability to attract and retain experienced and qualified human resources (Pearce and Robinson, 2008).

Tax laws and legislations, trade barriers, changes in population density and demography as well as government policy affect business in one way or the other. Government subsidy for example facilitates business development while political decisions on issues of salary, education and even regional integration have far reaching consequences on operations of firms. Key strategic areas of the national economy such as water provision, workforce, transport and energy as well as national and international forces such as terrorism or economic recession, also, pose challenges to firms (Mogeni, 2008). Natural environmental factors such weather and changes in climate have an effect on industries such as tourism, farming and insurance. Global warming as well as environmental pollution affects business operations. Social trend changes, an aging population and age profiles of employees and customers affect organizations' way of doing business (Smart and Vertinsky, 2006).

2.5 Business Challenges and Organizational Responses

The forces in the firm's environment directly or otherwise impact on the goals, structure and technological investment of the firm's way of doing business. Manager's interpretation of the environment is determined by their individual and group perceptions and cognitive process of what is happening around them. The challenges in the environment more often than not act as positive or negative stimulants and constraints for business development. As positive stimulants these challenges lead to positive responses which spur organization growth. On the other hand, when these challenges act as negative constraints and are perceived so by management, they may lead to decline in performance (Jeff, 2008). The analysis of a firm's current business state or SWOT analysis is based on the changes in the

environment and the challenges posed there in. This is the basis of strategic planning and is necessary to handle the competitive pressure experienced by firms.

Porter (1980) identified the five forces model of dealing with competitive pressure. The power of buyers, supplier power, intensity of existing rivalry, the threat of substitute goods as well as exit and entry barriers shape the nature of competition. There is also a potentially and equally powerful sixth force which may determine competitive pressure?: the availability and pricing of complementary goods in the market place. This also helps to change the competitive equation. Faced with unfamiliar environmental changes, firms must re-evaluate their strategies in tandem with such environmental turbulence (Ansoff and McDonnell 1990).

Strategic responses usually require heavy capital and other resources in investment both at the upper echelons of decision making and at the strategic business level (Byars, 1991). Other responses which can be adapted by firms to respond to the environment include cost leadership, differentiation and focus. This is in addition to product development, market penetration and development strategies. A strategy such as new market development works when the internal capability is good enough to be utilized in more markets (Jauch and Glueck, 1998).

At the strategic business unit levels, the heads of departments can develop functional level strategies in areas such as research, marketing and operations as a response to challenges in the environment. The competitive advantage of an organization is a function of the firm governance, industry analysis and firm resources advantage and competent strategies. The nature of the environment is a predictor variable to the

nature of firm performance. Given environmental turbulence, firms must adapt strategic choices which yield the highest return on investment. Strategic choices focus on the key role of the nature of strategy to be adopted by the firm as a core determinant of super firm performance (Child, 1997).

The changes in the external environment determine the organization's challenges and opportunities. Firms must understand the underlying sources of competitive pressure so as to come up with the right strategic responses and therefore company's competitive pressures are different from business scenario to business scenario. The nature of organizational structure adjustments also affects responses to changes in the environment. Usually, organic structures accommodate effective responses to rapid environmental changes. Mechanistic structures, on the other hand, are more suitable to predictable environments (Covin and Slevin, 1989). Some empirical studies have been done on strategic responses. Mulema, (2004) established that Teachers Service Commission responded to environmental changes through team building initiatives and operational efficiency while at the same time maintaining a good working relationship with the primary school teaching force in the implementation of the free primary education. Ogaga, (2006) studied responses by Kenol to changes in the environment.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers introduction of the study and the research design that was used to conduct the study. It describes the data collection methods used and the analysis of data in order to generate the findings of the research. The research adapts the qualitative paradigms. This is because the research describes the phenomenon which is qualitative in nature as it describes a shared understanding of the challenges facing Nairobi Water Company and the responses thereof.

3.2 Research Design

This study was conducted through a case study design whereby the unit of study was Nairobi Water & Sewerage Company (NW&SC). Case study design is more appropriate when a detailed and an in-depth data on an organization or multiple firms are desired (Cresswell, 1994). This is the case with this study whose focus is NW&SC as a single unit. The case study design provides more focused valuable insights to the phenomena under investigation. Case study design enables the researcher establish in detail factors that explain phenomena and go into the underlying issues. This study highlights the strategic responses of Nairobi Water & Sewerage Company to the challenges of supplying water to the informal settlements in Nairobi. Data measurement was undertaken by use of both ordinal and nominal scales in which case the difference of the challenges to supply water to the informal settlements were identified with their respective responses.

3.3 Data Collection

Both secondary and primary data were utilized in this study. Primary data was obtained from managers of NW&SC using an interview guide on the strategic responses of Nairobi Water & Sewerage Company to the challenges of supplying water to the informal settlements in Nairobi. Section one of the interview guide covered the personal data of the interviewees. Section two captured the first objective of the study; to establish the challenges faced by NW&SC in supplying water to informal settlements in Nairobi. The third section covered data collection on the second objective of the study; to determine the strategic response by Nairobi Water Company to cope with the challenges faced.

The Managing Director and other senior managers such as the Commercial Manager, Technical Manager, Informal Settlement Manager, and one Regional Manager were interviewed to give information on the challenges facing NW& SC in providing water to the informal settlements and the strategic responses employed by management to address these challenges. An interview is a way of collecting data as well as gaining knowledge from individuals. Kvale, (1996) regarded interviews as an interchange of views between two or more people on a topic of mutual interest.

These interviewees were in a better position to provide the required data and answer the research questions because they are the ones who make the key decisions in drafting and implementing the responses to challenges of supplying water to the residents. The interview guide used was administered through personal interviews undertaken by the researcher. This was also to give more room for further probing of the interviewees for more data. Probing is a way for the interviewer to explore new

paths which were not initially considered (Gray, 2004). Secondary data was obtained from the company's strategy documents and any other existing and relevant information about the firm as regards strategic responses of Nairobi Water & Sewerage Company to the challenges of supplying water to the informal settlements in Nairobi. Secondary data was also obtained through reviews and analyses of various strategy documents such as the company's strategic plan and stakeholder policy documents. This is in addition to books, internet sources, and journals.

3.4 Data Analysis

The data analysis was by way of content analysis. This is because the data collected was qualitative in nature. The qualitative data was summarized, categorized and presented according to common themes to assist the researcher in answering the research questions. Content analysis was used to arrive at inferences through a systematic and objective identification of the specific variables and data collected Weber (1885). The data analysis was also benchmarked with existing literature in chapter two. This was necessary to establish areas of common ground and those where deviations occur so as to come up with a well-founded research.

