INTERNATIONAL INSTITUTE FOR INFRASTRUCTURAL, HYDRAULIC AND ENVIRONMENTAL ENGINEERING

Pressure for change

Clear shared vision

Capability for change

Actionable first steps

Change

Process

People

Culture

SUCCESS

CHANGE MANAGEMENT IN NATIONAL WATER AND SEWERAGE CORPORATION-UGANDA.

Okaronon Edmond

M.Sc. Thesis SEE 115

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CHANGE MANAGEMENT IN NATIONAL WATER AND SEWERAGE CORPORATION-UGANDA

By

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This work is dedicated to my parents Mr and Mrs. Paschal Owino

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ABSTRACT

This study was carried out on the change management programmes initiated and implemented by the new management of National Water and Sewerage Corporation to improve corporation performance. The programmes were implemented along side the Private Sector Participation (management contract), which was an on-going contract in the corporation's largest service area, Kampala.

The objectives of the study were to assess whether generally accepted change management practices were applied in the NWSC change process, whether there was improvement in service delivery to the customers, and whether there was improvement in corporation performance and organisational behaviour. A combination of both qualitative and quantitative methods was adopted for the study to maximise on the amount of data collected. In the analysis of results, NWSC exempting Kampala area, and Kampala area were handled separately where possible.

The results revealed that the NWSC change management programmes were conceived and implemented following generally accepted change management practices. The study revealed that there has been a distinct improvement in organisational behaviour for example, middle managers take more risks than they had previously done with confidence and this resulted to improved performance outputs such as the 15% reduction in UFW. However, for Kampala area, which was under the private management contract, there was no significant change. Overall, the performance of the corporation showed a distinct improvement during the programme period. Service delivery to the customers was also greatly improved.

EXECUTIVE SUMMARY

Introduction

Change has come to be understood as the norm for today's work environment. Most people agree that the pace of change is constantly accelerating. There is pressure to innovate, develop newer, faster and better ways of working. It is generally recognised that one of the management defects, which can lead to the failure of an organisation, is failure to respond to changing circumstances. For organisations to survive and excel they should therefore act proactively to change. The typical approach of these organisations would be to know their present situation (where are we now?), where they want to be in future, and then design and implement programmes of improvement and strengthening (how are we going to get there?).

In Uganda the key players in the water sector are the Directorate of Water Development (DWD) and National Water and Sewerage Corporation (NWSC). NWSC is responsible for water supply and sewerage services in the large urban centres (Presently it operates in 12 towns) and DWD is responsible for the rest of the urban centres and the rural areas.

NWSC is a public utility company formed by decree No.34 of 1972 and strengthened by the NWSC statute No.7 of 1995. It is charged with the main responsibility of providing water and sewerage services in the large urban centres in a self-sustaining manner. The NWSC has moved from efficiency with funds for investment available in the early 70's, to dilapidation of the water and sewerage systems in the later part of the 70's and early 80's. From the mid 80's to the mid 90's, activities within the corporation were characterised by rehabilitation of the water and sewerage system. This was done mainly with the use of donor funds on lent to the corporation. The investments have contributed immensely in rehabilitating the existing infrastructure under NWSC management. Unfortunately, these investments have not been matched with the necessary efficient commercial and financial management capacity that can ensure the delivery of sustainable services in the medium to long-term.

With the infrastructure in place, the later part of the 90's was devoted to improved efficiency and performance enhancement, so as to effectively deliver services to the people. A number of institutional strengthening measures where instituted by the corporation e.g. management development, restructuring, and corporate planning. Despite this measures however, analysis of the corporation performance in 1997 revealed that the performance was inadequate. For example, the UFW was at 59 %, profitability as measured by return on fixed assets (ROFA) was at 0.14 %, efficiency of operations were appalling with an operating ratio (OR) of 92 % and Days receivable ratio (DRR) of 414 days. On realising that the above institutional development measures were not delivering benefits at the anticipated rate to meet the challenges, top management in 1997 resolved to improve performance through the use of Private Sector Participation (PSP).

Because of the size of Kampala area operations (it accounts for 60-70 % of NWSC's operations) and the perceived poor organisational behaviour of staff in Kampala area, the corporation resolved to improve performance there through the use of PSP under management contract. The contract award followed nominated contractor approach.

The contract was code-named Kampala revenue improvement project (KRIP) and had well-intentioned objectives, which included but not limited to improvement of revenue collection, improvement in water distribution and maintenance management and expansion of the water supply coverage. However the analysis of performance after one and half years of contract award (half the contract period) revealed that the stated objectives had not been achieved.

During the second half of 1998, the top-management of the corporation was changed. A new board of directors was ushered in place that in turn appointed the new managing director. The team triggered a critical analysis of the corporation's operations. They discovered that the corporation was facing many difficulties, which influenced its ability to finance its operations. The main problems were high UFW (about 60%), low collection efficiency (71 %), poor organisation culture, huge labour force and above all the corporation was operating at a deficit among others. The problems identified, had a major influence on the cash flow situation of the corporation which hampered implementation of planned activities. This led to poor service delivery to the customers and hence low cost-recovery, thus creating a vicious circle.

The above status pointed towards a need for change and reform so as to arrest the worsening situation of the corporation. The new management adopted a strategy of internal reforms, which comprised short-term performance enhancement programmes. The 100-days programme was therefore conceived with the general objective of improving operational efficiency within 100 days. The programme was part and parcel of the corporate plan but with a new approach to solving corporation problems by being more focussed. It covered the five key problem areas of water production and sewerage services, water distribution, revenue generation, cost reduction, and customer care. The service and revenue enhancement programme (SEREP I) was latter formulated as a follow-up programme to the 100-days programme. It was to enhance service delivery and improve customer care satisfaction. SEREP II then followed and like SEREP I it also ran for six months. The objective of this study was therefore to carry out an evaluation of these programmes.

Research questions and Research hypothesis.

It has been generally recognised that organisations that followed generally accepted change management practices in initiating and implementing changes have been successful. The research therefore set out to investigate the following research hypothesis: *"Short term programmes in NWSC, were conceived and implemented following generally accepted change management practices, resulted in improved performance output and change in organisational behaviour"*. The research questions formulated aimed at assessing: whether generally accepted change management practices were applied in the NWSC change process, the performance of NWSC before and after the programmes, whether there was real change in performance and organisational behaviour in NWSC, and whether there were improvements in service delivery to the customers.

Methodology

A combination of both quantitative and qualitative methods was adopted for this research to maximise on the amount of data collected. The research methods selected for the study were documentary review (which also included study of newspaper reports on NWSC operations), structured interviews, and self-administered questionnaires. The respondents for the in-depth interviews included all senior managers of NWSC (salary scale 1). Different questionnaires were designed for middle managers, lower cadre staff, and external customers in the five selected areas of study. The questionnaires for middle managers and lower cadre staff were pilot tested on a small number of respondents. This was very instrumental in fine turning the questionnaire to minimise errors in the final questionnaire sent to the respondents. The sample of respondents was taken as the entire population of middle managers (scale 2-4) and lower cadre staff (scale 5- 7). However for the customer surveys, a limited but representative random sample was selected from stratified population of active accounts in the five selected areas.

Qualitative data was analysed using grounded theory. The responses from questionnaires were coded using the likert scale 1-5 with a score of 5 representing a very high agreement and a score of 1 representing low agreement to a variable and then analysed using the central tendency measure of arithmetic mean. Where the likert scale method could not be applied for particular questions, frequencies were tabulated and quantified using percentages. In the analysis of questionnaires and performance output, NWSC exempting Kampala-KRIP (All areas except Kampala area) and Kampala-KRIP were handled separately where possible. This was adopted for two reasons: Kampala-KRIP represents about 60-70 % of NWSC operations and therefore any significant improvements in performance in NWSC exempting Kampala-KRIP could be overshadowed by poor performance in Kampala-KRIP, and secondly Kampala-KRIP was under a management contract and had not therefore embraced the change management initiatives wholly like the rest of the areas. This was evidenced by the absence of some of the operational strategies instituted in the rest of the areas. Kampala-KRIP could be considered as a control group in this situation.

Results and discussions

(a) Application of generally accepted change management practices in initiation and implementation of NWSC change process.

It has been noted that organisations that followed generally accepted change management practices i.e. delivering all the four pre-requisites for effective change management (Pressure for change, Clear shared vision, Capabilities for change and actionable first steps), incorporating the factors that lead to success into the change process and anticipating the nature of resistance to be encountered before initiating the change, have been successful. The study has found out that NWSC had pressure for change because of its inadequate performance before the programmes. It was noted that the performance of the corporation as indicated by the objective performance indicators were quite unacceptable. First and foremost, although NWSC was charged with the responsibility of providing water and sewerage services to urban centres of Uganda in a self-sustaining basis, it was operating at a deficit. The level of service provision to the customers was also poor, which raised numerous complaints.

The corporation also had a clear shared vision, capabilities for change (managerial, technical and financial) and followed Kurt Lewin's planned change process (Actionable first steps).

Resistance to change had also been anticipated and planned for by involvement of most stakeholders in planning for the change and design of an attractive voluntary retirement scheme. During implementation all factors that lead to successful change except autonomy were fully catered for in NWSC exempting Kampala-KRIP. However for Kampala-KRIP many weaknesses were experienced during implementation phase. This included low staff involvement, weak internal communication, reduced team working, low organisational autonomy, and low degree of flexibility.

(b) Organisational behaviour analysis

Organisational behaviour was investigated in accordance with the behavioural factors under organisation culture and the ideas of Armstrong in Gilgeous (1997) and Cullivan et al (1988). The study has established that the perceptions for change by the workers in NWSC exempting Kampala-KRIP was positive whereas that of the workers in Kampala-KRIP was negative. The attitude to change is an indicator of the workers support for change and has an overall influence on performance. This negative attitude by the workers in KRIP was therefore very detrimental to the change process. On the other hand there was reported improvement in communication in NWSC during the programmes.

The results also show that managers in NWSC exempting Kampala-KRIP involved workers in planning and implementing the programmes. Information was also openly shared among staff in NWSC exempting Kampala-KRIP. However for Kampala-KRIP it was reported that workers were not involved in planning and implementing the programmes and sharing of information among staff was inadequately done. More team working was also reported in NWSC exempting Kampala-KRIP. However the managers in Kampala-KRIP were of the view that there was less team working after the programmes compared to previous periods.

The results also show that prior to the programmes, people's actions were towards personal goals. For NWSC exempting KRIP this was turned round during the programme period and peoples actions were directed towards achieving organisational goals. The workers attitude also changed from I do not care attitude previously to being result-oriented. The change of attitude among the KRIP workers is yet to be achieved. In a similar note there has been reduction in corruption among the staff in NWSC exempting Kampala-KRIP but the workers in Kampala-KRIP are still involved in illicit activities in the field like illegal connections and colluding with the customers.

Blunt and Jones (1992) quote that sub-ordinates in low-income country management refuse to take even the most routine decisions not governed by a rule for fear that he or she will be blamed. This tendency of avoiding risks was prevalent in NWSC before the programmes. However after the programmes, the tendency has changed and sub-ordinates now take risks and are ready to learn from its occasional failures. There were also remarkable improvements in the following behavioural factors in NWSC

globally: Performance measurement, punctuality in the work place and cleanliness at corporation installation (water and sewerage plants).

From the results, it was recognised that the leadership in NWSC exempting Kampala-KRIP is quite strong, but the leadership in KRIP was reportedly weak and inadequate. There is need therefore to strengthen leadership in Kampala-KRIP if improved performance is to be achieved. Analysis of motivation using the Herzberg's motivational factors and factors to achieve job enrichment indicated that there is high staff motivation in NWSC exempting Kampala-KRIP but the staff in Kampala-KRIP seem to be demotivated. It was rather impressive to also note that the workers in NWSC exempting Kampala-KRIP have developed a sense of ownership and pride about working with the corporation. This is a good culture, as it would make the workers put more emphasis on achieving organisational goals and thus improve performance. The workers view in Kampala-KRIP is rather disappointing as the above is yet to be achieved. The poor staff motivation and culture reported above in KRIP could be a function of inadequate leadership.

(c) Service delivery to the customers.

Cullivan et al (1988) points out that people in effective institutions see service to the customers as their primary function. All work, programmes, and innovations are directed towards greater efficiency, effectiveness, and equity in service to the customers. A customer survey carried out in NWSC revealed that there was improvement in the quantity of water supplied to the customers. The perceived quality of water supplied was found satisfactory. The results also depict improvement in awareness of NWSC services and customer responsibilities and the way staff render service.

The response to customer complaints was found to be adequate and timely. This is consistent with information derived from documentary reviews where it was revealed that the response time to reported leaks and sewer blockage improved dramatically from more that 7 days before the programmes to less than 24 hrs after the programmes. This is further reinforced by the newspaper report "Good work NW&SC" (Monitor Sunday The, July 11, 1999) in which one of the customers was thanking the management of NWSC for the improved services. The effectiveness of operations as measured by the perceived accuracy of meter readings and bills was found to be satisfactory in NWSC exempting Kampala-KRIP. However for Kampala-KRIP, there is still a big gap in achieving effective meter readings and accurate billings. This could be the result of poor organisational behaviour in Kampala-KRIP reported above, which may have an effect on the customer's willingness to pay.

(d) Performance output.

The performance of NWSC as measured by the operational performance indicators and financial indicators showed dramatic improvement during the programme period. The combined efforts of PSP and the change management initiatives seemed to yield better results in Kampala-KRIP compared to the period before the change process. Notable improvements include: Reduction of UFW from 44 % before 100-days programme to 29 % after SEREP I (for NWSC exempting Kampala-KRIP) and from 53 % to 44 % for Kampala-KRIP, Improvement in productivity (for NWSC globally)

from 31 employees per 1000 connections before 100-days programme to 22 employees per 1000 connections after SEREP I, Increase in metered accounts (for NWSC globally) from 81 % before the 100-days programme to 87 % after the programme, and turnaround of corporation operations from deficit before the 100-days programme to surplus after the programmes.

Others were increase in capacity utilisation of the corporation plants, improvement in profitability from declining trend before the programmes to an increasing trend after the programmes, reduction in Operating ratio (OR), reduction in Days Receivable Ratio (DRR), and increase in active accounts. The subjective performance in the five key areas of water production and sewerage services, water distribution, revenue generation, cost reduction and customer care as perceived by the middle managers showed a remarkable improvement.

However despite the above improvements, some of the targets were not achieved as anticipated and some performance outputs were not sustained during SEREP II. This could be attributed partly to the short duration of the programmes, which made it difficult to have most of the requirements (inputs) and due to the inadequate funding during SEREP II. For Kampala-KRIP the poor organisational behaviour could have also played a role.

Conclusions

The research has found out that NWSC change followed generally accepted change management practices in initiating the change and preparing for resistance. During implementation, it was established that NWSC exempting Kampala-KRIP endeavoured to create and therefore utilised most of the factors, which lead to successful change. However for Kampala-KRIP there were notable weaknesses during implementation, which included: low staff involvement, reduced team work, and low degree of flexibility among others. The study has also found out that NWSC exempting Kampala-KRIP positively transformed organisational behaviour during the programme period but no significant improvement was realised in KRIP. The notable weaknesses in KRIP were reported corrupt tendencies by field staff, no emphasis by management on putting problems in the open, low staff motivation, staff actions & attitudes were significantly at variance with organisational goals and poor leadership among others. The performance of NWSC depicted a dramatic improvement during the programme period.

In summary for NWSC exempting Kampala-KRIP, it is apparent that the change was conceived and implemented following generally accepted change management practices, and it resulted in improved performance output and change in organisation behaviour. This therefore proves the research hypothesis formulated *"Short term programmes in NWSC were conceived and implemented following generally accepted change management practices, and it resulted in improved performance output and change in organisation behaviour"*

For the control group (Kampala-KRIP) it is apparent that although the programme was conceived following generally accepted change management practices, its implementation did not strictly follow the accepted practices and although it resulted in improved performance, there was no significant change in organisation behaviour.

For the control group we therefore reject the hypothesis and conclude that the change did not achieve the desired level anticipated.

Recommendations.

The following recommendations were made for future programmes:
- The duration for short term programmes to be at least one year long,
- There should be provision of adequate logistics-transport, materials, tools, and financial input,
- Worker participation and involvement in planning, implementation and decision making should be reinforced especially in Kampala-KRIP,
- Management should do everything possible to make lower managers autonomous by devolving most responsibilities and authority to the lower levels,
- The management of Kampala-KRIP should improve on the internal awareness of programmes initiated,
- The management of Kampala-KRIP should put emphasis on openly sharing information among its staff,
- The salary structure as a significant ingredient of motivation should be largely performance based,
- The management of Kampala-KRIP should enhance team working among its staff,
- The management of Kampala-KRIP should strengthen leadership at all levels if performance improvement is to be achieved.

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LIST OF ABBREVIATIONS

ANOVA	:	Analysis of Variance
B.E	:	Billing Efficiency
BPR	:	Business Process Re-engineering
C.E	:	Collection Efficiency
CR	:	Current Ratio
DER	:	Debt Equity Ratio
DRR	:	Days Receivable Ratio
DTS	:	Director Technical Services
DWD	:	Directorate of Water Development
GOU	:	Government of Uganda
IHE	:	Institute of Infrastructural, Hydraulic and Environmental Engineering
IRC	:	International Research Centre
JBG	:	Messrs H.P.Gauff Ingenieure GmbH & Co.
KRIP	:	Kampala Revenue Improvement Project
KWSSA	:	Kampala Water Supply Service Area
M.D	:	Managing Director
M.Eng	:	Master of Engineering
MIS	:	Management Information System
M.Sc.	:	Master of Science
NEMA	:	National Environmental Management Authority
NWSC	:	National Water and Sewerage Corporation
OB	:	Organisational Behaviour
O&M	:	Operations and Maintenance
OPI	:	Objective Performance Indicators
OR	:	Operating Ratio
PEST	:	Political, Economic, Socio-cultural, and Technological
PREP	:	Performance and Reform Enhancement Programme
PSP	:	Private sector participation
QR	:	Quick Ratio
ROFA	:	Return on fixed assets
SEREP	:	Service and revenue enhancement programme
SMART	:	Specific, Measurable, Achievable, Realistic, and Time bound
SPSS	:	Statistical Programme for Social Scientists
SWOT	:	Strengths, Weaknesses, Opportunities, and Threats
TQM	:	Total quality management
TU	:	Technical University
UFW	:	Unaccounted for water

Ushs	:	Uganda Shillings
US$	:	United states dollar
UTL	:	Uganda Telecom Limited
V.A.T	:	Value added tax
WATSAN	:	Water and sanitation

1 INTRODUCTION

1.1 Water sector in Uganda

The key players in the water sector in Uganda are the Directorate of water development (DWD), National Water and Sewerage Corporation (NWSC), and the National Environment Management Authority (NEMA). NWSC is responsible for water supply in large urban areas, DWD for water in small urban centres and the rural areas, while NEMA is in charge of environmental protection.

The constitution of Uganda (1995) provides the framework for policy and legislation in the country. It contains a number of sections, which refer to the rights of citizens to clean and safe water, the good management of water and sustained development of water resources.

1.2 National Water and Sewerage Corporation (NWSC).

National water and Sewerage Corporation is a public utility company formed by decree No.34 of 1972 and strengthened by the NWSC statute No.7 of 1995 with the statutory functions:

- To manage water resources in a way that is beneficial to the people of Uganda.
- To provide water and sewerage services to urban centres of Uganda on a self-sustaining basis.
- To develop water and sewerage systems in urban centres and big national institutions throughout the country.

It operates as a body corporate and may do all acts that body corporate do; lawfully acquire, hold and dispose of real and personal property and sue or be sued in its corporate name.

The executive organ of NWSC is the board of directors, which is, in accordance with the water statute, appointed by the Minister of Water. The board is the policy-making body of the corporation and consists of the chairman, the managing director and other directors, one of which is the director of the Directorate of Water Development (DWD). The National Environment Management Authority (NEMA) and the customers also have representatives on the board. The managing director is the top executive of the corporation and the delegation to the managing director of the board's powers is clearly set out in the National Water and Sewerage Corporation statute (1995).

The NWSC has moved from efficiency with funds for investment available in the early 70's, to dilapidation of the water and sewerage systems in the later part of the 70's and early 80's. From the mid 80's to the mid 90's, activities within the corporation were characterised by rehabilitation of the water and sewerage system. This was done mainly with the use of donor funds on lent to the corporation. The investments have contributed immensely in rehabilitating the existing infrastructure under NWSC management. Unfortunately, these investments have not been matched with the necessary efficient commercial and financial management capacity that can ensure the delivery of sustainable services in the medium to long-term. With the infrastructure in place, the later part of the 90's was devoted to improved efficiency and performance enhancement so as to effectively deliver services to the people.

Analysis of corporation performance in 1997 revealed that the performance was inadequate. Only 3 towns out of 11 that time were able to break-even, it had low coverage, high UFW, and a big inefficient workforce among others. The general perception by top management was that the previous institutional strengthening measures (Management development, Restructuring done in 1995 and corporate planning instituted in 1996) did not seem to deliver benefits at the anticipated rates to meet the challenges. In view of the large proportion of Kampala area operations (it accounts for about 60-70% of NWSC operations), top management therefore resolved to improve the performance there through the use of Private Sector Participation (PSP) under management contract.

1.3 Kampala Revenue Improvement Programme (KRIP)

Previous analysis carried out in 1997 had put UFW in Kampala area at 50-60% and cash collection efficiency at 70%. "The area was also perceived by NWSC top management as having staffs of inappropriate values and attitudes leading, among others, to acts like illegal connections, manipulation of meter readings by staff, uncoordinated operations, lazy staff etc. In short the poor organisational behaviour of Kampala area was perceived as being one of the causes of poor performance" (Onek, 1997 in Mugisha, 2000). In view of the large proportion of Kampala area operations, this poor performance was seen as having serious efficiency repercussions on the overall performance of NWSC.

Top management therefore resolved to improve the performance through the use of PSP under management contract. Messrs H.P.Gauff Ingenieure GmbH & Co (JBG) of Frankfurt/Germany were invited by the NWSC in August 1997 to submit technical and financial proposals for the commercialisation of NWSC operations within the KWSSA (Kampala water supply service area). Based on the proposals submitted by JBG, contract negotiations took place November 6-7, 1997 following which, NWSC entrusted JBG with the execution of the Kampala Revenue enhancement project on its behalf. The contract had good intentioned objectives, which included but were not limited to the following:

- Improvement of billing of water and sewerage thus increase billing efficiency,
- Improvement of revenue collection to increase collection efficiency,
- Improvement in arrears and bad debt recovery to reduce on equivalent debt-age of all unpaid water & sewerage services bills,
- Improvement of water distribution operation and maintenance management to reduce on water losses through bursts, leaks and wastage,
- Expansion of the customer base to increase on the water supply coverage,
- Establishment of a Management Information System (MIS) in the Kampala Water Supply Service Area (KWSSA).

However the analysis of performance of Kampala Area after one and half years under PSP, revealed that the stated objectives had not been achieved. This therefore prompted management to think of other remedial alternatives thus the initiation of the 100-days programme and later Services and Revenue Enhancement Programme (SEREP), which is the subject matter of this research.

1.4   100-days Programme and SEREP

The second half of 1998 saw change in the top management of National Water and Sewerage Corporation (NWSC). A new board of directors was ushered in place that in turn appointed the new managing director. They were entrusted with the following mission:

- To make NWSC a financially self-sustaining organisation and provide water & sewerage services to customers at affordable costs.
- To have the private sector where possible to assist in fulfilling the above objective.

The team triggered a critical situational analysis of the corporation's operations. They discovered that the corporation was facing many difficulties, which influenced its ability to finance its operations (NWSC, Feb 1999). The main problems were:

- Only 3 towns of Kampala, Jinja and Entebbe out of 11 towns that time (12 now) were able to break-even. The rest were subsidised in their operations,
- Debt servicing arising from high costs of funds on-lent to the corporation by government,
- There was a huge, expensive and inefficient labour force which contributed to high operating costs,
- The unaccounted for water i.e. the water that was being lost and not billed, was high (about 60% of the water produced),
- The collection efficiency i.e. collections as a percentage of billings was low (about 71%),
- There was a high arrears (accounts receivables) portfolio of about Ushs 30 billion (at the time of carrying out the research the exchange rate was Ushs 1800 for 1 US $) translating to about 14 months billing,
- There existed a poor organisation culture with most staff actions significantly at variance with organisations goals and objectives e.g. late coming, corruption in form of illicit activities by customer-interfacing field staff and poor hygiene and cleanliness in the corporation premises like pump houses, water treatment units etc,
- There were numerous customer complaints,
- Implementation of the corporate plan was relaxed,
- Taxation policy that demands that V.A.T be collected on bills as opposed to collections,
- Pressure from government on the corporation to improve performance,
- Above all the corporation was operating at a monthly financial deficit of about Ushs 348 million due to poor billing and collection efficiency.

The problems identified, had a major influence on the cash flow situation of the corporation which hampered implementation of planned activities. This led to poor service to the customers and hence low cost-recovery, thus creating a vicious circle.

The above status pointed towards a need for change and reform so as to arrest the worsening position of the corporation. The board and new management adapted a strategy of internal reforms, which comprised short-term performance enhancement programmes. The 100-days programme was therefore conceived with general objective of improving operational efficiency within 100 days. "In his first speech as new managing director, William Muhairwe, November1998, declared- off the curf- that he would turn the ailing corporation around within 100 days" (Gawaya, 1999).

The programme was part and parcel of the corporate plan but with a new approach to solving corporation problems by being more focussed.

It covered the following areas: water production and sewerage services, water distribution, revenue generation, cost reduction and customer care. The specific objectives were to:

- "Improve capacity utilisation and ensure acceptable water quality and sewage effluent.
- Increase coverage and reduce on UFW.
- Improve revenue generation.
- Reduce operational costs.
- Improve customer care relations and services" (NWSC, Feb 1999).

Targets and activities were developed to address the stipulated problems. In the implementation of the programme (which took place from 15-02-1999 to 31-05-1999), a participatory management style was adapted (ibid.)

The service and revenue enhancement programme (SEREP I) was latter formulated as a follow-up programme to the 100-days programme. It was to enhance service delivery and improve customer satisfaction and ran from 01-08-1999 to 31-01-2000. SEREP II then followed and was implemented from Feb-Aug/2000.

1.5 Research objectives

The objective of this study is therefore to carry out an evaluation of the programmes to:

- assess whether generally accepted change management practices were applied in the NWSC change process,
- assess the performance of NWSC before and after the programmes,
- assess whether there was real change in performance and organisation behaviour,
- assess whether there were improvements in service delivery to the customers,
- identify major constraints to improvement of performance,
- suggest possible remedial solutions to the constraints to improved performance.

1.6 Research Question

Based on the research objectives, the research questions were formulated as follows:

- Were generally accepted change management practices applied in the NWSC change process?
- What was the performance of NWSC before and after the programmes?
- Was there real change in performance and organisation behaviour?
- Was there improvement in service delivery to the customers?
- What were the major constraints to improvement of performance?
- What are the possible remedial solutions to the constraints?

1.7 Research hypothesis

This research set out to investigate the following research hypothesis:
Short term programmes in NWSC, were conceived and implemented following generally accepted change management practices, resulted in improved performance output and change in organisational behaviour.

1.8 Justification for the research

The performance of the corporation in service delivery has been inadequate which resulted into initiation of change management programmes (100 days programme and SEREP I and II). For successful implementation of the programmes, regular monitoring, evaluation and control is a pre-requisite. Although evaluation and control is the final major element of change management programmes, it also can pinpoint weaknesses in previously implemented strategies and thus stimulate the entire process to begin again (Hunger and Wheelen, 1996). The research therefore will carry out evaluation of performance to determine impacts created by the programmes, identify gaps and recommend strategies to adjust strategy formulation or implementation. This will ensure sustainability of future change management programmes.

