SANITARY ENGINEERING - SECTOR UTILITY MANAGEMENT

MANAGEMENT OPTIONS FOR NATIONAL WATER AND SEWERAGE CORPORATION (KAMPALA-UGANDA)

M. Sc. RESEARCH PROPOSAL

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1.0 PROPOSAL

1.1 Introduction

In Africa today, over half of the population is without safe drinking and two-thirds lack a sanitary means of excreta disposal and the trend is decreasing due increasing population (WHO, 1999). Uganda, in particular reported an urban water and sanitation coverage of 47% and 75% respectively in 1994 (WHO, 1996). In addition, NWSC reported water coverage of 70% (1996/97) in the eleven out of forty two district urban areas of Uganda that are under its jurisdiction (NWSC annual report, 1996/97). Lack of sustainability and ineffective systems contribute considerably to aggravate the current bad WATSAN situation in Africa. One may say that this is because of lack of investment capital but deficient management of the existing facilities also plays a major role (Water Utilities Partnership for Capacity Building-Africa (WUP), 1998). This has therefore led to the quest for efficient and effective management.

The management fashion in the world today seems to be a move towards partnerships between the public and private sector (Guislain, 1997). Franceys (1997) however argues that PSP in itself is not a panacea to overcome the problems of inappropriate technology demanding unsustainable institutional support for which customers are expected to pay realistic tariffs. He says that solution lies in the national capacity building of performance oriented proactive marketing management paid for by viable tariffs that the customers are able and willing to pay. He further notes that PSP is increasingly seen to be a better lever to optimise customer needs and organisational needs.

There are several methodologies of developing towards the type of institutions we desire. These include (a) structural and organisational development, (b) clearly defined objectives and goals, (c) management development, (d) systems and procedures development, (e) human resources development and (f) timely provision of physical inputs (Franceys, 1999). This therefore suggests that there are several institutional reform types that one can adapt to suit the problem at hand.

This research intends to base on the above premise to analyse the performance of NWSC, determine the strategic desired situation and design means of improvement. It will explore the various management options that have hitherto been applied and what has been the 'pattern of strategic improvements/change' (Johnson and Scholes, 1993). After an exhaustive diagnosis of the present performance, the required future and the menu of institutional development/strengthening options available for water utilities, a suitable one will be selected for NWSC.

It is hoped that this research effort will contribute to the much-needed sustainable, effective and efficient ways of WATSAN service delivery in African situation, Uganda in particular (WUP, 1998). The research will partly build on the work of Franceys (1994) and Kayaga (1995) in NWSC. Franceys found out that there was little coincidence between personal goals and organisational goals and the area of leadership was generally weak resulting into management deficiencies. He further observed that there was a big inertia to change the organisational behaviour. Kayaga proposed that NWSC financial problems were mainly due to a poor marketing-function (poor customer orientation). Part of this research will therefore be to investigate the present status quo in these areas.

The research commences with the proposal that will, hereafter include the background, the research problem, the hypothesis and research questions, the objectives, the research methodology and the scope of work. Thereafter, a literature review about the topic is presented.

1.2 Background Information

NWSC is a government parastatal established by decree No.34 of 1972. Its national duty is to develop and operate, in accordance with the country's Water Statute, water and sewerage services in any part of the country on a national and self supporting basis. Presently the corporation operates water and sewerage services in the capital city of Kampala and ten other urban centres throughout the country.

Only three out of the eleven towns are presently breaking even (excluding capital expenditures). These include Kampala, Jinja and Entebbe. The meagre surpluses from these three towns are accordingly used to finance the rest of the unviable towns. The biggest chunk of this co-financing comes from the customers' contributions in Kampala.

The research will put emphasis on management options for Kampala area. It is anticipated that efficient management of this biggest operational area of NWSC (commonly referred to as the 'revenue basket' of the corporation) will go a long way in alleviating the financial problems. Kampala city has a population of about two million with inadequate WATSAN coverage (the exact figures are not known but certainly water: <70% and sewerage: <40%, NWSC annual report 1996/97). The population is still growing at a steady rate of about 3.5%. It is therefore surprising that the city, under such circumstances still has an endless task of co-financing other areas. The corporation seems to have drifted for so long with respect to the rapidly changing environment due to population growth, inflation, and ageing infrastructure that requires replacement, environmental standards etc.

NWSC Statute of 1995 requires that the corporation prepare a corporate plan on a three-year basis. The financial year 1998/99 is the second year in which NWSC has had its corporate plan operational. The first one of 1997/98 acted more as a foundation for implementing plans. However, the corporation has not come near to the realisation of the first batch of the 3-year goals of the corporate plan due to fiscal financing problems. In addition other management options have been tried to no appreciable relief of management deficiencies.

Kampala area presently has a high UFW of about 50% and a collection efficiency of about 70% (1997). The operational costs are unnecessarily so high and the production efficiency so low. All these seem to be attributable to management irregularities that have persisted for so long.

NWSC is currently overburdened by the problems of cost of financing unviable towns. These include high cost of debt servicing, huge account receivables, expensive inefficient labour force, high operational costs arising from high costs of inputs like electricity and a relatively inefficient operational mode. In addition there is a VAT law that has put the corporation on collision course with the Uganda Revenue Authority (NWSC, 1999).

Kampala area presently has a multitude of problems, almost all emanating from management deficiencies. The area performed quite well in terms of revenue generation from 1993 to around 1996 but the performance has apparently drifted since then to date. In view of the rapidly changing macro-environment, the drifting pattern is quite worrying.

1.3 Research Problem

In order to salvage the situation in Kampala area, a number of management options have so far been tried with little or no success. Between 1992 and late 1997, a relatively dynamic management was in place. The then management tried all sorts of strategies including objectives oriented, results oriented, staff motivation, customer orientation by decentralising services to reach the customer etc. However, the then policy framework at NWSC-headquarters did not grant the required autonomy, enough management development at all levels, timely provision of inputs and systems and procedures development. The management was therefore marred by crosscutting patronage, less decision making, interference in revenue collection and general lack of enabling environment due to bad organisational behaviour.

The most recent option was the private sector participation in the form of a management contract. This was hurriedly introduced in December 1997 and has so far apparently done little to avert the appalling situation. This recent trend of events has culminated into a belief by some people (especially those in disfavour) that PSP is not the most suitable institutional reform for the corporation at present. *The problem therefore is what management option can steer Kampala area to balance organisational and customer needs.*

1.4 Hypothesis and research questions

From what has been pointed out above it seems the general organisational behaviour of NWSC plays a major influence on the success of improvement strategies. Indeed, Franceys (1994) indicated that there was a strong influence of the way individuals and groups behave towards the realisation of goals in NWSC. Moorhead and Griffin (1999) define organisational behaviour as the study of human behaviour in organisational settings, the interface between human behaviour and the organisation, and the organisation itself. To understand the effect of organisational behaviour on the efficiency and effectiveness of the organisation, Moorhead and Griffin (1999) point out that the three aspects need to be tackled simultaneously.

Experience from Buenos Aires, Argentina seems to indicate that PSP can leverage organisational effectiveness and poor organisational behaviour (personal communication with Franceys, 1999). The government of Uganda is focussing on the private sector (said by a government minister in the Monitor News – Uganda, 15/6/199). This research will therefore investigate the hypothesis: *'organisational behaviour is the key to effective and efficient service delivery to the customer and PSP is the way to transform it in NWSC '.*

To investigate the hypothesis, the following research questions will be answered:

- How is NWSC performing, what are the trends, where is it doing well/badly and why – could the organisational behaviour be a major influencing factor? (In other words what are the **strengths** and **weaknesses?**)
- How can NWSC use the strengths to reduce the weaknesses?
- What are the past, present and likely future **opportunities** and **threats?**
- How have the past institutional strengthening/development efforts helped?
- What is NWSC desired strategic future (in 5 years time)?
- What are the possible politically agreed and realistic management options NWSC can pursue in order to realise sustainable exchange relationship with the customers?
- How have these options worked in the African context?
- Does NWSC need PSP to change its organisational behaviour to meet the needs of the customers?

1.5 Objectives

The objectives of this research include the following:

(a) To review the literature about strategic management

(b) To measure the present and past (since 1992) performance outputs of Kampala area.

(c) To carry out an institutional analysis of NWSC since 1995 (1992-1994 is documented: Franceys, 1994).

(d) To find the impact of the introduction of present management contract and other institutional strengthening measures on NWSC management deficiencies.

(e) To redefine NWSC corporate strategy to determine the direction and future realistic (SMART) objectives.

(f) To select an appropriate management option for NWSC-Kampala area that will transform organisational behaviour to meet the needs of the customers.

1.6 Research Methodology

1.6.1 Procedure

In order to investigate the hypothesis, the research methodology will be as follows:

1) Review of the literature on: institutional analysis, management of water utilities in Africa, institutional strengthening measures and the institutional development options.

2) Collection of performance output data. This will involve Kampala area's technical or physical and financial objective performance indicators since 1992. This may require calculation of some of the indicators especially the financial ratios. The idea will be to get trends of the snap shots of the area's performance since 1992.

3) After documenting the performances in (2) above, an institutional analysis will be done to find out the underlying causes of the recorded performance. The institutional analysis will proceed as follows:

(a) The external environment will be analysed using the methods recommended by Johnson and Scholes (1993). This will involve assessing the nature of the environment (dynamic/complex, or static/simple), auditing environmental influences using the PEST analysis and finally assessing the possible competition (for the market and for resources). The result of this analysis will be to identify the past, present and possible future **Opportunities** and **Threats** thereby giving a trend. Interviewing senior management and KRIP management will help to carry this out.

(b) To assess whether the stakeholders have been performing their activities in NWSC, an activity responsibility matrix will be conducted by reading documents and interviewing members of senior management and KRIP management. The extent to which these activities are done effectively will be determined using a scoring scale of 1 to 5. This will determine weak activity responsibility areas.

(c) The first stage of the assessment to find out the possible causes of the state of the performance in (2) above will be carried out using the subjective performance descriptions by Cullivan et al (1988). These will be distributed to members of senior management, area managers and the KRIP management to find out progressive data for 1995, 1996, 1997, and 1999. Since the data for 1994 is known (Richard Franceys, 1994), this will give a trend.

(d) The second stage will be the detailed analysis of the organisational behaviour. Interviews/questionnaires will be conducted/prepared to find the following information (all the 7S of MCKinsey model are incorporated in order to analyse organisational behaviour as per Moorhead and Griffin (1999) definition – **the human behaviour being emphasised**. The interviews/questionnaires will also incorporate Taylor's scientific management and Weber's ideas of classical organisational theory):

Internal behaviour analysis

- Short falls in management skills (**Audience**: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Willingness to delegate powers to lower levels (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Management culture, style and patronage issues that affect disciplinary action due to laziness, " I don't care attitude", corruption etc (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Issues related to the organisational structure with regard to organisational performance enhancement (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Issues related to teamwork, incentives and motivation as related to performance (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Issues related to customer orientation and public relations (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Issues related to transparency and corruption and misuse of corporation effects (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Performance measurement and control awareness (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Commercialisation and financial accountability aspects (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Corporate planning awareness issues (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Comments about PSP involvement and the accrued benefits relative to the costs for NWSC (**Audience**: Senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers)

- Issues related to procedures and maintenance systems (**Audience**: senior management and middle managers: middle management: area managers & KRIP Zonal managers, superintendents and overseers).

External perception analysis

(**Audience**: 200 Customers randomly selected from Kampala city, Residence District Commissioner (RDC) and the Mayor of Kampala City)

- Perception of the level of service by NWSC

- Corruption by field employees and general public opinion about NWSC compared to other utilities

- General view about PSP involvement in WATSAN service provision in Uganda

4) After all this analysis, a **SWOT** analysis will be done accordingly (this will be done, using interviews with Senior Management with regard to the analysis done already)

5) The existing corporate plan of NWSC will be scrutinised in the context of SMART criteria and the future strategy redefined with senior management. An assessment will be done to see how NWSC intends to transform itself to achieve the future strategy with regard to the SWOT analysis in (4) above (this will be carried out using interviews).