The validity of the interview guide was made possible through pre-testing with the Communications Manager. From the pre-testing errors were identified and corrected. The interviews were also conducted individually and not in a group to give privacy and confidentiality. The data was found to be reliable because it compared well with existing literature and the managers' responses to similar issues.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis and findings of the study as set out in the research methodology. The first objective of the study was to establish the challenges faced by Nairobi Water and Sewerage Company in supplying water to informal settlements. The second objective was to determine the strategic responses by Nairobi Water and Sewerage Company to cope with the challenges faced. Data collection was done by use of an interview guide which was developed in line with the objectives of the study. A total of 5 top managers responded to the interview. This represents 100% response rate which is satisfactory and can be used as a basis for drawing conclusions. The data was analyzed and presented using content analysis technique.

4.2 Bio Data of the Interviewees

All the interviewees of this study were from the senior management cadre of NW&SC. These were the heads of the departments of Technical, Commercial, Informal Settlements and Regional Manager. The Managing Director was also interviewed. The findings indicate that 55% of the top management staff had more than 9 years' experience in the management of the water sub-sector; 25% had between 6-8 years' experience and only 20% had less than 8 years' experience in water.

Staff experience is necessary in the delivery of the desired goals of the firm. This is because staff who are highly experienced and are equipped respond to emerging environmental challenges at their firms in a relatively shorter period of time. For NW&SC, more than 60% of their top management team are not only highly

experienced, but are highly qualified and competent in the dispensation of the firm's mandates. In fact, all the top management team interviewed have Post-Graduate qualifications.

4.3 External Business Challenges and Responses

The first objective of this study was to establish the challenges by NW&SC in supplying water to the informal settlements in Nairobi. The findings of the study in relation to this objective indicate that NW&SC faces a number of challenges in its attempt to supply portable water to its informal settlements. The challenges were found to be both external and internal. To begin with, NW&SC faces political, economic, ecological, legal, technological and socio-economic challenges either directly or indirectly. These are the external challenges facing the company. At the same time, the company has internal business challenges which include organization structure, employee attitude, infrastructure development, revenue collections, billing, strategic leadership, lack of adequate financial resources, management and staffing issues. In addition, there are other internal challenges such as lack of adequate programs for potential and existing customers and other stakeholders. Moreover inadequate water quantity, existence of water cartels, inadequate drainage and sewerage infrastructure, lack of standards, policies on land, resource allocation, inadequate investments and low income levels challenges exists.

To address these challenges, the researcher also interviewed the senior managers on the second objective, which was to establish the strategic responses used by Nairobi Water and Sewerage Company to address the challenges. According to the interviewees, the key strategic responses to the challenges were infrastructure development, community outreach, development of a master plan and lowering the

price of water services. The interviewees reported that the key strategic responses used to address the internal challenges were developing key performance indicators for staff, planning and budgeting for training, developing proposals for financing, employing the company machinery to deal with insecurity and cartels, undertaking stakeholder mapping, holding regular meetings with stakeholders and introducing pre-paid meters. They also said the ultimate response would be to develop a strategic plan on supplying water to the informal settlements in Nairobi.

The interviewees reported that lack of water and infrastructure development was the greatest challenge facing the company and the most successful strategic responses were the development of the infrastructure and community outreach. On what additional strategies the manager would deploy to create a sustainable competitive advantage, different responses were given such as running the informal settlement as a business with clear business principles such as quality service, customer focus and satisfaction.

4.3.1 Political Challenges and Strategic Responses

On political challenges facing the company, the interviewees reported that previous political regimes were not very supportive of the water sector reforms which require that every person pays for services rendered including water. The New Constitution 2010 has however provided that water is a basic human right and therefore every person should be provided with access. Political support aids policy implementation on all sectors of society including water. The findings indicate that besides the lack of political goodwill in previous regimes, other political challenges include lack of water sector budgetary support, prioritization and planning. The lack of clear policy guidelines on water and land in informal settlements and the political leaders interference with management such as demanding unrealistic service provision

without due regard to planning and procedures were other political issues found. Others include roadside declarations and statements which exert undue pressure on staff which deviates them from effective strategy implementation. This political interference, result of the support the politicians enjoy from the majority of voters who reside in these informal settlements was therefore seen as a major challenge since it may divert the strategic direction of the company

In response to the political challenges, interviewees reported that the company has responded by adapting demand driven planning whereby the management incorporates political participation in processes and procedures in water supply delivery. In some instances, the political demands become the following year plans so as not to interfere with the smooth operations of the current strategic plans. Also, the company had set aside emergency funds to deal with political demands and requests. The company also holds one to one consultative meetings with politicians to discuss the challenges and their strategic responses to avoid conflicts and resistance of projects.

4.3.2 Legal Challenges and Strategic Responses

The findings indicate that lack of clear land policy on informal settlements is another key challenge in supplying water in the informal settlements. The temporary nature of land tenure and land ownership by the people living in the informal settlements is a major challenge. The lack of a policy to enforce the provision of services has allowed the people in the informal settlements to be ignored and live without basic services such as roads, water, sewers and other services.

This scenario has produced many informal water service providers who have neither service standards nor professional capacity. In such cases they provide poor quality and expensive water services which leads to emergence of cartels and organized gangs who force people to pay 10 times more than the gazetted tariffs.

The interviewees reported that on legal challenges, the company has responded by using the existing administrative framework consisting of the chiefs and other local leaders to provide the required recommendations and identification of the people who need to be supplied with water. This coupled with the presence of identification papers and telephone numbers are used by the company to provide water connections and water billings. The New Constitution 2010 states that water is a basic human right and everybody is entitled to water including all the inhabitants of informal settlements. The company is therefore faced with a bigger challenge of not only supplying the water but also taking due consideration of the illegal nature of the land occupation, lack of way-leaves and ownership.

The other response to the legal challenge is by way of negotiating with community leaders to identify land set for communal use and/or road reserves within these informal settlements on which to lay the water infrastructure. NW&SC also uses village elders, otherwise known as “*Wazee Wa Vijiji*” and youth leaders in this venture. The firm also uses compulsory acquisition to acquire land for construction of water tanks, public toilets, water treatment plants and other facilities that provide services as a last resort. The company also faces the challenge of providing water to the informal settlements as per the gazetted tariffs of KShs. 15 per 1000 litres. This is not the case where the company has not invested. Cartels and gangs overcharge the consumers up to KShs.50 per 20 litre jerry-can because of the illegal water connections and unprofessional nature of this business, the company suffers water and

revenue losses. These cartels also influence, control, intimidate and manipulate the people and the leaders to comply with their wayward demands. Without proper community outreach the community can become uncooperative and frustrate the company's water provision efforts.