1.9 Chapter Conclusion

This research commenced in chapter 1 with a general background of the water sector in Uganda and National Water and Sewerage Corporation in particular. It was reported that despite the various institutional development programmes tried in the corporation, including Private Sector Participation (PSP), the corporation performance remained inadequate. With the view of improving performance, the corporation adapted short-term change management programmes (100 days programme and SEREP) whose evaluation is the subject matter of this study.

This is then followed by literature review in chapter 2. This builds a theoretical foundation upon which the research is based by reviewing the relevant available literature. Chapter 3 covers the methodology used in data collection and analysis. It also gives the rationale for the choice of different methods.

Chapter 4 presents results of the study and discussion of the results. Finally chapter 5 covers the conclusions of the evaluation within the context of a wider application for processes of change and recommendations, which identifies the directions for future programmes in NWSC.

2 LITERATURE REVIEW.

2.1 Introduction

Constant change has come to be understood as the norm for today's work environment. Most people will agree that the pace of change is constantly accelerating. There is pressure to innovate, develop newer, faster and better ways of working. One of the management defects which could lead to the failure of a company is failure to respond to changing circumstances (Gilgeous, 1997). Saade et al (2000) gives a number of change options normally adapted by organisations, which are, to mention but a few: Retrenchment, Total quality management, Business process re-engineering, Benchmarking, Management contracts, Commercialisation, Performance contracts, and Management information system.

Change is generally a response to some significant threat or opportunity arising outside the organisation. Changes within an organisation take place both in response to business and economic events and to processes of managerial decisions. Managers in this sense see events taking place that, to them, signal the need for change (Ibid.).

The internal context of change relates to management philosophy, structure, culture, and system of power and control. External causes of change on the other hand can be as a result of changes in the level of technology used, market place changes, customer expectations, competitor activities, quality and standards, government legislation or political values. Depending on their current situation and aspirations, different companies will react in different ways to these pressures.

For organisations to survive and excel, they must act proactively to change. The typical approach of these organisations would be to ask:
- What is happening, vis-à-vis what changes are perceived as being important
- What is our current situation
- Given what we are about, what do we need to do to move in the right direction

Reactive organisations on the other hand respond to some significant threat from outside. However, some people regard the do nothing attitude as a strategy in itself (Oldcorn, 1989). "Unfortunately its often necessary to rock the boat to get things going: too often the cry is used to protect a comfortable status quo. 'Don't rock the boat' can only be justified as a strategy if it is absolutely certain that you will reach your objective travelling the way you are. It is however, impossible to be certain that one's objectives will be reached especially in the long term" (Ibid.).

The management of change is different to many of the tasks in organisations, which can be completed using known procedures and routines. Managing change involves considering factors (people, technology, information processing, and competition) that are continuously changing. It relies on managers scanning their environment. Most importantly it relies on managers understanding what has to be present for it to be successful. When approached correctly, effective change management is a rigorous discipline that delivers measurable bottom-line results successfully. Change management initiatives enables employees to meet performance targets on time and on budget, reduce risk associated with the change and increases an organisation's capacity for future change so higher goals can be set annually.

In this sense, it is important that an organisation continually monitors what is happening around it, that is it develops a sense of awareness which stems from realising the need to set in motion changes, that will keep it in, or ahead of, the competition. Although NWSC is a monopoly service provider, with the increasingly changing government trend to privatisation of public utilities mainly to foreigners, there is strong need for the national managers of NWSC to improve performance so that the foreigners have no advantage over them. With improved performance, there will be no valid reason for government to involve foreigners in the management of utility services.

2.2 Environmental scanning

Environments and programmes interact dynamically (Samuel, 1990). Reading the environment is essential for both strategic, long-term decisions as well as tactical, short-term decisions. Environmental analysis should be undertaken not merely when a programme is established, but throughout its life cycle (Samuel, 1990). "It is a management tool for avoiding strategic surprises and ensuring the firm's long-term health" (Hunger and Wheelen, 1996).

2.2.1 Internal environment

The internal environment consists of variables (strengths and weaknesses) that are within the organisation. These variables form the context in which work is done. They include the corporation's structure, culture and resources.
Structure is the way a corporation is organised in terms of communication, authority, and workflow. Often it is referred to as the chain of command.
Culture is that pattern of beliefs, expectations, and values shared by the corporations members. Organisation norms emerge and define acceptable behaviour of members.
Resources are the assets that constitute the raw materials for the organisations production of goods and services. These assets include people's skills, abilities and management talents, as well as financial assets and plant facilities. The resource endowment must be efficiently utilised to improve performance of the corporation.

(a) Organisation structure

The structure of the organisation has a profound effect on its degree of productivity and the type of structure which is effective depends upon environmental conditions (Schwartz et al, 2000). Huczynski and Buchanan (1991) points out that organisational design has changed from seeing stability to considering change as the norm. The implications of these are the expressed concern about the form of company that is likely to survive in these changing times (change in technology and customer demand). They proposed that organic structures and systems were most appropriate to changing conditions.

However Burns and Stalker latter pointed out that neither mechanistic nor organic structural forms was intrinsically efficient but depended on the environment. Thus mechanistic structure may be appropriate for organisations which use unchanging technology and operates in a relatively stable environment. An organic structure on the other hand can be more suitable for a firm, which has to cope with unpredictable

new tasks. Hunger and wheelen (1996) points that organisation structure has to support the corporate strategy in consideration.

(b) Organisation Culture

Organisational culture gives a company a sense of identity "This is who we are. This is what we stand for" (Hunger and Wheelen, 1996). Schein (in, Huczynski and Buchanan, 1991) considered culture as an integral part of an organisation which influences individual behaviour and contributes to the effectiveness of the organisation.

Another factor in corporate culture is how institutions deal with change (Cullivan et al, 1988). When a major change is introduced (new technology, organisational restructuring, a new billing system, new leadership), people are often required to alter the way they operate. It is important to know how organisations respond to new systems or personnel. Does it refuse change, pretend to change, change superficially, or does it realign its forces positively to support innovation. An unhealthy corporate culture will be highly resistant to any change; forces will line up to protect narrow self interest at the cost of overall organisation health (Cullivan et al, 1988).

(c) Organisation Resources

Assets are the raw materials for the organisation production of goods and services. Grant in Hunger and Wheelen (1996) proposes the following resource based approach to strategy analysis:
- identify and classify the firms resources in terms of strengths and weaknesses,
- combine the firms resources into specific capabilities,
- appraise the potential of the resources and capabilities,
- select the strategy that best exploits the firms resources and capabilities relative to external opportunities,
- Identify resources gaps and invest in upgrading weaknesses.

Johnson and Scholes (1993) point out that resource based strategies would provide a better focus for strategy formulation. The value of resources depends on how well they are being managed, controlled and used.

2.2.2 External Environment

"The external environment consists of variables (opportunities and threats) that are outside the organisation and not typically within the short run control of top-management" (Hunger and Wheelen, 1996). These variables form the context within which the corporation exists. The external environment is composed of two parts: Task environment and societal environment. The task environment includes those elements or groups that directly affect and are affected by an organisation's major operations. Some of these elements are shareholders, governments, suppliers, local committees, competitors, customers, labour unions, special interest groups and trade association.

The societal environment includes more general forces; those that do not directly touch the short-run activities of the organisation but can, and often do, influence its

long-run decisions. These include political, economic, socio-cultural and technological forces. The societal environment is usually analysed using the PEST (Political, Economic, Socio-cultural & Technological) analysis (Schwartz et al, 2000).

(a) Political and Legal Environment

All organisations have to exist within the political and legal system wherever they operate. Politics can be national or local and both can have a significant effect on the life and well being of the organisation (Oldcorn, 1989). Schwartz et al (2000) mentions the following salient features, which normally affects the performance of organisation. This includes political interests, monopoly legislation, environmental protection laws, taxation policy, foreign exchange regulations, employment law and government stability. NWSC is facing a problem of stringent policies like taxation policy which demands payment of V.A.T on billings as opposed to collections, environmental protection laws which puts tight standards on the effluent quality to be discharged from the corporation's sewerage works. There is however stability in government and the board of directors are responsible for setting employment laws.

(b) Economic Environment

The state of the economy is continuously changing and the organisation that succeeds is the one that identifies rising and falling trends fastest and takes action soonest, or which has sufficient flexibility to adapt to a new economic situation (Oldcorn, 1989). The economic environment has many aspects and the main ones that affect organisations are: (Ibid.)

- The prosperity of the market- Market means all the possible customers for the organisation's goods and services. It is seen that if customers are not feeling well off, they are not likely to spend much on the service offered,
- Inflation- Inflation is increases in the price we have to pay for goods and services. All organisations, in inflationary times find that they have to pay out more for the goods and services they are using. Raw materials costs rise, wages rise, electricity and petrol prices increases and so on. In most circumstances organisations are left with no option but overcome this by increasing the prices of their own goods and services to compensate.
- Exchange rates- Organisations that are involved in buying from other or sell into other countries, as well as those that are set up in more than one state, are particularly concerned about the way exchange rates fluctuate.
- Interest rates- Interest is the cost of borrowing as well as reward of lending- and these days there are very few organisations that manage without at sometime having to borrow money. There are many advantages in borrowing (and there are risks too), but the timing of that borrowing can be critical.
- Other factors considered under economic environment are money supply, unemployment/underemployment, and energy availability & costs.

The gross national product for Uganda and hence for NWSC customers is quite low (Mugisha, 2000). This affects customer's ability and willingness to pay and hence contributes to poor collection efficiency. Interest rates charged by donors is particularly relevant to NWSC as it was noted in section 1.2, that most of the development projects previously undertaken by the corporation were financed through loans. Further to the above, since NWSC relies on imports for most of its materials

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and equipment, the exchange rate has an effect on the corporation as the payment for the goods acquired has to be effected in foreign currency.

(b) Technological Environment

The factors under these section are: Technological base, in-country manufacturing capability, availability of expertise, spending on research & development, speed of technological transfer, rates of obsolescence and technical education (Schwartz et al, 2000). Oldcorn (1989) mentions that a lot of technological change takes place and organisations have to be aware of the possibilities in three ways. "First, there is the problem that competitors may achieve a technological development which bite into your own market. What is worse is an entirely new form of opposition from a different type of competitor. Second, organisations have to be aware of general technological advances in the broad area which they can build into their own products".

Third, all organisations use equipment of one kind or another, technology is updating all equipment used by organisations at a very fast rate. Organisations that fail to keep up to date will die, but those that kick off the development of a new piece of technology very often succeed (Ibid.). Most inputs for the corporation services (Chemicals, spare parts etc) have to be imported due to lack of in-country manufacturing. It is also compounded by the use of imported technology because of the conditions set by the donor agencies when providing loans.

(c) Socio-cultural Environment

The socio-cultural environment of an organisation can change as much as any of the other types of environment. These is considered under the following factors: "Population demographics, income distribution, social mobility, gender issues, attitude to work and leisure, levels of education and consumerism (Schwartz et al, 2000). NWSC is affected by illiterate customers who do not appreciate the value of safe water and efforts for supplying it. They believe water is a God given resource, which should be supplied for free. This therefore has an influence on customer's willingness to pay and hence results in low collection efficiency. The tendency of people not willing to work hard compounded by corruption also affects the performance of the corporation.

2.3 Institutional analysis

For infrastructure projects to be successful, institutional framework and specific organisations that promote rather than hinder the development process is required (Schwartz et al, 2000). This is achieved by analysing and assessing the present situation of the organisation. The analysis gives an indication of the strengths and weaknesses (opportunities and threats) from which a programme for improvement and strengthening can be designed. Objective verifiable indicators and subjective performance descriptions are used for the analysis (Ibid.).

Johnson and Scholes (1993) states that the ability to sense changes in the environment is important as changes in environment, signal possible changes in strategy. Organisations, which are better at sensing the environment, perform satisfactorily.

Thompson (1997, in Mugisha, 2000) concurs with the above as he states "an organisations needs to understand the nature of its market and generally be aware of, and responsive to, changes in the environment as a whole in order to be effective and efficient.

2.3.1 Objective performance indicators.

These are measurable outputs related to actual current performance of the organisation in delivering its product. These measures or indicators relate to the quantitative results of delivering that product. Cullivan et al (1992) states that performance indicators can be used in two ways: by periodically analysing and comparing a series of indicators, organisations can evaluate its own progress over time and secondly the performance indicators are to compare the organisation performance against generally acceptable performance.

Reviewing current outputs will point problem areas for institutional assessment. Output measures in themselves will not necessarily tell why problems exist but raises signals in advance (Cullivan et al 1988). Shearer (1988, in Schwartz et al 2000) also point out that "measurement of performance" on its own will produce a series of snapshots of performance, which, over time, will demonstrate a trend, which may be favourable or otherwise.

Some of the performance indicators that are normally considered for water and wastewater organisations are:
- Water production m3/d
- Water consumption m3/d
- UFW %
- Coverage %
- Billing efficiency %
- Collection efficiency %
- Profitability (ROFA) %
- Liquidity (CR)
- Creditworthiness (DER)
- Financial efficiency (DRR)

2.3.2 Subjective performance descriptions

Where objective performance indicators show that there are problems within the institution or are not exhaustive, a more detailed analysis is required (Schwartz et al 2000). The "Wash" approach (Cullivan et al 1988) considers "performance categories" for institutional analysis though these can be described as individual perceptions. For short-term changes, only the following categories are considered:
1. Organisational Autonomy
2. Leadership
3. Management and Administration
4. Commercial Orientation
5. Consumer Orientation
6. Organisation Culture

1. Organisational Autonomy

Organisational autonomy is the freedom of institutions from the government or regulatory bodies. While not unrestrained, this independence must exist to the extent that the institution conducts its affairs and meets its responsibilities in an effective manner with minimum interference and controls by other entities (Cullivan et al 1988). Chaudhry et al (1992) points out that the success of teams lies on the opportunity for freedom to make their own decisions. The teams felt they owned the problem and the solution was in their own hands. They enjoyed the autonomy and the challenge.

Effective organisational autonomy is characterised by the power to make decisions about the following important matters: budgets, revenues, hiring levels, pay and incentives, control of personnel, institutional policies, planning & construction of projects and organisation goals (Cullivan et al, 1988). Many excellent companies have even pushed autonomy down to the shop floor or product development team (Peters & Waterman, 1982). Clark (1993) further points out that successful organisations model their jobs and work organisation on ideas of "responsible autonomy", with minimum, specification of tasks. This however calls for close supervision. An adequate level of autonomy is therefore a prerequisite to the success of institutions.

2. Leadership

Leadership is the ability to inspire others to understand the institution mission, to commit themselves and work towards its fulfilment (Cullivan et al, 1988). It goes well beyond proficiency in management skills. Moorhead and Griffin (1999) point out that Leadership is both a process and property.

In order to perform its functions in a competent manner, an institution needs to have effective leadership at many different levels. Effective leaders serve as positive role models. They provide motivation for managers and staff to perform their functions in often difficult and sometimes apparently unrewarding contexts (Cullivan et al, 1988). They have an instinctive feel for the products, services and markets involved, and enjoy a clear awareness and insight of the opportunities and risks (Thompson, 1997). Effective leaders help transform the institution by making it active, energetic, and visionary and by making the sum of the parts greater than the whole (Cullivan et al, 1988).

3. Management and Administration.

Effective management is demonstrated by the capacity to get the most out of the resources available in a deliberate or planned manner (Cullivan et al, 1988). "In managing change, it is important to remember that seen from above, change is exciting and challenging, seen from another perspective it may be threatening" (Taylor, 1994). Projecting enthusiasm to teams and creating a positive culture should therefore be done with utmost care

Good managers have a clear sense of goals and priorities; they know who to rely on to get a job done and how to delegate to them the means to do it. Effective managers are aware of the operational details; they monitor the work and follow-up consistently

(Cullivan et al, 1988). Change management agent take "Helicopter perspective", to stand back from the immediate project and take a broader view of priorities (Johnson and scholes, 1993).

An effective management climate is characterised by teamwork, co-operation and good communication among the staff. "It is necessary to ensure that your team understands all the reasons behind the business rules" (Taylor, 1994).

The counterpart to management skills is the existence and use of the key administrative systems. "These are the policies and procedures which regulate and guide the actions of management" (Cullivan et al, 1988)

4. Commercial Orientation

Commercial orientation is the degree to which actions in an institute are driven by cost-effectiveness and operating efficiency. The performance of an institution's function should be guided and disciplined by a strategy to achieve financial growth (Cullivan et al, 1988). This orientation can be viewed at both operational and policy levels. At the policy level, commercially oriented institutional structure, stage investment, expenditures, and revenues to achieve financial equilibrium annually.
Some water utilities in developing countries have enviable performance record because they are run on commercial principles like any successful private organisation (Franceys, 2000).

Operationally, everyday activities are guided by the quality standards and by constant attention to cost factors. The institution strives to establish a reputation as a financially well-run business to obtain financial support for growth (Cullivan et al, 1988)

5. Consumer Orientation

For the organisation to become consumer-oriented, it must understand the customer (Kayaga, 1997). "Consumer orientation is organising and directing the services of the institution towards consumers" (Cullivan et al, 1988). People in effective institutions see serving consumers as their primary function. All work, all programs, all innovations are directed towards greater efficiency, effectiveness, and equity in service to the consumer. Staffs at every level are aware of this consumer orientation and see it as governing positively their important operational decisions and actions.

Effective institutions in the sector have workable means wherein consumers can interact with them. Creative and cost-effective ways are sought to inform and educate the public (Cullivan et al, 1988). So the excellent companies are not only better at service, quality & reliability. They are also better listeners. That is the other half of the close to the customer equation (Peters and Waterman, 1982).

2.4 Pre-requisite for change

There are four pre-requisites for effective change. These include Pressure for change, a clear-shared vision, capability for change and actionable first step. If any one of these four factors is missing, then problems arise. Problems, which would arise,

include low priority with little action, fast start but the impetus immediately fizzles out, anxiety to carry out the change but frustration comes in due to inadequate capabilities and haphazard efforts because of false start. So before starting make sure that all the four pre-requisites can be delivered (Saade et al, 2000).

2.4.1 Pressure for change

The first step in developing our understanding of change is to consider what drives and influences the need for change. As discussed in section 2.2 above, this could be a result of change in external environment that come from outside the organisation due to changes in level of technology used, market place changes, customer expectations, competitor activities, quality and standards, government legislation and political values, as well as change in economy or change in internal environment which emanates from inside the organisation and relates to management philosophy, structure, culture and the system of power and control.

To carry out the change successfully, the manager must be able to discern and understand the pressure for change early so that there is maximum time to plan and organise to accommodate the pressure.

2.4.2 Clear shared vision

"The very essence of leadership is that you have to have a vision. It's got to be a vision you articulate clearly and forcefully on every occasion" (Peters, 1989). To survive in today's quality conscious environment, the firm's vision should be clear and at the same time leave vast latitude for initiative taking. Peters (1989) further comments that an effective vision prepares organisations for the future but also honours the past.

From the vision, mission statements and specific objectives to accomplish the mission are formulated. An organisation's mission is the purpose of or reason for organisation existence (Hunger and Wheelen, 1996). 'The concept of a corporate mission implies that a common thread or unifying theme should run through a corporation's many activities and that corporations with such a common thread are better able to direct and administer their many activities" (Ibid.). The objectives on the other hand are the end results of planned activities. They state what is to be accomplished by when and should be quantified if possible.

2.4.3 Capability for change

Before a change is initiated, organisations should make sure that it is capable of delivering the change anticipated. Among the factors to be considered include:
• Managerial capabilities- You have to be confident that the people at the top know where they are going and why. "Success in any management process requires capability to recognise problems and opportunities, make good decisions, and take appropriate action" (Schermerhorn, 1996). If managerial capabilities are found to be lacking, they could be developed through support and coaching in knowledge, skills and attitude (Schwartz et al, 2000)

- Technical capabilities- At the outset organisations should know whether they have people with the training, skills and capability to introduce the changes planned. If not train, recruit and/or dismiss (Saade et al, 2000).
- Financial capabilities- Introducing change always involves more financial requirements (Ibid.). This is required to facilitate the accomplishment of stated objectives.

2.4.4 Actionable first step (Change process)

Kurt lewin recommends that any planned change effort be viewed as a three-phase process shown in Figure 2.1. Planned change is a direct response to a person's perception of a performance gap, which is a discrepancy between the desired and actual state of affairs. Lewin's three phases of planned change are
1. Unfreezing: Preparing a system for change
2. Changing: Making actual changes in the system
3. Refreezing: Stabilising the system after change.

1. Unfreezing

Schermerhorn (1996) states that for change to be successful, the system to be changed, individual, group, or organisation must be ready for change. Planned change has little chance for long-term success unless people are open to doing things differently. Unfreezing is the stage of preparing a situation for change and developing a felt need for change. It often helps people break old habits and recognise alternative ways of thinking about or doing things. Ashoka (1998) describes it as the time or exercise where the staff are given the motives for change so that they see them as desirable and necessary. "Once this is achieved, the staff will be motivated to welcome and co-operate with the change programme out of conviction" (Ibid.).

2. Changing

The second stage is where the changes are initiated in the organisational targets of tasks, people, culture, technology, and structure. "However, Lewin believes that many change agents enter the changing phase prematurely, are too quick to change things, and therefore end up creating resistance to change. When managers implement change before people feel a need for it, there is an increased likelihood of failure"(Schermerhorn, 1996).

3.Refreezing

The final stage in the planned change process is refreezing where emphasis is on stabilising the change and creating the conditions for its long-term continuity. This is accomplished by providing appropriate rewards for good performance, positive reinforcement, and necessary resource support (Schermerhorn, 1996). Once the new lines have been drawn, there may be a tendency to relax. Some people may even revert back to the old ways. You need to keep the pressure on until you are sure the new habits are well established. "One doesn't discover new lands without consenting to lose sight of the shore for a very long time" (Gide, in Blanchard, 1996)

Figure 2.1: Lewin's three phases of planned organisational change.

**Phase 1
Unfreezing**

> **Create a felt need for change by:**
> - Establishing good relationship with workers.
> - Helping others realise that present behaviours are not effective.
> - Minimising expressed resistance to change.

**Phase 2
Changing**

> **Implement change by:**
> - Identifying new, more effective ways of behaving.
> - Choosing appropriate changes in tasks, people, culture, technology and/or structure.
> - Taking action to put these changes into place.

**Phase 3
Refreezing**

> **Stabilise change by:**
> - Creating acceptance & continuity for new behaviours.
> - Providing any necessary resource support.
> - Using performance contingent rewards & positive reinforcements

2.5 Change through the right focus

The questions that are normally asked are what organisations need to change in order meet competitive pressures. Pummel in Saade (2000) points out that changes should adequately cover the processes, people and culture. He points out that many change programmes fail because the people issues are not adequately addressed.

2.5.1 Changing operational processes.

This focuses on improving customer satisfaction through continuous and incremental improvements to processes, which includes removing unnecessary activities and variations. Continuous improvement is often perceived as a quality initiative. Saade et al (2000) view process improvement to be: understanding the process, understanding why the process fails, understanding the cause of failure and improving the process by tackling the cause.

2.5.2 Changing the culture

Cultural change is a form of organisational transformation that is, radical and fundamental form of change. Cultural change involves changing the basic values, norms, beliefs etc among members of the organisation. Peters and Waterman (1982) point out that the dominance and coherence of culture proved to be an essential quality of the excellent companies. The stronger the culture and the more it was directed toward the market place, the less need there was for policy manuals, organisation charts, or detailed procedures and rules. In such organisations, people way down the line know what they are supposed to do in most situations because the handful of guiding values are crystal clear (Ibid.).

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The shared values in the excellent companies are clear, in large measures because the methodology is rich. On the other hand, poorer-performing organisations often have strong cultures, too, but dysfunctional ones. They are usually focussed on internal politics rather than on the customer, or they focus on "the numbers" rather than the product or the people who make and sell it (Ibid.).

2.5.3 Changing the people

"No change can be thought to succeed if the people within the organisation are not willing to change" (Mugisha, 2000). Gilgeous 1997 in Mugisha (2000) identifies three types of people in the change process.

• The change sponsors: those who have authority and responsibility to command that changes be made,

• The change champions: the people who plan and support the change,

• The change players: the people who in their daily lives have to experience and cope with the changes.

"Going according to size, therefore it can be seen that the change players are the biggest mass in a normal flat organisation. When it comes to changing people, it may mean that a lot of efforts must be put on the change players because they are the ones who touch the ground to implement things" (Mugisha, 2000).

In times of change, organisations are realising that they must have personnel who can adapt smoothly and quickly to the changing environment, both internal (within the organisation) and external (within the market place). To realise how to effect changes in an organisation, it is necessary to know what is likely to be the reaction of the work force to major change. Figure 2.2 gives an idea of the likely reaction of a typical workforce in an organisation to a major change (Saade et al, 2000).

Figure 2.2: Reaction of a typical workforce in an organisation to a major change.
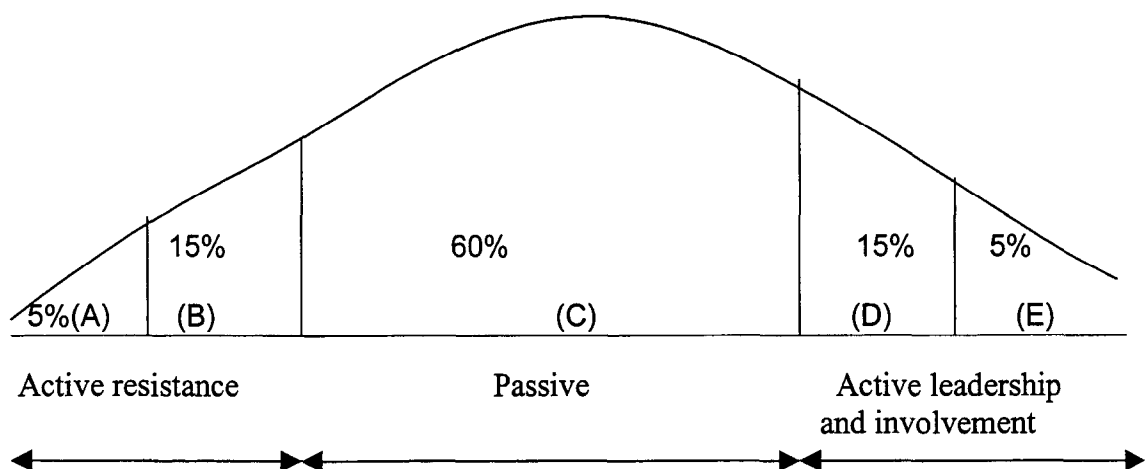
Where
A- The workforce that will not change
B- The workforce that will change when there is no other option
C- The workforce that needs to be convinced to change
D- The workforce that gets involved as soon as possible
E- The workforce that leads the change.

Following this model, to effect change sucessfully at the start the focus should be on the 20% of the people who will actively lead and get involved. Early success and persuasion then starts to get the middle 60% involved and isolate the 20% who are still resisting, who will either change or find alternative work in which change is not required. "This is a very practical change management approach. First identify the work-force that is convinced and support the change. Then, educate those who are not convinced by the explanation (the doubting Thomases). Finally, force those who are resisting into submission with sanctions such as loss of jobs, suspension, pay cuts etc"(Ashoka, 1998).