6) Up to this stage we have the present situation of NWSC and the desired future in the context of the macro-environment. Following this will be a desk study again to critically analyse data, look at the available institutional strengthening/development measures, how they have worked in Africa and then see if PSP is the appropriate one to transform NWSC to meet the needs of the customers.

7) An assessment will be done of what management options (institutional strengthening/development measures have so been tried to enhance performance in NWSC (especially Kampala area) since 1992. The impacts of these options on performance output will be subjectively analysed with members of senior management (on a scale of 1-5). Any perceived reasons for non-effectiveness of these options will be analysed using interviews with senior management. This will give a signal of what option could be tried next.

8) To conclude with the PSP option, a subjective transaction cost - benefits analysis of management contract tried in NWSC (from 1997) will be carried out using results got from the above data. Further more, the chosen option will be evaluated in view of the anticipated costs and benefits.

Figure 1.6: IDEALISED RESEARCH METHODOLOGY

ORGANISATION

SWOT Analysis

OPIs (since 1992)

SPDs (since 1994)

Organisational behaviour

| INTERNAL Behaviour ANALYSIS | EXTERNAL Perception ANALYSIS |

For 1994, 1997,1999

Activity responsibility matrix

PEST Analysis

HYPOTHESIS

EXPERIENCES IN AFRICA

ID Options (since 1997)
- PSP
- Decentralisation
- Corporatisation

IS Options (since 1993)

QUALITY CUSTOMER SERVICE
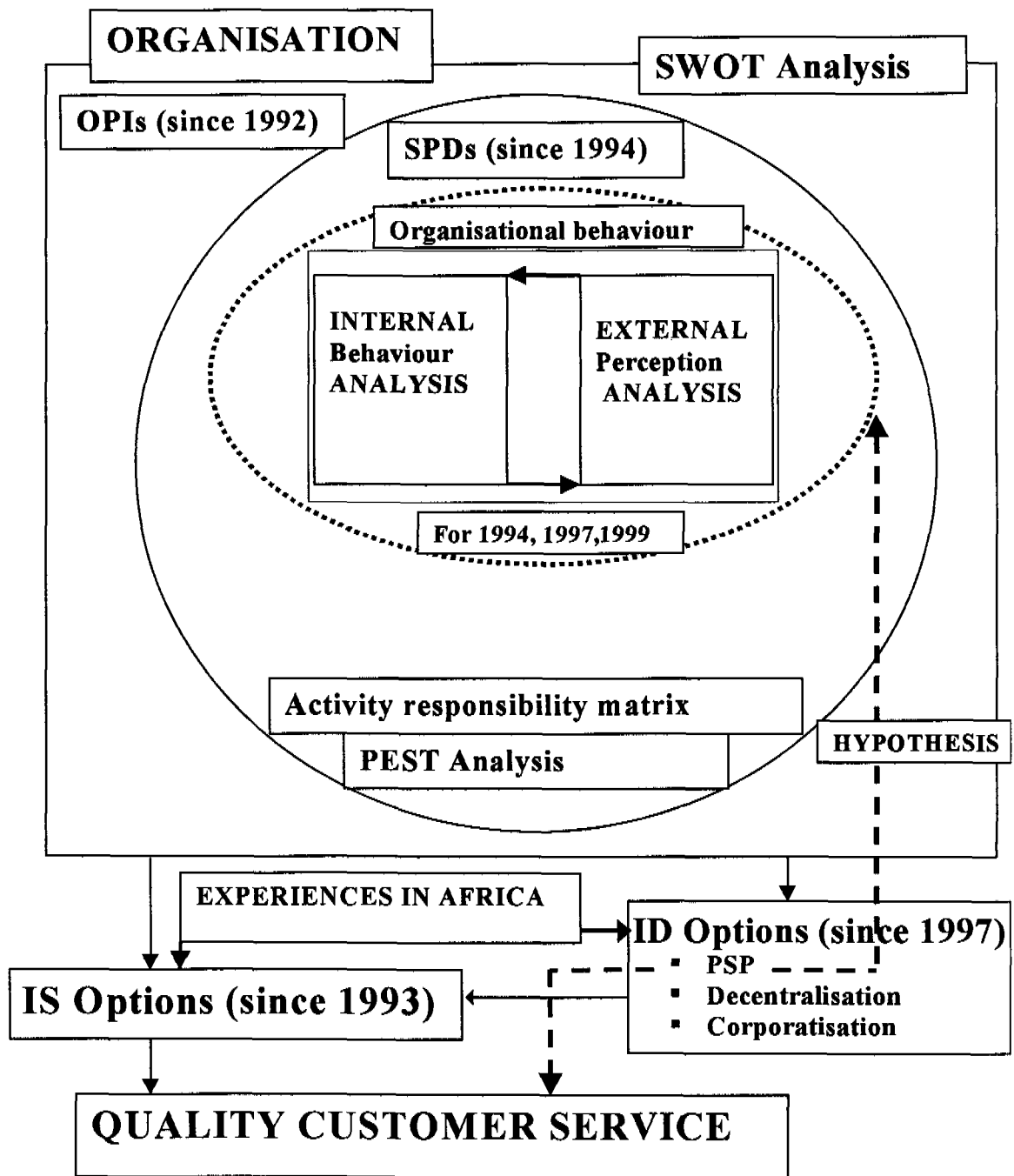
1.6.2 Research Design and Methods (theoretical concepts)

A research method is a technique for collecting information or data. Social research uses three methods: observation, analysing documents and asking questions (Buchanan and Huczynski, 1991).

Moorhead and Griffin (1999) define scientific research as the systematic investigation of hypothesised propositions about the relationships among natural phenomena. They classify research into basic and applied research. Basic research involves discovering new knowledge rather than solving specific problems. On the other hand, applied research is conducted to solve particular problems or answer specific questions. *From these definitions, it is clear that this particular research falls under the category of applied research.*

Moorhead and Griffin (1999) define a research design as a set of procedures used to test the predicted relationships among natural phenomena. Similarly, Buchanan and Huczynski (1991) define it as a strategy or overall approach to tackling a research question or problem. All of them point out *case studies*, *surveys* and *experiments* as the types of research designs. This research will mainly use the technique of surveys that involves interview, questionnaire, observation or document collection and analysis methods.

(a) Questionnaires

A questionnaire is a collection of written questions about the respondent's attitudes, opinions, perceptions, and/or demographic characteristics. To facilitate scoring, the researcher typically uses multiple- choice questions (Moorhead and Griffin, 1999).

(b) Interviews

An interview resembles a questionnaire, but the questions are presented to the respondent orally by an interviewer. The respondent usually is allowed to answer questions spontaneously rather than asked to chose among alternatives defined by the researcher Moorhead and Griffin (1999).

(c) Observation

This involves using one's senses to see, smell, touch, and occasionally taste and listen to what is going on in a given social setting (Buchanan and Huczynski, 1991).

Research findings can be evaluated on two principle criteria: internal validity and external validity. Internal validity is the degree of confidence with which it can be claimed that the independent variable really did cause the observed changes in the independent variable. On the other hand, external validity is the extent to which the findings from the research settings can be generalised to other social settings Buchanan and Huczynski, 1991).

2.6.3 Statistical sampling

Hootsmans and Vermaat (1996) point out the following:

- When you are designing a certain sampling program, you have to take into account that the results that you are going to collect will show a certain variation around the average value.

- Sampling is a game of chance and in order to get realistic results, you have to take replicate samples. The more samples you take, the better; this depends on time and resources.

- Samples should taken randomly i.e. without bias. All possible locations of the system under study should have equal chances of selecting the sample.

Mean and Variance
- The mean is calculated from

$$\bar{x} = (\Sigma x_i)/n$$

Where: x_i = value of the replicate sample

n = total number of replicable samples

$\bar{x}$ = Mean

$\bar{x} \rightarrow \mu$ (The real population mean) as $n \rightarrow N$ (population size)
- The variance between the samples can be described by the so called *sample variance* $s^2(x)$:

$$s^2(x) = (\Sigma(x_i^2) - (\Sigma x_i)^2/n)/(n-1)$$

The square root of the variance gives the *standard deviation* indicated with s(x)

- The variance of the mean $\bar{x}$ is obtained from the variance $s^2(x)$ by dividing it by the number of samples on which the mean is based. Thus:

$$s^2(\bar{x}) = s^2(x)/n$$

The standard deviation of a mean is often called the *standard error*. Thus it is clear that the larger the size of the repeat samples the smaller will be error.

Confidence Interval
- Suppose your sample mean belongs to a normal distribution with mean $= \mu$ and standard deviation $= \sigma/\sqrt{(n)}$, you can say with 95% certainty that:

$$\bar{x} - 1.96 \cdot \sigma/\sqrt{(n)} \subseteq \mu \subseteq \bar{x} + 1.96 \cdot \sigma/\sqrt{(n)}$$

(*Source*: Hootsmans and Vermaat, 1996)

1.7 Scope of the study

As stated earlier, Kampala area is the main source of funds for NWSC. Its operations however depend on the institutional framework of NWSC headquarters. For this reason, this research will focus on organisational behaviour of both headquarters and Kampala area but with more emphasis on Kampala area. Not all issues of organisational behaviour will be looked at because of time limitations but the vital ones as covered by Franceys (1999) will be covered by the interviews/questionnaires as seen in the methodology above.

2.0 Literature Review

2.1 Strategic management in general

Strategic management involves making strategic decisions. Johnson and Scholes (1993:10) define a strategy as the direction and scope of an organisation over the long term: ideally which matches its resources to its changing environment, and in particular its markets, customers or clients so as to meet stakeholder expectations.

Thompson (1997) points out that strategic management relates to three inter-related aspects: awareness of institutional performance, choice of strategic options for improving effectiveness and efficiency and implementation. He notes that strategic decisions are affected by the nature and style of leadership in the organisation, together with the prevailing culture and values (organisational behaviour).

The process of selecting strategic management options starts with appraisal of current situation and current strategy (SWOT analysis), determination of desirable changes to objectives and/or strategies and then search for and choice of suitable courses of action (Thompson, 1997:50). Fig 2.1 below shows a framework for selecting options.