On further probing on how the company has responded to the legal challenges, the interviewees pointed out that the company engages the water users and other stakeholders into forums where water saving tips, customer service, public health and partnerships are encouraged. At the same time, the firm provides incentives, holds workshops, negotiate with the leaders with a "give and take" spirit to reduce resistance to change. Creating awareness through use of comedians such as 'Vitimbi' group, school children use poems and plays to communicate the importance of having safe drinking water.

4.3.3 Social Challenges and Strategic Responses

The interviewees reported that the social challenges in the informal settlements are diverse and include poor education levels, violence, crime and poverty. It was also reported that most households are women lead with a large population composed of unemployed youths who undertake manual jobs and earn less than a dollar per day. Such a population which in most cases is not educated is therefore challenged by the ability to pay for water services and resorts to making illegal connections and other anti-social behaviour such as crime. This social climate which is charged with hostility and violence creates fear for business development. Other social challenges were reported as the fact that the youths in the informal settlements usually engage in manual and casual jobs and very few have any professional skills.

The informal areas also experience high rates of theft and vandalism making the provision of water services a big challenge. Even when services are provided the people are not able to afford legal connection fees, and when disconnections due to non- payment of bills are effected, they cannot afford re-connection fees. The company has also experienced stealing of pipes and meters. During implementation of projects in many cases materials meant for construction have been stolen from site without trace. The interviewees also reported cases where staff has had to abandon construction sites as rowdy youths have demanded payments and bribes for the work to continue and in extreme cases threatened the company staff with mob justice. The result is company staff do not feel safe working in these areas and demand extra security and may require armed guards at times. This scenario makes operations expensive and is not motivating to the staff. There are also many cases where community leaders expect to be bribed to give or share information. In other cases the staff have facilitated for these illegal water connections.

To respond to the social challenges, all those interviewed indicated that the company has embarked on extensive community outreach programmes such as public relations and customer care to gain acceptance, win trust and reduce resistance to change. Community mobilization programmes are done with the help of administrative leaders and stakeholders. Even when the company policy is clear and does not allow money to change hands, the company is forced to provide lunch, airtime and certain logistics to the community leaders since the company never promotes the use of force as it can lead to riots and more insecurity. To supply water the company has responded by delegating the management of water kiosks to community groups composed of women and youths to sell the water and use the proceeds for self-improvement projects.

At the same time the NW&SC has also entered into strategic alliances with key stakeholders so as to address the challenges of cartels, illegal connections and insecurity. To this end the company has developed alliances with NGOs working in the informal settlements by way of collaboration and sharing of resources in the pursuit of common goals and objectives. An example was given of the Mathare-Kosovo settlement where the company developed a strategic alliance with Pamoja Trust, a local NGO working in informal settlements. Together they were able to mobilize the community, reduce tension between the company and the people and create awareness of the project and its outputs. It was explained that the successful partnership is because NGOs have an in-depth knowledge of the cultural, social and economic conditions existing in the informal areas.

The NGOs also have a better understanding of the local political arena and its dynamics. Their understanding of the existing dynamics of power groups, cartels, local structures and needs has assisted in establishing good working relationships. This has assisted the company to ensure community participation throughout the project cycle. The company is currently negotiating with Safaricom to have a partnership that will develop the billing system for the prepaid meters that will transform the billing system to address the '*Kadogo*' economy that requires consumers to only pay for the services that they use and at real time.

4.3.4 Economic Challenges and Strategic Responses

The interviewees reported that one of the major economic challenges is the amount of disposable income available to the people living in the informal settlements to pay for services. This economy termed as the "*Kadogo*' economy only allows the people to plan to pay for their bills daily and in small quantities as and when need arises. Such kind of economy creates a bigger challenge to the firm which has to plan to

accommodate this segment against the conventional business plans which provides for monthly payment of bills. Such challenges have affected the ability of the company to provide water in a cost effective manner where profits and revenue collections are the focus but currently the focus is providing water to the informal settlements as a basic human right.

In response to economic challenges, the interviewees were in consensus that, the company is developing methods where the people will be able to pay for water bills in small amounts without waiting for the end of the month. Such innovations include pre- paid meters and per day billing which will provide real time billing and payment. It was also reported that some staff feel that providing water to the informal settlements should be a social corporate responsibility by the company for sustainability. The company is also considering providing free water services up to 6000 litres for all people living in the informal settlements as a basic human right. Any amounts greater than this will be charged.

4.3.5 Ecological Challenges and Strategic Responses

The interviewees reported that the infrastructure of the informal settlement is poor with inadequate drainage systems which allow floods during rainy seasons. The floods cause pollution and contamination of ground water. The poor solid waste disposal systems and poor sanitation in the informal areas complicate the situation as the perception is that the company should be able to provide these other services together with water services. They also reported that most of areas where the informal areas exist are rocky and require that pipes to be laid above the ground. This is expensive and due to the high rate of crime the exposed pipes are vulnerable to theft and vandalism and these pipes end up as scrap metal in the black market. This causes loss of investments, water and subsequent loss of revenue for the company. The cost

of replacement of the destroyed infrastructure does not motivate the company to constantly seek for funds for these vulnerable areas.

On ecological challenges, the company has responded by undertaking community outreach programmes not only to reduce vandalism and theft but also to educate the local community on the importance of maintaining the infrastructure. The company has also resorted to the usage of materials such as cast iron and steel pipes with expensive anchorage systems for sustainability. To alleviate the challenge of poor hygiene and sanitation the company now constructs ablution blocks which have toilets, hand washing sinks, urinals and showers. These ablution blocks are constructed and operated by the local people to establish ownership and sustainability.

4.3.6 Technological Challenges and Strategic Responses.

The use of advanced technology in modern business development creates a sustainable advantage for the firm through innovation such as cost reduction, new product development and faster communication among others. Water provision in urban areas is usually provided with the expectation that people will pay for the amount they consume. However in the informal settlements in Nairobi this is not always the case. The findings indicate that one of the main goals of metering in the informal settlements is actually to reduce the water losses and wastage. Since the company lacks the necessary technology to detect such losses it is challenged to ensure that people have accountable and responsible behaviour. It was also found that where the company provides individual connection in informal settlements, the people turn the individual connections into water points where they supply free water to their neighbours therefore denying the company deserved revenue.