2.6 Approach to change

Kotter et al in Gilgeous (1997) provide a description of the available alternatives that arise from the choice of four types of variables (Table 2.1 below)
1. the amount of time required
2. the degree of planning
3. the type of involvement
4. the use of power

These represent four strategic options for the management of change. On the basis of these criteria change can either be revolutionary or evolutionary. With an evolutionary approach, many people will be involved in planning and implementing the change programme, get people involved and minimise resistance. Revolutionary approach on the other hand is often planned by few people and implemented in a rapid manner by those who agree with the changes or those who are coerced to do so. Rapid changes may work but usually it involves conflict and will not be reinforced. Gilgeous (1997) points out that the key variables that can help a manager decide which approach to take is:

• the amount and type of resistance anticipated,
• the position of the initiators vis-à-vis the resistors, in terms of trust, power etc,
• the locus of the relevant data for designing the change, and
• the stakes involved.

Therefore to manage effectively, managers need to understand the change process and adopt a style that will increase the chance of being successful.

Table 2.1: Strategic options for the management of change.

Variable	Revolutionary change	Evolutionary change
Pace	Rapid changes	Slow changes
Structure	Clearly planned	Not clearly planned initially
Involvement	Little involvement of others	Lots of involvement of others
Approach to resistance	Overcome resistance	Minimise resistance

2.7 Choosing a change strategy

Schermerhorn (1982) propose three broad strategies, which can be adopted when attempting to get others, adapt a desired change. These are force-coercion, rational persuasion and shared power strategies.

2.7.1 Force-Coercion strategy

This strategy uses the power bases of legitimacy and punishment as primary inducements to change. Force-Coercion can be done in more than one way. " In a direct forcing strategy, the change agent takes direct and unilateral action to "command" that change take place. This involves the exercise of formal authority or legitimate power, offering special rewards, and/or threatening punishment. In political manoeuvring, the change agent works indirectly to gain special advantage over other persons and thereby make them change. This involves bargaining, obtaining control of important resources, or granting small favours in return

Schermerhorn (1982) contends that this strategy has limited results. "Although it can be done rather quickly, most people respond to this strategy out of fear of punishment or desire for reward. This usually results in only temporary compliance with the change agent's desires. The new behaviour continues only so long as the opportunity for rewards or punishments is present"(Ibid.).

2.7.2 Rational persuasion strategy

Rational persuasion strategy attempts to bring about change through persuasion backed by special knowledge, empirical data, and rational argument. "The likely outcomes are eventual compliance with reasonable commitment" (Schermerhorn, 1982). "It is assumed that people will accept changes if they see that it is in their self interest to do so. It is argued that workers will change by themselves if they appreciate the cause"(Ashoka, 1998). Although slower than force-coercion strategy, it tends to result in longer and internalised change (Schermerhorn, 1982).

2.7.3 Shared power strategy

This strategy identifies or establishes assumptions from which support for a proposed change will naturally emerge. Sometimes called a normative-reductive strategy, this approach is based on empowerment and is highly participative in nature. " It relies on involving others in examining personal needs and values, group norms, and operating goals as they relate to the issues at hand. Power is shared by the change agent and other persons as they work together to develop new consensus to support needed change"(Ibid.). Because this method entails high level of involvement, it is likely to result in a longer lasting and internalised change.

2.8 Conditions for successful change

Making the right changes that will benefit the company, while bringing along the people with it, doesn't just happen by chance. Particular foundations and structures need to be created and developed. The following are the conditions under which success to change is likely.

2.8.1 Direct active involvement of senior management

Peters and Waterman (1982) provide evidence of how effective change in organisations is fostered by visible top management support. The key is for top management not only to advance the change concept but also keep it from being undermined. If others lower in the organisational hierarchy see senior managers totally committed to the change, they fully buy into the new procedures (Ibid.).

2.8.2 Make people aware of pressure for change

Employees should be informed of the plans for the future and the competitive-market pressure being faced. "Keeping people in the dark encourages rumour and speculation" (Schermerhorn, 1982). Awareness of the need for change and an understanding of the changing circumstances enables employees appreciate and get committed to change.

2.8.3 Participation and involvement

Participative planning actively includes in the planning process as many of the people as possible who will be affected by the resulting plan, and/or will be asked to help implement them. Participation can increase creativity and information available for planning. It can also, increase understanding, acceptance and commitment of the people to final plans. "To build and enact the best plans, proper attention must always be given to genuine involvement of others during all planning stages. Even though this process may initially take more time to formulate plans, it may ease the actual implementation and improve final results" (Schermerhorn, 1982).

Nolan et al (1993) comment that "You must lay proper groundwork, involving those who will be affected by the change, obtaining commitment from relevant stakeholders- especially the organisation employees- and developing a comprehensive implementation plan- the steps typically neglected in most change efforts". "One of the well-documented psychological laws of organisational behaviour is that

involvement leads to commitment. Use a high-involvement approach to achieve a high commitment, a commitment that is essential for the success of the change effort" (Ibid.).

2.8.4 Encourage communication

For effective change, communication is very vital right from the initial announcement of the impending change through to the implementation stage. Ashoka (1998) points out that there is need to plan for effective announcement while planning for a major change, keeping in mind the nature of the change and the organisational environment. Both of these have a major impact on the development of an appropriate communication strategy. The reasons for the change, what the new organisation will be and how certain jobs will change should be clearly communicated. Regular and effective communications greatly avoids uncertainty that change can promote (Gilgeous, 1997).

2.8.5 The need for the right culture

Successful change requires cultures, which encourage flexibility, autonomy & group working. If the organisation culture does not support these activities, then change may be much more difficult to accomplish. Gilgeous (1997) points out that if organisations don't have a culture which matches how they wish to operate in future, they must create one.

2.8.6 Use of individual skills and innovativeness

Selecting, developing and making the best use of individuals are vital activities, because an organisation is only as good as the people in it. People need the technical knowledge and skills so that they can participate in making useful decisions, solving problems and creating new ideas. To achieve this, the competencies of individuals, both personal and interpersonal need to be continuously upgraded in the areas of business, management and performance improvement.

Oldcorn (1989) also concerts that where the individuals in an organisation do not have the flexibility or willingness to change, individuals will have to be trained to be more adaptive and forward-looking too. Those who take the training courses have lots of confidence and are more excited about the changes being implemented.

2.8.7 Successful changes begin with results

Schaffer and Thomson in Gilgeous (1997) argue that change programmes can succeed if they begin by being result-oriented (focuses on achieving specific, measurable operational improvements). The results-driven approach is beneficial for the following reasons:

- Innovations employed to achieve targeted goals are carefully prioritised.
- Since management introduces each process innovation sequentially and links them to short-term goals, it can discover fairly quickly the extent to which each approach yields results.
- Management creates a continuous learning process by building on the lessons of previous phases in designing the next phase of the program.

2.8.8 Give regular feedback on performance

The organisation should draw attention to any discrepancy between actual performance and desired present and future performance. It allows those concerned to begin to think about how this situation can be improved and prepares them for the need to change.

2.8.9 Publicise successful change

Gilgeous (1997) points out that to create a positive attitude towards change, the organisation should publicise the change programmes which are seen as models of how to undertake change and the positive effects it can have for employees. However this should not be taken to mean that mistakes should be hidden or poor performance outcomes ignored.

2.8.10 Praise as well as pay for results

People want to be adequately remunerated for their efforts. "A motivational work setting is rich in availability of rewards for people whose performance accomplishments help meet organisational objectives" (Schermerhorn, 1982). Rewards are not necessarily financial but may be in terms of owning the whole change process. To maximise the motivational impact of rewards, managers should (1) respect diversity and individual differences; (2) clearly understand what people want from work; and, (3) allocate rewards to satisfy the interests of both individuals and the organisation.

2.9 Barriers to successful change

Those managing changes must be aware of the nature of resistance they will face from other managers and workers. The cause can be difficulties in organisations- its structures, power centres, its culture. These difficulties must be addressed before unfreezing can take place (Gilgeous, 1997). The factors behind resistance to change are:

- **Fear of loss**- People often resist change because they think they will lose something of value. As a result, they tend to focus their own immediate best interests and not those of the whole. There are times when change will result in short term loss for a particular individual or group. In the long term, change will produce more positive results. It is therefore advisable to look beyond some of the short-term difficulties, discomfort and disadvantages to see a better future which is more fulfilling.

- **Misunderstanding**- People may resist change when they do not understand its implications and perceive that it might cost them much more than they will gain. Such situations occur when trust is lacking between the people initiating the change and the implementers and managers of that change. Under these circumstances it is easy for misunderstanding to develop when change is introduced, even though on the surface the change is to peoples advantage. Mistrust creates suspicion and motives can be questioned.

- **Disagreement about the benefits of change**- People may assess the situation differently from those initiating the change and may see more costs than benefits,

not only for themselves but also for the whole. Those who implement change may be working with different sets of information to those who initiated the change, leading to differences in the analysis of its value.

- **Concern about lack of skills or ability**- People may resist change because they fear they will not be able to develop the new skills and behaviour that will be required of them. Thus even when people realise the change is a good one, they may resist it. A new situation, structure or procedure may require different behaviour, new and different relationships, and a requirement to change faster than is confortable.

- **Culture of the organisation may pose a barrier to change**. For example a 'no mistake allowed' culture. This may be symptomatic as a risk-avoidance strategy on the part of managers. The effect is that it will adversely limit the plans and actions of many in the organisation. Peters and Waterman (1982) noted that risk-taking and occasional failure often accompany successful change: "A special attribute of the success-oriented, positive, and innovative environment is a substantial tolerance for failure" (ibid.).

Resistance should be recognised as a clue to re-examine the merits of a proposed change (Moorhead and Griffin, 1999). Resistance can be constructive if it prompts managers to communicate more with employees, re-evaluate the decisions to make a change, and perhaps search for new ways to reach the desired goals. Any manager planning to make a change should therefore first of all try to assess the extent to which the change will be resisted (Oldcorn, 1982).

Kurt Lewin developed the technique called the 'force-field analysis', which is a useful way of identifying the resisting elements in an organisation, on one hand and the forces in favour of the change, on the other. The technique is specific to any one change, the 'forces' being different for each change that is proposed. The technique also shows the relative strength or weakness of each element in the equation and is often expressed in the form of a diagram.

Figure 2.3: Kurt Lewin's force-field analysis of resistance to change.
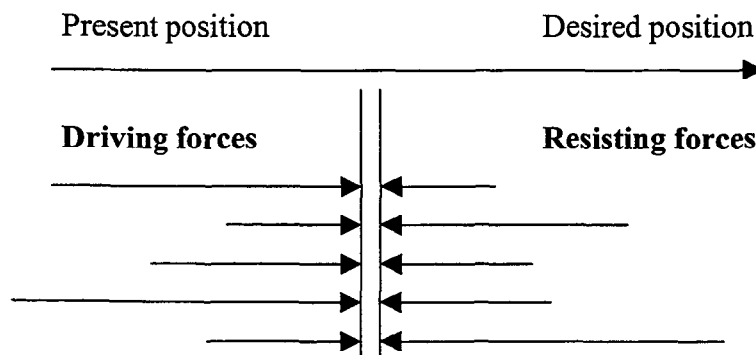
The diagram illustrates clearly how the driving forces that are seeking to achieve a change come up against a number of restraining or resisting forces. The relative length of arrows indicates the relative strengths of the driving forces and of the resistors. In order to achieve the desired objective either the driving forces have to be strengthened (which can lead to more conflict) or attempts have to be made to reduce the strength of the resistance (or remove it altogether). If a final decision has been

reached to initiate a change the following methods can be used to manage resistance (Gilgeous, 1997).

Table 2.2: Methods for managing resistance.

Method	Examples
1. Education & Communication	Open communication, Training programs to increase awareness.
2. Participation & Involvement	Collaborative design of changes.
3. Facilitation & Support	Emotional support and attentiveness, specific problem-related training.
4. Negotiation & Agreement	Labour contract, mutual goal-setting sessions.
5. Manipulation & Co-optation	Appointment of a member of an opposing group, such as a member of union, to board of directors.
6. Coercion	Threats of punishment or dismissal for non-compliance.

Accordingly, Strebel in Gilgeous (1997) noted that programmes based primarily on the change drivers, ignoring the forces of resistance, are as prone to failure as those dealing primarily with the forces of resistance, ignoring the change drivers. What is therefore needed is the choice of a change path based on a diagnosis of both the forces of change and resistance.

2.10 Change management options.

Having discussed the general aspects of change management in section 2.4 to 2.9 above, some of the specific options normally adopted by organisations are briefly explained here.

(a) Retrenchment

Retrenchment is the reduction of scale of operations to a position where the company has a solid, consolidated and competitive base (Thompson, 1997). This action is required when a company experiences declining profits as a result of production inefficiency. Thompson (1997) further points out that to improve efficiency, three aspects are involved either individually or in combination: cost reduction, asset reduction and revenue generation. These, except for asset reduction are infact in line with the objectives for the 100-days programme.

Turnaround Strategy is most appropriate when a corporation is in a highly attractive industry and its problems are not yet critical (Hunger and Wheelen, 1996). This strategy emphasises the improvement of operational efficiency. The two phases of

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turnaround strategy are contraction and consolidation. Contraction is the initial effort, which quickly cutback sizes and cost. Consolidation is the implementation of programs to stabilise the now leaner corporation (Hunger and Wheelen, 1996). To streamline the company, management develops plans to reduce overhead cost and justify costs of functional activities. Management has to conduct the consolidation phase in a positive manner & encourage employees to get involved in productivity improvement. The organisation is likely to emerge from this strategic retrenchment period a much stronger & better-organised company capable of expanding the business.

(b) Total Quality Management (TQM)

Winning companies compete by delivering a product that supplies superior quality to customers. Customers value quality and are willing to pay for it (Thompson, 1997). Quality incorporates the organisation's ability to meet specific needs and requirements of customers such as timely delivery at adequate quantity. There should be commitment to continuous quality improvement, which should be led by top-management and supported throughout the organisation. Taylor (1994) points out that to maintain competitive edge in the markets, companies must not just " do things better" but "do things differently"

Peters (1988, in Thompson, 1997) argues that organisations committed to Total quality management have to address these issues

- necessary commitment to getting things right first time must be encouraged and developed throughout the organisation,
- guiding system from the strategic leader: continual quality improvement must be managed,
- need for clear targets and measures of success,
- quality improvements/innovations should be rewarded, and
- relationships with both buyers and suppliers should be developed.

PA Consultants (1987, in Thompson, 1997) "contend that companies who have pursued Total quality have been able to benefit in a number of ways. Specifically they have:

- improved company image, improved productivity and reduced costs,
- created greater certainty in their operations (by reducing conflicts within the operating system, they have improved the speed of delivery and their flexibility in responding to changes in customer requirements),
- improved morale (employees have shown greater concern and commitment where they have seen that there is an emphasis on things being done well and that high standards have been encouraged, valued and rewarded),
- committed customers".

(c) Business Process Re-Engineering (BPR)

A new approach to strategy implementation by improving operations is re-engineering. It redesigns business processes to achieve major gains in cost, service, or time (Hunger and Wheelen, 1996). This involves:

- a fundamental rethinking of the way work is done,
- a structural reorganisation; breaking hierarchies into cross-functional work teams,

- a new information and measurement system, and
- a new value system with greater emphasis on customers.

It is an effective way to implement a turnaround strategy. Reengineering strives to break away from the rules and procedures that have developed and become ingrained in an organisation over the years and that block change. "Such organisational and work design rules were based on assumptions about, technology, people, and organisational goals that may no longer be relevant" (Hunger and Wheelen, 1996). The key to reengineering is to ask "If this were a new company, how would we run this place"? To make the whole organisation work, changes must be made to challenge both the established way of doing things and to encourage managers to agree new non-bureaucratic methods of operating- to achieve breakthroughs and commit themselves to continuous improvements (Taylor, 1994).

Hammer (in, Hunger and Wheelen, 1996), the brain behind this change option suggests the following principles for reengineering:
- organise around outcomes, not tasks; design a person's or department's job around an objective or outcome instead of a single task or series of tasks,
- have those who use the output of process perform the process,
- people or departments that produce information can also process it for use,
- treat geographically dispersed resources as though they were centralised,
- link parallel activities; instead of having separate units perform different activities that will eventually come together, have them communicate while they work so that they can do the integration,
- put the decision point where the work is performed, and build control into the process; the people who do the work should make the decisions and be self-controlling, and
- capture information once and at the source; instead of each unit developing its own database and information processing activities, the information can be put on a network so all can have access to the data.

(d) Benchmarking

Benchmarking compares a company's performance, processes, products and services with those of the best performers inside and outside the industry. One can, from the often impressive report series issued by water utility see advances that it is making: more customers, a high turnover, a lower UFW, etc.. compared with one, two or five years ago. But the question whether these performance figures are any good compared to others in the same business, or in another business, is not raised, let alone answered.

The benchmarking process identifies indicators and best practices (that top performers use) that enable management to challenge the status quo, improve performance and increase customer value. Benchmarking does not necessarily aim to set targets comparable to those achieved by others, but rather acts as a means of identifying the need for improvements and the ways to get there (Saade et al, 2000)

Benchmarking emphasise the 'process' as a way to get to the 'target'. A process transforms inputs by suppliers in to outputs delivered to customers. Often, processes

by utilities have not been designed but have evolved over time, and resistant to change because 'that's the way we've always done it'.

2.11 Organisation behaviour

"Organisation behaviour (OB) 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). Huczynski and Buchanan (1991) define it as the study of the structure, functioning and performance of organisations, and the behaviour of groups and individuals within them. We cannot fully understand the individual behaviour without learning something about the organisation since the organisation influences and is influenced by the individual. Clearly then the study of organisational behaviour must consider the ways in which the individual and organisation interact.

"What this one means is that if the people (who hold positions of managers, supervisors and workers) are not well put, all other organisational efforts may lead to failure" (Mugisha, 2000). The matter of how people are doing what and how organisations respond becomes so crucial regarding effective and efficient service delivery. "However, it may not be enough to just know the characteristics of workers; there is need to also know the 'fuel' that makes them work" (Ibid.).

Armstrong in Gilgeous (1997) lists 16 questions one needs to ask himself while trying to analyse people in organisations and what makes them work. These questions are:
- Do people feel they are given enough responsibility?
- Do people know what is expected of them in the shape of the objectives and standards of performance?
- Is there adequate feedback to people on their performance, whether it is good, bad or indifferent?
- Is there sufficient challenge in the jobs given to people and sufficient emphasis on doing a good job?
- Do the managers or supervisors in the shape of guidance or help give people enough support?
- Is the emphasis in the organisation on hard, dedicated work, or is it fairly relaxed?
- Do the people feel fairly rewarded for the work that they do?
- Do people feel promotion policies are fair?
- Is there a lot of bureaucracy and red tape around the organisation or is the approach reasonably flexible and informal?
- Is there an emphasis on taking calculated risks in the organisation, or is playing it safe the general rule?
- Is management open about what company is doing?
- Is there a general feeling of warmth and good fellowship in the atmosphere?
- Do managers and employees want to hear different opinions?
- Is there emphasis on getting problems out in the open rather than smoothening them over or ignoring them?
- Do people feel that they belong to a worthwhile company and are valuable members of working teams?
- Is there an emphasis on positive rewards rather than punishment?

Cullivan et al (1988) has almost similar views that emphasise worker motivation and team working as necessary conditions to leverage effective performance. In their analysis, they also seek to know if the following organisational elements exist.

- Teamwork.
- Staff having a good feeling being in the organisation.
- Staff feeling involved in the organisation's activities.
- Staff being able to balance organisational goals and personal ones.
- Staff feeling trusted.
- Staff being interested in improving skills, attitudes, knowledge and entrepreneurship.
- Line managers committed to staff development.
- Adequate salary.
- Corruption seen as unacceptable.
- A system for hiring & firing staff.
- Staff putting value on organisation property.

Tichy (1983) also points out that "Behavioural emphasis focuses on the interface between the organisation and its members, that is, the impact of the organisation on its members in terms of satisfaction, quality of working life, and opportunity to grow. These all contribute to behaviour and therefore to overall organisational effectiveness". The following aspects, which influence people to embrace change, will be covered in more details in this section:

- Communication,
- Teamwork, and
- Motivation,

2.11.1 Communication

Communication is one of the most frequently quoted reasons for blockages and difficulties in organisations. Often teams will express a measure of satisfaction with the way they communicate internally but extreme dissatisfaction about the cross-team communication. Poor communication causes major operational problems as well as emotional and human resource complications. It is the key to delivery on at least three of the change imperatives- awareness, flexibility and co-ordination in the face of complexity (Chaudhry, 1992).

Communication quite obviously is about keeping people informed. The greatest value is that it:

- "Demonstrates to people that they are important,
- Improves self-esteem and motivation,
- Lowers the risk of confusion,
- Makes the early detection of anomalies and errors possible,
- Prevents actions based on assumptions,
- Helps avoid suspicion and unhelpful competition,
- Generates interest,
- Maintains momentum of change process,
- Improves commitment,
- Facilitates appropriate allocation of resources & schedule of activities, and
- Increases bottom-line results" (ibid.)

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Saade et al (2000) and Johnson and Scholes (1993) both point out that communication is very appropriate if there is a problem in managing change. People normally misunderstand change and perceive it as a negative event and will resist it. Communicating widely to employees will make them understand the motives of change initiated, gain their commitment and turn perceptions of threats to opportunities.

Effective communication systems, both formal and informal, are therefore required to inform people of priorities and strategies and to ensure strategies and tasks are carried out expeditiously. Employees have reported higher levels of job satisfaction and work performance when they are pleased with the way their supervisors communicate and the personal feedback they get (Moorhead and Griffin, 1999).

2.11.2 Teamwork

Teams are formed to increase employee commitment and participation. It encourages individuals get involved in activities of the organisation. A team can produce much more than can the sum of individuals, since they bring together complementary skills (Gilgeous, 1997).

Particular benefits of teams are:
- "they improve performance, personal growth, and work products,
- they improve job satisfaction, quality & service,
- they improve morale, cohesiveness and enjoyment,
- they have a positive effect on culture, and
- they do more than individual can" (ibid.).

However for teams to work effectively, there must be a positive mental attitude towards them within the company, particularly from top management.

Tjosvold in Gilgeous (1997) points out that the largest problem associated with team working is conflict both within the team and between teams. Conflict occurs when the attitudes, motives, expectations or activities of team members are incompatible. Some forms of conflict are said to be constructive (Hunt, in Gilgeous, 1997). They are beneficial to the group because they:
- introduce different solutions to the problem,
- clearly define the power relationship within the group,
- encourage creativity and brainstorming,
- focus on individual contribution rather than group decisions, and
- bring emotive, non-rational arguments into the open.

However, more often, conflict is considered to be destructive as it:
- prevents members from seeing the task at all,
- dislocates the entire group,
- undermines the objectives in favour of sub-goals,
- leads people to use defensive and obstructive behaviour,
- results in disagreement of the entire group, and
- stimulates win-lose conflict.

It is clear that the disadvantages of conflicts outweigh the advantages. It is therefore beneficial to avoid conflicts for efficient and effective completion of tasks. Group cohesion is an important factor in keeping a group together. Huczynski and Buchanan (1991) argue that group cohesiveness has positive relationship with productivity & member satisfaction. Finally successfully reaching goals often increases the cohesiveness of a group because they are proud to be identified with a winner and to be thought of as competent and successful. This may be one reason for the popular Phrase "success breads success". A group that is successful may become more cohesive and possibly even more successful (Moorhead and Griffin, 1999).

2.11.3 Motivation

Motivation is important in organisations because in conjunction with ability and environment, it determines performance. The relationship can be stated as follows:

$$P = f (M, A \text{ and } E)$$

Where P= Performance, M= Motivation, A= Ability, and E= Environment (Moorhead and Griffin, 1999). For high performance, an employee must want to do the job (motivation), be able to do the job (ability), and have the materials and equipment needed to do the job (environment). A deficiency in any factor will hurt performance.

Organisations are interested in theories of motivation to discover techniques for motivating people to work harder. Huczynski and Buchanan (1991) argue that factors, which led to satisfaction, were different from those, which led to dissatisfaction at work. The events that led to satisfaction were called motivators and were achievements, advancements, recognition, growth, responsibility and the work itself.

The events that led to dissatisfaction were called hygiene factors and were salary, status, company policy, job security, supervision, and working conditions. Herzberg's theory argued that improvement in the hygiene factors might remove dissatisfaction, but would not increase satisfaction and motivation. However for developing countries, good salary appear to be a significant ingredient for motivation and increased job satisfaction. According to Herzberg, the redesign of jobs to increase motivation and performance should thus focus on the motivators and factors to achieve job enrichment outlined below:

- remove control,
- increase accountability,
- create natural work units,
- provide direct feedback,
- introduce new tasks,
- allocate special assignments, and
- grant additional authority.

Herzberg's approach to job enrichment has had a number of successful applications reported. However other studies conducted by various researchers came up with other motivating factors although those will not be covered here.

2.12 Management of WATSAN sector in developing countries.

Are principles of management different in developing countries compared to that in developed countries? The ways in which people interact and manage their objectives within organisations are often seen to be culturally biased and may give an explanation as to varying success levels. Though it can be argued that measures of success are culturally biased. Hyden (1983) stresses that African managers are deeply ethical with strong commitments to their families and villages of origin. "Infact they are likely to see the impersonality that is such a virtue in the western bureaucratic ethic as somewhat immoral". But these ethics relate to the absolute necessity, the overriding imperative, to fulfil one's societal obligations to the extended family, then the clan and then the tribe rather than to the employing organisation.

Blunt and Jones (1992) explain that "Whereas African organisations may find that they can apply western management concepts and practices to their technical core with few major modifications, these imported ideas and practices are generally found to be inadequate and/or inappropriate for the organisations within their environments". Brown (1989) however rejects 'simple formula' explanations of alleged differences in management practices in Africa as compared to elsewhere.. 'which are reductionist and ignore obvious features of African societies which requires no great imaginative leap to comprehend': political centralisation, patronage, poverty of resources, low capacities for growth, low risk political strategies and political instability.

The symptoms of poor organisational performance identified by the conference on civil service reform (ODA, 1989) include "inability to make policy and routine decisions and implement them, failing services, low morale, high spending on staff, overstaffing, declining revenue and weak financial management, budgeting, control, accounting and audit". One factor, which emerges from the quotations as essential to managerial success, is the building and maintenance of political connections. This consists not in building an independent political base, but in gaining access to top politicians in order to influence policy decisions, supply of resources and protection against politicisation and inappropriate policies. Such political support has to be earned through loyalty and careful network building (Blunt and Jones, 1992).

Corruption and politicisation are described as significant characteristics of low-income country management. Another is the style of leadership whereby many managers "become habituated to interventions from above and invite and expect it, as in the case of the subordinates who refuse to take even the most routine of decisions not governed by a rule for fear that he or she will be blamed, and punished, by a superior if anything goes wrong" (Blunt and Jones, 1992). Centralisation of powers and fear of failure and responsibility for error at lower levels leads to overload at the top, which in turn causes inordinate delays in decision making.

However Leonard (1987) explains that "there is every reason to expect that Leadership skills are as readily available in Africa as they are in the west. But it is also evident that values are at the very centre of the leadership function- a leader must be able to define the goals that an organisation is to pursue and to secure effort to achieve them. In the west, it is relatively easy to find a leader who will sufficiently embody the organisation's goals so as to maintain them". This is achieved by creating

goal commitment artificially with respect to that manager's career development. The environment of government activity in Africa is so politicised, however, that this kind of artificial link between organisational goals and a senior manager's career often does not exist. To a much greater extent than in the west, then commitment must be internally generated by the manager. "We certainly have no knowledge of what reforms might be used to improve the performance of Africa's public organisations. We can be reasonably certain that techniques imported from the west will fail unless they are revised quite fundamentally" (Ibid.).