Figure 2.1: Strategy framework based on a series of questions
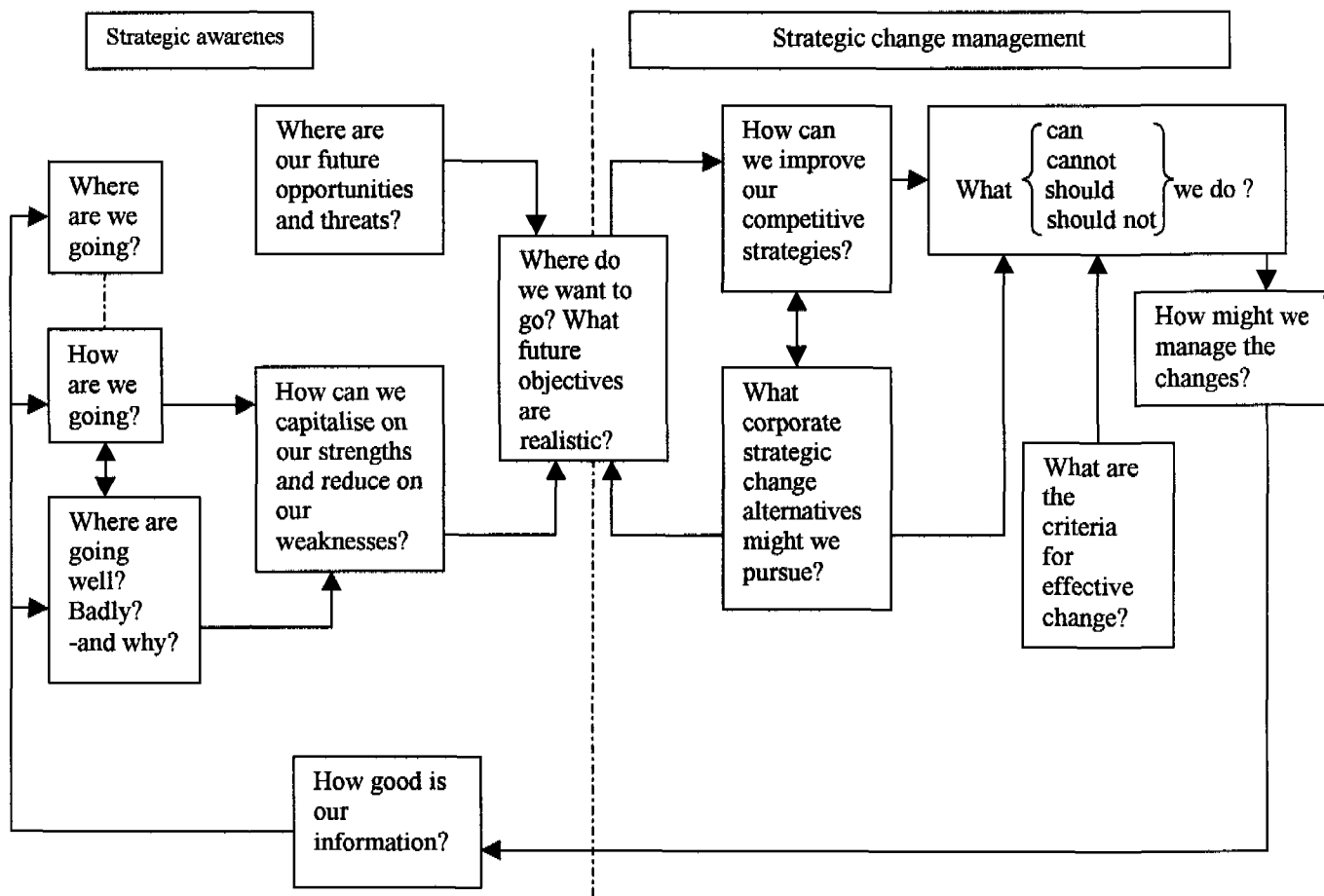
Source: **Thompson, 1997**

2.2 Performance of WATSAN organisations

The organisation's performance is determined by output measures which are defined as specific measurable elements related to the actual current performance of the institution in delivering its product (i.e. the provision of water, and the removal and treatment of waste water). Output measures relate to the qualitative and quantitative results of the product and are evaluated as a pre-assessment step to institutional analysis to determine potential or need for further analysis (Cullivan et al, 1988).

The organisation must maintain regular measurements of its performance outputs in order to monitor and correct accruing deficiencies. Tanner (1997) asserts that management control succeeds via *measurement*. Accordingly, 'what gets measured gets done' and what gets measured is also a message to the organisation of what the organisation values. Franceys (1999) agrees with this notion when he stresses that 'if it cannot be measured it cannot be managed' and that 'if you do not inspect it, do not expect it. Shearer (1988), in Franceys (1999) points out that measurement will produce a series of snapshots of performance whose trends can be used for management control.

According to Cullivan et al (1988), institutional assessment attempts to find the reasons underlying inadequate performance relative to best performers in similar geographical conditions.

The source of such data in an organisation may be from existing documents, published material from previous researchers and annual reports.

There are three types of performance output measures that can be considered for a WATSAN utility. Cullivan et al (1988) advises that the actual outputs to be determined should be tailored to the specific needs of character of the organisation.

For the assessment of the performance outputs, information of the physical and financial indicators is required.

2.3 Institutional analysis

WATSAN institutions are those organisational entities, which are responsible for providing water and sanitation services in either urban or rural areas (Cullivan et al, 1988) .

Cullivan et al (1988) recommends that an institutional assessment should take into account the following performance categories:

- Organisational autonomy
- Leadership
- Management and administration
- Commercial orientation
- Consumer orientation
- Technical capability
- Developing and maintaining staff

- Organisational culture

- Interactions with key external institutions

Johnson and Scholes (1993), note that institutional strategic analysis starts with the analysis of the macro-environment, then followed by analysis of the resources which the institution possesses in order to understand the organisations strategic capability. For a strategy or option to succeed, Johnson and Scholes (1993) assert that its necessary to examine how individuals and groups can influence the development of the strategy in terms of their own interests or expectations.

Institutional analysis helps to understand the causes of problems leading to inadequate performance of an organisation. Johnson and Scholes (1993) point out that this analysis is not a one-off exercise, which precedes choice and implementation; it is just done to become aware and better informed about an organisation situation. Bouman (1999:5) indicates that that this analysis greatly contributes to the design of a selection model for institutional reform.

Thompson (1997) points out that an organisation needs to understand the nature of its market and generally aware of, and responsive to, changes in the environment as a whole in order to be effective and efficient. He says that the current strategy and its performance outputs should first be assessed and future targets, which may imply more or less of the same, or activities which are different, determined. 'To do this requires an analysis of current results/outputs, an evaluation of current resources (Strengths and weaknesses) and the assessment of opportunities and threats present and developing in the environment'.

Once the problems are clearly defined, the decisions should be clear on the type of improvements to change the institution (Cullivan et al, 1988).

2.3.1 Analysis of the external macro-environment

The macro-environment determines the organisation structure. Schermerhorn et al (1991) defines the general environment as a set of cultural, economic educational and legal-political forces common to organisations operating within a given geographical area. 'A basic concern that must be addressed in analysing the environment of the organisation is its complexity'. 'Environmental complexity is the magnitude of the problems and opportunities in the organisations environment as evidenced by the degree of richness, independence, and uncertainty'.

Johnson and Scholes (1993) point out that its necessary to understand the external environment in order to match the capabilities of the organisation with it but insists that the environment will always have uncertainties, which are mostly complex. They therefore argue that because of this unpredictability, what matters is for managers to be sensitive to signals in their environment and flexible and intuitive in their responses to such signals. They should then build their organisations to suit such responses. Environmental analysis bases for thinking through strategic options.

The following steps are advised for the analysis of the macro-environment:

- Assessing the nature of the macro-environment (is it simple/static or complex/dynamic?)

- Auditing environmental influences (the PEST analysis can be used)

- Identify possible competition

- Identify the positioning of the organisation in relation to others with which it competes for customers or resources in order to establish its relative strengths in its market.

Johnson & Scholes (1993)

PEST analysis

Johnson & Scholes (1993) advises that it is useful to consider what environmental influences have been particularly important in the past and the extent to which there are changes occurring which may make any of these more or less significant in the future for the organisation and its competitors. This analysis may help to identify a number of key influences on the organisational performance and to identify long-term drivers of change.

2.3.2 The roles of external actors

The institutional setting in most African countries can be characterised by the degree of involvement of different actors like central government (national, regional, district or municipality, ministries etc), private sector and users/customers. The inclusion of users receives a worldwide acceptance. When these types of actors work together instead of in competition to each other, an enabling environment is created for sustainable development (Bouman, 1999).

It is advisable that a matrix be developed of what has to be done to ensure effectiveness in the sector and who is responsibility. An analysis is then done to determine who is responsible or involved or interested for a range of sector activities. Finally, each activity is scored on a scale of 1(low) to 5 (high) twice, once for effectiveness, once for efficiency based on your understanding of from the PEST, SWOT, performance outputs and performance descriptions (Franceys, 1999). This analysis detects the weak areas that can be taken into account when designing an improvement management option.

2.3.3 Leadership

Leadership is the ability to inspire others to understand the institution's mission, to commit themselves to that mission, and to work towards its fulfilment (Cullivan et al, 1988).

Leadership is one of the four roles of a manager. 'A manager is a person in an organisation who is responsible for the work performance of one or more persons. Human resources are people, individuals, and groups that help organisations produce goods or services. Management is the process of planning, organising, leading and controlling the use of resources to accomplish performance goals. It therefore follows that leadership is the process of inspiring others to work hard to accomplish important tasks' (Schermerhorn, 1996).

Leadership is about achieving results. Ulrich et al (1999) points out that 'leaders who are not getting results are not truly leading'. 'Individuals wanting to be better leaders need a battery of habits, traits, Competences, knowledge, behaviour, style, motives, values, and character which we call, collectively "attributes". Peters and Waterman (1982) agree with

this concept when they idealise any intelligent approach to organising into MCKinsey 7-S Framework; the 7 Ss are Shared Values, Structure Strategy, Skills, Staff, Style and Systems. 'The approach must encompass, and treat as independent, at least the above variables.

Ulrich et al (1999) observed that 'a good leader must have good interpersonal skills so that people feel comfortable to approach him when they have suggestions for improvements, he must delegate so that people feel committed to the job and must value quality service. The desired results should be *balanced, strategic, lasting* and *selfless*. Effective results must meet these four criteria; leaders who will strive to be effective must satisfy them'.

Handy (1985) points out that 'management of people is like driving a car or perhaps making love'. However McGregor, in Handy (1985:97) calls it 'wishful thinking' for a leader who sets out to avoid being called a "boss" and to operate so that everybody likes him. A leader cannot avoid authority more than he can avoid responsibility.

A good leader recognises that 'groups of people can achieve much more than individuals acting alone' and therefore promotes teamwork (Buchanan and Huczynski, 1991). Mackay (1993) stresses that the role of a leader involves getting the team involved in goal setting' where the goals and targets are not in quotas but levels of quality, reliability and consistency in service and products delivered both to internal and external customers. Cullivan et al (1986), in Franceys (1999) indicate that effective leadership provides motivation for managers and staff to perform their functions often in difficult and sometimes apparently unrewarding situations. 'Effective leaders help transform an institution by making it active, energetic, visionary and making the sum of the parts greater than the whole. In effective institutions, leadership does not only rest with the top manager' (Cullivan et al, 1988).

2.3.4 organisational autonomy

Increased autonomy, with incentives for commercial orientation greatly improves the overall organisational performance (Ashoka –World Bank, 1996).

Organisational autonomy is defined as the degree of independence from the national government or regulatory bodies. Effective organisational autonomy is characterised by the power to make decisions about the following important matters: budget, revenues, hiring, levels, pay and incentives, control of personnel, institutional policies, planning and construction of projects, and organisational goals (Cullivan et al, 1988).

Bowman (1999) argues that for the selection of organisational model, the degree of autonomy plays a major part. His experience in Africa notes that autonomy is always limited in the respect of tariff setting, water quality and obligation to reach all layers in the society.

2.3.5 Legal framework

Water law encompasses all rules organising or otherwise governing the administration of water as such. It must address itself to conflicts of jurisdiction as may arise between different governments (Caponera, 1992).

The legal framework should support organisational types. Water rights, ability to open bank accounts, legal forms of interacting with consumers, etc may affect the operations of a water utility (Bouman, 1999). The legal framework needs to assist in a positive manner rather than hinder and restrict negatively (Cullivan et al, 1986).

2.3.6 Management and administration

Management is organising the people and resources to accomplish the work of the institution. Effective management is demonstrated by the capacity to get the most out of the resources available (human and other) in a deliberate or planned manner. Good managers have a clear sense of goals and priorities; they know who to rely on to get the job done and how to delegate to them the means to do it (Cullivan et al, 1988).

An organic management style must be in place to ensure quality management of an organisation (Handy, 1985). To achieve this objective, a proper management culture, as part of an enabling environment is required. Farnham (1996), in Franceys (1999) distinguishes between two types of management cultures: private sector management and public sector administration. The key features of public administration include mechanistic structures, long chains of command, short spans of control, heavily bureaucratised that foster passive and defensive behaviour. On the other hand, private sector management tends to have more flexible structures with less hierarchy, task orientation, and maximising individual discretion with high level of decentralisation and wide spans of control. The criterion for success with private sector management is achieving goals set for the organisation (Keeling (1973) in Farnham).