The interviewees also reported that the people in the informal settlements have low rates of education and therefore have a low usage of technology for communication. This leads to poor coordination and communication within the company. The people have a low rate of mobile phone access, computers and real time communication systems. The company is therefore not able to effectively use modern technology such as internet for communication moreover where the phones exist, airtime is also a challenge.

To respond to the technological challenge, the interviewees reported that the company is planning to use pre-paid meters where people can buy tokens from the company to pay for water as per their needs which will also reduce the cost of meter installations and connections. To address the challenges of poor coordination and communication the company has planned to develop a resource library as a knowledge management system where all data and information on the informal settlement can be found. This data can therefore be used to source for funds and undertake focused development of the infrastructure. The data will also be used by the County Government to ensure that adequate resources are budgeted for infrastructure development. To address the challenge of illegal connections without individual metering, the company is planning to introduce innovative technologies such as paperless billing using mobile phones to respond to the challenge that most residents do not have postal addresses.

4.3.7 Strategic Leadership Challenges and Strategic Responses

According to Scholes et al (2008), strategic development is strongly associated with strategic leadership, an individual upon whom strategy is seen to be personally dependent. In such circumstances, the strategy may be seen as a deliberate intention of the leader. The findings show that the company is a private company but managing public assets and therefore the Managing Director is not the owner or founder of the

company. Strategic leadership addresses issues of organisational change, restructuring and strategic planning among others. From the findings it is also evident that the number of people in the informal settlements increases annually and the demand for water has also increased. However over the years this has been happening without strategic leadership since previous leadership regimes which were charged with the responsibility of supplying water to informal settlement such as the Nairobi City Council did not initiate any effective strategic development in the informal settlements.

To this end, to address the challenges of supplying water to informal settlements the NW&SC has undergone strategic change which involves fundamental changes in the business operations. The company has aligned itself to the change in the environment by developing long term strategies, undertaking strategic change management programmes and seminars as well as developing transformational programmes to change the mind sets of the staff. The company now undertakes community outreach programmes and customer clinics to ensure sustainability in water supply and usage.

All the interviewees reported that the current leadership is very supportive of improving access to water in the informal settlements and is addressing various management issues which include cultural change. Seminars and workshops are held to eliminate the perception by staff deployed to work in informal settlements that it is not a punishment or disciplinary measure to work in the informal settlements as it was previously perceived. Staff with negative attitudes towards informal settlements which allow discrimination and unequal distribution of resources are discouraged.

Properly trained and developed staff constitutes one of the core competencies of a firm. From the findings, NW&SC was found to be having staff that lack skills

necessary to handle informal settlement areas. The company leadership has responded by developing training programmes which address the training gaps such as community mobilization, project management and communication. This is in addition to developing mentoring and counselling programmes which is necessary to educate staff to accept informal area residents as people who need services similar to their counterparts living in formal settlements. Resistance to change was also noted as a key challenge which is addressed through regular workshops and staff seminars.

4.3.8 Strategic Planning Challenges and Responses

Strategic planning provides the road map in any organisation on the vision and mission of the firm. It also identifies the strengths and weakness of the organisation together with the strategic objectives of the firm as a basis of developing short and long term strategic plans. The findings indicate that that strategic planning in the informal settlements has been given low priority. There was however found to exist guidelines which could be turned into strategic plans.

The interviewees reported that in response to the challenges on strategic planning and the supply of proper quantity and quality of water available and the lack of basic infrastructure in the informal settlement, NW&SC has developed a master plan for the informal settlements which can be used to source for funds and undertake proper implementation of projects. The master plan has also given the different options available, the required financial resources and the expected outputs. The plan will improve communication flow, allocation of resources, participation and better understanding of the environment. The company has also developed a strategic plan for the informal settlement.

When probed further on the responses, the interviewees reported that at the same time, the company is building its strategic capability by ensuring that the residents are involved and participate in the planning process and the identification of technical and social solutions. In particular the residents identify sites for water supply structures such as public toilets, tanks and water kiosks. The communities also participate in monitoring, operating and reporting for sustainability of projects.

At the sometime the interviewees pointed out that the creation of Strategic Business Units is also part of the strengthening of the company's capability in strategy implementation as a response to the strategic planning challenges. This will allow the company to focus and dedicate resources to the informal settlements. Competent managers have been recruited to these units with clear job descriptions, roles responsibilities and relevant experience to implement the projects in these areas. The company has also restructured to ensure that it avails more staff to be deployed in the informal settlements with key performance indicators and relevant incentives. The structuring has also ensured that responsibilities are devolved to the regional officers such as customer care roles to ensure efficient resource allocation and control.

4.3.9 Marketing Challenges and Strategic Responses

Effective marketing strategies such as promotions, pricing and good customer relations are very essential in increasing the competence profiles of a firm. From the findings, many of the people living in the informal settlements are found to be disadvantaged economically as most of them earn less than a dollar a day. This coupled with the culture creates the perception that water in the informal settlements is expected to be a free service. Due to the informal settlements dynamics of crime and insecurity there is frequent vandalism of infrastructure which leads to water losses

leading to reduction in revenue collection. Consequently, the informal settlements were never before seen as a viable and economically sustainable market.

The interviewees also reported that the company has realised that the potential customers in the informal settlements form a large base which requires more attention. On this basis the company is now increasing its efforts to provide services and increase its customer base and relevant customer care service. Providing water in the informal settlements reduces illegal connections, lowers unaccounted for water and results in increased revenue collections. To address the challenge of poor access to water, the NW&SC has developed rapid response teams to address pipe bursts in the informal settlements. The company has also established community committees which can collect and communicate customer complaints to the company. The company has mapped the consumers with the assistance of Water Services Trust Fund to reflect the needs, ability and affordability of the residents to ensure that appropriate technology is used to supply water to these areas.

Upon further probing on the need to pay for water, all the interviewees pointed out that the company has created awareness that water services must be paid for and residents should not pay more than the minimum tariff set by the Water Services Regulatory Board. This differentiated tariff structure acts as a low cost strategy where people living in the informal settlements are charged lower prices. The lower prices reduce competition from cartels and reduce the need for the people to look for alternative water sources which may be polluted and contaminated. The interviewees also reported the long term plan of supplying water through the social connection policy and introducing a revolving fund.