Low-income countries can be described as having a survival culture. In a "survival culture", survival means you cannot be attacked for doing nothing but you can be attacked for doing something. "The image that managers are resistant to change may be true, there are very few reports of organisational change introduced by managers on their own initiative-reluctant to take the risk without having first sought much higher level approval" (Montgomery, 1987). Because everyday life (Particularly in Africa) can be so uncertain, managers will do everything possible to avoid uncertainty in their work place with considerable tolerance for those who apparently (in western eyes) are doing nothing. Meetings often become the place for the senior managers to demonstrate their patronage and chiefly control and largesse rather than as a form for solving problems and coming to a common solution. In many ways low-income country systems have managed to retain the best and the worst aspects of the colonial bureaucracy without acknowledging that all systems have to change over time.

2.12.1 Management in Public utilities.

Dia (1991) suggests that "perhaps one of the single biggest hindrances to economic development in sub-Saharan Africa is the poor performance of the public sector and chronic weaknesses in the local institutions. The underlying reason for this poor performance seems to rotate around poor motivation of staff. Kiggundu, 1988 in Blunt and Jones (1992) emphasises that poor motivation in Africa may lead to poor performance, individual frustration and alienation at work. The question however is should managers in Africa adopt motivational theories (like those of Herzberg in section 2.11.3 above) which have been developed in the west. Blunt and Jones (1992) assert that while those theories can account for the aspects of human behaviour, they are not always of much help to those charged with making complex organisations work. Blunt and Jones (1992) advice African managers to adopt a cautious, sceptical approach since there are many unanswered questions in the area of motivation. According to them the practical solution lies in studying, acknowledging and understanding the impact on employee behaviour of stimuli from the environment-inside or outside the organisation.

Jones in Blunt and Jones (1992) discern another side of motivation; he says that successful managers do not think of 'motivating' employees. Rather they set and communicate clear standards for individual performance; make it clear that performance matters and that substandard performance is not acceptable, provides relevant opportunities for employees to learn the necessary abilities; reward good performance and punish poor performance. In Zambia for example, Blunt found out that supervisors who had established good interpersonal relationships with employees were much more effective in their jobs as a result. Blunt's conclusion is therefore that you can exercise authority using good interpersonal relationships after winning

acceptance of employees. Sitting at a distance and just paper setting of standards hoping that they will be achieved may not be proactive enough.

There is also the likelihood that public utilities have to function as job providers, this being seen as a more important function than their actual task of service provision. If the bottom line of developed country utilities is profit and service with the bias at present towards service, perhaps the bottom line for many low-income countries is job provision and service, with the bias towards jobs. There are however some favourable factors for public enterprises in such a setting as they are within the government system and 'free from the normal hassles a business enterprise has to face'. But there are also the unfavourable factors, which include 'almost day to day interference from the political masters and bureaucrats in their functioning'. They do not have any freedom in dealing with employees, whether recruitment, transfer or dismissal. Interference in all these matters is common. "Public enterprises have failed significantly when faced with a challenge of crisis. The root cause for this lack of productivity can be found in the absence of appropriate strategy, technical stagnation and absence of employee involvement" (Govinda, 1991).

2.12.2 Management in corporatised utilities

Many corporatised utilities in Africa and Asia were set up at the behest of lending agencies foremostly the Word bank (Blokland et al, 1999). These lenders offered project loans on the conditions that the recipient utility be grated sufficient autonomy to recover costs and meet its financial obligations. However insufficient provisions were made to ensure that the rule of autonomy was transformed into the reality of utility operations. In the end most corporitised utilities were autonomous on paper but not in practice.

"Managers of corporitised utilities almost without exception complain that they need government permission for every move they make" (Ibid.). Corporitised utilities operating on a national scale, suffer from the additional problem that proceeds of systems in surplus areas are used to cross-subsidise systems in deficit regions. This is true for NWSC as highlighted in section 1.4; prior to the beginning of the 100-days programme, the proceeds from the 3 towns which were breaking-even were used to cross-subsidise the other deficient towns. This keeps all systems trapped in a vicious circle of poor service provision, consumers are unwilling to pay their bills, which leads to poor collection performance and hence inadequate funds for maintenance and repairs causing inadequate service provision and so on.

2.12.3 Sub-section conclusion

In conclusion, from the management literature, it appears that there is as great a desire and as great a need for leadership and team building in low-income countries as there is in the rich. Blunt (1983) found that there is no reason to believe that forms of teamwork and work participation are not as applicable in developing countries as they are in the rich countries. On the other hand there must be freedom to generate sufficient revenue to reward staff adequately whilst understanding that a manager's conduct will always be influenced by the cultural setting and the different forces operating in his personality. "Most probably he will view leadership problems on the basis of his personal background, knowledge and experience" (Abisheganaden).

2.13 Evaluation and control

Evaluation is a form of managerial control whereby actual results are compared to desired outcomes to see if a problem really has been resolved. If not, corrective action should be taken. Evaluation can reveal where modifications can be made in the original solution to improve its results over time. It can also provide important information to make "go-no go" decisions and avoid the pitfalls of escalating commitment to previously chosen courses of action.

In any evaluation, both the positive and negative consequences of the chosen course of action should be examined. "If the original solution appears inadequate, a return to earlier steps in the problem-solving process to generate a modified or new solution may be required" (Schermerhorn, 1982). Even Hunger and Wheelen (1996) comment that "although evaluation and control is the final major element of change management programme, it also can pinpoint weaknesses in previously implemented strategic plans and thus stimulate the entire process to begin again. In this way, problem solving becomes a dynamic and an on-going activity within the management process.

For evaluation and control to be effective, there must be an established system in place. Evaluation is also made easier if the original goals and objectives of the proposed solution to the problems are clear and objective where possible. The process involves:
1. Determining what to measure,
2. Establishing standards of performance,
3. Measuring actual performance- made at predetermined time,
4. Comparing actual performance with the standard set,
5. Taking corrective action; If actual results fall outside the desired tolerance range, action must be taken not only to correct the deviation, but also to prevent its recurrence.

It often helps to think of programs in terms of inputs, process, outputs and outcomes. Inputs are the various resources needed to run the program. The process is how the program is carried out. The outputs are units of service and outcomes are the impact created as a result of the program. This study will therefore be carried out based on these four salient issues.

2.14 Chapter conclusion

Section 2.1 gave a general introduction to change management. It was pointed out that organisations change in response to some significant threat or opportunity arising from outside the organisation and that organisations must act proactively to change in order to survive. The need for continuous Environmental scanning (both internal and external) is highlighted in section 2.2, while section 2.3 discusses tools of institutional analysis which are very vital for effective and efficient change.

Section 2.4 then discusses the pre-requisite for change, which have to be present before a successful change is implemented. What organisations need to change in order to meet competitive pressures is covered in section 2.5 while sections 2.6 & 2.7 give the approach and strategies that can be adopted when attempting to get others

adapt a desired change. Section 2.8 highlights the conditions for successful change. It was pointed out that particular foundations and structures need to be created and developed to make the right changes that will benefit the company while bringing along the people. This includes among others, direct involvement of senior management, participation and involvement, encouraging communication and giving of regular feedback on performance.

Unlike section 2.8, which dealt with the factors for successful change, section 2.9 looked at barriers to successful change. It was noted that programmes based primarily on the change drivers ignoring the forces of resistance, were as prone to failure as those dealing primarily with the forces of resistance ignoring the change drivers. Section 2.10 discusses some specific change management options normally adopted in organisations. These include Retrenchment, Total quality management (TQM), Business process re-engineering (BPR), and Benchmarking.

Aspects of organisation behaviour (the ways in which the individual and organisation interact) are covered in section 2.11. The aspects of organisation behaviour discussed in detail were communication, teamwork and motivation. Management of WATSAN services in developing countries is covered in section 2.12. According to the literature reviewed, it seems there is yet inadequate information on what principles are to be used in management of services in developing countries. Finally section 2.13 presents what is involved in program evaluation which is the subject matter of this study. It was pointed out that programmes are evaluated in terms of inputs, process, output and outcome.

Although most of the aspects in this literature review are based on studies in developed countries, they are assumed to be applicable to developing countries like Uganda. This is assumed because of inadequate literature on change management specifically for developing countries where organisations operate under different conditions.

3 METHODOLOGY

3.1 Introduction

A research methodology is a technique for the choice and use of particular tools and strategies for data gathering and analysis. This chapter is divided into two main parts: Preliminary studies conducted at the institute (IHE) and field work done in the author's home country and work organisation (NWSC).

3.2 Preliminary studies

On successful completion of the M.Eng programme and after securing sponsorship for the M.Sc. programme, discussion was held with the supervisor. This was aimed at agreeing on the research topic. It was tentatively suggested that the topic be on the author's work organisation (NWSC) focussing on recent programmes implemented by the corporation.

To come up with an appropriate topic of study, the following was done:
- documentary review of existing publications in IHE, IRC and TU libraries,
- study of available NWSC documents about the programmes,
- Search on the Internet for reports on NWSC operations during and after the stated period.

After further consultation with the supervisor, it was agreed that the topic of study be Change management in NWSC- Evaluation of 100-days programme and SEREP 1.

3.2.1 Philosophy of research design

Philosophers have debated the relationship between data and theory for many centuries. Failure to think through philosophical issues can seriously affect quality of management research. An understanding of philosophical issues is very useful. First, it can help to clarify research designs which is the overall configuration of a piece of research: what kind of evidence is gathered from where, and how such evidence is interpreted in order to provide good answers to the basic research question.

Secondly, knowledge of philosophy can help the researcher to recognise, which designs will work and which will not. Thirdly, knowledge of philosophy can help the researcher identify, and even create, designs that may be outside his or her past experience. It may also help the researcher to adapt research designs according to the constraints of different subjects or knowledge structures (Easterby et al, 1999)

(a) Two main traditions.

There is a long-standing debate in the social sciences about the philosophical position from which methods should be derived. This includes phenomenology and positivism. However occasionally an author of one option produces ideas, which belong more neatly to those of the other option. The practice of research shows that even self-confessed extremists do not hold consistently to one position or the other.

Although there has been a trend away from positivism towards phenomenology, there are many researchers, especially in the management field, who adopt views by

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deliberately combining methods drawn from both traditions. The discussion of these different traditions follows next.

(i)   Positivism.

The key idea of positivism is that the social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation. Many intellects have repeated that there can be no real knowledge but that which is based on observed facts.

"This statement contains two assumptions: firstly, that reality is external and objective; secondly, that knowledge is only of significance if it is based on observations of this external reality. There follows from this a number of implications:

- Independence: the observer is independent of what is being observed;
- Value-freedom: the choice of what to study, and how to study it, can be determined by objective criteria than by human beliefs and interests;
- Causality: the aim of social sciences should be to identify causal explanations and fundamental laws that explain regularities in human social behaviour;
- Hypothetical-deductive: science proceeds through a process of hypothesising fundamental laws and then deducing what kinds of observations will demonstrate the truth or falsity of this hypothesis;
- Operationalisation: concepts need to be operationalised in a way which enables facts to be measured quantitatively;
- Reductionism: problems as a whole are better understood if they are reduced into the simplest possible elements;
- Generalisation: in order to be able to generalise about regularities in human and social behaviour, it is necessary to select samples of sufficient size;
- Cross-sectional analysis: making comparisons of variations across samples can most easily identify such regularities"(Easterby et al, 1999).

However some positivists would not only disagree with some of these statements, but also change their own views significantly over time.

(ii) Phenomenology

The new paradigm that has arisen, largely in reaction to the application of positivism to the social sciences stems from the view that the world and reality are not objective and exterior, but that they are socially constructed and given meaning by people. This phenomenology is not logically derived from positivism in any way.

Many different variants are associated more or less closely with phenomenology. These include sociology, social constructionism, and qualitative methods. Each of these takes a slightly different stance in the application of phenomenology and in the features of positivism that it finds most distasteful.

The starting point is that reality is socially constructed rather than objectively determined. Hence the task of the social scientist should not be to gather facts and measure how often certain patterns occur, but to appreciate the different constructions and meanings that people place upon their experience. One should therefore try to

understand and explain why people have different experiences, rather than search for external causes and fundamental laws to explain their behaviour. Human actions arise from the sense that people make of different situations rather than as a direct response from external stimuli (Easterby et al, 1999).

Within the phenomenological or social constructionist viewpoint there are several direct attacks on the assumptions of positivism. The strongest attack has been on its assumption of value-freedom. Habermas (1970, in Easterby et al, 1999) points out that any form of knowledge is an instrumentation of self-preservation. Human interests not only guide the way we think and the structures of work and authority but they also condition the way we enquire into, and construct our knowledge of the world. One of the big problems with positivism methods is that they are claimed to be independent of values and interests. Harbermas thus attempts to demonstrate the true relationship between knowledge and interest which is otherwise concealed by the objectionist view of positivism.

The term paradigm can be used in three distinct levels: Philosophical level, which reflects the beliefs about the world; the social level, which provides guidelines about how the researcher should conduct his or her endeavour; and the technical level, which involves specifying the methods and techniques which should ideally be adopted in conducting research (Morgan, 1979 in Easterby et al, 1999). The main difference between the positivist and phenomenological viewpoints are highlighted in table 3.1 below (Easterby et al, 1999).

Table 3.1: Difference between positivist and phenomenological paradigm.

	Positivist paradigm	Phenomenological paradigm
Basic beliefs	The world is external and objective	The world is socially constructed and subjective
	Observer is independent	Observer is part of what observed
	Science is value-free	Science is driven by human interests
Researcher show	Focus on facts	Focus on meanings
	Look for causality and fundamental laws	Try to understand what is happening
	Reduce phenomena to simplest elements	Look at the totality of each situation
	Formulate hypothesis and then test them	Develop ideas through induction from data
Preferred methods include	Operationalising concepts so that they can be measured	Using multiple methods to establish different view of phenomena
	Taking large samples	Small samples investigated in depth over time.

These two positions are of course the 'pure' versions of each paradigm. Although the basic beliefs may be quite incompatible, when one comes down to actual research methods and techniques used by researchers the differences are by no means clear cut and distinct. This is very relevant for the water sector. Previously engineering fields

emphasised the use of a positivist paradigm. However there is now a greater emphasis on the phenomenological paradigm as it offers a better understanding why things happen the way they do.

To aid the researcher to choose which methods and aspects are most likely to be of help in a given situation, the strengths and weaknesses of each method are given in table 3.2 below (Ibid.).

Table 3.2: Strengths and weaknesses of positivist and phenomenological paradigm.

Quantitative methods (Positivist paradigm)	Qualitative methods (Phenomenological paradigm)
Strengths • Provide wide coverage of the range of situations • Fast and economical • Considerably relevant for policy decisions	**Strengths** • Look at change processes over time. • Understand people's meanings • Adjust to new issues and ideas as they emerge • Contribute to evolution of new theories • Provide a way of gathering data, which is seen as natural rather than artificial.
Weaknesses • Rather inflexible and artificial • Not effective in understanding processes or the significance that people attach to actions • Not very useful in generating theories • Hard for the policy makers to infer what changes and actions should take place in the future • Data gathered will not be relevant to real decisions although it may support the convert goals of decision-makers.	**Weaknesses** • Data collection takes up a great deal of time and resources. • Analysis and interpretation of data may be difficult • Very untidy because it is harder to control their pace, progress and end-points • Many people, especially policy-makers, may give low creativity to studies based on a phenomenological approach.

Different methods will provide different perspectives on what is being studied, and therefore it is worth 'triangulating' where possible by using, a combination of both quantitative and qualitative methods (Hofstede in Easterby et al, 1999). Todd (1979,

in Easterby et al, 1999) also advocate the use of both quantitative and qualitative methods, and provide examples of how he has been able to combine these different forms of data to good effect in researching organisations. Triangulation is not an end in itself, but an imaginative way of maximising the amount of data collected (Easterby et al, 1999). The researcher is advised to use different methods from within the same paradigm whenever possible, and also to move across paradigm occasionally.

3.2.2 Research design

Based on the above discussion, a combination of both qualitative and quantitative methods will be adopted for this research to maximise on the amount of data collected. The research designs therefore selected for this study are documentary review and surveys. Documentary review was selected because there is a large inventory of written information, which could give a great impression on the subject under study. This includes: -

- Available literature in IHE, IRC and TU libraries to determine what is already known about the phenomena of change management.
- NWSC documents: Reports on 100 day programmes and SEREP, company accounts, committee minutes, customer records, minutes of area management and senior management meetings during the period of the programmes.
- Newspaper reports on NWSC operations during and after the stated period. This would give a view of customer perceptions on service delivery by the corporation during the programme period.

Surveys are used to supplement information revealed in documentary review that is not on record but valuable for the study. The surveys consist of in-depth interviews and questionnaires.

(i) Data to be collected

In order to answer the research questions in section 1.4.1 and the research hypothesis, the following research data was collected.

- Data on the change process and perceptions for change. This is to determine how management initiated, planned, and implemented the change and workers/managers reactions to it. This was conducted because it has an effect on overall performance of the programmes.
- Data on how change management influenced organisation behaviour. This is to be assessed by determining how staff and management are doing what. The way management handles these behavioural issues and response from workers give signals of what could be happening in the corporation.
- Data on customer perceptions and customer satisfaction. This is to determine how customers felt during that period and assess improvements in service delivery to the customers.
- Data on objective performance indicators (OPI) and financial indicators. This was to assess performance and was determined at the beginning of the programmes, at the end of the respective programmes, and 6 months after. The trend would indicate whether the programmes worked and continued working.

(ii) Designing of research instruments.

The following research instruments were designed to facilitate the execution of the research: Interview schedule for senior managers and questionnaires for middle managers, lower cadre staff and customers.

The interview schedule for senior managers was structured interview composed of open-ended questions. This would give the opportunity for the respondents to speak at length on the topic thereby providing a richness and depth of information not normally yielded by questionnaires (Oppenheim, 1999). The questionnaires on the other hand were composed of mainly closed questions constructed to allow more discrimination commonly known as likert scale where the respondent is asked to tick one answer category indicating the strength of agreement or disagreement with the respective statements (Ibid.). However there were some open-ended questions, which asked for suggestions on how similar programmes could be improved in future and services, made better. The purpose of the study, assurance of confidentiality and procedure of completing the questionnaires was clearly indicated in the instructions.

The end of preliminary studies culminated into the preparation of research proposal, which summarised what the study was about and how it was to be investigated.

(iii) Ethical issues.

In carrying out management research, it is ethical for the researcher to request for entry to the organisation in which the research is to be carried out well in advance. The author communicated to the managing director-NWSC on the 7th-September-2000 on the impending research giving general subject and objective of study. The managing director's response message of 14th -September-2000 stated " Management is particularly happy that you have chosen to carry out research in NWSC with regards to the previous change management enhancement programmes. We trust that your research will be able to bring out key strategic issues and gaps that can be input as lessons learned to future NWSC-strategic programmes. Your idea is very good, very responsible and highly welcome. We shall support you in all possible ways".

3.3   Field work

This section covers the fieldwork done in the author's home country and work organisation- NWSC as mentioned before. The research was conducted from 25th-September-2000 to 1st -December-2000.

3.3.1 Introduction of research to NWSC- management

The research topic was first introduced to the director technical services and then to the chief human resources manager (The MD was out of the country on official duties). A lunch seminar was latter organised in which the presentation of research proposal was done on Monday, 2nd-October-2000. A number of valuable comments were made and the researcher was particularly requested to include customer questionnaires among the research instruments. This was to assess the level of improvement in service delivery during the period. A letter was then drafted by the chief human resources manager to the directors, heads of departments/sections

requesting them to avail all the necessary materials/documents to the author to facilitate successful completion of research.

From then on the lunch seminars were conducted every Monday and it formed a forum where staff carrying out research could make presentations and exchange views. On Monday 9th -October-2000 the MD was briefed on the previous presentations and on his request a recur of the presentation was briefly done. In his comment, he was particularly happy that the staff were taking a keen interest on research related to NWSC operations. He pledged to offer support to the researchers within the corporation's means to facilitate successful completion of research.

3.3.2 Documentary review

Documentary review is a more straightforward method of data collection because data is already in existence and does not have to be "created" by the researcher in the same way as the responses to an interview are created. It is also more reliable for investigating past corporation operations as it is not prone to errors due to poor memory (Ibid.). The study of the official documents gave an insight on the way the programmes were initiated, planned, implemented and the impact on performance. The computation and analysis of the different performance indicators and financial indicators was done for NWSC globally, for NWSC exempting Kampala-KRIP and for Kampala-KRIP separately where possible. This was adapted for two reasons:

*   Kampala-KRIP represents about 60-70% of NWSC operations and therefore any significant improvements in performance in NWSC exempting Kampala-KRIP could be overshadowed by poor performance in Kampala-KRIP.
*   Kampala-KRIP was under a management contract and had not therefore embraced the change management initiatives wholly like the rest of the areas. This was evidenced by the absence of some of the operational strategies instituted in other areas. Kampala-KRIP could be considered as a control group in this situation.

Documentary review also gave an insight whether generally accepted change management practices were applied in the initiation, planning and implementation of the short-term programmes. Lastly the study of newspaper reports on corporation operations at that time highlighted how the customers perceived improvement in service delivery by the corporation.

3.3.3 In-depth interviews

The sample for in-depth interviews was all senior managers (salary scale 1) at headquarters. They were chosen, as according to the documentary review they were fully involved in the planning and implementation of the programmes. The interviews were arranged with the respective managers individually well in advance. They were informed about the purpose of study and estimated time to be taken in conducting the interviews. Each interview conducted commenced with thanking the respondents for setting aside time despite their busy schedules, and introduction of the research topic. They were also assured of confidentiality of their responses, and that information identifying the respondent would not be disclosed under any circumstances.

The interviews methodologically went through the process of programme initiation, planning, implementation, workers reactions to the programmes and how resistance was managed. Information on the role of top-management during implementation,

perceived impact, factors that contributed to the success and failure of the programmes and finally suggestions on how similar programmes could be improved in the future was obtained. Thanking the respondent and expressing appreciation on how their responses would be helpful in the study concluded each interview.

The results of the interview supplemented documentary review by revealing information that was not on record but which was necessary for the study. 9 senior managers were interviewed out of a total of 12 giving a response rate of 75%.

3.3.4 Data collection in the areas using questionnaires

The questionnaires for middle managers, lower cadre staff and customers were monitored in five areas (Kampala, Jinja, Masaka, Mbale and Tororo). The survey used a self-administered questionnaire for collecting data. This was preferred to other types of research instruments mainly because, it ensures a high response rate, it is comparatively less costly, it is easier to reach a widely dispersed sample and has minimum interviewer bias (Oppenheim, 1999). The questionnaires examined issues ranging from perceptions for change, influence of the programmes on organisation behaviour (Communication, Team working, Performance measurements etc), provision of inputs during the programme period and improvements in service delivery to the customers.

(a) Piloting questionnaires

Questionnaires have to be composed and tried out, improved and then tried out again until we are certain that they can do the job for which they are needed (Oppenhein, 1999). "Piloting can help not only with the wording of questions but also with the ordering of question sequences and the reduction of non-response rates. Pilot work is expensive and time-consuming but avoiding pilot work is likely to prove more costly still" (Ibid.). Casley and Krishna (1995) also recommend that "A newly prepared questionnaire should be pretested on a few pilot respondents in order to identify weaknesses, ambiguities, and omissions before it is finalised for the survey itself".

The questionnaires for middle managers and lower cadre staff were therefore piloted on six middle managers and four lower cadre staffs respectively. The pilot work was done only in one area (Kampala area) due to cost implications. This was quite instrumental in that:

- Double barrelled questions were identified and separated,
- Rephrasing of the instructions which were considered belittling and offensive was done,
- Questions were made simple and clear for the respondents to understand,
- Complete questions on those which couldn't form an opinion were constructed, and
- Consistency of the 1st person was maintained.

(b) Sampling

The target population for middle manager's questionnaire was all staff in salary scales 2-4 in the five selected areas. The exercise started by getting the list of names in the specified category in the stated areas from the personnel officer headquarters. There

were a total of 35 middle managers: 13 in NWSC exempting Kampala-KRIP and 22 in Kampala-KRIP. Because of the small numbers of respondents under this category and the need to get accurate perceptions on the programmes, the sample of respondents was taken as the entire population.

Similarly the population for the questionnaire for lower cadre staff consisted of all staff in salary scales 5-7 in the selected areas. Only staffs up to scale 7 were selected as these were thought to be literate enough to give meaningful responses. Similar procedure was used in getting the list of names. There was a total of 145 staff within this range: 69 in NWSC exempting Kampala-KRIP and 76 in Kampala-KRIP. Because of similar reasons above, the sample of respondents was also taken as the entire population.

The sampling frame for customer surveys included all accounts in use in the five areas of study. The customers on supply were selected to minimise non-response due to non-availability of supply. At the time of sampling, NWSC had a total of 34,222 active accounts. To improve the quality of data because of improved management of surveys a limited but representative sample of respondents was drawn. The sample size was calculated as follows (Oppenheim, 1999):
$N = 2500/E^2$ where N= sample size and E= standard error (%).
Taking E=5%, ===$\rightarrow$ Sample size N=100.

To ensure that an adequate number of questionnaires are returned for analysis, the size adapted catered for non-response. Response rate of 50% was assumed and therefore a sample size of 200 was drawn. Dixon and Massey (1957) recognise that in surveys a sampling design involving "stratification" of the population is often used and will, if used correctly, give more precise information about the population. "For stratification, the population is sub-divided into several parts or strata, and the number of observations in the sample is apportioned among these strata. Frequently the proportion of the sample to be taken from each strata is fixed the same as the proportion of the population in that strata (Ibid.).

Since Kampala-KRIP accounts for 60-70 % of NWSC operations, of the 200 total respondents required, 120 (20 in each of the six zones) were randomly selected in Kampala-KRIP from a list of 26182 active accounts (with details about zones, customer references and account numbers). The Kampala billing system administrator printed out the lists of active accounts in each of the six zones. The number of pages in each print out was divided by the sample size to be selected. After every number of pages corresponding to the figure obtained above, the last customer on that page was selected for the sample. However due to time constraints only 60 questionnaires were distributed in Kampala-KRIP and 33 responses were received giving a response rate of 55%. The response rate was based on the actual number of questionnaires delivered.

The remaining 80 respondents for the sample were distributed proportionately among the four selected areas exempting KRIP according to the number of active accounts in each area. The criterion for selection of samples in each of these areas is detailed in Table 3.3 below.

Table 3.3: Criterion for selection of samples for customer surveys

Area	Number of active accounts	Sample size
Masaka	1349	13
Mbale	2005	20
Tororo	1032	10
Jinja	3654	37

Similar procedure as explained above was used for drawing the samples in each area. A total of 45 responses were received giving a response rate of 56%. Details of response rates obtained from the questionnaires are shown in table 3.4 below.

Table 3.4: Response rates from middle managers, lower cadre staff and customer questionnaires.

		No. distributed	Responses received	% Response rate
Middle managers Questionnaires	NWSC exempting Kampala-KRIP	13	12	92
	Kampala-KRIP	22	19	86
Lower cadre staff Questionnaire	NWSC exempting Kampala-KRIP	69	51	74
	Kampala-KRIP	76	46	61
Customer Questionnaire	NWSC exempting Kampala-KRIP	80	45	56
	Kampala-KRIP	60	33	55

(c) Field procedure

The questionnaires for middle managers and lower cadre staff were mainly distributed to the respondents by the author. This provided an opportunity to explain to the respondents how the questionnaires are to be filled. It also enabled the respondents to seek any clarifications on some unclear items. The zonal managers-KRIP and area managers were requested to distribute the questionnaires to the field staff whom the author could not meet personally due to the nature of their jobs. The respective zonal managers and area managers also assisted in distributing the questionnaires to the customers and collected them in 3 weeks time.