2.3.7 Customer orientation

Cullivan et al (1988) defines customer orientation as organising and directing the services of the institution towards consumers, people who staff an effective institution in the sector see serving customers as their primary function. The fashion nowadays is towards total quality management (TQM) which focuses decisively on customer service.

In today's marketplace, only those organisations that are able to deliver what customers 'want in terms of quality, service, and cost will prosper'. Practising TQM can do this. 'Total Quality Management (TQM) is management that ensures that an organisation and all its members operate with commitment to continuos improvement and to meeting customer needs completely' (Schermerhorn et al, 1991).

Kordupleski et al (1993) refers to 'total quality programs as customer driven, market driven, customer oriented, or the like. It is asserted that satisfying customers is essential to success: thus an effective organisation must listen to its customers and serve them effectively. The conclusion is that 'if management can improve the internal measures, and if a statistical link exists between the internal process measures and quality as perceived by the customer, then a predictable improvement should also take place in customer perceived (true) quality'. Kordupleski et al (1993) however, points out that the total quality movement has always not performed to its expectations because of *failure to integrate the marketing function in the movement.*

Market share can result from quality by retaining the old customers and attracting new ones. 'A satisfied customer (one who perceives quality at or above expectations) is most

likely to be retained as a customer, and is also more likely to engage in positive word-of-mouth. Potential new customers may then be swayed by positive word-of-mouth (Kordupleski et al, 1993).

Price and Chen (1993) asserts that 'TQM, being incorrectly perceived as too bureaucratic, complex and expensive by small high technology companies, must be adopted if the company wants long-term viability. It is said that TQM is a management system, not a series of programs and for it to be successful, it must be adopted throughout the organisation and requires long-term commitment from the top down'.

Fig: How market share results from quality service/products
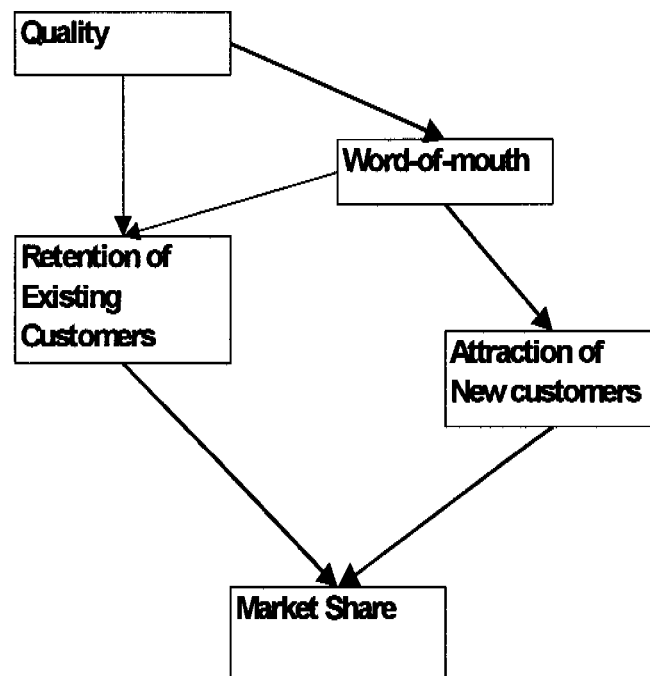
Adapted from: Kordupleski et al (1993)

Price and Chen (1993) further say that TQM puts customer satisfaction first. 'Customer satisfaction produces long-term, sustainable profits, but a profit priority creates a short term focus at the expense of long-term health'. Problem solving process involves analysing the situation, developing solution, and developing action plan, implementing and evaluating the result.

Harrington (1995) prefers to define a Quality Management System in terms of its intent rather than in terms of the way it is implemented; 'the intent of QMS is to ensure that an organisation consistently meets customer requirements'. Stahl (1995) agrees with this concept when by saying that TQ focuses on consistently satisfying customers and their needs but notes that this level may imply a reactive system to provide customers what they request of the firm. Stahl points out that this approach falls short of striving for "total customer satisfaction", "customer delight" or "exceeding customer expectations". Franceys (personal communication: 1999) however warns of this latter ambitious strategy; for evolving companies, the costs may exceed the benefits; in such cases he proposes 'Acceptable Customer Satisfaction'.

Harrington (1995) enumerates the benefits of QMS as: improved customer satisfaction, increased customer confidence, increased market reputation and improved market share; from an organisation's internal perspective, the benefits are: reduced rework, lower costs, lower inventory and less employee frustration associated with rework and recurring problems.

Franceys (1999) observes that the core values of TQM are: putting the customer first; anticipating and knowing customer expectations; meeting and exceeding customer expectations; getting the service 'right first time'; recognising and reducing the costs of poor quality; recognising and reinforcing good performance of staff. The cost of TQM may however, be unnecessarily high for poorly developed infrastructures especially in developing countries. In those cases adapting TQM to AQM (Acceptable Quality Management) is suggested'. Harrington (1995) supports this approach by saying, " a quality management system will not win the game for you but the lack of it can cause you to lose the game".

2.3.8 Commercial orientation

The trend, nowadays is towards a 'performance oriented proactive marketing management' paid for by viable tariffs by customers (Franceys, 1997). A similar view is shared by Kooiman & Eliassen (1987), who assert that organisational survival is a function of institutional legitimacy, and organisational viability depends on the evaluation of organisational performance of the consumers or clients served. The emphasis or the ultimate result of good management therefore, is the leveraging of the 'beneficial exchange relationships' between the customer and the organisation (Kotler & Andreasen, 1991).

Commercialisation requires that viable tariffs be charged. Winpenny (1994) points out that economic principles require that users be charged water and sewerage at a rate equal to marginal cost of supply: at this level, the benefit from consuming the last unit of water equals the cost of providing it. But experience has shown that even those agencies that successfully recover costs of the supply system do not ipso facto cover the long-run marginal costs which is typically higher than average current costs. He argues that water tariffs in most countries are usually perceived as a means of cost recovery rather than as a way of managing demand. For purposes of equity, public health and amenity however, Winpenny (1994) notes that there is a strong case for providing a minimum amount of water at low unit prices using 'lifeline' blocks.

Guislain (1997:101) notes that commercialisation is aimed at making the enterprise more profit oriented. He says that it can cover the following measures: instituting commercial accounting, publishing financial statements, defining commercial objectives, allowing the enterprise freedom to chose its suppliers, and setting up an autonomous board and management.

Cullivan et al (1988) defines commercialisation as the degree to which actions in an institution are driven by cost effectiveness and operating efficiency. They assert that institutional performance should be guided by the urge to become self-sufficient financially at an appropriate stage in growth and that the institution should strive to establish a reputation as a financially well run business in the eyes of the financial and outside community.

2.3.9 Developing and maintaining staff

Cullivan et al (1988) says that developing and maintaining staff include those activities directed toward recruiting staff, providing skills to do the jobs and grow professionally, and providing adequate job satisfaction and wages and benefits to retain competent personnel.

'Human resource strategies are now frequently seen as the key to the achievement of business objectives, to keep companies competitive'. 'Human resource (HR) strategy refers to a set of ideas, policies and practices which management adopt in order to achieve a people-management objective'. Therefore HR strategy may be seen as part of the overall business or organisational strategy (OS). 'OS is described as the attempt by those who control an organisation to find ways to position their business or organisational objectives so that they can exploit the planning environment and maximise the future use of the organisations capital and human needs' (Tyson, 1995).

2.3.10 Technical capability

Technical capability is the measure of the institution's competence in conducting the technical work required to carry out the responsibilities of the institution. Most of this technical work is performed directly by skilled, qualified employees, but outside specialists whose work is supervised by the institution's staff may be used where appropriate (Cullivan et al, 1988).

2.3.11 Organisational behaviour

1) Introduction

Organisational behaviour is the study of human behaviour in organisational settings, the interface between human behaviour and the organisation, and the organisation itself (Moorhead and Griffin, 1999). They point out that although its possible to focus on any of these three areas, we must remember that all three are ultimately relevant to a comprehensive understanding of organisational behaviour.

Figure 2.3(a): Nature of organisational behaviour

```
                    ┌─────────────────────────────┐
                    │      Environment            │
                    └─────────────────────────────┘
                                  ▼
        ┌──────────────────────────────────────────────────┐
        │  Human behaviour in organisational settings       │
        │                                                    │
        │  ┌────────────────────────────────────────────┐   │
        │  │ The individual-organisational interface    │   │
        │  └────────────────────────────────────────────┘   │
        │            The organisation                        │
        └──────────────────────────────────────────────────┘
   ┌──────────────────────────────┐            ▲
   │Source: Moorhead and Griffin, 1999│    ┌─────────────────────┐
   └──────────────────────────────┘        │    Environment       │
                                           └─────────────────────┘
```
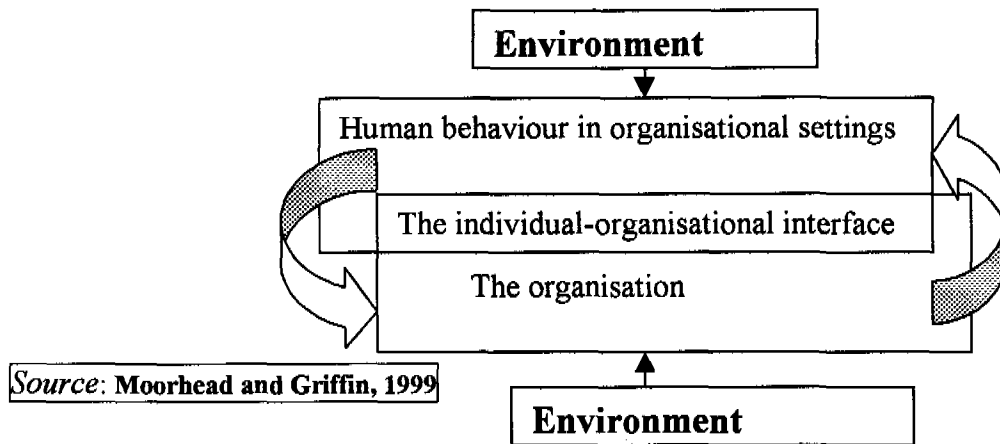
Schermerhorn et al (1991) defines organisational behaviour as 'the study of individuals and groups in organisations'. 'It is a body of knowledge that has special implications for the ways in which, manages deal with people in any work setting'. The study of organisational behaviour helps a manager to cope with the realities of a 'workplace'. 'These realities include the changing workforce, the changing customer expectations, the changing organisations and the need for managers to change too'.

On the other hand, the study of organisational behaviour is 'the study of the structure, functioning and performance of organisations, and the behaviour of groups and individuals within them' (Pugh, 1971:9, in Huczynski and Buchanan, 1991:2).

Cullivan et al (1988) defines organisational culture as the set of values and norms, which inform and guide everyday actions. The culture forms a pattern of shared beliefs and assumptions, which translate into behaviour that can be observed.

D. S. Pugh, in Huczynski and Buchanan (1991) notes that formal organisations exist to achieve particular goals through the behaviour of their members. The task of management can therefore be considered to be the organisation of the behaviour of individuals and groups to achieve the desired goals in relation to the means and resources available. Pugh however points out that the problem in this is how much organisation and control of individual behaviour is necessary for effective functioning and effective goal achievement. Pugh discerns two sides in the discussion of the subject of organisational behaviour:

• The "organisers" (who include Henri Fayol, Frederic W. Taylor and Max Weber) maintain that more precisely specified plans and programmes, with improved monitoring and control of the behaviour, which is intended to achieve them, are necessary for effectiveness. They point to the advantages for efficient goal achievement of specialisation of function and clear job definitions, standardised procedures and clear lines of authority. Peters and Waterman assert 'that there is need to inculcate values of hard work, commitment to the task, belief in the worth of the product, and the importance of developing a common culture, which encourages enterprise, professionalism and respect for the customer. It is in the conscious full

control by management of the structure, functioning and culture of the organisation that effectiveness is achieved'.