4.3.10 Financial Challenges and Strategic Responses

Adequate financial resources are an essential factor for formulation and implementation of strategy as they provide the resources necessary for business growth and development. The findings indicate that though the budget allocated to the informal settlements may be perceived to be adequate for the implementation of projects in the informal settlements, this may not be the actual position as challenges of inadequate staff; motivation, inadequate community awareness and mobilization are prevalent. The interviewees reported that due to the nature of the informal settlements and the culture of the residents, challenges of community mobilization to identify land for projects take longer than the normal periods in these areas causing delays in project implementation. This may show very slow rates of project implementation and funds absorption.

The interviewees reported that to address the challenges of inadequate financial resources to develop infrastructure in the informal settlements, the company has partnered with local banks to support the community to get loans and subsidies to finance the infrastructure. An example was given of Kayole-Soweto informal area where the company partnered with K-Rep bank which assisted the people to get loans to pay for meters. The company has also partnered with development partners such as the World Bank and the Water Services Trust Fund to support infrastructure development. Other partners have been identified to assist the community to facilitate payment for household connections such as *Akiba Mashinani*, an NGO that has provided credit to the residents of Mathare-Kosovo. The need to have the community to identify land for projects is now done in a structured manner and includes all stakeholders.

4.4 Discussions of Findings

The findings of this study indicate that Nairobi Water and Sewerage Company has faced both internal and external challenges in its attempt to supply water to the informal settlements in Nairobi. The external challenges were found to include political, social, technological, ecological and economic factors. The same study identified the internal challenges to be strategic leadership, financial and staff challenges. This contrasts Jones (2004) who identified competition as the greatest challenge facing organisations today. It also contradicts the position of the company which has not faced major competition because it is a monopolistic firm being the only one licensed by the Water Services Regulatory Board to provide water and sewerage services in Nairobi including the informal settlements.

The findings also show that NW&SC does not experience competition from the supply of substitute goods and services because water has no substitute but the findings indicated that the company has suffered competition from illegal water service providers such as cartels and organised gangs. This compares with Porter (1984) who identified the five forces of competition which affect profitability as threat from new entrants, substitute goods and services, bargaining power of supplier, buyers and rivalry of competitors. These factors affect the industry and how organisations' perform and are perceived, although business is also affected by social factors such as consumption patterns of households and the community at large.

The findings also have shown that societal factors are a major challenge to Nairobi Water and Sewerage Company. Households in informal settlements live below the poverty line and earn less than a dollar a day. These factors influence how water is supplied in the informal settlements. Communities require adjustments of the tariff so

that water is available and affordable. The findings established the fact that the social connection policy was developed as a response to this challenge. This is similar to Smart and Vertinsky (2006) who found that societal trends affect the way organisations do business.

The findings of this study also established that unemployment and the low wages paid to people in the informal settlements have created the “*kadogo economy*”. The company had to become innovative by making adjustments for the people living in the informal settlements to pay for water in small bills in real time. In this case the findings show that the effect of interest rates and inflation rarely affect the supply of water to informal settlements but does affect the ability of a person to afford the service.. Economic reviews have also shown that economic factors such as the level of inflation, interest rates and exchange rates affect business operations. This compares very well with Pearce and Robinson,(1991), who have shown that economic threats if not properly analysed and addressed can inhibit a firm’s success.

The findings show that the firm faces internal challenges such as strategic leadership and negative employee attitude towards the informal settlements. The findings also indicated that the Company is aware of these challenges and has proactively responded by putting in place programmes to address the employee attitude. The organization has also developed a Master Plan to act as a roadmap in order to succeed in supplying water to the informal settlements. This is in line with Ansoff and McDonnell (1990) who argue that when firms are faced with unfamiliar environmental changes, they must re-evaluate the strategies in tandem with such environmental turbulence. It also compares with Kimberley and Evanisko (1981), who argue that the right application of a firm’s resources will lead to the desired outcomes over time.

The findings show that NW&SC has faced challenges of dealing with residents who have a culture of violence and insecurity in its effort of supplying water to the informal settlements. The company has developed strategic responses to address these challenges, which include restructuring by creating an informal settlements department and reducing the water tariff to cater for the low income residents. This is consistent with Porter (1985) who identified focus, cost leadership, and differentiation as the key competitive strategies which can be adopted by firms for success.

The findings also identified strategic leadership as a challenge to supplying water to the informal settlements in Nairobi. This is consistent with Pearce and Robinson (2005), who argue that firms require strategic leadership to continually analyse proactively the environmental threats. Sustainable strategic leadership is important in delivery of competitive advantage of a firm and the findings show that the increase in population and subsequent increase in demand for water need fast-tracking programmes that deal with staff attitude to change positively towards the informal settlements. The findings also show that the firm has responded to the technological challenge by introduction of pre- paid meters for metering and mobile phones for billing .These findings agree with concepts that have identified the need to adapt to e-commerce, intranets and extranets in this digital era, (Holling, 2010).

The findings also show that Nairobi Water and Sewerage Company business operations are affected by the legal factors such as The Constitution 2010 which has now identified water as a basic human right and therefore the need to supply water to the informal settlements residents. This is similar to Mpungu (2005) who identified government legislation as one of the environmental challenges faced by African Air Rescue in the supply of medical services.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study was concerned about establishing the strategic responses to challenges that Nairobi Water and Sewerage Company has faced in supplying water to the informal settlements in Nairobi. This chapter provides the summary, conclusions and recommendations for the research findings which are in line with the objectives of the study. It also covers the implications of the study, the limitations of the study in addition to suggestions for further research.

5.2 Summary of Findings

The first objective of this study was to establish the challenges faced by Nairobi Water and Sewerage Company in supplying water to informal settlements in Nairobi. The second one was to determine the strategic responses by Nairobi Water and Sewerage Company to cope with these challenges. The findings have clearly shown that the company faces many challenges in supplying water to the informal settlements. The same study has also established that the firm has also developed many strategic responses to address the challenges.

Some of the challenges identified are political, legal, social, economic, technological and ecological. These can be viewed as external environmental challenges facing NW&SC in supplying of water to the informal settlements. The company also faces other challenges which are more inclined to internal factors which affect its performance in the supply of water to informal settlements.

These include leadership, strategic planning, marketing and financial challenges. Other challenges are due to the nature and dynamics of the informal settlements in Nairobi which may be different from other towns in the country.