Frequent follow-up with the managers were however made in case of any queries so as to ensure correctness and completeness in filling the questionnaires. The results of the above questionnaires were handled separately for NWSC exempting Kampala-KRIP and for Kampala-KRIP.

3.3.5 Data Analysis

Qualitative data from documentary review, interviews and newspaper reports was analysed using grounded theory. This was systematically done so as to tease out themes, patterns and categories. The rationale behind this method is that rather than forcing data within derived assumptions and categories, research is used to generate information, which fits and works because it is derived from concepts and categories (Oppenheim, 1999).

Analysis of the respondents and documents gave information on whether the programmes were conceived, planned and implemented following generally accepted change management practice. This was assessed in light of the four pre-requisites for effective change, Kurt Lewin's change process of unfreezing, change and refreezing, and whether the factors, which lead to successful implementation of change and resistance, were addressed. It also gave an overview of improvement of performance, organisation behaviour and customer perceptions on service delivery.

The responses from the closed questionnaires were coded using the Likert scale 1-5 with a score of 5 representing a very high agreement (very favourable situation in case of customer surveys) to the variable and a score of 1 representing a very high disagreement (worst situation for customer surveys) to the variable. The central tendency measure of arithmetic mean was then computed for each variable. Where the Likert scale method could not be applied for particular questions, frequencies were tabulated and quantified using percentages. One questionnaire for lower cadre staff in NWSC exempting Kampala-KRIP and two customer questionnaires from Kampala-KRIP were excluded from the analysis because all variables were marked either strongly agree or strongly disagree.

The results derived from the questionnaires reinforced the information from interviews and documentary review on change process, facilitation during the programmes and influence of the programmes on organisation behaviour. The customer responses enabled the assessment of improvement in service delivery during the programme period, which was further reinforced by newspaper reports.

An attempt was made to analyse the customer responses using statistical software SPSS for windows version 8.0. An SPSS data editor was opened in which data was entered for each variable using the codes described above. However since this method of data analysis had not been anticipated during the design of the questionnaires, no objective conclusion could be reached from the results on the analysis of variance (ANOVA) and t-test tried. The central tendency measures of arithmetic mean and percentages computed for the different variables as explained above was therefore taken as representative for the entire population.

3.3.6 Presentation of research findings to NWSC-management

A preliminary report on research findings was prepared and a copy handed to the MD-NWSC. A brief discussion of results was latter held between the author and the MD. These mainly centred on key performance indicators and aspects of organisation behaviour.

Presentation of the research findings to NWSC- management was then done on 1st-December-2000. Valuable comments were made on how the results could be enriched. These were considered in further analysis of the results. The MD in his closing remarks thanked the presenter for a job satisfactorily done and looked forward to reading the final research thesis. A copy of the presentation was made and it is to be used as a resource document for future presentations on 100-days programme and SEREP.

4 RESULTS AND DISCUSSIONS

4.1 Introduction

The previous chapter covered the methodology used in data collection and outlined the methods used for data analysis. This chapter will present the results obtained and discuss them in the context of the literature reviewed in chapter 2 and research questions in section 1.6.

4.2 Results of face-to-face interview schedule

Data about the change process instituted in NWSC was determined as described in section 3.3.3 using face-to-face interview schedule (Appendix I). The full highlights from the interviews carried out with senior management members are shown in Appendix II. The summary from those results is presented below under the respective sub-headings.

4.2.1 Programme initiation and reasons for change.

The new board and management initiated the 100-days Programme. It was initiated to address certain ills that were apparent at that time (Low capacity utilisation, High UFW, Low billing/collection efficiency etc). The corporation was also operating at a deficit and not able to meet its statutory obligations. Top-management therefore wanted to reverse this trend. The intention was to have surplus to be re-invested in areas of mains extension thus increasing the revenue base. There were also many complaints from customers in the way they were being handled and on water bills they received. Leaks were also not attended to promptly. Above all, although there was a strategic plan (corporate plan), senior managers believed its implementation was relaxed and it had not worked after a three-year period thus resulting in corporation stagnation. Senior managers further believed that since the traditional way of doing things was not appropriate, short-term programmes were therefore required to expedite implementation of the corporate plan and breath in new life in the corporation operations.

4.2.2 Programme planning

The M.D made observations that culminated into a working paper for management to look at. The approach was to first analyse the existing situation, identify major corporate performance gaps and map out where NWSC should be. This was carried out through strengths, weaknesses, opportunities and threat analysis (SWOT), the results of which are presented in table 4.1. The weaknesses were dealt with particularly on the five key areas (Water production and sewerage services, water distribution, revenue improvement, cost reduction and customer care) and where small input would create big impact.

Senior managers widely accepted that a participatory type of management style was adopted whereby a task force with five committees, one for each of the key areas above were created at headquarters to carry out the planning. The chairmen were heads of departments with specialists from the lower hierarchical structural levels and

the union as members. This balanced top-bottom and bottom-top approach. Similar committees were formed at the area level.

Table 4.1: Key issues raised in SWOT analysis before the programmes.

STRENGTHS.	WEAKNESSES
• Relatively sound sewerage & water infrastructure • Abundant raw water for abstraction • A competent & relatively qualified senior management team • Good positioning of NWSC services relative to other utility services • Abundant water production capacity (operating at about 58% overall) • A good enabling water legislative framework • A relatively good organisational autonomy.	• Operational frame with a large number of un-viable towns (only 3 of 11 that time breaking-even) • High arrears portfolio translating to about 14 months of debt age • Expensive labour force, partly due to overstaffing • Low morale among workers • Low operating efficiency (e.g. UFW of 60) • No external customer surveys • Irrational and costly welfare scheme • Poor organisational behaviour • Lack of performance incentives • A running monthly financial deficit of about Shs 348 million ($ 200,000)
OPPORTUNITIES	THREATS
• Government support for the water sector • A relatively good public image • Donor confidence • Relatively stable economy	• Low customer ability to pay • A V.A.T law that was unfriendly • High environmental protection regulations • Large external debt servicing • Lack of in-country manufacturing.

Planning also involved identification of the key and crucial problems in each of the five main areas and those, which could be implemented within the 100-days addressed. The committees under the overall chairmanship of DTS, formulated SMART targets and activities to achieve the stated goals. Budgets were then drawn and some money set aside to implement the Programme. Eventually these were discussed in prelinary sessions and after amendments formed the working documents for the Programme. Most of the stakeholders (Heads of departments, heads of sections, area managers and other key staff) were involved in reviewing the targets.

Comments on factors raised in the SWOT analysis, which could affect performance during the programmes:

- The government taxation policy requires the corporation to pay V.A.T on bills raised as opposed to collections. Amidst the poor debt collection and the high accounts receivables pointed out before this further compounds the poor financial position of the corporation.
- Lack of sufficient in-country manufacturing has brought problems in the timely provision of inputs because of the long government procurement procedure. On the other hand, forceful adoption of western technologies has also contradicted the norm of appropriate technology, which can be sustained. This is also disadvantageous to the corporation because of fluctuation in exchange rate (section 2.2.2), as a result of inflation in Uganda as the imports has to be paid for in foreign currency.
- The low ability to pay by the customers also presents a very big problem to the corporation.

4.2.3 Programme implementation

Senior managers recognised that the area managers and heads of departments implemented the Programme using a participatory approach with overall guidance from top-management. In section 2.8.3 Nolan et al (1993) quotes that a high-involvement approach achieves high commitment, a commitment that is essential for the success of the change effort. The programmes were implemented through committees. Committees formed brought democratisation in decision making and deciding the fate in various committees. Issues of departmentalism almost disappeared "staff say in technical section were involved in customer care activities". Duties of committees at headquarters were to drive the process and monitor the Programme.

Weekly reports were submitted by the areas to the task force committee chairpersons at headquarters. This were evaluated against set targets and well established criteria and feedback given where necessary. The respective task force committee members carried out evaluation of activities that were planned under their respective committees. Regular meetings were held to review progress and any hindrances identified.

Evaluation of the programme was done monthly and prizes were given to areas, which excelled. Overall evaluation was done at the end of the Programme, during which the best performing areas were rewarded. Winning areas would host the area management and senior management meetings and thereafter conduct bull-roasting festival. Competition between areas was development.

4.2.4 Worker's reactions to the programmes

At the beginning, the 100-days Programme was referred to as a beast Programme. It was something new and the reception was not favourable. The workers initially thought they were going to loose jobs. Later with the awarding of trophies to the best performers, and interaction between management and customers, staff attitude

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changed as they saw that the Programme was initiated in good faith geared to make them better.

The workers were also worried about the cost reduction measures instituted (e.g. medical policy of treating only one spouse and 6 biological children instead of the whole clan previously). Fortunately most of this decisions were passed with involvement of the worker's representatives (Union) so they understood the problem. This is consistent with what Oldcorn (1982) suggested in section 2.9 of literature review that "Any manager planning to make a change should first of all try to assess the extent to which the change will be resisted". Workers also felt they needed better pay for the extra work since they were required to increase productivity to cater for increased work due to staff reductions. Senior managers pointed out that although the salary was increased by 12-15 %, the workers felt the increase was low.

However the middle management team especially the area managers embraced change. They realised a lag in implementation of activities due to lack of funds. With commitment from management to finance the programmes and provide incentives in recognition for good performance, the Programme was wholly embraced. There was a new concept and a new sense of direction from the new M.D. It involved initiation of cultural change- strict attendance in office, performance measurement, rewarding people who perform, which was not there before in NWSC. These according to senior managers could have brought about mixed reactions.

The 100-days Programme involved a lot of work. People previously did not want to work. However they latter took the challenge because of motivation and cash incentives. This is supported by the Newspaper report "Let NWSC chief crack whip"(Monitor Sunday, August 08, 1999) where a customer commented "NWSC employees were used to being handled with kid gloves. Things are now changing. The heat is on. Everybody has to deliver or Muhairwe will crack the whip. Look at the estimated bills we have been getting; yet we have functional meters. Meter readers were too lazy to move around. Look at the dormant accounts that have been activated. Look at the leakages-both sewage and treated water that has been minimised. Open your eyes and see the NW&SC offices (KRIP) on 6th street, step inside and see many other achievements in this short time. Muhairwe crack the whip if this is what delivering entails"

4.2.5 Resistance management during the Programme

According to senior managers resistance was managed by convincing workers that the change had benefits. Most stakeholders including the union members (worker's representatives) were involved in planning for the Programme. This is consistent with one of the methods recommended by Gilgeous (1997) for managing change by collaborative design of changes (table 2.2). The implementation of the Programme was participatory in nature and in the end even those who were resisting, embraced the change. There was no victimisation in the lay off of staff. Those laid off applied voluntarily because of the attractive monetary terms of the voluntary retirement scheme. However there were those who were forced to leave because of indiscipline, drunkardness, theft and laziness.

Initially there was resistance as regards cost reduction measures instituted. When these came to attention of management, incentives were given in form of allowances for additional tasks. Workers were also motivated with cash prizes and special bonus for outstanding performance. Parties were also instrumental in avoiding resistance as workers interacted with top-management members & board members. It brought self-pride, self-confidence and job satisfaction to well performing areas. Empowering workers during the implementation of the Programmes also managed resistance, which was very useful in boosting moral.

4.2.6 Role of top-management during implementation

Results of interviews recognised that the top managers drove the change process, gave guidance to the way of implementation and could advise on the way forward from time to time. They also did the supervision, co-ordination and facilitation of the whole exercise. They played the role of leadership, monitoring and evaluation of the programmes at the area level. They made sure that the necessary inputs like materials are forwarded to the areas in time.

They also participated in massive campaigns to attract customers who were off supply back to the system and came with a proposal on review of tariff, which was seen as a bottleneck to revenue generation. Finally they saw to it that rewards were appropriately given out at the end of the evaluation. Peters and Waterman in section 2.8.1 point out that effective change in organisations is fostered by visible top-management support.

4.2.7 Perceived impacts of 100-days Programme

The biggest impact according to senior managers was on attitude change, changed work mentality and work culture. New concepts were driven into people e.g. customer care-people learnt how to handle customers, woo disconnected customers back to the system. Team working was developed and where it was weak, it was enhanced. Everybody started concentrating on his work, learnt how to work on pressure and started measuring performance.

Concepts of cost-consciousness also came in. Good decisions were made on medical scheme and new transport policy (Corporation vehicles reserved for operations only and officers entitled to transport were given loans to purchase their own vehicles. The corporation however paid such officers monthly consolidated allowance for maintenance, operation and mileage). There was good public perception on NWSC. People started to understand and appreciate what the corporation was doing though there are still few sections of the public who feel quality of service is not good. The board also came to appreciate the day-to-day activities of the corporation and learnt more about its operations.

There was increased morale and commitment especially on the part of area management. This played a big role in increasing productivity. There was also cultural change e.g. awarding of trophies, which sent a message that it is better to be a committed employee. This change in work culture resulted into improved performance in revenue collection, cost reduction and situation turned from cash deficit to surplus. Response to customer complaints (leaks, blockages) and customer

image improved. All in all it showed that there was a great potential for change in NWSC. It further highlighted that controlled expenditure and management can turnaround the corporation.

4.2.8 Necessity for another Programme (SEREP)

This is part of the methodology of adapting change. There should be a period for weakening the status quo (unfreezing), change and then refreezing. SEREP was therefore initiated to enable the change created during the 100-days Programme to become normal working life in the corporation. Further a lot of achievements were made during the 100-days Programme, lessons learnt, constraints and weaknesses experienced. However the Programme did not attain strictly the objectives (appendix IX-XI) for which it was set because of short period of time. Longer period was therefore required to facilitate achievement of targets, maintain the already existing spirit, consolidate achievements and look at ways of addressing constraints and weaknesses. New concepts, attitude and impetus of work created needed to be kept alive.

4.2.9 Perceived impacts of SEREP

SEREP consolidated the achievements of the 100-days Programme. What it actually did according to senior managers was to institutionalise the cultural change of hard work and commitment. There was further reduction in costs due to monetisation of benefits (water, electricity and telephone) to chief officers and introduction of transport policy. For the first time in NWSC the cost of such items could be known in advance. As a result of cost reduction measures instituted, five more areas (Mbarara, Masaka, Mbale, Fortportal and Kabale) were able to break-even with the rest meeting at least their employee related costs (NWSC, Feb 2000; NWSC, Sept 2000).

There was increase of coverage through mains extension and installation of kiosks to extend services to the poor. Coverage was increased by 70 km (NWSC, Feb 2000; NWSC, September 2000); representing 4.4 % increase in network length. The information gathered from the interviews was that all the work was financed by corporation's own resources, unlike during the previous periods when NWSC was relying solely on donor funds for development projects. Customer awareness also went up. Though the work habits had become a norm, the implementation of the Programme became strenuous and monotonous in terms of weekly reports. Enthusiasm faded out mainly because of inadequate funding during SEREP II and slackness in management commitment, so another change was inevitable. SEREP paved way for the present performance contracts (Government signed performance contract with NWSC management and NWSC in turn signed performance contracts with the respective area managers and heads of support services).

4.2.10 Reward system

The management of NWSC put in place a reward system whereby the best performing areas were awarded trophies, which went together with a cash prize. This was done in order to keep the momentum of the programmes alive. This was also used as incentives, which had never existed in NWSC. Trophies were used for recognition

and customer care, whereas cash prizes were to motivate staff which also encouraged competition among the different areas.

Awarding of trophies was done on monthly basis in the winning area, which also conducted a bull roasting festival to motivate area members. Trophies were awarded for the best performing area manager, and the best overall area performance. Trophies were also awarded to areas that performed best in: water production and sewerage services, water distribution, revenue improvement, reduction in suppressed accounts, cost reduction, customer care and finally break-even. The cash prizes ranged from Ushs 300,000 to Ushs 1.5 million (US$ 170-850). Senior managers generally recognised that the reward system brought a lot of competition among managers and raised morale, which led to achievement of better performance. Schermerhorn (1982) generally agrees (section 2.8.10) that the availability of rewards for people, whose performance accomplishments help meet organisational objectives, motivates workers to put in extra efforts. Best customers in the winning area were also visited and offered certificates.

4.2.11 Greatest contributors to success of the programmes

Senior managers attribute the success of programmes to team work. Management put in place a system in the form of committees. All those with specialised knowledge were involved in the planning of the programmes. Participatory approach was encouraged not only in headquarters but also in the areas. A whole cross-section of top-management and middle management was involved in the planning stage of the programmes. This is in line with information in section 2.8 of literature review. This is a very good approach in planning, as people tend to own the programmes. Results of interviews also confirm that there was commitment on part of management compared to previous periods. Money was made available to finance capital expenditure and most of the money saved was ploughed back into operations. Activities were also prioritised

There was a lot of public relations in form of radio programmes and discussion with civic leaders who were enthusiastic to assist. The inbuilt incentive mechanism also greatly enhanced the success of programmes.

4.2.12 Greatest obstacles to success of the programmes

There was still resistance from some die-hards who were afraid that the corporation was to be privatised. They felt that management was just playing a trick meanwhile making NWSC juicy before it can be sold. There was also lack of adequate logistics-transport, materials, and tools to execute the work. According to senior managers, this was mainly caused by delays in procurement due to naturally long circles. Materials that had to be imported had not come within 100-days. Funding of the Programme laxed at the end which resulted in the objectives not being achieved as planned. Allowances were not forth coming so people lost impetus. Saade et al (2000) pointed out in section 2.4.3 that adequate finances are required to facilitate the accomplishment of stated objectives. People also developed fatigue after working such a long journey from 100-days Programme.

Finally KRIP management was not willing to change as they had a running contract. Whereas it was possible to change the status quo in the NWSC exempting Kampala KRIP, the senior managers recognised that it was not possible to do so in Kampala KRIP because of the management contract. Since KRIP represents about 70% of NWSC operations, improvements made in NWSC exempting KRIP were therefore overshadowed. Since the performance of KRIP in revenue collection during SEREP 1 was inadequate (NWSC, Feb 2000), most of the demands could not be acquired.

4.2.13 Lessons to be input in future programmes to increase their success.

The senior managers suggested the following be input in future programmes to increase programme success. Participation of all workers besides the managers should be addressed. They should be informed in the beginning about the intended change and direction in which the corporation is moving. Programmes to shift from taskforce management, which is designed, on temporary basis to strategic management having full participation of the respective departments. Programmes also to be set with realistic targets while providing the resources, facilities and equipment as budgeted and putting trust and responsibility to the respective managers. Realistic programmes to take at least one year and to fall within financial obligations of the corporation.

Reduce the form of reporting and evaluation to be done after 3 months to minimise fatigue during implementation. System of control to be made flexible. Motivation (good salary incentives appear to be a significant ingredient for motivation in a developing country like Uganda) of staff should be looked into and prompt payment of allowances that should cover virtually everybody.

There is need to give power and autonomy to the implementing units. This resulted in creation of new Programme (PREP) categorised by performance contract and autonomy to achieve more success. The areas were commercialised with the hope of improving and sustaining their operations.

4.3 Results of questionnaires for middle managers

The central tendency measure of arithmetic mean was used in the analysis of various responses to the questionnaires for middle managers. An average score of 5 was taken to represent strong agreement to the variable, 1 strong disagreement and 3 uncertain. Since the population was small and the response rate very high, the average scores are considered satisfactory and can be taken to represent the views of all the workers under this category. The comments of the results obtained are highlighted here below under the respective sub-headings.

4.3.1 Perceptions for change

Schermerhorn (1996) defines perceptions as a way we form an impression about ourselves, other people and daily experiences, and the way we process information into the decisions that ultimately guide our actions. It acts as a screen or filter through which information must pass before it has an impact on individual decisions and actions. Depending on individual values, needs, cultural background, and other circumstances of the moment, information will pass through this screen with varying

interpretations and degree of accuracy (Ibid.). The bottom-line is that people can perceive the same things quite differently.

Figure 4.1 gives the results of the way middle managers in NWSC perceived the change instituted by new management. Change was initially perceived as disruptive to mindset method of operation by both groups in NWSC exempting Kampala-KRIP and in the control group Kampala-KRIP as the score was above average. On whether the change would be beneficial to the workers, Managers from NWSC exempting Kampala-KRIP scored it on average but the managers in KRIP scored it below average thus signifying disagreement.

Other variables which were scored above average by both groups of managers were: change thought to be essential & perceived to make it easier to achieve targets and involvement of senior managers & more stakeholders than ever before. For the remaining variables, managers in NWSC exempting Kampala-KRIP scored them above average but Kampala- KRIP gave scores below average which implied that the perceptions for change by managers from NWSC exempting Kampala-KRIP was better than those from KRIP. Schein in Huczynski and Buchanan (1991) pointed out in section 2.2.1 that if workers in an organisation have positive perceptions on the changes initiated, it will result in effectiveness of the change process. From the above, it is therefore anticipated that the workers in NWSC exempting Kampala-KRIP will be more effective in their operations during the programmes compared to those in Kampala-KRIP.

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Figure 4.1-Scores by middle managers on Perceptions for change

Agree

Average score

5

4 4.1

3.6 3.7 3.7 3.8 3.9 3.8
3.5 3.5 3.5 3.5 3.5
3.3
3.1 3.1
3 2.9
2.8 2.7
2.6
2.3

2

1

Disagree

Legend:
◆ NWSC Exempting Kampala-KRIP
■ Kampala-KRIP

Variable (categories):
- Change perceived disruptive to established methods
- Change perceived to make it easier achieve targets
- Change thought to be essential
- Change thought to be beneficial to workers
- All staff involved in planning & implementation
- Involvement of staff avoided suspicion & resistance
- Senior managers were personally involved
- Involvement of senior members encouraged others
- Workers fears were recognised & attention given
- Progs involved more stakeholders than ever before

4.3.2 Communication.

The results of the way the programmes were communicated are detailed in Appendix IV Chart 1. Both groups of managers believed that communication during the programme period was in all directions (top-bottom, bottom-top and lateral). They were also in agreement that this communication method resulted in co-ordinated actions, and was still applicable after the programmes. Generally most of the variables were scored either at average or above average. The scores by managers in NWSC

exempting Kampala-KRIP were always higher than those for managers from KRIP except on communication system that existed before the programmes.

The managers believed that the 100-days programme and SEREP have been the most widely communicated programmes in the history of NWSC. From the results it is evident that these communication system was quite beneficial in that people understood the goals & motives of the change, commitment to change was gained and it was highly effective in turning perceptions of threats to opportunities. Saade et al (2000) and Johnson and Scholes (1993) presented similar arguments in section 2.11.1.

4.3.3 Teamwork

Many tasks are beyond the capabilities of people operating individually. Successful performance entails mobilising and utilising groups as essential human resources in organisations. Gilgeous (1997) points out that the power of a team is a case where 2+2=5.

The results on variables under team working during the programmes are detailed in Appendix IV Chart 2. Managers agree that teams created during the programmes did not at all result in conflict as this variable was scored much below average. Managers in NWSC exempting Kampala-KRIP believed that there was more team working now than there used to be 3 years ago. This is consistent with information derived from documentary review and interviews with senior managers. However for Kampala-KRIP, this variable was scored below average thus signifying disagreement. The possible explanation for these was that the work teams created under the respective key problem sections in NWSC exempting KRIP (water distribution, revenue generation, cost reduction and customer care) where non-existent in Kampala-KRIP.

Managers in NWSC exempting KRIP scored highly the variable on effective team meeting development, which maximised participation and contribution. Generally the scores for most variables were also above average with scores by managers from NWSC exempting KRIP higher than those from Kampala-KRIP. There was agreement that all problems were thought of as a group problem and that team working resulted in good quality service.

4.3.4 Motivation

As discussed in section 2.11.3 of the literature review, motivation is one of the factors, which influence performance. A highly motivated person works hard at a job: an unmotivated person does not. Motivation is not necessarily financial but all forces within the individual that account for the level, direction and persistence of efforts expended at work. Results of these motivational factors are shown in Appendix IV Chart 3.

The middle managers believed that there was increased accountability and responsibility at work during the program period. However the variable on reduced control was scored below average by both groups of managers. This made workers feel untrusted. The variable on assured job security after the programs was also scored much below average by managers from Kampala-KRIP but managers from NWSC exempting Kampala-KRIP scored it above average. Similarly managers from NWSC

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exempting KRIP were in agreement that there was proper motivation & facilitation now than before the programs but Kampala-KRIP managers were in disagreement.

Generally most of the motivational variables were scored above average by managers from NWSC exempting Kampala-KRIP but those from Kampala-KRIP scored most of them below average. Why this big variation when these two groups should be operating under similar conditions will be looked at in the section on discussion of results.

4.3.5 Performance measurement

Franceys (2000) quotes that what cannot be measured cannot be managed. Results on performance measurement detailed in Figure 4.2 shows remarkable performance of the corporation in this area. Both groups of managers scored all the variables above average, which implied that they are in full agreement that performance measurement, existed. This gives an impression that the corporation is able to manage well its operations.

The variable on the entire process-being result oriented was scored above 4 by managers from NWSC exempting Kampala-KRIP and 3.9 by managers from Kampala-KRIP. This is consistent with information derived from documentary review which emphasised that targets and activities were set using SMART criteria and it was aimed at achieving specific, measurable, achievable, realistic and time bound performance output (NWSC, Feb 1999; NWSC, June 1999). The variable on reinforcing excellent behaviour through rewards was scored higher than 4 by managers from NWSC exempting Kampala-KRIP and 3.5 by managers from Kampala-KRIP. This is also consistent with information gathered from documentary reviews and structured interviews conducted with senior managers.

Further to the above, both groups of managers agreed that the performance measurement system applied now had never been widely used by NWSC staff in the past. This therefore confirms the improvement in this area during the program period. All in all more than half of the variables were scored higher than average score of 4 by managers from NWSC exempting Kampala-KRIP. Although the scores by managers from Kampala-KRIP were also above average, they were lower than scores by managers from NWSC exempting Kampala-KRIP except on the variable on giving of regular feedback on performance where the scores were the same.

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Figure 4.2- Scores by middle managers on Performance measurement

Agree

5

4   4.1   3.9   3.9   4.1 4.1 4.1 4 1
     3.9   3.7 3.7
        3.7 3.7
              3.4 3.5

Average score

3 ◀

2

1

Disagree

NWSC Exempting Kampala-KRIP

Kampala-KRIP

Entire process was result-oriented

There was regular feedback on perf.

Attention drawn on discrepancy between act &des perf.

Factor above allowed those concerned to think of improv

Model results were publicised

Excellent behaviour reinforced thru rewards

Perf systems applied had never been widely used before

Variable

4.3.6 Management and supervision

Schermerhorn (1996) points out that "management" is what managers do to achieve effective and efficient performance. Appendix IV chart 4 summarises the results of the subjective performance of the corporation under the different variables under management and supervision during the program.

The variables on granting of autonomy to the workers and conducting training to equip workers with the required skills to enable them achieve targets was scored average by managers from NWSC exempting Kampala-KRIP but below average by managers from KRIP. The other variables, which were scored below average by managers from KRIP, were those on sharing information openly among all staff, involving others in defining their roles & responsibilities and performance indicators being understood at appropriate level. Managers from NWSC exempting Kampala-KRIP however scored all these variables above average.

Both groups of managers were in agreement that there was creation of continuous learning process by building on the lessons of previous experience. This is consistent with information derived from documentary review and in-depth interviews where lessons learned from 100-days program were input to SEREP 1 and those in SEREP 1 in turn input into SEREP 2. Results outlined above signify improved management especially in NWSC exempting Kampala-KRIP. This is reinforced by the newspaper report "Donors vote NW&SC best managed public company" (Uganda confidential, July 9-15, 1999).