• The "behaviourists" on the other hand believe that increasing control over the behaviour of individuals in the organisation is self-defeating. Increased control leads to rigidity in functioning where flexibility is required, apathy in members performance when commitment and motivation are required, and efforts devoted to counter-control through informal relationships to defeat the aims of the organisation. Increasing control therefore does not generally lead to increasing efficiency, and if it does it is only in the short term and at the cost of internal conflict.

Cross-cultural issues

'Cross-cultural convergence may apply to the formal management structures of organisations but does not apply to actual behaviour of organisational members in different cultures – even if the structures are the same. This is because people are different; they have been exposed to different cultural processes from birth and continue to operate through the particular cultural interpretation, which it gives' (D. Pugh, in Huczynski and Buchanan, 1991).

Scientific management and classical organisational theory

Scientific management focuses on the efficiency and productivity of individuals. Taylor, in Moorhead and Griffin, 1999 assumed that monetary rewards are the primary incentive managers can use to motivate workers to achieve higher levels of output. Theorists however later recognised that Taylor's views of employee motivation were inadequate and narrow. Others argued that Taylor's incentive system would dehumanise the workplace and reduce workers to little more than robots.

Moorhead and Griffin, 1999 maintain that scientific management remains the cornerstone of contemporary thought. The four basic concepts of scientific management are shown in figure 2.3 (b):

Figure 2.3 (b): Basic concepts scientific management

1) Managers develop a science for each element of the job to replace old rule-of-thumb methods
2) Managers scientifically select employees and then train them to do the jobs as determined above
3) Managers supervise employees to make sure they are using the scientifically determined method
4) Workers perform the tasks while managers continue to plan, organise and oversee the work
Source: Adapted from Moorhead and Griffin (1999:12)

Moorhead and Griffin (1999) say that while scientific management focuses on how individual workers could be made more efficient, classical organisational theory focused on how a large number of workers and mangers could be most effectively organised into an overall structure.

Weber, in Moorhead and Griffin (1999) proposed a "bureaucratic" form of structure that he believed would work for all organisations. This bureaucracy embraced logic, rationality, and efficiency. These ideas are still interesting and relevant today.

Figure 2.3 (c): Elements of Weber's ideal Bureaucracy

Elements	Comments
1. Rules and procedures	A consistent set of abstract rules and procedures should exist to ensure uniform performance
2. distinct division of labour	Each position should be filled by an expert
3. Hierarchy of authority	The chain of command should be properly established
4. technical competence	Employment and advancement should be based on merit
5. segregation of ownership	Professional managers, rather than owners, should run the organisation
6. Rights and properties of the position	These should be associated with organisation, not the person who holds the office
7. Documentation	A record of actions should be kept regarding administrative decisions, rules and procedures.

Adapted from: **Moorhead and Griffin (1999:13).**

2) Behaviour towards changes in organisations

'A challenging and key part of a manger's role is that of successfully managing change. The pressures for change come from a number of directions- technological change, social change, and political change will all affect the water supply manager- and the pace of change is increasing' (J Carter, 1990).

Most often change is not introduced in a rational way according to the organisational strategy and mission. Pettigrew and Whipp (1991:31), in Clark (1995) argued: "The process by which changes are made seldom move directly through neat successive stages of analysis, choice and implementation . . . Seldom is there an easily isolated logic to strategic change. Instead the process may derive its motive force from an amalgam of economic, personal, and political imperatives. Their interaction through time require that those responsible for managing that process make continual assessments, repeated choices and multiple adjustments".

The introduction of change in an organisation must be justified/rational. Colonel Rolf Smith, in Tanner (1997:9) argues that right things should be done right e.g. following the correct procedures and setting priorities, and do away with things that do not count. In addition, 'better things which others are doing, and have not been done in your organisation should be considered in the design of change'.

'Human nature is to resist change, resist 'another program' and regard the effort as just another 'whim' of current management. Some managerial approach to introduce change is to avoid referring to the effort as a "program" and "just do it" (Tanner, 1997).

To introduce change in an organisation in a planned way, the manager may employ the following strategies: modify tasks, modify the technology, modify the structure, and modify the people (Buchanan and Huczynski, 1991). Bedeian (1980) cites four common cases of resistance to change in organisations as parochial self-interest, misunderstanding and lack of trust among the members, contradictory assessment of costs and benefits of change and low tolerance of change (in Buchanan and Huczynski, 1991).

'Resistance to change can be manifested by employees in a number of ways including lots of complaints about pay rates, absenteeism, low efficiency standards, deliberate restriction of output below what they can achieve and marked aggression against management' (Buchanan and Huczynski, 1991).

Franceys (1999) points out that change in an organisation is possible if the combined effect of dissatisfaction with the present, shared goals for the future and the specific steps taken towards the achievement of shared goals is greater than the effect of the pull of the past and inertia of the present.

3) Managing change

Kotler and Schleisinger suggest the following ways to manage change in organisations: education and communication, participation and involvement, facilitation and support, negotiation and agreement, manipulation and co-optation and explicit and implicit coercion (in Buchanan and Huczynski, 1991).

The design of change must take root into the organisation structure and systems. James Balasco, in Tanner (1997:89) urgues that "unless you tend to structures and systems, changes will not last. People slip back into old patterns, because ownership for change usually rests with the boss. They see their improvement effort as an extra task".

Lessons can be learned from organisations that have effectively managed change. Waterman (1987), in Buchanan and Huczynski (1991) identified the characteristics of organisations that have effectively managed change as follows:

• Set their direction but not detailed strategy and

• Treated everyone as a source of creative input

• Treated facts as friends and financial controls as liberating

• Possessed motivation and will to break habits and encouraged team-work and trust

• Were bureaucracy-busters, smashing encumbrances to high performance

• Action and commitment backed management words.

4) Knowledge, Behaviour, Values and Attitudes

Knowledge and Learning

'Learning is a relatively permanent change in behaviour that occurs as a result of experience'. There are several types of learning: 'classical conditioning' is a form of learning through association that involves the manipulation of stimuli to influence behaviour. 'Cognitive learning is a form of learning achieved by thinking about the perceived relationship between events and individual goals and expectations. Finally, 'social learning' is the learning achieved through the reciprocal interaction between people and their environment (Schermerhorn et al 1991).

Behaviour, Values and Attitudes

'Values are global beliefs that guide actions and judgements across a variety of situations'. There are two types of values: terminal values (those that reflect a person's beliefs about ends to be achieved), and instrumental values (those that reflect a person's

beliefs about the means for achieving the desired ends). Value congruence occurs when individuals express positive feelings upon encountering others that exhibit values similar to their own. Values tend to influence attitudes and behaviour' (Schermerhorn et al 1991).

'Like values, attitudes are an important organisational behaviour component. Attitudes are influenced by values, but they focus on specific people or objects, while values have a more general focus. Attitudes are predispositions to respond in a positive or negative way to someone or something in one's environment' (Schermerhorn et al 1991).

Stahl (1995) points out that 'organisational culture is the key means to communicate the goals of an organisation and the appropriate behaviour in attaining those goals. Peoples' values and beliefs are core to the definition of culture and are the centre of organisational culture. The observable part of culture in all organisations consists of the artifacts and the behaviour of its members. Artifacts are the signs and products of culture. The artifacts and behaviour may take several noteworthy forms: symbols, awards, stories, heroes, slogans, and ceremonies that signify organisational values'.

'In organisations there are deep-set beliefs about the way that work should be organised, the way authority should be exercised, people rewarded, and controlled. Organisations that are differentiated in their cultures and who control that differentiation by integration are likely to be more successful. This management is however not easy' (Handy, 1985).

'Normally, there are cross-cultural differences existing between organisations. "The issue is' are they moving towards convergence and if so how far?". This concept derives from the fact that the ultimate limitation on human goals is not human intelligence or technology, but our ability to work together effectively in organisations (Buchanan and Huczynski, 1991).

5) Teamwork

All organisations are made up of groups of individuals who have to work independently. For any organisation to be successful, those groups must operate as effective teams. A manger with responsibility over others, to succeed, he or she must be able to lead and manage their team effectively (Moxon, 1993). Moxon says that effective team building involves regular working sessions, tackling own problems with help, tackling root causes, openness, honesty, and risk taking. In addition team building consists of action-orientation-commitment to decisions, individuals putting in time and effort, leader accepting feedback, developing of interpersonal skills and making the programme unique to the team.

Teamwork for quality can also be enhanced by quality circles. Ingle (1982) defines a Quality Circle as 'a small group of people doing similar work meeting to identify, analyse and solve product quality problems. They usually meet for one-half hour to one hour each week in or near their area; membership is strictly voluntary and any one who wishes to join is welcomed as a member; each person is free to decline membership; an active circle will attract more people in the long run'. In short, 'a quality circle is a participative management system in which workers make suggestions and improvements for the betterment of the company'.

Ingle suggests that a successful quality circle must have the following characteristics:

- People-building philosophy

- Leader gets participation from everyone

- Members help others to develop

- Projects are circle efforts and not individual efforts

- Training is provided to workers and management

- Creativity is encouraged

- Projects are related to members work

- Management is supportive

- Quality and improvement consciousness is promoted and developed.

6) Motivation

People work for a variety of reasons. What is important to one person may have little significance to another. Motivation is personal and supervisors must get to know individual employees in order to learn what motivates them. Some people work for basic survival needs, while others are seeking security. Some work to fulfil their ego satisfaction, or something even deeper (Maddux, 1994).

A supervisor must be sensitive to recognise these employee needs, and design ways to meet them while achieving the goals of the organisation (Maddux, 1994). Motivation can be enhanced through job enrichment which is defined as a technique for changing the design and experience of work to enhance employee need satisfaction and to improve work motivation and performance (Huczynski and Buchanan, 1991).

Stahl (1995) points out that satisfied employees are productive employees. This derives from the "contented cow theory" which states that "contented cows deliver more milk". To reinforce the desired organisational culture, managers need to know the key levers and mechanisms to use. Schein, in Stahl (1995) suggests the following bases for managerial actions to reinforce organisational culture:

- The behaviour managers measure and control

- Managers reactions to crises

- Modelling and coaching expected behaviours

- Criteria for allocation of rewards

- Criteria for selection, promotion, and termination of employees

2.4 WATSAN sector management in Africa

2.5 Institutional Strengthening Options

2.5.1 Management development

Management is an institutional strengthening measure that involves support and coaching in knowledge, skills and attitudes (Franceys, 1999).

Knowledge and Learning are becoming part of the modern management styles today (Yeo, 1996: *Learning Organisation*). Peters (1992) reinforces this argument when he asserts that companies should pursue economies of scale, mostly by learning, and not production. "Learning is the new form of labour. [Its] no longer a separate activity that occurs either before one enters the workplace or in remote classroom settings . . .learning is the heart of productive activity" (Shoshana Zuboff, in T. Peters, 1992).

'There is need to learn how to master management of knowledge . . .and learn from one another – quickly, efficiently and effectively'. Learning processes are divided into four critical areas: learning with clients (external customers), learning from outsiders, learning from each other (internal customers) and systemic knowledge capture and dissemination (Peters, 1992).

2.5.2 Systems and procedures development

(a) Business Process Reengineering (BPR)

Yeo (1996) points four modern management paradigms as TQM, BPR, Learning Organisation and Management by Projects (MBP). He indicates that the fashion is now management of change – from TQM to BPR and beyond. 'Some people suggest that BPR and TQM do exist simultaneously within any organisation and alternate between themselves with continuos improvements taking place between radical changes'. ' BPR essentially extends the TQM concept of continuos/incremental improvements to drastic, information technology based, rapid improvement'.