5.2.1 Challenges Faced by Nairobi Water and Sewerage Company

Political challenges were found to be related to non- supportive previous regimes , lack of water sector budgetary support, prioritization , planning and lack of clear policy guidelines on water and land in informal settlements. Political interference and influence on management were also found to be additional challenges. Other challenges were found to be legal in nature such as lack of a clear land policy, temporary nature of the land tenure as well as the lack of policy to enforce the provision of services. These scenarios have created illegal water service providers managed by cartels and organised gangs who operate without service standards and professional capacity. This makes water supply in the informal settlements expensive.

Social challenges identified by the study include poor education levels, violence, crime, poverty, unemployment and insecurity. Others were vandalism of infrastructure, bribery and corruption among others. The findings also identified economic challenges facing NW&SC in supplying water to informal settlements as the level of disposal income available to the people living in the informal settlements. Their incomes were identified to be extremely low creating the “*Kadogo economy*” which only allows people to pay their bills one day at a time and in small quantities. In this respect the company was challenged to come up with strategies to accommodate this non-conventional economy.

On the ecological front, the company has faced challenges of poor drainage systems, pollution, contamination of ground water as well as poor solid waste disposal and

poor sanitation systems. Some of the informal settlements were also found to be situated in rocky terrain thereby making infrastructure development a major challenge. The other challenges were related to technologies for reducing water losses and wastage. Most of the residents in the informal settlements were found to have low level of information technology education thereby hampering efficient and effective innovative communication systems.

Challenges related to strategic leadership included organisational change management, restructuring and strategic planning. The strategic planning of the company was found to have given low prioritization to water supply to informal settlements. The findings also point out that marketing is a challenge to the company with issues of lack of promotion, pricing and good customer care being prominent. Finally there were also financial challenges facing the company such as inadequate funding for investments, outreach programmes, staffing needs as well as operational costs.

5.2.2 Strategic Responses by Nairobi Water and Sewerage Company

The findings of the study identified various responses used by NW&SC to address the challenges of supplying water to informal settlements. The company has responded to political challenges by allowing politicians to participate in strategic planning meetings and incorporating political requests into demand driven strategic plans. At the same time the firm has set aside emergency funds to cater for political demands and requests.

On legal challenges the interviewees reported that the company has responded by using the existing administrative framework which includes chiefs, assistant chiefs and other local community leaders to act as guarantors in water supply connections

and billings. The leaders are able to identify genuine residents since they lack postal addresses and permanent residence. The NW&SC also negotiates with community leaders to identify land for communal use and road reserve where water infrastructure can be built. In such areas the use of compulsory acquisition is used as a last resort.

In response to the social challenges, those interviewed reported that the company has developed community outreach, participation, customer care awareness and education programmes. Cases of theft and vandalism of company infrastructure such as water pipes and meters are also reported to the police for action. At the same time the company has formed strategic alliance with key stakeholders such NGO's, Banks other local institutions for financial support.

To respond to the economic challenges, the interviewees reported that the organization has responded by the introduction of appropriate innovative solutions such as prepaid meters. The firm is also considering real time billing to cater for the "*Kadogo Economy*". The supply of some minimum quantity of water as a basic human right is also being considered. Another response is the use of water tokens to allow consumers to buy and use water that they can afford at the time.

The interviewees reported that the company has responded to the ecological challenges by undertaking community outreach programmes not only to reduce vandalism and theft but also to educate the local community on the importance of maintaining the infrastructure and the subsequent benefits. The firm has also resorted to the usage of durable materials for sustainability of the infrastructure. To alleviate the challenge of poor hygiene and sanitation the NW&SC now constructs ablution blocks which have toilets, hand washing sinks, urinals and showers for the residents

to use. These ablution blocks are operated by the local people to establish ownership and sustainability.

In response to technological challenges, the finding indicated that the company has responded by use of prepaid meters. All those interviewed also indicated that the company is also planning to develop a resource library and knowledge management system on informal settlements water supply management. The company has also adapted various responses to the strategic planning challenge by aligning itself to the changes in the environment and developing long term strategies such as the Nairobi Water Master Plan. The plan will improve communication flow and stakeholder participation as well as resource planning and allocation. Others are undertaking strategic change management, community outreach programmes and a change in organisational culture. At the same time the company has employed competent and skilled staff as well as training the current staff.

The findings also captured strategic responses to marketing challenges since the company did not previously look at informal settlements as a potential market. It is now developing very innovative ways and methods to ensure that all people in the informal settlements get access to water supply services. The company is now committed to ensuring proper customer care through rapid response teams to address bursts water pipes and customer complaints. Programmes on community mobilization, participation, supply of prepaid meters, introduction and recruitment of customer care coordinators are now a priority.

On the financial challenges, the interviewees reported that the organization has responded by forging strategic alliances and partnerships with Non-Governmental Organisations, Water Services Trust Fund, banks and other strategic partners to

mobilise funding for the supply of water to informal settlement in Nairobi. The Nairobi Water Master Plan coupled with the current political support will be a strategic tool in this venture.

5.3 Conclusions of the Study

The findings have clearly shown that Nairobi Water and Sewerage Company faces many challenges in supplying water to the informal settlements. The key challenges were found to be social, political, economic, technological, legal, strategic planning, among others. The same study has also established that the company has developed strategic responses to address these challenges. The most outstanding responses were found to be increase in community outreach programmes, water infrastructure development, staff capacity building and strategic planning on supplying water to the informal settlements.

The study has also shown that supplying water to informal settlements in Nairobi is not a one-man show but involves many departments and professionals such as engineers, sociologists, customer care representatives, administrators, lawyers, financial analysis and other stakeholders. For an effectively coordinated effort towards this end, it is pertinent to develop a policy to serve as a roadmap for business operations in the informal settlements. Consequently, enough resources for infrastructure development, community participation and human resource capability development must be allocated.

It is only within this framework that Nairobi Water and Sewerage Company will effectively be in a position implement the New Constitution 2010 and participate in the realisation of Kenya's Vision 2030 which advocates the supply of water to all. To this end NW&SC will require strategic leadership to put in place a competitive

strategy which will incorporate funding, community outreach programmes, community participation and strategic partnerships based on a clear land and legislative policy to guide the supply of water to informal settlements in Nairobi.

5.4 Recommendations of the Study

The objectives of the research was to establish the challenges faced by Nairobi Water Company in supplying water to the informal settlements and the strategic responses used by the company to cope with the challenges faced. The research findings have clearly shown that Nairobi faces political, technological, ecological and technological challenges among others. The study has also shown that the company has responded by developing strategic responses to these challenges which could be used to increase academic theory and knowledge, developing policy guidelines and empowering management in addressing the challenges of supplying water to informal settlements.