4.3.7 Leadership

The results on how leaders inspired others to work hard to accomplish tasks during the programme is detailed in Appendix IV chart 5. The results show that the managers were in agreement with the following variables: Leaders helped clarify goals, roles & responsibilities, Leaders listened to comments & suggestions from subordinates, Leaders oriented towards producing results and availability of adequate support from top-management. Results of in-depth interviews also confirm the existence of adequate support from top-management.

The rest of the variables were also scored above average by managers from NWSC exempting Kampala-KRIP but managers from KRIP scored all these variables below average. This is indicative that there is a leadership problem in Kampala-KRIP. For NWSC exempting KRIP, the leadership seems to be adequate since all the scores were above average. Generally almost all scores by managers from NWSC exempting Kampala-KRIP were higher than those by managers from KRIP. Leaders in NWSC exempting Kampala-KRIP encouraged workers to participate in planning and implementation of the programmes but these seemed not to exist to an adequate level in KRIP. Further to this there seemed to be low co-operative environment created in KRIP compared to NWSC exempting KRIP.

4.3.8 Organisation culture.

Schein in Huczynski and Buchanan (1991) consider culture as an integral part of an organisation which influences individual behaviour and contributes to the effectiveness of the organisation (section 2.2.1). The results on organisation culture (the system of shared beliefs that develop within the corporation and guided the behaviour of its members) are highlighted in Figure 4.3. The results show that previously people's actions were mainly geared towards personal gains. After the programmes, people's action in NWSC exempting KRIP were in line with organisation goals but the culture in KRIP had not changed as the score on this variable was below average.

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Figure 4.3- Scores by middle managers on Organisation Culture

Agree

Average score

◆	NWSC Exempting Kampala-KRIP
■	Kampala-KRIP

5

4.2 4.2

3.9   ■ 3.9 ■ 3.9

4

■ 3.5

3.7

3.5 ◆ 3.5   3.6

.5

◆ 3.2   3.3

3.3

3

■ 3   3.1   ■ 3.2   3.1

2.8   ■ 2.9

2.7

.4

2

1

Disagree

Variable

X-axis labels: Previously peoples action towards personal gain · Peoples action now in line with org goals · Previously staff would arrive to work at any time · The arrival system introduced improv punctuality · The cleanliness at corp premises improved · 2 yrs perf was low because workers lazy · The attitude above has now changed · There was reduction in corruption · In the past managers avoided taking risks · The attitude above has now changed · Workers have developed pride about the corp

It was also revealed that there was improvement in punctuality in all areas due to the introduction of the arrival system (This is a system introduced during the programmes whereby staff sign in when arriving to office in the morning and sign out when leaving the office in the evening). The cleanliness at the corporation installations (water & sewerage works) in all areas also greatly improved. This is confirmed by information gathered from documentary review and results of in-depth interviews with senior managers.

On the issue of laziness, managers from NWSC exempting KRIP accept that there has been a marked improvement and worker's attitude has changed from "I do not care attitude" to being result-oriented. The score by KRIP managers though slightly above average showed no significant improvement from previous situation. The variable on reduction of corruption among staff since the programmes started was scored above average by managers from NWSC exempting KRIP and below average by managers from KRIP. This showed marked improvement in NWSC exempting KRIP compared to Kampala-KRIP. Corruption here meant illicit activities (illegal connections, tampering with meters, staff colluding with customers to defraud the corporation etc) carried out by staffs who interact with the customers.

It is also revealed that previously managers had a tendency of avoiding taking risks. This tendency has since changed as managers now take risks and are ready to learn from occasional failures. Finally the managers from NWSC exempting KRIP confirm that workers have now developed a sense of ownership and pride about working with the corporation, however for KRIP this is yet to be achieved.

4.3.9 Subjective performance before and after the programmes.

Appendix IV charts 6 & 7 show the subjective performance before and after the programmes in the five key areas of water production & sewerage services, water distribution, revenue improvement, cost reduction and customer care as perceived by the middle managers. The results show that the performance of the corporation before the programmes was below average on some key areas or slightly above average. Due to the efforts put in during the programmes, there was a remarkable improvement in performance in all the key areas and all scores were above average after the programmes.

The relative improvement in performance in NWSC exempting KRIP was however higher compared to those achieved by KRIP. This result is consistent with information gathered from documentary review and in depth interviews with senior managers. The information on improved performance is further reinforced by the newspaper report "Govt. gives NWSC a big thank you" (Monitor Sunday, October 22, 2000) in which it was reported "On August 31, 2000, the government of Uganda (GOU) and National Water and Sewerage Corporation (NWSC) signed a performance contract for three years permitting NWSC to function as an autonomous parastatal. It is the first state parastatal to enjoy this status in recognition of its good performance".

Table 4.2: Suggestions made by middle managers on the way NWSC can improve future progs.

Suggestions by managers from NWSC exempting KRIP	Suggestions by managers from KRIP
1. Programmes should have well laid out budgets, which should be implemented with provision of funds. 2. More autonomy should be given to areas to manage future programmes including control of budgets with minimal control from headquarters. 3. All work plans should be facilitated fully and on time 4. NWSC Area managers should put all sections under the same competitive race like areas since all sections have targets, activities and milestones to achieve. 5. Adjust tariff structure to be customer friendly. 6. The spirit of team work should be continued 7. Participatory management approach and involvement of most workers in planning to be continued. 8. There should be sense of trust and support from top-management. 9. Staff salaries & allowances to be looked into. This will strongly give the lower staff reason to put in an extra effort in line of duty.	1. NWSC can improve future programmes through sensitising the workers about the aims and objectives of the programmes. 2. Involve all sections in the programmes and seek views from staff at all levels right from the start. 3. Motivation should be improved through greater participatory decision-making, less derogatory and funitive action on employees for failure to achieve targets, and more administrative and technical support for handling tasks. 4. Ensure adequate finances are available. 5. The flow of information though portrayed as bottom-up-bottom is not entirely so, as what one sees is that what top-management decides is what is to be implemented. There is need to make employees at the lower level, part of the decision-making process. 6. Engage employees in workshops and seminars. 7. Involve civil society, the community & proper increased public relationship. 8. More facilitation in transport, tools & materials 9. Have more meetings between top-management & junior staff. 10. Respect the worker as the most important factor of production.

4.4 Results of questionnaires for lower cadre staff.

The results of questionnaires for lower cadre staff were also analysed using the central tendency measure of arithmetic mean and percentages. The details of the results are shown in Table 4.3, Figure 4.4 and Appendix VI charts 8&9.

Table 4.3: Results showing how the lower cadre staff heard about the Programme.

	Lower cadre staff from NWSC exempting KRIP	Lower cadre staff from KRIP
From the supervisor	16 %	21 %
I read about it on notice board	18 %	11 %
I read about it from newspaper	12 %	43 %
In area meeting	46 %	14 %
During bull roasting festival	8 %	11 %

Results in Table 4.3 above show that 88 % of the lower cadre staff in NWSC exempting KRIP heard about the programme from internal sources and only 12 % heard about it from external (Newspaper) sources. For KRIP, only 57 % heard about the programme from internal sources and 43 % from Newspapers. This gives an impression of the effectiveness in internal communication in NWSC exempting KRIP compared to KRIP during the programme period.

Figure 4.4 shows that awareness of the programmes (both 100-days programme and SEREP) was scored above average. This is in agreement with results from documentary reviews and in-depth interviews which confirmed that employees were informed about the change programmes. The employees and the workers union participated in the planning and the preparation stage of the programmes (NWSC, Feb 1999). The workers in KRIP perceived that the programmes would not lead to job security but those in NWSC exempting-KRIP were in agreement with this variable thus scoring it above average. Staff from all areas however perceived that the programme would result in increased salary and fair rules & procedures.

The programmes were also embraced automatically in NWSC exempting KRIP but not necessarily so in KRIP. It was further revealed that previously whenever programmes were introduced, no effective communication would be made to the workers. Workers from NWSC exempting KRIP gave a score of 4 on the variables on reasons for and expected improvements in performance of the programmes being communicated and clearly explained to the workers. Lower cadre staff in KRIP were however in disagreement with both of the above variables and scored them below average.

Results shown in Appendix VI chart 8 reveals that the teams developed enabled understanding of tasks and achieving of better performance. It was also reported that there was more teamwork after the programmes than it existed before the programmes. Staffs were also encouraged to express their feelings on tasks. This was consistent with information from in-depth interviews, which pointed out that a participatory management style, was adapted for the implementation of the programmes.

Figure 4.4-Scores of Staff response

Agree

Average score

5

4

3

2

1

Disagree

NWSC Exempting Kampala-KRIP

Kampala-KRIP

3.9   3.9
3.7
3.8
3.6
3.5
3.4
3.3
3.2   3.2   3.2
3.1
3   3   3   3
2.9
2.8
4   4
3.5

Awareness about 100-days prog.
Awareness about SEREP.
Perceived job security
Perceived increased salary
Perceived fair rules & procedure
Progs. Embraced automatically
Communication in past progs.
Reasons for progs widely comm
Expected improv clearly explain
Team working encouraged

Variable

Staff from NWSC exempting KRIP were in agreement that they were facilitated with transport, tools and equipment but those in KRIP were in disagreement. The response from KRIP staff was similar to problem noted from information derived from in-depth interviews and documentary reviews (NWSC, June 1999 & NWSC, Feb 2000). It was also agreed that workers responsibilities & roles were clearly defined to them and they participated in defining these roles and responsibilities compared to the past periods (Chart 9).

From Chart 9 in Appendix VI it is confirmed that there has been improvement in mechanism of performance measurement. This is similar to results obtained from in-depth interviews, documentary reviews and questionnaires for middle managers. Lower cadre staff from NWSC exempting KRIP were in agreement with the variable on giving of feedback on performance and rewarding of such performance, which is consistent with information from documentary reviews (NWSC, June 1999; NWSC, Feb 2000) and in-depth interviews. However staff from KRIP seem not to agree much on this issues. Workers also agreed that they had adequate support & encouragement from their supervisors. Finally they believed that the programmes were beneficial to all stakeholders.

4.5   Results of external customer surveys

This section gives the results of external customer surveys and is about customer perceptions, their views, opinions and their assessment of the water & sewerage service delivery by NWSC. The results of the questionnaires were also analysed using the central tendency measure of the arithmetic mean and percentages. The comments on the responses are given here below.

Results in Figure 4.5 show that in NWSC exempting Kampala-KRIP the percentage number of customers who receive water supply for 24 hrs increased from 38 % before the programme to 48 % after the programme. There was also improvement on those receiving water for a period of 19-23 hrs thereby reducing on the percentage of customers receiving supply for less than 19 hrs. Similar and better improvements were achieved in Kampala-KRIP (Figure 4.6) where the percentage of those receiving supply for 24 hrs increased from 28 % before the programmes to 43 % after the programmes. The customers receiving supply for less that 13 hrs substantially reduced. Although NWSC has improved its service delivery as evidenced by the duration of supply, there is still room for further improvement in order to achieve 24-hr supply.

Figure 4.5 Comparison of hrs of supply before & after the progs. in NWSC Exempting Kampala-KRIP
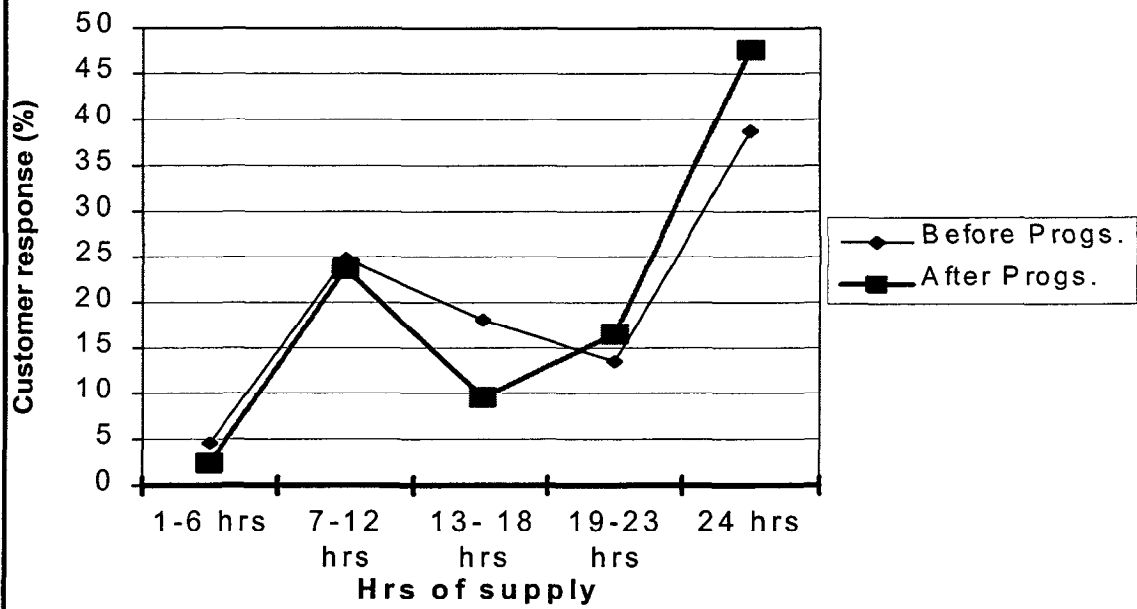
Figure 4.6 Comparison of hrs of supply before & after the progs. in Kampala-KRIP
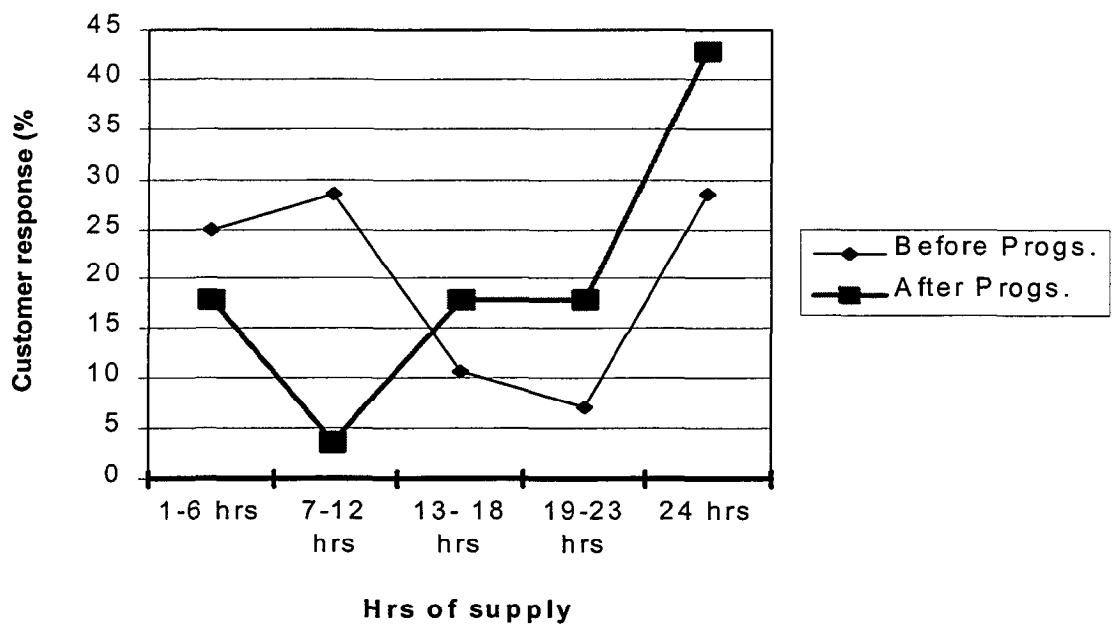
Similarly, results in Appendix VIII reveal that improvement in pressure in the distribution system was scored well above average by customers from all areas. These two variables gives an indication that the quantity of water received by the customers is fairly adequate.

The customers also agree that they are notified of interruptions of water supply due to leakage, which interruptions have considerably reduced since the programme period. The response time to leaks is also scored above average. This is similar to information gathered from documentary review (NWSC, June 1999; NWSC, Feb 2000) and in-depth interviews. The customers also reported a lower frequency of forwarding written complaints to NWSC offices. This is a signal of improved effectiveness in service delivery. This is further confirmed from results in Table 4.4 below.

Table 4.4: Results of external customer surveys.

	PARAMETER	RESPONSES IN PERCENT OF TOTAL RECEIVED			
1	Do you have piped water supply	Yes	No		
		O	97.8	2.2	
		K	97.0	3.0	
12	Do you have any problems with your meter readings	No problems	Sometimes not accurate	Always not accurate	Other
		O	83.3	14.3	2.4
		K	62.5	25.0	6.3	6.2
14	Do you have any problems with your water bills	No problems	Sometimes not accurate	Always not accurate	Other
		O	87.8	12.2	
		K	51.6	38.7	3.2	6.5

Where O denotes results received from customers in NWSC exempting KRIP, and
     K denotes results received from customers in KRIP.

83.3 % of the customers from NWSC exempting KRIP and 62.5 % of the customers from KRIP have no problems with their meter readings and similarly 87.8 % from NWSC exempting KRIP and 51.6 % from Kampala-KRIP have no problems with their bills. This shows that the effectiveness of operations especially in NWSC exempting KRIP is within acceptable range for a developing country like Uganda (assuming 80 % satisfied customers to be adequate). However Kampala-KRIP still requires more efforts to improve their effectiveness in this areas. These two areas had been the most frequent source of written complaints to the corporation according to information gathered from documentary review (NWSC, Feb 1999) and in-depth interviews.

The results in the appendix further show that in case of any complaints forwarded to NWSC offices, the response received from staff is quite adequate and timely. This is reinforced by the Newspaper report "Good work NW&SC" (Monitor Sunday The, July 11, 1999) in which one of the customers commented "I would like to thank the management of NW&SC for their improved services. As a water consumer, I am glad that now the front desk people do mind about customers' concerns, unlike when we used to be barked at in the past. Knowing that someone is in position to listen to my complaint gives me satisfaction".

Results detailed in Appendix also show that frequency of receiving bills since the programme started has been very good (scored well above average). There is agreement that customers are often notified before disconnection for non-payment and when disconnected, were allowed to pay their bills in instalments. This is a sign of good customer care. It is consistent with information gathered from in-depth interviews and documentary review (NWSC, June 1999 & NWSC, Feb 2000). This is further reinforced by the newspaper report where one of the customers was advising other utility organisations to emulate the example of NW&SC in way of settlement of overdue bills " UTL, do like NW&SC" (Monitor The, Monday, May 31, 1999).

It is also clear from the Appendix that there has been a reduction in sewage overflows on NWSC sewers and good control & response time to reported overflows since the programme period. The quality of water supplied by NWSC as indicated here by colour and taste is very good. Results from documentary review (NWSC, June 1999 & NWSC, Feb 2000) confirm the same findings. Customers also agree that there has been improvement on awareness of NWSC services, customer responsibilities and way staff render their services.

Table 4.5: Suggestions made by customers on the way NWSC can improve service delivery

Suggestions made by customers from NWSC exempting KRIP	Suggestions made by customers from KRIP
1. Improve awareness on customer responsibility	1. Respond quickly to leakage repairs on the roadside & household.
2. Improve notification of consumers if water will not be provided for some days through an appropriate media and at an appropriate time	2. Provide a wide publicity to public not to waste water and report any leakage on time.
3. Inaccuracy of meters, so the staff should check on the consumption rate by the customers.	3. NWSC should remove the burden of extra costs of cutting/digging across roads from the customers if a wider customer base is to be created.
4. Should improve on handling sewage overflows	4. Abolish minimum charge
5. Replace old pipes, which normally result into frequent bursts.	5. Reduce on reconnection fee.
6. Notify clients before disconnection	6. Reduce the new connection fee or allow payment of new connection fee in instalments.
7. Introduce several methods of payment in instalments.	7. Reduce on the charge for sewerage.
8. Reduce reconnection fee to suit the users.	
9. Reduce percentage charged on sewage service.	
10. Reduce connection fees.	

4.6   Results of performance output

Performance output was calculated from information gathered by documentary review of NWSC records. This was done for the period before the initiation of the 100-days programme and at the end of the respective programmes for the operational performance indicators. The financial indicators were however computed as at end of financial years which for NWSC falls on 30/June. For the performance output prior to 1998, the figures were adapted from the work of Mugisha (2000). Calculation of performance output over a period of time results in performance trends. The trends of performance output facilitates prediction of future events (Franceys, 2000). The details of the operational performance indicators showing targets achieved during the 100-days programme, SEREP 1 & SEREP 2 are shown in appendix IX, X & XI respectively. Appendix XII then gives the summary of NWSC operational performance indicators before and after the programmes.

4.6.1   Operational performance indicators

• **Water production & other related indicators-** Water production in NWSC globally has been showing a consistent declining trend from 1995 to 1998 as shown in Figure 4.7. Kampala-KRIP exhibited similar trends. However this trend was reversed and water production showed an upward trend from 1998. The capacity utilisation of NWSC production plants globally increased from 58 % at the beginning of the 100-days programme to 61 % at the end of SEREP 2. Water production in NWSC exempting Kampala-KRIP had virtually stagnated for long prior to initiation of the 100-days programme. These areas registered an increase in capacity utilisation of 4 % from an average of 37% before the beginning of the 100-days programme to 41 % by the end of SEREP 1.

Figure 4.7 Variation in water produced
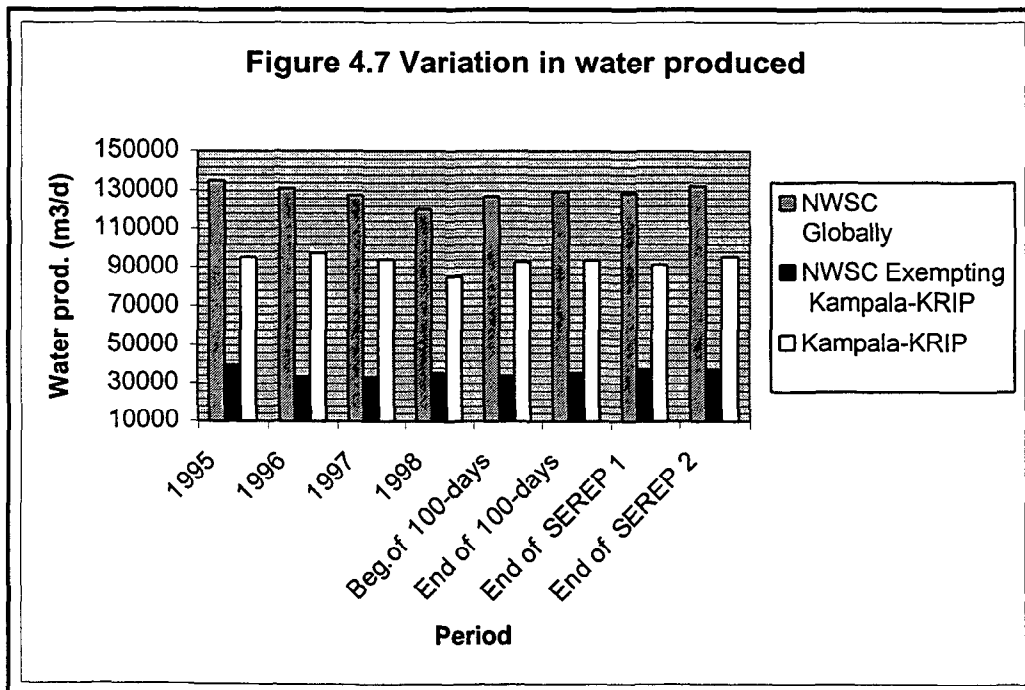
Although the performance of the corporation in water production increased during the programmes, there is still a lot of idol capacity and the targets set were not achieved. There is need therefore to further increase the capacity utilisation if the corporation is to achieve commercial viability. This could be achieved by increasing network coverage and thus total number of connections. Figure 4.8 illustrates that the corporation is in the right direction in increasing its customer base. The total number of connections has consistently increased from the beginning of the programme; with minor improvement during the 100-days programme but gradually picking up in latter programmes.

Figure 4.8-Variation of total connections in NWSC
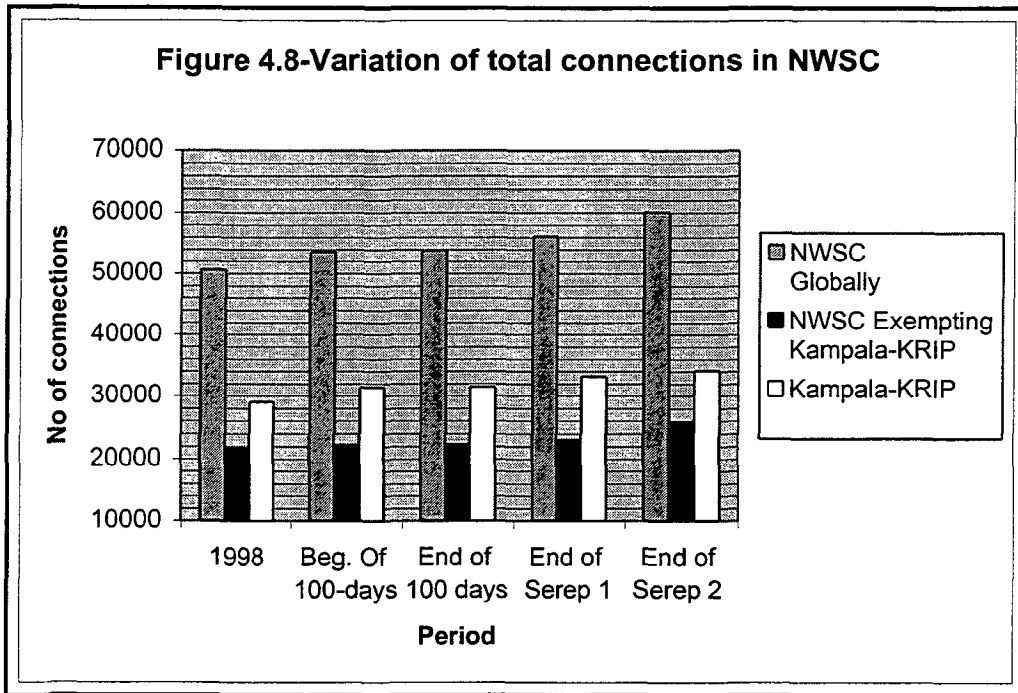
The capacity utilisation could also be improved by reduction in suppressed accounts (connections which are off supply mainly due to disconnection for non-payment) and resulting increase in active accounts. Figure 4.9 reveals that NWSC globally had a reduction in suppressed accounts from the beginning of the 100-days programme to the end of SEREP 1. However there was a slight increase again during SEREP 2, implying that the output was not sustained. NWSC exempting Kampala-KRIP had a remarkable improvement during the 100-days programme but the improvement was not sustained during SEREP 1&2. Kampala-KRIP registered substantial reduction in suppressed accounts during SEREP 1 but stagnated during SEREP 2.

This indicates that the reconnections did not match the disconnections effected. This is consistent with the customer's suggestions of reduction in reconnection fee, which could be an impediment to most of them having supply reconnected after disconnection.