'TQM and BPR are not mutually exclusive. Both emphasise customer focus, teamwork and empowerment. The basic difference lies in the nature of change and the quantum of consequential improvements. TQM is primarily good for gradual, continuos and incremental improvements while BBR brings about 'radical' changes and 'dramatic' improvements' (Yeo, 1996). Hammer and Stanton, in Yeo (1996) define re-engineer as 'the fundamental rethinking and radical redesign of business processes to bring about dramatic improvements in performance'.

Schermerhorn et al (1991) asserts that 'tomorrow's managers must be prepared to succeed in both the peaks and valleys of changing economic times'. 'Progressive managers must realise that there is more to managing organisational transitions than simply cutting employees and reducing the level of management' (manipulating the organisation structure). 'Such changes alone cannot guarantee the required organisational success; the underlying processes or ways in which the organisation accomplishes its day-to-day tasks must change as well'. Schermerhorn et al (1991) suggest *process*

reengineering (they define it exactly like Yeo (1996) above) as the latest development that can achieve this aim.

Johansson et al (1993) assert that marketing is part of the BPR. 'A *Break Point* is defined as 'the achievement of excellence in one or more value metrics where the marketplace clearly recognise the advantage, and where the ensuing result is a disproportionate and sustained increase in the supplier's market share'. 'There are five areas (BP-value metrics) where breakpoints can occur – market, product design and support, value chain, and finance, as well as information systems umbrella'. When looking for Break Points, one needs to do market research by listening to what the customer wants. 'This will assist to find out which activities can be eliminated or streamlined in order to get a reengineered process'. All this will determine core business processes, processes that support core ones, and non-core processes as tailored to the customer needs'. According to Johansson et al (1993), a market defines what it wants in terms of the following terms: robustness; price; lead time; flexibility; process design; reliability; differentiation/ optionality; environmental proaction; product design; service empathy; and information systems.

(b) Other Management Systems

Introduction

'Management control in a strategic context consists of control systems in two broad categories:

● Systems of information and measurement

● Systems which regulate the behavior of people rather than simply measuring the end result of their efforts. Reward systems are the most important example of this type of system' (Johnson et al, 1993).

For the water sector, this section prefers to consider Management Information Systems (MIS), Statistical Process Control (SPC) systems, Asset Management Planning (AMP) and Geographical Information Systems (GIS).

Management Information Systems (MIS)

'The interaction among individuals at different management levels together with the use of information in the decision making process are of great importance for the effective and efficient performance of an organisation. A management information system is defined, as a system that provides information required for the managerial functions to be carried out and decisions to be taken' (R D A Tillekeratne with R. Franceys, in Franceys (1999)).

MIS can be used to analyse a business to identify how new or better information and systems could improve its performance in the expected operating environment. With MIS, you can map out what the business can achieve in the short, medium and long-term. Identifying such business advantages from the information system utilizes the business's mission statement, objectives and Critical Success Factors (CSFs). CSFs are defined as 'those things, which must go right if the business objectives are to be achieved'. There should not be too many for each objective (normally 5 to 8). The CSFs must be the

product of the management's analysis of the objectives, which they have set (Edwards et al, 1991).

Inspite of the tremendous development of MIS, of highly complex models, we find that there is resistance to their use in effective utilisation of their potential. They have not solved (and sometimes compounded) some critical issues of organisation life: motivation to work & commitment to the task, or decision improving the quality of organisation life. This is because managers are concerned about long range effects of MIS, the change it is likely to require in organisational design and managerial styles (Prof. Henri-Claude de Bettignies, 3rd annual conference, Turin, 1979:17).

Asset Management Planning (AMP)

Barnyard et al (1998), in Franceys (1999) points out that 'management of the corporate asset base is increasingly being recognised as an essential function of water utilities'. It is indicated that this focus derives partly from the need to produce long-term investment plans and target capital expenditure in the most cost-effective manner. However, deriving from the statistical modelling approach used in Seven Trent Water Ltd., in my opinion developing countries should not just adopt this high tech method; they should adapt according to their circumstances.

'An Asset Management Plan, within the U.K water industry, is essentially a long-term plan for the maintenance and improvement of the assets owned and operated by the water companies'. The concept of AMP allows asset condition, performance, and investment needs to be quantified and independently certified. Judging from U.K experience, AMP may help to facilitate investments to the benefit of asset maintenance, improved levels of service, meeting higher quality standards and growth in demand' (Franceys, 1999).

Geographical Information Systems (GIS)

The GIS provides the utility facilities to manage and analyse key data, its people, assets and customers in relation to the process-driven work offered by the utility. The relevance of GIS technology to water utilities derives from the fact they are largely asset-driven as opposed to the normal 'process'- driven companies. High tech customer oriented approaches like TQM and BPR discussed above may yield no sustainable benefits to a water utility if the asset base is not properly managed. However a water company cannot have sustainable financial capability without being customer-driven as well. Asset management systems (GIS and AMP) should be balanced with customer-driven systems (Ray (1996), in Franceys, 1999).

Statistical Process Control (SPC)

Water utilities must maintain a consistent measuring and monitoring (M&M) policy in order to reduce the cost of failure. The process is for everyone and is never unending process. Involving everybody builds confidence in the entire workforce and finally reduces the cost of measuring (self-control). However this requires training the team so that the workers understand the figures and can be able to mitigate problems. Mitigation of problems is best done via brain storming by analysing the 'cause and effect' of problems (using say, the FISH BONE DIAGRAM). Continuos checking at regular time

intervals will enable you to draw a Statistical Process Chart that will give an indication of weak areas for correction (Franceys, 1999; personal communication and video).

2.5.3 Corporate planning

Boyle and Gower, in Franceys (1999) say that corporate strategy must take into account: future social attitudes, future consumer demands and future legal/environmental structures. It must also be considered in relation to the following: future markets, future resources, future technologies and future organisation and management style.

Baguley (1994) points out that in the business context, strategy is concerned with such matters as what products or services the organisation will offer and to which markets they will be offered. According to Baguley, a strategist is concerned with the whole organisation rather than its parts, the long term rather than the medium term or short term and the broad scope of the organisation's activities. Baguley reckons that the decisions and the resultant choices taken will be strongly influenced by the nature and characteristics of a larger operating environment (Political, Economic, Social and Technological). It is therefore sensible to note that '*in a world of uncertainty, the focus is shifting from systematic planning to implementation of action programmes which in the short run produce visible results against which the long term strategic plan can be further refined*' (Franceys, 1999).

Similarly, Mintzberg (1979) views corporate strategy as a mediating force between the organisation and its environment. Accordingly, 'strategy formulation involves the interpretation of the environment and the development of the consistent patterns in streams of organisation decisions ("strategies") to deal with it'. Therefore, the work of top management is to try to 'tailor strategy to the strengths and needs of the operating environment and to try to maintain a pace of change that is responsive to it without being disruptive to the organisation'.

Franceys (1999) points out that 'corporate planning involves defining the *organisation vision* (which should: provide an image of success for the organisation, be challenging, be achievable, and be able to be shared by all staff and inspire). The planning also defines the *organisation mission* (which should address what business we are in, what business we will be in, and what business we ought to be in) and the *organisation goals* and objectives; objectives are more quantified than goals'.

2.5.4 HRD

In the world of uncertainty, an organisation that fails to keep up with the pace of change of the environment will lose grip on its market. Senge (1991), in Thompson (1997:374) says that one way to keep pace with changing environment is to encourage continuos learning and knowledge generation at all levels. He points out that the organisation must have processes that move knowledge around the system easily where it is needed, and can translate that knowledge quickly into changes in the way the organisation acts, both internally and externally.

Blokland (1999) observes that most often the training function of a water utility is the 'dustbin' of the organisation. It is considered as a 'dumping ground' for people who cannot cope with the demands of construction and/or operations. He notes that the importance of training is not well understood by these organisations. Blockland asserts

that HRD can be an all-encompassing intervention to achieve effective and efficient organisations.

Capacity building is the ability of individuals; groups, institutions and organisations to identify and solve development problems over time (UN, Agenda 21, 1992, in Blokland, 1999). On the other hand, capacity is defined as the ' the ability to perform appropriate tasks effectively, efficiently, and sustainably (Hilderbrand, 1994, in Blokland, 1999). Blokland insists that HRD is part of the overall institutional building capacity package, which include institutional development, organisational design and HRD. There are three activity areas in HRD:

- Training (which is geared towards learning related to the present job of the learning person)

- Education (which is geared towards learning to prepare the learning person for a different but identified job)

- Development (which is geared towards learning for growth of the learning person but not related to a specific present or future job) (Nadler, 1990, in Blokland 1999).

HRD must be tailored to the priority organisation needs (issues of man power planning) and everyone engaged in it should be concerned with *evaluation*. In order to be able to evaluate HRD activities, three prerequisites must be met:

- HRD programmes must be undertaken unless tangible results can be obtained

- At least one method to measure the results of the HRD programme is included in the design

- Each member of the HRD team is committed to measuring the result of his/her efforts (Nadler, 1990).

Staffing requirements (man power planning) are to be based on detailed job analysis and the resulting job descriptions, taking into account technologies employed, the level of automation, and other factors. However, manning ratios and staffing patterns do provide some initial general indicators of productivity. For planners in developing countries a commonly accepted broad range is one employee per 600 to 1600 population served depending on the level of development and the degree of automation (Carefoot, 1984 in Blokland, 1999).

2.5.5 Benchmarking

'To stay competitive, most businesses have to continuously explore ways to become more responsive to their customers. For many businesses this involves specific operational changes to reduce cost and improve productivity – to do more with less. Others have to rethink their strategic focus and make more drastic changes to the products and services they deliver, the means by which they deliver they and the markets they serve'. One of these processes of change is 'performance improvement' and can be done via benchmarking. Benchmarking compares a company's performance, processes, products and services with those of the best performers inside and outside the industry with the aim of adapting them for performance improvement (Blockland, 1999).

Stahl (1995) distinguishes between two types of benchmarking. These are functional benchmarking and competitive benchmarking. 'Functional benchmarking is the studying and possibly emulating the best processes and systems in the world whether in the firm's own industry or in another industry'. 'Competitive benchmarking is analysing what the best competitor or leading companies in the industry are doing in order to discover the products, processes, and practices and satisfy customer needs'

2.5.6 Organisational Structure

Thompson (1997) points out that an organisation must have an appropriate structure, which ensures that the system behaves in a coherent manner.

Fletcher Byron, in T. Peters and Waterman (1982:9) thinks that 'an inflexible organisation chart which assumes that anyone in a given position will perform exactly the same way his predecessor did, is ridiculous'. Organisations ought to shift and adjust and adapt to the fact that there is a new person in the post. Indeed, this same thinking is implied by Burns and Stalker (1961), in Buchanan and Huczynski (1991) when they propose that organic organisational structures and systems are more appropriate to changing environmental conditions.

In Buchanan and Huczynski (1991), there are several comments on the appropriateness of the organisation structures based on other people's work: Toffer (1989) proposes that 'super industrialism' was emerging from the breakdown of the older and the advent of the new technologies. It is proposed that bureaucratic structures should be replaced by adhocracies, which are defined as being flexible structures that sought to co-ordinate temporary work teams'. Kanter (1985) suggests the replacement of segmentalistic organisations by ones with an integrative approach to problems, which tend to see more key events and see them earlier. 'They tie problems together, see small crises as symptoms of larger dangers ahead, and prepare accordingly'.

2.6 Institutional Development Options

2.6.1 Private sector participation

General

Private sector is the corollary of public sector. Chapman and Cowdel (1998) take public sector, as a way referring collectively to those institutions which a society considers necessary for the basic well being of its members. Their aims are politically determined by the state, and they rely heavily on government funding for survival.