5.4.1 Theory and Knowledge

The findings of this study will be significant in the development of theory and knowledge of the informal settlements. This is because there is limited literature on the challenges of supplying water to the informal settlements. The dynamics of informal settlements identified in the research such as the level of internet and mobile phone use, the level of poverty, the “*kadogo economy*” and the levels of education provide a wealth of knowledge in terms of the responses Nairobi Water and Sewerage Company has used to address them. This is because such parameters can be used when comparing with other areas with similar challenges.

The research findings will therefore form the basis for further research as well as act as a source of literature review for future researchers. Researchers and academicians could use the findings of this study as the basis upon which informal settlements

challenges such as the poor sustainability of investments and insecurity are resolved. The study findings could also be used by researchers and academicians to address fundamental challenges which face Government and Non-governmental institutions in community mobilization, participation, private sector participation, water usage and conservation among others. The findings will also be used to provide knowledge on the challenges and subsequent responses when supplying water to informal settlements in Nairobi and other organisations with similar challenges as faced by NW&SC could benefit by adapting this knowledge.

5.4.2 Policy Guidelines

The increasing population in the informal settlements is a major challenge in the development of the water sector in Kenya since many people continue to die due to lack of water and sanitation. Episodes of cholera outbreaks and other water related epidemics are a nightmare to the Government and other institutions charged with the responsibility of ensuring good health.. The findings of the study have identified the specific challenges which the Government could address through developing long term policies and strategies. This could reduce the social and economic risks faced by the people living in the informal settlements such as policies on land tenure.

Challenges related to land tenure, infrastructure development and financial resource allocation could be addressed through developing appropriate policies. The findings of this study indicate that there is need for formulation and implementation of a policy framework. The framework could be used to guide the supply of water in the informal settlements.

Therefore, these findings could be of great importance to policy decision makers in the water sub-sector. It is hoped that these findings could also be used to create unique policies and strategies that could be replicated in other sectors throughout Kenya.

5.4.2 Management Practice

This study has found that no known research has been carried out before to establish the strategic responses of Nairobi Water & Sewerage Company to the challenges of supplying water to the informal settlements. The findings brought out the challenges of management of financial resources and staff attitude towards the informal settlements. This could be used to build sustainable management practice and strategies in supplying water to the informal settlements. The responses such as the social connection policy, prepaid meters and use of mobile phones could also inform management on the best practices in the supply and management of water in these settlements. It is also hoped that the responses NW&SC has adopted to handle the challenges of illegal connections and vandalism could serve as a basis for corrective strategies on effective supply of water to the informal settlements. The findings could also form the foundations for guiding management practice in developing a strategic management manual for supplying water to informal settlements in Nairobi.

The company could use these findings to review its organisational structure to ensure proper allocation of competent and committed staff who would undergo training on the informal settlements environment and dynamics. Management could also use the findings of this study to develop effective key performance indicators targeting the supply of water to the informal settlements. This could be possible through the creation of a visionary strategic leadership that would make Nairobi Water and Sewerage Company a learning organisation with the capacity to constantly learn and respond to the ever turbulent environment. If this is done, environment challenges

such as changing technology, resistance to change and changing political regimes among others, will cease to haunt the company. The findings show that for the firm to succeed there is need to match needs and resources to ensure that the different departments support each other to create an enabling internal environment for success.

The findings also show that the company should look at handling the informal settlements as a business where revenue collection will be a key performance indicator. The NW&SC could also ensure that adequate staff are allocated and provided with adequate financial resources that could make business operations more successful. The findings also indicate that the informal settlements department may require staff with special skills plus incentives to deal with the challenges of supplying water to these settlements.

5.5 Limitations of the Study

This study was limited by the title which was only addressing the strategic responses of Nairobi Water and Sewerage Company to the challenges of supplying water to the informal settlements in Nairobi and was therefore covering only Nairobi city. Time for the interviewees was also a limiting factor as senior managers who were the target for the interview guide were found to be quite busy and did not have adequate time at their disposal to comprehensively respond to the issues raised in the interview guide.

At the same time, the managers interviewed gave detailed information on the challenges facing the company while some of the managers expressed fears in disclosing some pertinent issues related to the study. Issues touching on utilization of finances and employee involvement in undesirable activities such as staff collusion with cartels to sabotage the supply of water to the informal settlements were found to be quite sensitive. In the absence of such information, the findings of this study may

not be conclusive. Since there was a case study on the strategic responses of Nairobi Water & Sewerage Company to challenges of supplying water in informal settlements in Nairobi, this therefore means that the application of these findings could be limited to Nairobi Water and Sewerage Company. Consequently research on other water companies may need to be undertaken to capture more relevant application to the water sector.

5.6 Suggestions for Further Research

Nairobi County has the highest number of informal settlements with the highest population and the researcher was informed that the informal settlements in Nairobi are quite different from those of other towns. A study could be done to establish the most successful strategy in responding to the challenge of supplying water to these settlements.

A study to establish the major challenges and the strategic responses in the other towns in Kenya could also be done which will be useful to help improve access to water in the informal settlements in Kenya. The other area of further research could be on the impact of social connection policy adopted by Nairobi Water and Sewerage Company on supplying water free of charge to the informal settlements as a basic human right.

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APPENDICES

Appendix I: Introduction Letter



UNIVERSITY OF NAIROBI

SCHOOL OF BUSINESS

MBA PROGRAMME

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Nairobi, Kenya

DATE... 2.8.2013

TO WHOM IT MAY CONCERN

The bearer of this letter ... JACQUELINE MULWA


Registration No. ... DG11P1900612004

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.


PATRICK NYABUTO
FOR: MBA CO-ORDINATOR
SCHOOL OF BUSINESS



Appendix II: Interview Guide

Responses of NW&SC to challenges of supplying water to informal settlements in Nairobi

Section One: Personal data of interviewees

1. What is your managerial position in your firm?
2. How many years have you been working for this company?
3. For how long have you been in charge of this department? Please tick.
1-2 Years () 3-5 Years () 6-8 Years () over 9 Years ()

Section Two: Challenges faced by the Company

1. Kindly explain any internal challenges that the Nairobi Water and Sewerage Company may have faced in supplying water to the informal areas.
2. Kindly explain how each of these internal challenges has affected the business operations
 - a) Leadership: _____
 - b) Financial resources: _____
 - c) Structure: _____
 - d) Training: _____
 - e) Others: _____
3. Kindly explain any external challenges that Nairobi Water & Sewerage Company may have faced in supplying water to the informal areas.
4. Kindly explain how each of the external factors has affected the business operations of the company.
 - a) Political: _____
 - b) Economic: _____
 - c) Social: _____
 - d) Technological: _____
 - e) Environmental: _____
 - f) Legal: _____
 - g) Others: _____
5. In your view which is the greatest challenge facing NW&SC in supplying water to the informal settlements.