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Figure 4.9-Trend of suppressed accounts in NWSC

Figure 4.9-Trend of suppressed accounts in NWSC
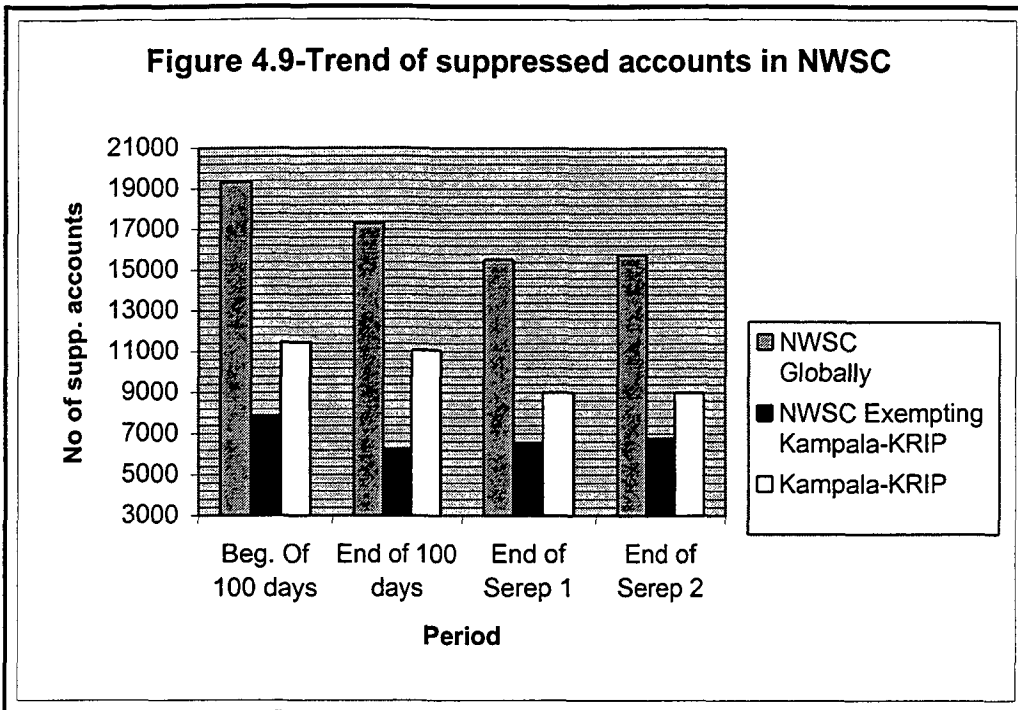
As a result of increase of total connections and reduction in suppressed accounts, the percentage increase in active accounts as shown in Figure 4.10 is indicative that the performance of NWSC is in the right direction. However more effort is still required to woo back the 26 % of the customers whose supply is still disconnected. This would further improve on the plant capacity utilisation and revenue base.

Figure 4.10-Increase of active accounts

Figure 4.10-Increase of active accounts
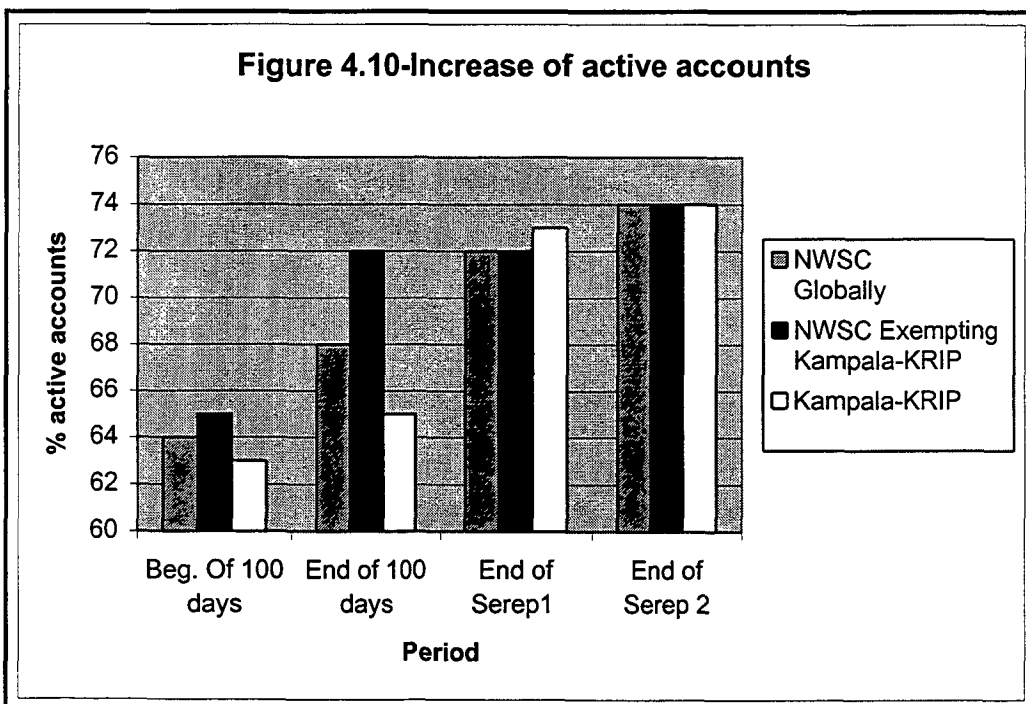
- **Metered accounts-** The installation of meters supports two important business goals of the utility- full cost recovery & reduction of water losses and in addition, it creates two important positive externalities, namely fairness in customer billing & leverage on consumer consumption patterns through tariff-setting (Blokland et al, 1999). Franceys (2000) further points out that when there is no meter on a customer's service connection, there is little incentive to conserve water. It is also known that what cannot be measured, cannot be managed (Ibid.). The trend of percentage metered accounts in NWSC as indicated in Figure 4.11 shows that the corporation has achieved a lot within this short period. With the increase of percentage metered accounts from 81 % to 89 %, it is evident that the corporation is now more capable of conserving water and better manage its operations. With this positive trend, there is clear evidence that the corporation will soon achieve universal metering and thus avoid complaints raised by customers due to unmetered charges.

However metering does have drawbacks. Meter reading requires demanding procedures and of course a meter is as good as its accuracy. It also requires staff of good organisation behaviour so that the readings are not manipulated for personal gains. This further necessitates procedures for periodic meter control, cleaning and re-calibration, and eventually, replacement (Blokland et al, 1999).

Figure 4.11-Trend of metered accounts in NWSC
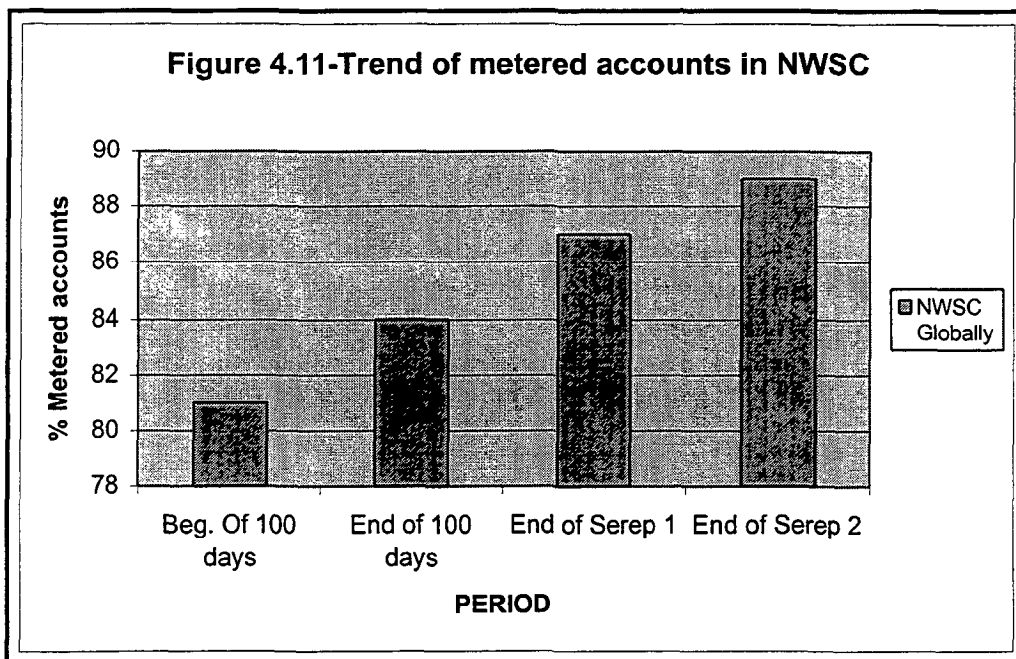
- **UFW-** The efficiency of operations of NWSC as measured by UFW before the beginning of the 100-days programme was appalling. The level of UFW for NWSC globally stood at 50% implying that half of the water produced was lost en-route between the treatment plant and the customer's premises and was not therefore transformed into revenue. The situation in Kampala-KRIP was worse and in NWSC exempting Kampala-KRIP no better at a figure of 44 %. As a result of prompt response to leaks and bursts, reduction of illegal connections and other measures instituted during the programmes, the level of UFW for NWSC exempting KRIP drastically reduced during the 100-days programme and SEREP

I to 34 % & 29 % respectively. For Kampala-KRIP, the reduction during the 100-days programme was minimal but improved in SEREP I. However the figure is still quite high at 44%. Because of Kampala-KRIP's operations, the high improvement registered by NWSC exempting KRIP was overshadowed by that of Kampala-KRIP, thus leaving the UFW for NWSC globally at 42 % by the end of SEREP I. As shown in Figure 4.12 the reducing trend of UFW was not sustained during SEREP II. This could be as a result of inadequate funding and lack of logistical support during SEREP II as reported in the results of senior management interviews and from information gathered from documentary reviews (NWSC, Feb 2000).

Figure 4.12-Status of UFW in NWSC
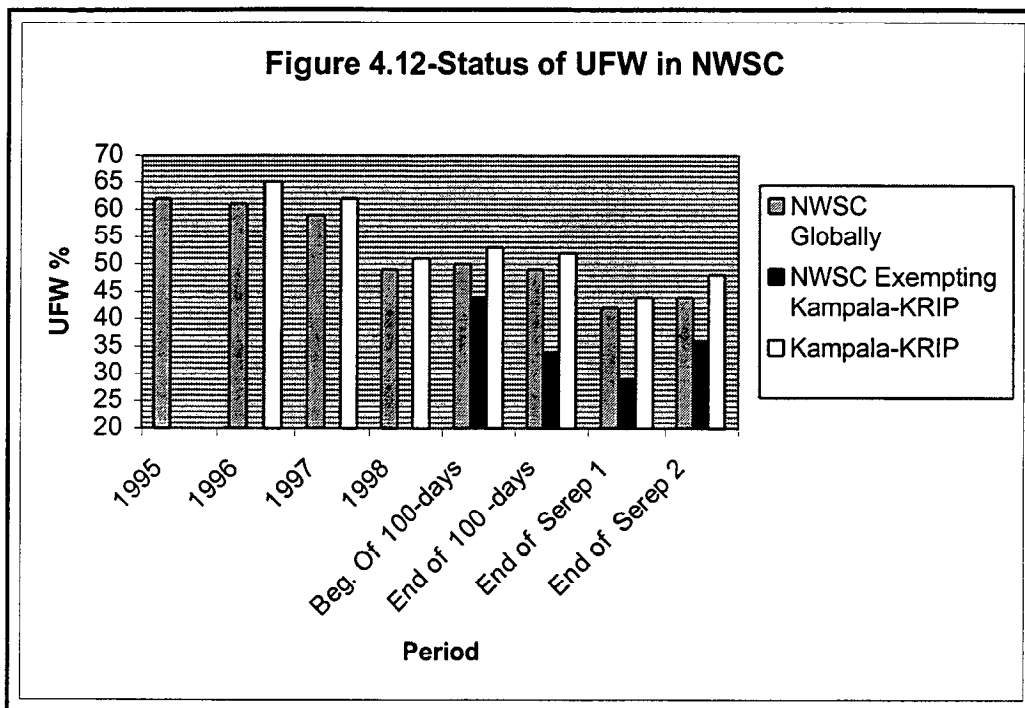
• **Billing efficiency-** Figure 4.13 below shows that the billing efficiency for NWSC globally was 50% and for NWSC exempting Kampala-KRIP was 56 % before the beginning of the 100-days programme. As a result of efforts placed in reducing UFW discussed above, the billing efficiency improved accordingly during 100-days programme and SEREP I but reduced during SEREP II. All in all, there were some improvements registered though these were not sustained.

Figure 4.13- Variation in billing efficiency in NWSC

A bar chart titled "Figure 4.13- Variation in billing efficiency in NWSC". Y-axis labeled "B.E (%)" ranging from 20 to 80. X-axis labeled "Period" with categories: 1995, 1996, 1997, 1998, Beg. of 100-days, End of 100-days, End of Serep 1, End of Serep 2. Legend: NWSC Globally, NWSC Exempting Kampala-KRIP, Kampala-KRIP.
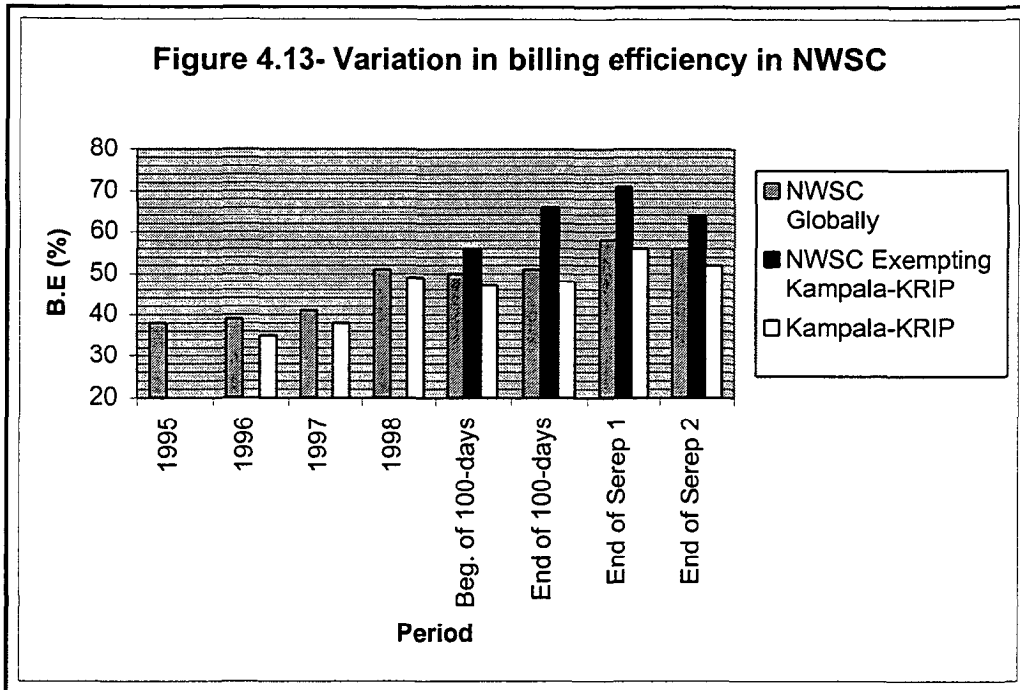
- **Arrears reduction and collection efficiency-** The arrears (accounts receivable) portfolio for NWSC before the programmes stood at Ushs 33 billion ($18,400,000) which was equivalent to 14 months billing. NWSC exempting Kampala-KRIP accounted for 25 % and KRIP 75 % of the arrears. During the programme, there was a 10 % reduction in arrears for NWSC globally and 13 % reduction by NWSC exempting Kampala- KRIP. The reduction in arrears was however not sustained by NWSC exempting Kampala- KRIP during SEREP II. The trend of arrears reduction is detailed in figure 4.14.

Figure 4.14-Arrears status in NWSC

A bar chart titled "Figure 4.14-Arrears status in NWSC". Y-axis labeled "Arrears (million Ushs)" ranging from 5000 to 35000. X-axis labeled "Period" with categories: Beg. of 100 days, End of 100 days, End of Serep 1, End of Serep 2. Legend: NWSC Globally, NWSC Exempting Kampala-KRIP, Kampala-KRIP.

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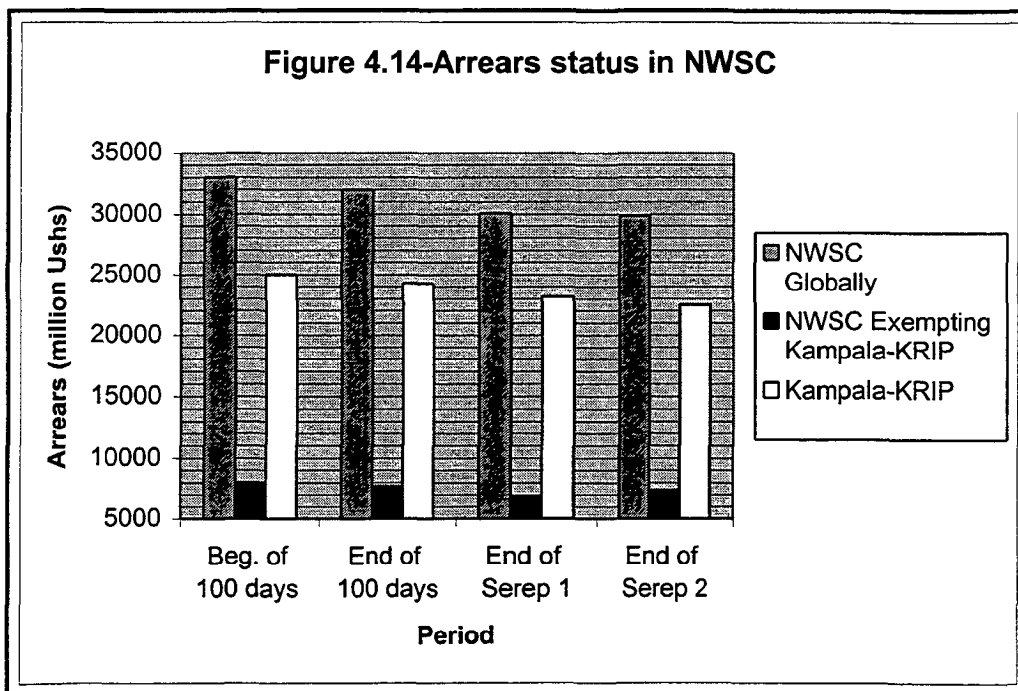
Despite these improvements, the arrears portfolio still looks very sad. The corporation requires additional efforts in educating the customers on the necessity and implications of paying the accrued bills.

As for the collection efficiency (amount of money collected divided by the bills raised during a particular period), NWSC globally had performed badly from 1997 to the time of initiating the programmes, with collection efficiency reducing from 105 % to 74 % having had a consistent increase from 1995 to 1997. The collection efficiency however reflects the collection of both arrears and current charges and therefore does not reflect the actual collection for only current charges raised during a specified period.

Due to strategies put in place, the collection efficiency during the 100-days programme increased drastically. However there was a drop during SEREP I and an increase again during SEREP II. These trend shows that there is no consistency in collection efficiency improvements in NWSC (Figure 4.15). The explanation for these erratic trend (got from documentary reviews and in-depth interviews) is that government which is the biggest customer for the corporation normally tend to pay their bills at the end of the financial year which was within the period for 100-days programme and SEREP II, thus the better performance during these programmes.

The collection efficiency in NWSC is therefore highly dependent on payment by government. There is need to impress on government the importance of regular payment of bills to the corporation. A world bank review report in Franceys (2000) on Botswana's water utility company (one of the few commercial utilities in Africa) had these to say on way of handling government bills: "An innovative feature is the "one-check" system for government users. The Ministry of finance meets all monthly charges for government and deducts them from the cash allocation of each Ministry or Department. This procedure avoids the accumulation of arrears by government users of infrastructure services that is common elsewhere". If this procedure could be adopted, it would result in improved revenue collection and minimise arrears accumulation.

Figure 4.15-Collection efficiency trends in NWSC
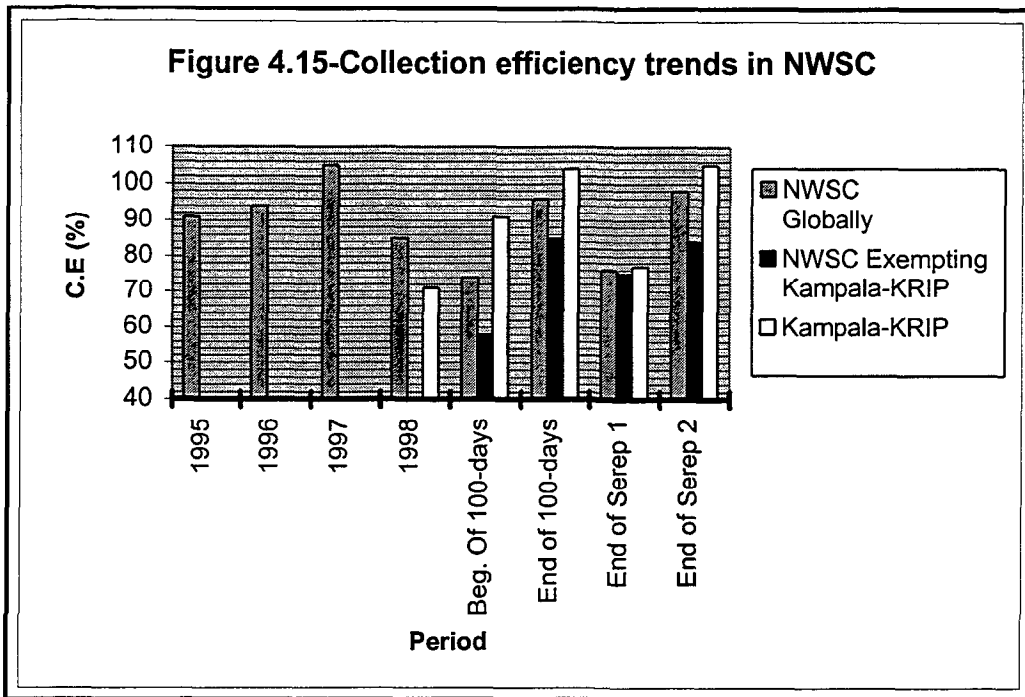
- **Productivity-** NWSC productivity as measured by the number of employees per 1000 connections registered slight improvement from 1995 to 1998 due to the restructuring exercise aimed at reducing a lot of inefficient staff. The period from 1998 to the time of initiation of the change management programme had minimal improvement. Figure 4.16 shows that during the programmes, there was substantial improvement from 31 employees per 1000 connections before the 100-days programme to 22 employees per 1000 connections at the end of SEREP I. This output was sustained during SEREP II and resulted in achieving the target set for this performance indicator. This was made possible because of:

  - attractive terms of voluntary retirement scheme which reduced staff numbers from 1655 before the 100-days programme to 1199 after SEREP II.
  - mains extensions which increased coverage and thus the number of connections. During the programme, NWSC laid 70 km of mains and installed 138 water kiosks to serve the poor communities (NWSC, Feb 2000 & NWSC, September 2000). This works were executed from the corporation's own funds from surplus realised due to cost reduction measures discussed in the next sub-section. From the high numbers of water kiosks installed within the short period, it is also evident that the programmes had incentives of serving the poor.
  - customer awareness created through several meetings held with the local communities in all areas, educative radio programmes and newspaper press releases.

Figure 4.16-Variation in NWSC Productivity (Employees/ 1000 connections)
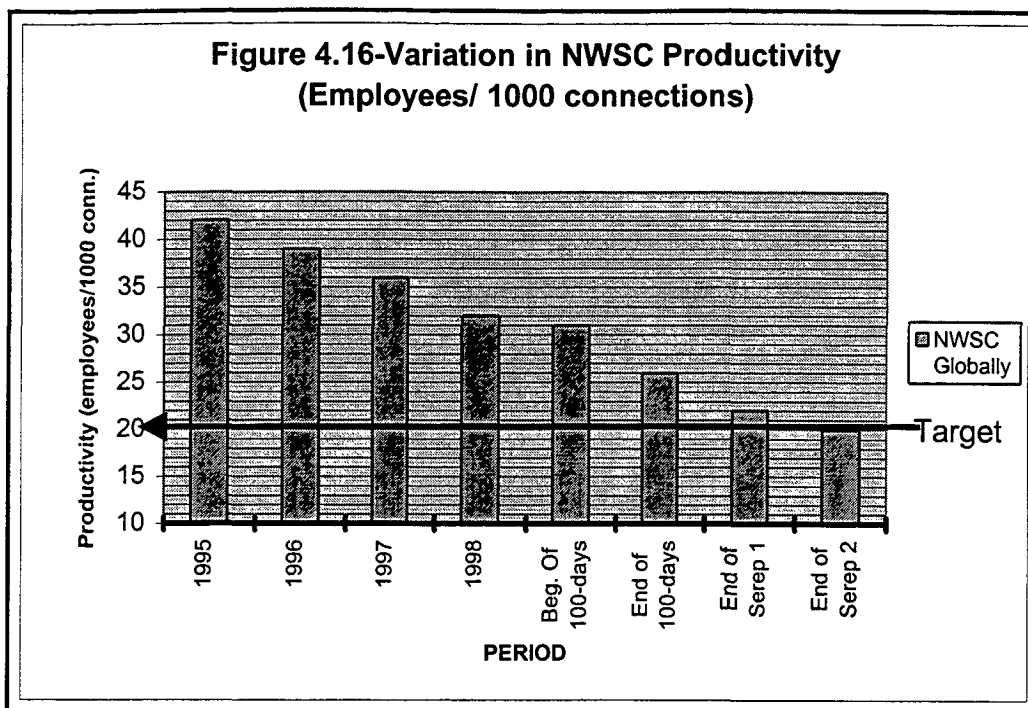
- **Collections and Expenses-** Figure 4.17 shows that prior to initiation of the 100-days programme, NWSC was operating at a deficit i.e. expenses were greater than collections. As a result of the collection strategies and cost reduction measures instituted during the programmes, this situation was turned around and the corporation started making profits (here defined as collections less expenses). This is reinforced by the Newspaper report "NWSC in surplus" (New Vision The, Thursday, September 30, 1999) in which the managing director NWSC was being interviewed on how he managed to turn the deficit before the 100-days programme to a surplus.

If the previous situation were to continue, NWSC would either be out of business or be forced to solicit for subsidies from government. " Profit is not the goal of an enterprise- but it is necessary for any enterprise just as we need air to breath to live, so an enterprise needs profit to live" (Franceys, 2000).

The cost reduction measures instituted by NWSC, which enabled the achievement of this target to mention but a few, were:

- transport control measures- stringent transport policy was put in place by management to eliminate misuse of corporation vehicles
- medical expenditure control- control of number of dependants that the corporation could treat and review of clinics & hospitals to eliminate costly & non-effective ones.
- Employee costs- lay off of redundant staff
- Cost of utilities- management prepared proposals and put ceilings on cost of utilities payable to entitled staff.

As a result of these cost-reduction measures, 5 more areas were added to the break-even list bringing the number of break-even areas to 8. The 4 remaining areas were capable of at least meeting their employee-related costs (NWSC, September 2000).