On the other hand, the concept of private sector participation in public service provision embraces a wide range of policy approaches. At one end of the spectrum is outright privatisation or the transfer of ownership and control from the public sector to the private sector with particular reference to asset sales. Other less radical forms include management and service contracts, lease arrangements, concessions and build-operate-transfer arrangements (BOTS) (Rivera, 1996).

Estache (1994) maintains that the historical role of the public sector in the delivery of public infrastructure has been overwhelmingly huge, and it will continue to bear the bulk of the responsibility in low-income countries. This is because private alternatives are not yet as common in the poorest countries as in middle income countries.

Experience has shown that private sector participation goes along with substantial benefits to consumers of expanded coverage and quality of service as well as significant improvements in productive efficiency (Rivera, 1996). Rivera however asserts that consolidating these gains and reaping additional benefits in the future will depend on strong leadership and continuous political commitment. World Bank (1997) gives additional benefits of PSP as: tapping private sector skills and know-how, improving the efficiency of service delivery, and gaining access to finance for new investment.

Guislain (1997) asserts that to maximise economic efficiency, privatisation reforms need to break up the SOE to foster competition, eliminate monopolies and other barriers to entry in the market. In case of monopolistic sectors he points out that a strong regulatory framework must be put in place.

Julia Jones (1997) suggests forming of public private partnerships to provide satisfactory compromises between the extremes of all-public or all-private service provision. He points out that self-sustaining projects may flourish if an ailing public utility can solicit the assistance of the private sector, find the right balance of responsibilities, for a given context, and form a partnership.

Jones (1997) indicates that PSP appears to be the right lever to balance organisational needs and the needs of the customers. According to him PSP improves efficiency and effectiveness by transforming inefficient organisations. He points out the following influencing factors as being responsible for inefficiency and ineffectiveness in organisations:

- Short falls of capital
- Short term budgetary constraints that prevent long-term investments
- Use of inappropriate standards
- State interference at managerial level
- Poorly specified objectives
- Lack of autonomy, inadequate use of performance indicators
- Incomplete accounting procedures that prevent proper financial control
- Excessive levels of bureaucracy
- Corruption
- Centralised political considerations that override good managerial practice
- Inappropriate personnel policies, unfocussed human resources development
- Inappropriate or inadequate institutional framework
- Inadequate attention devoted to O&M
- Inappropriate tariff structures and misdirected subsidies
- Wide seasonal variations in raw water quality and quantity.

(Adapted from Morales-Reyes, 1993)

World Bank (1995) warns that privatisation can have pit falls if it is carried out in a rushed and poorly planned manner that is not sufficiently transparent or competitive. This can be due to the desire to meet deadlines.

Experiences of PSP in developing countries

In May 1993 a concession was awarded to Aguas Argentinas in Buenos Aires, Argentina. The concessionaire is responsible for providing all water supply and sewerage services for the federal capital itself and fourteen districts of the province of Buenos Aires. By December 1995, the water production capacity had increased by 27%, water and sewerage coverage by 8.8% and 6.4% respectively. In addition the length of the water and sewerage network had increased by 9% and 2.8% respectively. They transformed the organisational behaviour of the former workers by providing conducive retirement incentives and encouraging those remaining to buy equity shares in the company. All these indicate that the customer is now getting better services than before (Rivera, 1996).

In August 1989, after several decades of inefficient management of WATSAN services, the government of Guinea entered into a lease arrangement for private sector operation of water services in the capital, Conakry. Major gains in service availability and quality were achieved during the first five years of the lease contract mainly because of huge investment in water supply. Tariffs have however dramatically short up in an effort to achieve full cost recovery. The collection ratio of private customers increased from less than 20% to more than 75% in 1993 and technical efficiency and service coverage improved (Rivera, 1996).

World Bank (1994), in Franceys (1999) provides an excellent example of a private company providing public services in west Africa- Côte d'Ivoire. The type of PSP here is a concession that provides all customer segments. The concession boasts of less than 15% unaccounted for water, full cost recovery, 98% collection efficiency, high labour productivity (4 staff per 1000 connections) and excellent water quality at the customer's tap.

World Bank (1994), in Franceys (1999) further gives a successful management contract in Botswana where management has been mainly out contracted to expatriates. The management is free to charge commercial tariffs to ensure full cost recovery, and has managed to keep government interference out. Because of this good management, the company maintains 24-hr water supply with high quality treatment. The unaccounted for water is less than 25% and the collection efficiency is approximately 98%. This performance is attributable to good quality staffs who are motivated by competitive salaries.

2.6. 2 Decentralisation

Winpenny (1994) points out that in the water sector, the collection of data and analysis of problems are best done centrally, while solutions are often best sought in a decentralised fashion subject to the creation of the necessary legal, institutional and policy conditions.

An optimum allocation system is that which equates the marginal cost of supply with marginal benefit (shadow price) of the water in use. Winpenny (1994) asserts that neither a fully decentralised nor a fully centralised system is necessarily ideal on this criterion.

"It is likely therefore that some mixture of top-down control, regulation and allocation of entitlements, bottom-up decision making ...is efficient" (Roumasset & Chakravorty, 1988, in Winpenny, 1994:25).

World Bank (1996) maintains that one decentralisation is an important strategy for improving efficiency of operations. Decentralisation allows greater responsiveness to customers and increases managerial accountability.

2.6.3 Corporatisation

Guislain (1997) refers corporatisation as the conversion of public enterprises organised under public law (including governmental business) into companies organised under private law. He says that this may be required as the first step to the privatisation of a state enterprise as a going concern with all its assets and liabilities and without interruption of activities although it is not necessarily a must.

Corporatisation was tried out in New Zealand Corporation, 1994 with the objective of freeing the SOEs of social and other non-commercial obligations, and to effect a clear separation between ownership and management of SOEs. In addition the effort was to empower managers to run these enterprises as commercial entities and to level the playing field between SOEs and the private enterprises (Guislain, 1997:103).

World Bank (1996) notes that corporatisation converts a department or SOE into an autonomous organisation that is owned by government, but runs on a commercial basis thereby helping the operators to respond directly to the markets. World Bank (1996) however reckons that often further step is required of privatisation to minimise government interference in operations.

2.7 Selection of Strategic option

2.8 Evaluation of the options

2.8.1 Comparative analysis

2.8.2 Transaction costs and benefits analysis

References

Ashoka Mody-ed. (1996): The World Bank, Infrastructure delivery: Private Institute and the Public good, Washington, D.C.

Baguley Philip (1994) 'Improving Organisational Performance: A Hand Book for Managers', McGraw-Hill Book Company, England.

Blokland M. (1990) ' Human Resources Development: Lecture Note', IHE-Delft.

Bouman Dick (199): Institutional models for water supply schemes with public taps (unpublished) : 2nd Version

Caponera Dante A (1992): Principles of Water Law and Administration, National and international, Barkema A.A, Brookfield, Rotterdam.

Chapman D and Cowdel T (1998): New Public Sector, Financial Times Management, London

Clark Jon (1995): Managing, Innovation and Change: People, Technology and Strategy, SAGE publications Ltd, London

Cullivan D, Tippett B, Edwards B Daniel, Rosensweig F & McCaffery J (1988): Guidelines for Institutional Assessment of Water and Wastewater Institutions, WASH Activity No 146, Washington, DC

Edwards Chris, Ward John and Bytheway Andy (1991) 'The Essence of Information Systems', Prentice-Hall.

Estache A (1994): Making public infrastructure entities commercial, Finance and development.

Franceys R (1999) 'Strategic Management & Public Private Partnerships Module: IHE lecture note', Delft, The Netherlands.

Franceys R (1999): Strategic management &Private Public Partnerships Module, IHE-lecture notes, Delft, The Netherlands

Franceys R (1997) 'Private Waters? - A bias towards the Poor, Position Paper on PSP in the Water and Sanitation Sector: Issues for the Department for International Development, U.K.

Franceys R (1994): Institutional development series, Management of water utilities in low income countries: India and Uganda (unpublished), WEDC

Guislain .P (1997): The Privatisation Challenge: A strategic, legal and Institutional Analysis of international Experience, World Bank, Washington D.C.

Handy Charles B (1985) 'Understanding Organisations', 3rd ed., Penguin Group, London.

Harrington H. James with Harrington James S. (1995) ' Total Improved Management: The Next Generation in Performance Improvement', McGraw-Hill, Inc.

Huczynski Andrzej A and Buchanan David A. (1991) 'Organisation Behaviour: An Introductory Text', 2nd Ed.

Ingle Sud (1982) 'Quality Circles Master Guide: Increasing Productivity With People Power', Prentice-Hall, Inc.

Isreal Arturo (1987) 'Institutional Development: Incentives to performance', Published for World Bank, by University Press, London.

Johnson Gerry & Scholes Kevin (1993) 'Exploring the Corporate Strategy: Texts & Cases' 3rd ed., Prentice Hall-Europe

Johansson Henry J, Mchugh Patrick, A. John Pendlebury and William A. Wheeler III (1993) 'Business Process Reengineering: Break Point Strategies for Market Dominance', John Wiley & Sons Ltd. England.

1997
Jones Julian (1887) 'Institutional Development Series, Urban Water Supplies for Developing Countries: The French Approach, R. Franceys (series ed.), WEDC, Loughborough University, 1997.

Kayaga Sam (1997): Institutional development series, marketing of watsan services: NWSC Uganda, Loughborough University

Kooiman Jan and Eliassen Kjell A. (1987), 'Managing Public Organisations: Lessons from Contemporary European Experience', Alden Press, Oxford.

Kordupleski Raymond E, Roland T. Rust & Anthony J. Zahorik (1993) 'Why Improving Quality does not Improve Quality (Or Whatever Happened to Marketing?)', pp82-95, California Management Review, Volume 35, Number 3, University of California.

Mackay Allen (1993) 'Team Up for Excellence', Aukland, Oxford University Press.

Maddux B Robert (1988): Team building, 2nd edition, Crisp publications Inc

Mintzberg Henry (1979) 'The Structuring of Organisations', Prentice Hall, Inc., Englewood Cliffs.

Moorhead Gregory & Griffin W. Ricky (1999): Organisational behaviour, Managing people and organisations, Ashwin J. Shah, Mumbai

Moxon Peter (1993): Building a better team, A handbook for managers and facilitators, Gower publishing, England.

Pegrum Dudley F (1959) ' Public Regulation of Business', Richard D. Irwin, Inc. Homemod, Illinois.

Peters T (1992) 'Liberation Movement', BCA.

Price Michael J. & Eva E. Chen (1993) 'Total Quality Management in a small, High Technology Company', pp96-117, California Management Review, Volume 35, Number 3, University of California.

Rivera D (1996): Private sector participation in the water supply & wastewater: Lessons from six developing countries, THE WORLD BANK, Washington D.C.

Schermerhorn John R., JR (1996) 'Management', John Wiley & Sons Inc., Canada.

Schermerhorn John R, JR, James G. Hunt & Richard N. Osborn (1991) 'Managing organisational behavior', Wiley & Sons, Inc., Canada.

Stahl Michael J (1995) ' Management: Total Quality in a Global Environment', Blackwell Business.

Tanner David (1997) 'Total Creativity in Business & Industry', Advanced Practical Thinking Training, Inc., New York.

Technical Report (1998): Water Utilities Partnerships for Capacity building- Africa (WUP)- Institutional Development of Water Supply & Sanitation Utilities, Phase II: 1999-2001.

Thomas J. Peters & Robert H. Waterman JR (1982) 'In Search of EXCELLENCE: Lessons from America's Best-Run Companies', Fitzhenry & Whiteside, Toronto.

Thompson L John (1997): Strategic management, Awareness and Change, 3rd edition, International Thomson Business Press

Turin, pp30-50 (1979): Changing Organisations and the Role of Management Development, 3rd Annual Conference Proceedings.

Tyson Shaun (1995) 'Human Resource Strategy: Towards a General Theory of Human Resource Management', Pitman Publishing, London.