Section Three: Strategic Responses to Challenges.

1. What strategies has NW&SC adopted to address the internal challenges

2. What strategies has NW&SC adopted to address the external challenges

3. In your views which are the most successful strategic responses to the challenges facing NW&SC in supplying water to the informal settlements, please rank in order of best.
 - a) _____
 - b) _____
 - c) _____
4. Given a chance to become the CEO of this firm what do you think are some of the additional strategies you will deploy to create a sustainable competitive advantage in supplying water to Nairobi's informal settlements.

Appendix III: Nairobi Informal Settlements

1. Biafra City Cotton	63. Mohlaa Moidada
2. Blue Estate - B.A.T House	64. Molem village
3. Buru Buru City Cartoon	65. Muigai Inn - Njiru
4. Eastleigh Muungani	66. Mukuru kwa Ruben
5. Galole	67. Mukuru Sisal
6. Gatanga Base - Pumwani	68. Mwengeny
7. Giciriri Slum 3rd street	69. Mworoto - Dandora
8. Kiambiu	70. Pipeline
9. Kinyago Kanuku	71. Railway Zone - Imara Daima
10. Kitui	72. Riruta - Imara Daima
11. Majengo	73. Rurii - Imara Daima
12. Motherland	74. Tasia Village
13. Muganda slums	75. Waisinge - Imara Daima
14. New Akamba Dancers	76. Vietnam
15. Nyambura Slum-12th street	77. Total size and population Langata
16. Plot 10	78. Bangladesh-mugumoini
17. Sewer slum	79. City cotton-wilson
18. Sophia - Pumwani	80. DC slum
19. Upendo Slum - Eastleigh Airbase	81. Gatwikira
20. Zawadi	82. Kambi Kisii
21. Total size and population Makadara	83. Kambi Lamu lemu
22. Barclays Village	84. Kambi Muru
23. Commercial	85. Karanja Village
24. Donholm	86. Kianda
25. Fuata Nyayo	87. Kiang'ombe
26. Hazina Sokoni	88. Kichinjio
27. Jamaica	89. Kisumu Ndogo
28. Kabirira	90. Kriobangi-karen
29. Kaloleni-Agare Village	91. Kuwinda
30. Kanaro	92. Kwa Gathoni slums
31. Kenya Wine	93. Laini saba
32. Kingston	94. Lindi
33. Kisii Village	95. Makina
34. Lunga Lunga	96. Makina Slums
35. Mariguini	97. Mashimoni
36. Masaai Village	98. Mitumba
37. Maziwa	99. Plot 10
38. Mbotela	100. Quarry/Raila Estate
39. Mukuru Kayaba	101. Riverside Mbagathi
40. Paradise	102. Sara ngombe
41. Paradise	103. Silanga
42. Shimo la Tewa	104. Songa Mbele slum
43. Sinai	105. Southlands- mugumoini
44. Site Village (off Aoko road South B)	106. Soweto East
45. South B	107. Soweto West Kianda
46. Total size and population Embakasi	108. Wangombe-nairobi west
47. 48 Zone - Imara Daima	109. Total size and population Starehe
48. Bins - Imara Daima	110. Ghetto
49. Canan - Dandora	111. Gitathuru
50. Embakasi Village	112. Gorofani/pipeline
51. Gatope Zone - Imara Daima	113. Kahonoki
52. Gitari Marigo	114. Kambi moto
53. Kamulu	115. Kiamutisya
54. Kangurue - Komorock	116. Kosovo
55. Kayole Soweto	117. Kwa Kariuki
56. KCC	118. Mabatini
57. Kwa Gitau	119. Madoya village
58. Kware Village	120. Mahira
59. Kyangombe	121. Mathare 3C
60. Maili Saba	122. Mathare 4B
61. Mihango	123. Mathare Mashimoni
62. Milimani - Imara Daima	124. Mathare no.10

125. Mathare3b
126. Mathare4a
127. Redeemed
128. Thayo
129. Tsunami
130. Village two
131. Total size and population Dagoretti
132. Catholic area-Ngando
133. Dagoretti centre
134. Gachui
135. Gatina
136. Githarani
137. Kabiria
138. Kabiro
139. Kaburi
140. Kamwanya
141. Kandutu
142. Kanguku
143. Kanunganga
144. Kareru
145. Kareru
146. Kawangware coast
147. Kawangware Kiambooni
148. Kawangware sokoni
149. Kimbo
150. Kinyanjui
151. Kirigu
152. Ki-West-Ngando
153. Kongo
154. kwa Nganga
155. Lenana
156. Magithondia
157. Muria mbogo
158. Musamba
159. Muslim
160. Mutego
161. Njiku
162. Pipeline
163. Riruta east
164. Riruta Githembe
165. Soko mujinga
166. Stage waria
167. Wanyee
168. Total size and population Kasarani
169. Beth Village
170. Clay Village
171. Dam site
172. Dampsite
173. Gatheca
174. Githurai
175. Githurai Majengo
176. Gituaba- mwiki
177. Gituamba
178. Jangwani
179. Kahawa Soweto
180. Kamae
181. Kariadudu-Baba dogo
182. Kariobangi Light Industry
183. Korogocho Grogon A
184. Korogocho Grogon B
185. Korogocho A
186. Korogocho B
187. Kwa Njoroge village
188. Kware village

189. Arurui
190. Mugure-Baba dogo
191. Muthokinjo
192. Ngomongo
193. Ngunyumu
194. Quarry Squatters
195. Ruaraka Akamba Dancers
196. Shape Corner
197. Tusker
198. Zimmerman B
199. Total size and population Westlands
200. Dam
201. Deep sea
202. Githogoro
203. Kaptagat
204. Kariua
205. Kibagare
206. Kwa Njoroge
207. Matopeni
208. Mji wa huruma
209. Ndumbuini
210. Suswa
211. Waruku

Source: Kenya Informal Settlements Improvement Programme (2009)