Ulrich Dave, Jack Zenger and Norm Smallwood (1999) 'Results-Based Leadership', Harvard Business School Press, Boston, Massachusetts.

WHO (1996): Water supply and sanitation sector Report- Sector Status as of 31 December 1994.

Wind Jerry Yoram & Main Jeremy (1998) ' Driving Change: How the Best Companies are Preparing for the 21st Century', Kogan Page Limited, U.K.

Winpenny J (1994): Managing water as an Economic Resource, Routledge, London.

World Bank Policy Research Report (1995): Bureaucrats in Business, the economies and politics of government ownership, Oxford University Press, Incl.

Yeo K T (1996) 'Management of Change – from TQM to BPR and Beyond', Guest Editorial, International Journal of Project Management, Volume 14, Number 6, Elsevier Science Ltd., U.K

APPENDIX

Time Schedule Activities

Activity	Month	SEPT		OCT				NOV					DEC					JAN					FEB				
	Week No	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8
Preparation of Proposal +Literature Review		■																									
Presentation of Proposal +Literature Review			■																								
General Examination				■																							
Data collection and processing					■	■	■	■	■	■	■	■	■	■	■												
Evaluation																■	■										
Thesis Writing																		■	■	■	■	■					
Thesis Printing																									■		
Thesis to Examination committee																										■	
Oral Presentation																											■
Examination																											■

APPENDIX A: QUESTIONAIRRE FOR ANALYSIS OF EXTERNAL ENVIRONMENT (internal analysis)

Information required:
- Nature of the environment in which NWSC operates
- Past, present and possible future environmental influences
- Positioning relative to other service utilities
- Key threats and weaknesses

[TO BE FILLED BY: Heads of department HQTRS and KRIP]

Position of person: . . . .

Q1: How do you categorise the external environment in which NWSC operates?
- Predictable? (Y/N) . . . .(1 – 5)
- Complex? (Y/N) . . . .(1 – 5)
- How do you cope with it?

. . . .

. . . .

. . . .

Q2: Rate to what extent the following factors affect NWSC operations and planning (**PEST analysis**)

Factor	(Y/N)	Influence (1-5)			Remarks
		Past	Present	Future	
POLITICAL/LEGAL					
1) Environmental protection laws					
2) Taxation policy					
3) Government stability					
4) Political interference					
5) Employment law					
6) Others (specify)					
ECONOMIC					
1) GNP trends					
2) Interest rates					
3) Power and chemical costs					
4) Unemployment					
5) Money supply					
6) Other (specify)					
SOCIAL/CULTURAL					
1) Population demographics					
2) Income distribution					
3) Levels of education					
4) Attitudes to work and leisure					
5) Outside view of NWSC					
6) Customers willingness to pay					

1

7) Others (specify)					
TECHNOLOGICAL					
1) In country manufacturing					
2) Availability of expertise					
3) Speed of technological transfer					
4) Rates of obsolescence					
5) Technical education					
6) Technology base					
7) Others (specify)					

Note: The PEST analysis will strive to find the long-term drivers of change (Opportunities and Threats) and the key environmental influences.

Q3: (a)Does NWSC have any competitors for the market? (Y/N)...................................

Past:...............................Present:...........................Future:...............................

(b) If any what measures are you putting in place to cope with it?

....

....

....

(c) Apart from competing for the market do you face competition for government resources with other service utilities?

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(d) In which ways would you say you an edge over other service utilities in terms of delivering services to the customers regardless of the type of service?

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External Analysis (Politician's View: RDC, Mayor, Minister, Others)

Position:..

(a) What is your comment about NWSC services generally?

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(e) Do you think corporate planning was necessary any way? (1-5).

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Q12:

(a) What are your comments about the present management contract with regard to customer service delivery compared to the previous arrangements?

....

....

....

(b) Comment on the management by KRIP compared to the previous arrangement with regard to the following topics:

Team building:

....

....

Combating any corruption tendencies:

....

....

Time management:

....

....

Strictness with work:

....

....

(c) Rate the prospects of KRIP with regard to customer service delivery compared to the previous management (1-5)...

(d) Do you think this management contract could have been handled by Ugandans instead of foreigners (1-5) ....In a better way? Y/N...

Q13:

(a) Do you have a maintenance system in place? Which one?

....

....

(b) To what extent do you do regular maintenance (1-5)? ....

(c) Comment on your daily work procedures

....

....

....

....

(d) Do you see any improvement in the maintenance and work procedures with this management contract compared to the previous arrangement? Do you think the previous management could have improved as well given the same facilities?

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(e) Do you think corporate planning was necessary any way? (1-5).

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Q12:

(a) What are your comments about the present management contract with regard to customer service delivery compared to the previous arrangements?

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....

(b) Comment on the management by KRIP compared to the previous arrangement with regard to the following topics:

Team building:

....

....

Combating any corruption tendencies:

....

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Time management:

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Strictness with work:

....

....

(c) Rate the prospects of KRIP with regard to customer service delivery compared to the previous management (1-5)..

(d) Do you think this management contract could have been handled by Ugandans instead of foreigners (1-5) ....In a better way? Y/N..

Q13:

(a) Do you have a maintenance system in place? Which one?

....

....

(b) To what extent do you do regular maintenance (1-5)? ....

(c) Comment on your daily work procedures

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(d) Do you see any improvement in the maintenance and work procedures with this management contract compared to the previous arrangement? Do you think the previous management could have improved as well given the same facilities?

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(b) Looking back about 3 years ago, do you think NWSC is progressing in terms of service delivery?

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(c) What is your view about the idea to involve private sector in the provision of water services in NWSC in to meet customer needs?

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(d) In your opinion, which is the weakest area of operation of NWSC that emphasis can be put in order to improve service delivery?

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(e) What are your other comments about how NWSC can improve service delivery?

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APPENDIX B: ANALYIS OF ORGANISATIONAL BEHAVIOUR

(TO BE FILLED BY: KRIP middle managers and overseers)

Q1: (a) Your position:..
(b) How many staff are under your control?..

Q2:
(a) What are your qualifications? ....
(b) Have you ever received any training in management and customer service?..
(c) What additional skills do you think you would need to perfect your work? Basic computer skills? Is management trying to give you these skills?

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....
....

Q3:
(a) To what extent do you think your supervisor has given you all the powers you need to carry out your work? (1-5) ....
(b) Does the short fall in 3(a) above affect your efficient and effective management? (1-5)
....
(c) Do you envisage any change in your superior's policy to delegate powers? (Y/N)

3

(d) Rate the leadership above in terms of enabling you to perfect your work (1-5).

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....

(e) What improvements would you suggest?

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Q4:

NWSC has its rules and procedures pertaining to how things should be done during your management.

(a) Which rules and procedures do you consider are too strict and impede you from effective management? How?

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(b) To what extent do your superiors want you to abide by these rules? (1-5)

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(c) If you break them in trying to solve an urgent problem, or in trying to do any other thing beneficial but contrary to the rules and procedures, what happens?

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....

(d) How often does management change these rules and procedures?

....

....

(e) To what extent would you say that things should continue to be done the way they used to be in the past in order to keep consistence? (1-5)

....

(f) What are your other comments about (d)? Do you think management also supports this notion?

....

....

....

(g) Who recruits and transfers staff? HQTRS? 6th Street?, Yourselves? Is this arrangement favourable to your management? (Y/N)

(h) How would you rate your work output with respect to the target? (1-5)

....

(i) What do you think is the major problem with poor performance (if any) from the field in your section? (1-5) scoring (I) workers have I do not care attitude (ii) workers are lazy (iii) workers have few work skills (iv) other

(j) What happens when you give punishment to any staff who is not working as expected? (1-5) (I) higher authorities (God fathers) interfere and reverse the decision (ii) the decision takes

4

effect but the 'god fathers' put you on the black list (iii) management supports it wholeheartedly (iv) other (specify)

(k) How does the result in (I) affect the management of your operations?

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....

(l) How does workers union affect your control over the workers?

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....

(m) To what extent would you think that corruption (internal swindling of corporation funds) is a major draw back in NWSC? (1-5) ....

(n) To what extent would you think that corruption (conniving with customers) is a major draw back in NWSC? (1-5) ....

Q5:

(a) How does your section fit into the organisation structure?

....
....
....

(b) By hierarchy, how many are there from you to the top man of KRIP? Does the KRIP management generally strictly follow hierarchy or you can approach any officer including the top man at any time? How does this arrangement promote/impede effectiveness and efficiency in your management?

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(c) In which way does the organisational structure affect your daily work? Would it facilitate you work to change the structure as the work complexities arise? In your view what has been the approach of headquarters about changing the organisational structure? Do they recruit as per the structure or work requirements?

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Q6:

(a) How often do you hold meetings and how do you take decisions in your section?

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....

5

(b) How do you make follow up of the decisions made?

....
....

(c) To what extent do you think there is teamwork in your section (1-5)?...............................

(d) How do you motivate your staff? Do you think the salary is adequate? To what extent is the salary a key player in the motivation of your staff?

....
....
....
....
....
....

(e) Do you have reward system in place? ....

(f) Do you have a penalty system in place?...

Q7:

(a) How do you measure customer satisfaction?

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....
....

(b) To what extent are your staffs generally inclined to customer care both in the field and in the office (1-5)? ....

(c) How long do you take to respond to customer queries? .

....

(d) Do you have a customer complaints book? ....

(e) How would you rate your public image? (1-5)...

Q8:

(a) How would you rate the system in terms of transparency (doing "things behind doors" and you just see them happening) (1-5)?...

(b) What do you think is the impact of this on the management of operations? (1-5)

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....
....

(c) What is your comment about management's restriction on the use of corporation vehicles to only SC 1 staff? Is it fair? (1-5)

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....

(d) What are your comments about the general tendency for some staff to use the corporation effects for their personal work?

....
....
....

(e) What are your comments about transparency in promotions, training of staff, staff transfers?

....

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Q9:

(a) How do you measure your section's performance?

....

....

(b) Do you use indicators for measurement? Which ones do you use?

....

....

(c) What do you normally do once you find that your indicators are below the expected targets?

....

....

(d) To what extent are your superiors interested in your measurements?

....

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....

Q10:

(a) Do you control your operating expenses or this is controlled from headquarters?

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(b) Do you relate your expenditures to the revenues or this is controlled from headquarters?

....

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(c) What are your comments about water being traded as any other business good? Would this deprive people of their basic necessity?

....

....

....

(d) Is management strict with accountability of funds? (1-5)

....

....

Q11:

(a) What are your comments about the role of corporate planning in NWSC?

....

....

(b) To what extent does it play a leading role in your management planning? (1-5)................

(c) How do you use the annual corporate targets to run your day to day operations?

....

....

(d) In your opinion what do you think can be done in order to make the corporate plan more effective?...

....

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(e) Do you think corporate planning was necessary any way? (1-5).

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Q12:

(a) What are your comments about the present management contract with regard to customer service delivery compared to the previous arrangements?

....

....

....

(b) Comment on the management by KRIP compared to the previous arrangement with regard to the following topics:

Team building:

....

....

Combating any corruption tendencies:

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....

Time management:

....

....

Strictness with work:

....

....

(c) Rate the prospects of KRIP with regard to customer service delivery compared to the previous management (1-5)...

(d) Do you think this management contract could have been handled by Ugandans instead of foreigners (1-5) ....In a better way? Y/N.......................................

Q13:

(a) Do you have a maintenance system in place? Which one?

....

....

(b) To what extent do you do regular maintenance (1-5)? ....

(c) Comment on your daily work procedures

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(d) Do you see any improvement in the maintenance and work procedures with this management contract compared to the previous arrangement? Do you think the previous management could have improved as well given the same facilities?

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8

Q14:
Which measures has NWSC tried before to improve the management effectiveness?

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To what extent do you think they were actually effective (1-5)? ....