Figure 4.17-Collections & Expenses trends in NWSC
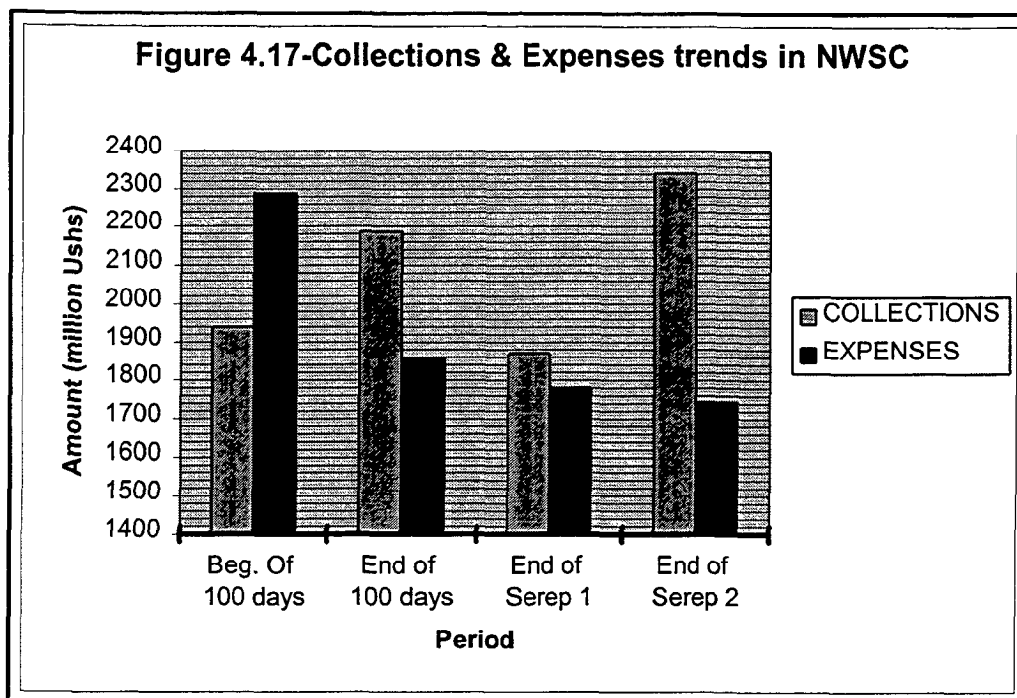
- **Customer Care-** the following improvements were realised during the programme period in customer care related issues (NWSC, June 1999, NWSC, Feb 2000 & NWSC, September 2000).
  - Customer care front desk offices were established to enhance proper handling of customers and the motto adopted was "The customer is King and the reason we exist". This was placed in strategic locations in all offices.
  - An amnesty policy was extended to all illegal consumers of water with the aim of legalising their status as far as water consumption was concerned.
  - Consumer awareness was improved through several meetings held with the local communities in all areas.
  - Response time to leaks and blockages improved from more than 7 days before the programmes to less than 24 hrs after the programmes as detailed in appendix XII thereby meeting the target set.
  - Management evolved a customer friendly reconnection programme where customers were allowed to pay their arrears in instalments. This attracted a considerable number of customers back to supply.
  - The tariff review structure was concluded with a view of drawing up a structure, which is customer friendly.
  - Educative exhibitions held helped to sensitise the public about the NWSC activities.
  - Personal sales visits and customer surveys to identify customer problems were effected and were continued routinely.

The entire above has improved customer care and accordingly contributed to improved revenue collection.

4.6.2 Financial indicators

Financial ratios provide useful summaries of relative efficiency or progress of providing service. Cole (1990) points out that analysis of financial performance data is a key feature of all planning and control activities. Financial ratios are also used for interpretation of financial statements, prediction of future events from trends of financial ratios and controlling the financial affairs of the institution (Franceys, 2000). The financial ratios were computed from financial statements of the corporation and details of the results are presented in Table 4.6.

• **Profitability**- the profitability of NWSC as measured by return on fixed assets (ROFA) has been inadequate. As shown in Figure 4.18 there has been a declining trend in profitability from 1996 to 1998 and it even assumed negative values in 1998 which signifies loss making.

Figure 4.18-Variation in Profitability in NWSC
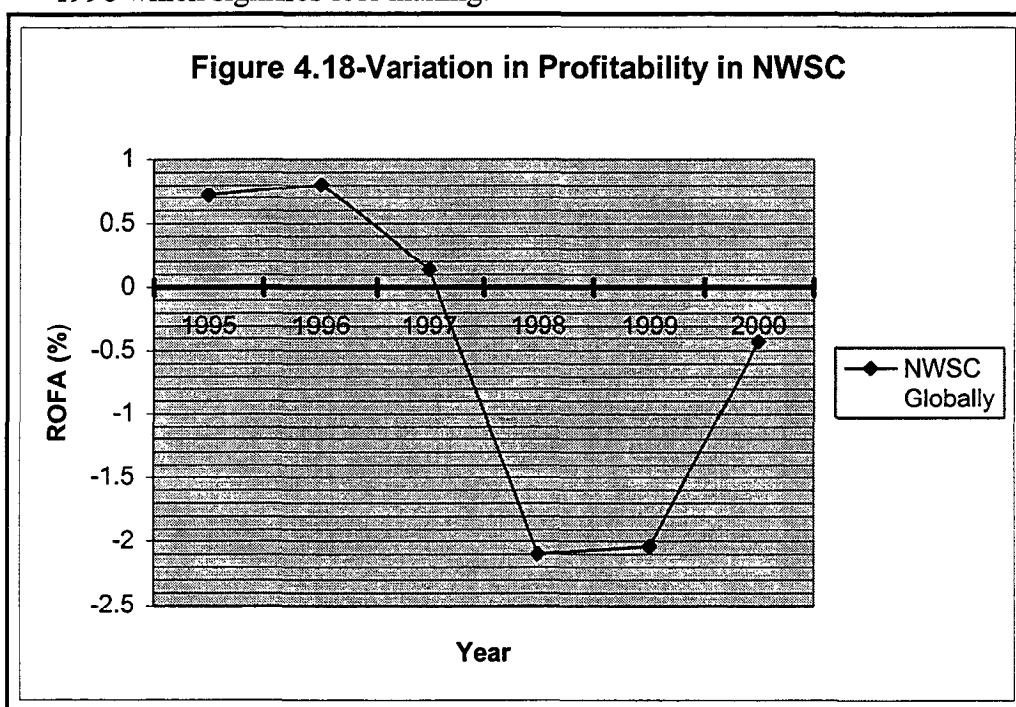
Due to efforts put in by new management during the programme period, the trend of ROFA started rising again in the positive direction. Despite this improvements however, the value is still in negative. In order to achieve the recommended profitability of 6-8 % for commercial enterprises, the corporation has to put in more efforts in increasing revenue, reducing expenses or increasing the tariff.

It was established that NWSC had not increased tariff since 1994 despite the country's annual inflation rates of between 6-10 %. With this state of affairs, it may be quite difficult for the corporation to raise the profitability to the standard figures for commercial enterprises. Commercial enterprises normally adjust tariff annually to at least cater for inflation, as lags in tariff adjustment would subsequently make it difficult to adjust the rates to optimum level. It is therefore eminent that the corporation still requires additional strategies in increasing revenue collection and reducing expenses.

Table 4.6: Financial ratio analysis for NWSC

INDICATOR	YEAR		1995	1996	1997	1998	1999	2000	Target Range
Profitability ratios									
ROFA (%)	Profit(*PBIT*) / (Average) Net Fixed Assets	H	0.72	0.80	0.14	- 2.10	- 2.04	- 0.43	6.0-8.0
Liquidity ratios									
Current ratio (CR) %	Current assets / Current liabilities	H	271	324	321	243	74	66	100-200
		K			104	113	78	83	
Quick ratio (QR) %	Cash (& Accounts Receivable)/ Current liabilities	H	251	272	253	162	58	52	100
		K			110	98	76	82	
Cash (Quickest) Ratio- %	Cash / Current liabilities	H	10	17	17	21	12	6	50-60
		K			4	13	11	3	
Efficiency ratios									
Operating ratio (OR) %	Operating expenses / Operating revenue	H	78	84	92	93	113	89	< 60
		K			50	61	72	55	
		O			110	102	127	79	
Days receivable ratio (DRR)	Accounts receivable / Daily operating revenue	H	370	383	414	429	451	338	45-60
		K			410	406	464	351	
		O			430	472	320	304	
Creditworthiness ratio									
Debt equity ratio (DER)	Long-term debt (Loan) / Equity	H				55	70	40	<300%
					IMPACT OF 100-DAYS PROGRAMME				
					IMPACT OF SEREP1 and SEREP2				
Key: H-Performance of NWSC overall, K-Performance of Kampala-KRIP, O-Performance of NWSC exempting Kampala-KRIP									

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- **Liquidity-** Liquidity ratios as measured by Current ratio, Quick ratio and Cash ratio are indicators of the institution's ability to discharge current obligations in times of financial difficulty (Franceys, 2000). The Current ratio of NWSC globally before the beginning of the programmes was at very high value as shown in Figure 4.19.

Figure 4.19- Variation in Current ratio in NWSC
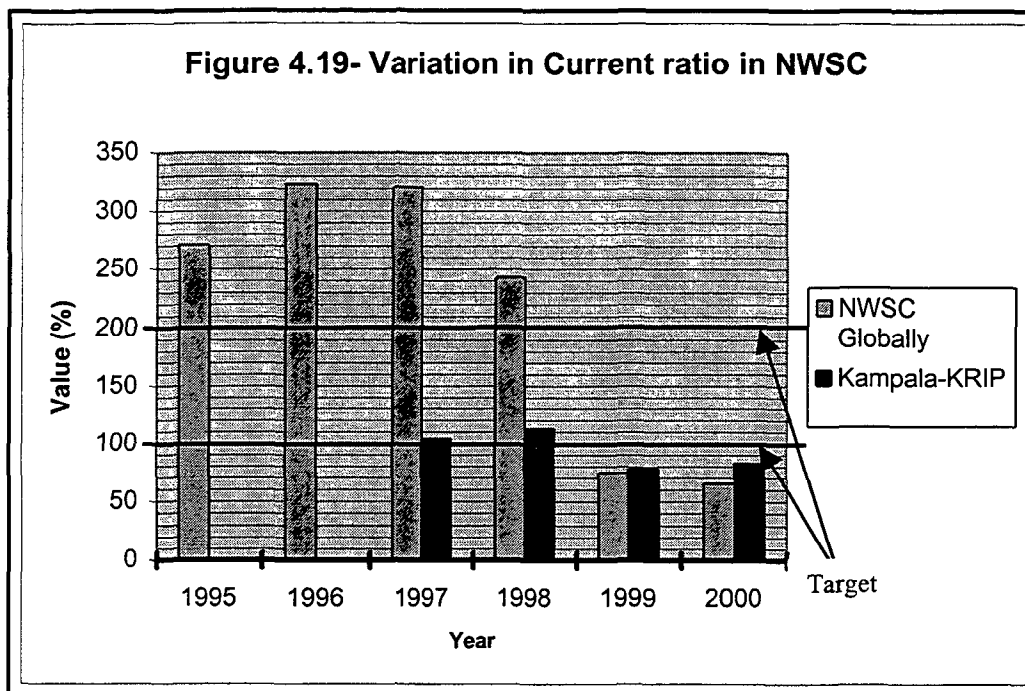
This could be due to high amount of stock held, high accounts receivable, large amount of cash at hand/bank or low liabilities. From the high value of Quick ratio highlighted in Figure 4.20, it is preliminarily suspected that the high current ratio could be due to high accounts receivable, large amount of cash at hand/bank or low liabilities. However on looking at the low Cash ratio in Figure 4.21 compared to the recommended value of 50-60 %, it seems the high values of Current ratio was due to high accounts receivable. This implied that the corporation required more effort in reducing the accounts receivable. With efforts put in during the programmes, the values for Current ratio and Quick ratio fell below the recommended values but the Cash ratio was still very low.

Figure 4.20- Variation in Quick ratio in NWSC.

Figure 4.21-Variation in Cash ratio in NWSC
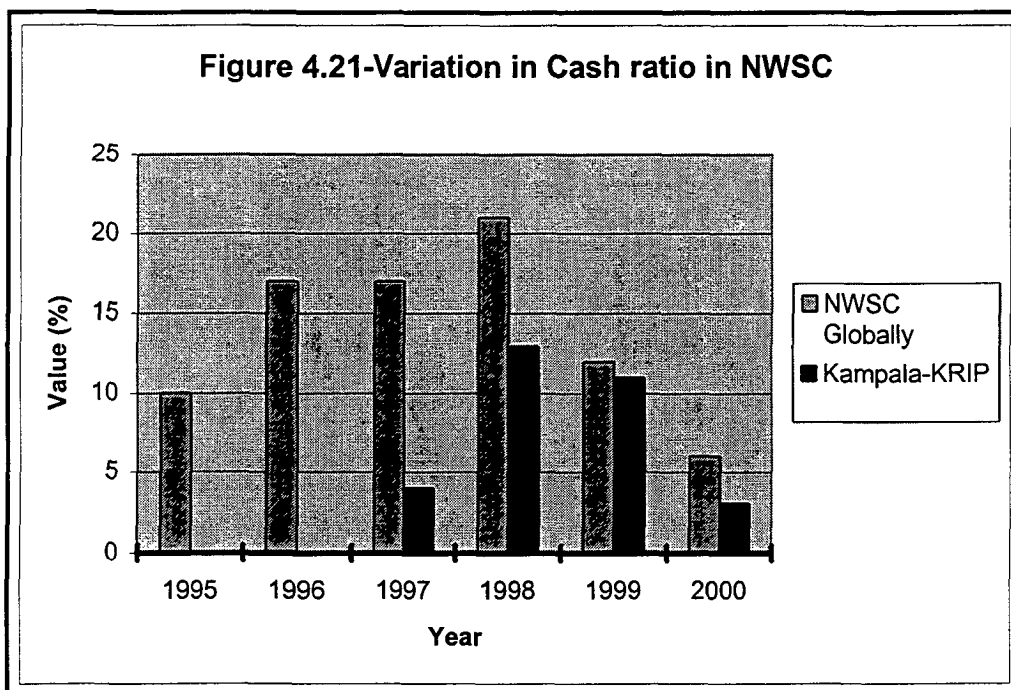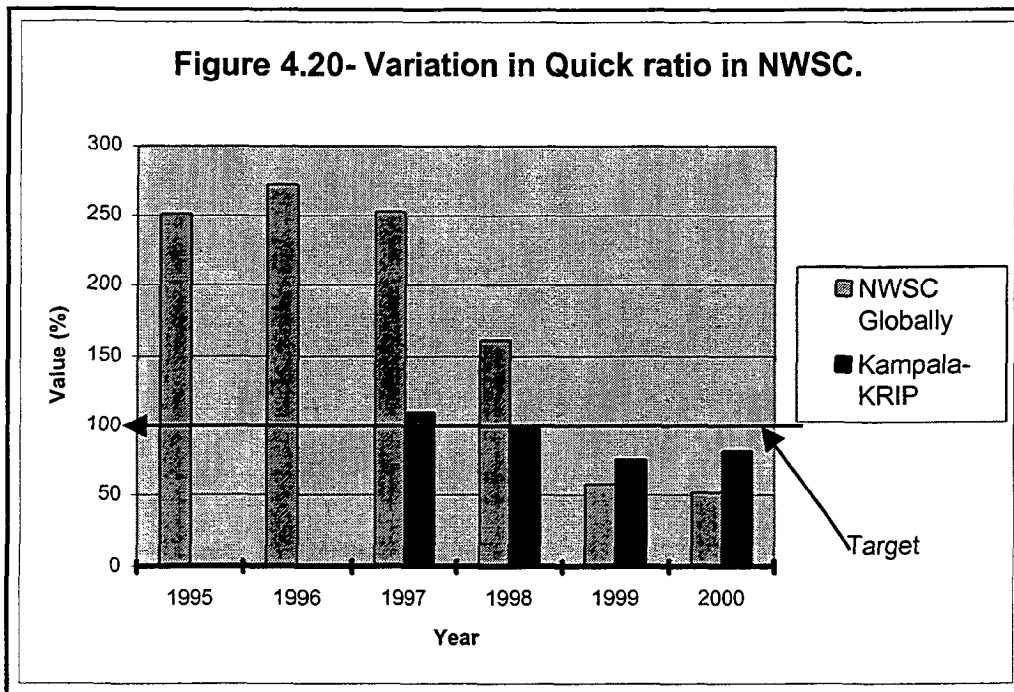
- **Efficiency ratios-** Efficiency ratios deal primarily with the way in which revenue is collected and used. It can be used as a measure of performance of the organisation (Franceys, 2000). The efficiency ratio as measured by the Operating ratio showed an increasing trend for NWSC globally from 1995 to 1999 and the values were higher than the recommended value of 60 % (Figure 4.22). These implied the expenses were quite high and revenue very low. The best way of reducing the gap between costs and revenues is to cut costs and achieve productive efficiency. Indeed with the efforts of new management during the programmes, the Operating ratio showed a declining trend and positive

improvement from 1999. If the cost reduction measures instituted by the corporation are continued the target figure could be achieved in NWSC globally & NWSC exempting Kampala-KRIP (KRIP already achieved the target).

Figure 4.22-Variation in Operating ratio in NWSC
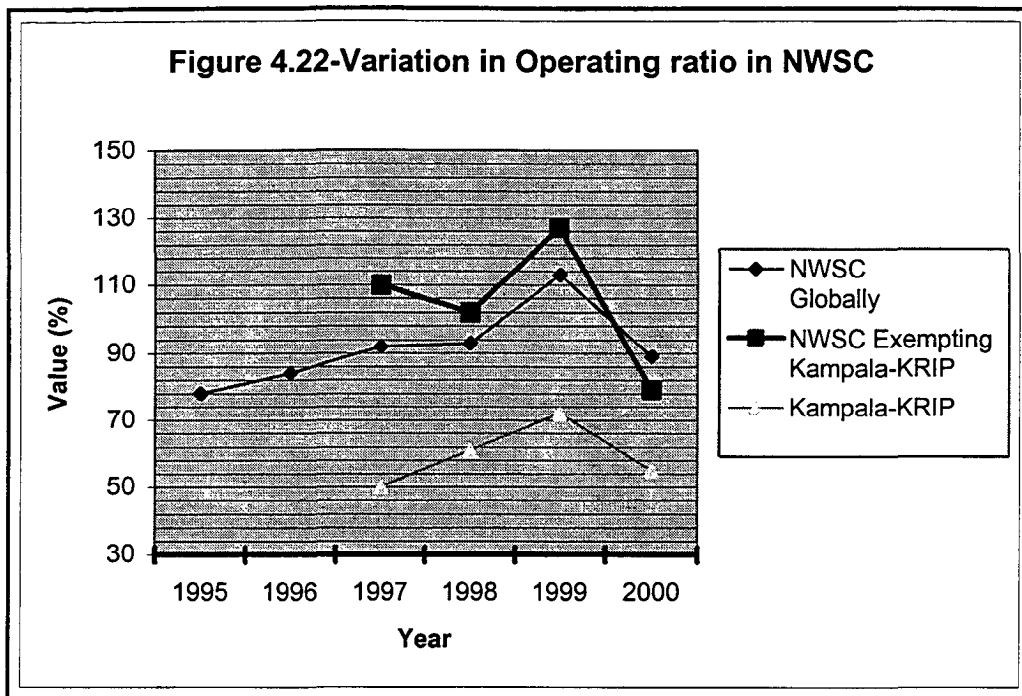
NWSC debt age (Days receivable ratio-DRR) in Figure 4.23 shows that before the programmes, the corporation was taking more than 400 days in collecting charges raised. This was reduced to 300 days for NWSC exempting Kampala-KRIP and to 340 days for Kampala-KRIP after the programmes. The trend is promising and pointing in the right direction but the corporation still requires additional efforts in these area to reduce the days receivable ratio to the recommended range for commercial enterprises of between 45-60 days.

Figure 4.23-NWSC Debt age
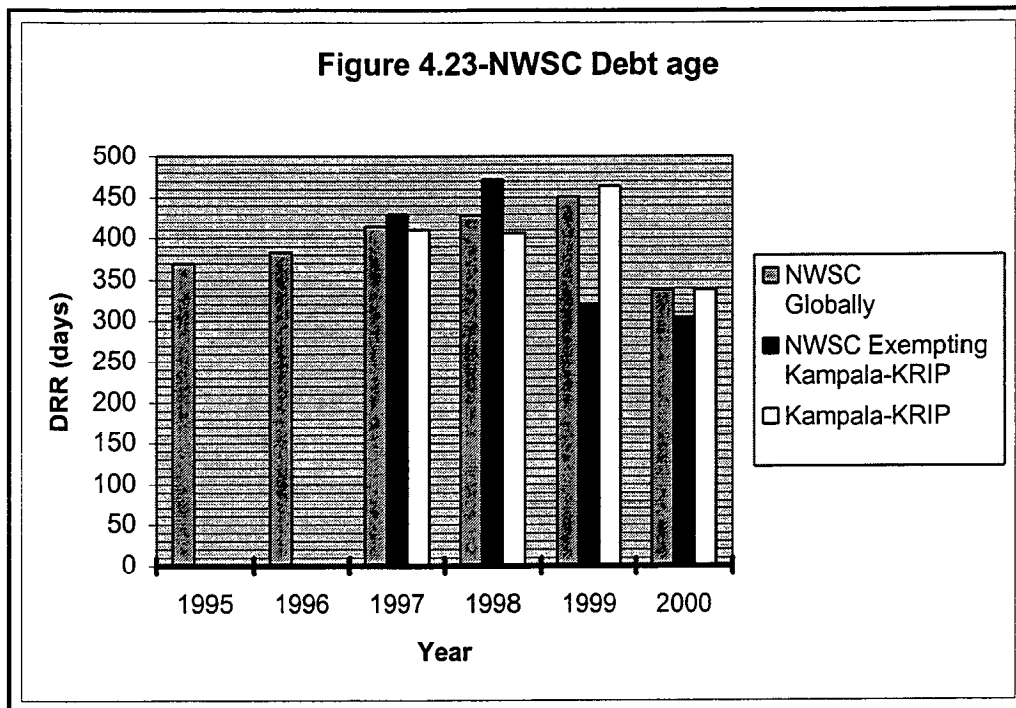
4.7 Was the change in NWSC conceived and implemented following generally accepted change management practices?

Having presented the results on the change process in sections 4.2-4.4, this section discusses the results to establish whether generally accepted change management practices were applied in the NWSC change process. It has been noted that organisations that followed generally accepted change management practices i.e. delivering all the four pre-requisites for effective change management (section 2.4), incorporating the factors that lead to success into the change process and anticipating the nature of resistance to be encountered, have been successful. In order to answer the research question whether the change in NWSC was conceived and implemented following these practices, the results are discussed in the context of the above principles.

4.7.1 Pressure for change

Results of documentary review (NWSC, Feb 1999) and in-depth interviews point out that the performance of the corporation before the Programme was downgraded. First and foremost, although NWSC was charged with the responsibility of providing water and sewerage services to urban centres of Uganda on a self-sustaining basis, it was operating at a deficit before the programmes. Its performance as indicated by the objective performance indicators was quite unacceptable. The level of service provision to the customers was also poor, which raised numerous complaints. This resulted into customer unwillingness to pay their bills, which led to poor collection performance and hence inadequate funds for maintenance, repairs and development, causing inadequate service provision. This therefore kept the system in a vicious circle.

It was also reported that NWSC had a strategic plan in form of corporate plan but after a three-year implementation period, it had not improved performance due to the relaxed manner in which it was executed. This therefore resulted into corporation stagnation. To crown it all the Public Private Participation (PPP) which was conceived with well-intentioned objectives (section 1.3) in the Corporation's largest service area-Kampala, seemed not to live to its expectations after half the contract period.

The results of the SWOT analysis (table 4.1) indicated that the major baseline problem in NWSC was more institutionally related, with most staff not performing as expected (NWSC, May 2000). The ensuing poor financial and operational performance was therefore (among other reasons) a result of this primary problem. The externalities (measured by the opportunities and threats) do not seem to be the main impediment to performance at that time. Even if there were outstanding issues like debt servicing resulting out of projects, mostly implemented via a supply driven approach, this did not justify a low operating efficiency (Ibid.). Hence the situation analysis pointed towards an organisation with sufficient hardware system in place, but deficient in software and management strategies to alleviate the performance of the corporation.

With the above trend of performance, there was pressure to initiate change as failure to arrest the situation would lead to collapse (Gilgeous, 1997). The results of middle manager's questionnaires detailed in Figure 4.1 agree that the corporate performance was low and the change was therefore thought to be essential.

4.7.2 Clear shared vision

It was pointed out in section 2.4.2 that effective vision prepares organisations for the future but honour the past (Peters, 1989). Study of NWSC documents revealed that the corporation had a vision, which runs as follows "NWSC to become the pride of Uganda's water sector in 20 years time". From the vision, mission statements, which aimed at having a healthy & well-motivated staff and satisfied customers, had been formulated. To operationalise the mission, NWSC had formulated specific goals, which goals were to be achieved in the corporate plan in order to enhance corporation performance. A look at these goals in appendix XIII reveals that the corporation had a sense of direction and knew where it wanted to be in the future. However from documentary review (NWSC, Feb 1999) and results of in-depth interviews, it was reported that implementation of the corporate plan was relaxed and thus affected the achievement of targets.

4.7.3 Capability for change

Capability is how complete the preparation for the change exercise are; whether all the resources required have been identified and provided, including, financial resources, managerial skills and technical skills as reported in the literature review (section 2.4.3). The study of corporation staff profiles revealed that the qualifications and experience of staff in all departments (Operations, Personnel, Accounts, Commercial etc) were satisfactory to supervise the O&M activities. This has been coupled with institutional capacity building, which has enabled the corporation to train staff to run the physical infrastructure satisfactorily (NWSC, Feb 1999). The

result of the SWOT analysis (table 4.1) carried out prior to the initiation of the 100-days Programme reported that NWSC had a competent & relatively qualified senior management team. It was further revealed that most managers have undertaken management development courses to enhance their knowledge and skills in service delivery.

The corporation had an additional advantage in that the new M.D comes from a business background. The new outlook from a business perspective comes at a time when NWSC's problems revolve around reducing costs and marketing its services to customers who have for a long time perceived that the corporation did not consider customer care to be important (Ibid.). This is an indicator that NWSC was equipped with technical and managerial capabilities. As for the financial resources, results of in-depth interviews and documentary review revealed that at the beginning of the 100-days Programme Ushs 300 million (US$ 200,000) was set aside specifically For the Programme activities.

However it was also reported that during SEREP II, the corporation faced a financial problem because of low collection in Kampala-KRIP. This therefore affected the financial input during that time and it could have contributed to some of the output not being sustained. The need for availability of finances was emphasised by senior managers and middle managers. It was considered that without financial backing, many activities would not be implemented and targets not achieved. Adequate funds must be available throughout the programmes to manage the process without interruption.

4.7.4 Actionable first step

Kurt Lewin's theory described in section 2.4.4 recommends a three phased process (Unfreezing, Changing & Refreezing) when initiating and implementing any change. According to the literature reviewed, the **Unfreezing** phase is where staff in the organisation and all the parties affected are made aware of the objectives of the change in order for them to understand and appreciate the need and conditions of change. They are also brought to accept the proposed implementation plan of the change. Study of documents of the change Programme and results of in-depth interviews revealed that the awareness about the Programme was first made during a workshop convened to discuss the corporation operations at that time. Participants for the workshop were drawn from all levels of organisation hierarchy, which also included the union (NWSC, Feb 1999).

The official launching of the 100-days Programme also created awareness among the NWSC staff and the customers. According to information gathered from documentary review (Ibid.), the print and electronic media were invited to carry out promotional programmes which included: A press conference conducted by top-management, radio programmes ran on weekly basis on popular radio stations, radio and television commercials carrying short messages (Ibid.). Ashoka (1998) recognises that whatever basic approaches are designed for successful application, one key factor that will set a change process going smoothly is an effective announcement.

Assessment of awareness of the change management programmes among the lower cadre staff revealed that the majority of the workers were aware of the change to be

effected as the average score was well above average. The awareness in NWSC exempting Kampala-KRIP was however higher than in Kampala-KRIP as shown in Figure 4.4. Table 4.3 also shows that the workers in Kampala-KRIP heard about the programmes through external sources (Newspapers). This suggests that there was no sufficient mass education about the Programme at the work place level. However for NWSC exempting Kampala-KRIP, internal awareness was quite adequate. Lack of internal awareness in Kampala-KRIP could have been the reason for the lack of appropriate support for the Programmes in Kampala-KRIP. From the discussion above, it can be deduced that the unfreezing phase of the change was adequately done, more especially in NWSC exempting Kampala-KRIP.

4.7.5 Change Phase (Implementation)

This section discusses the change process to assess whether all the conditions for successful change described in section 2.8 and barriers to successful change were taken into account during the planning and implementation stage.

Direct involvement of senior management: As outlined in section 2.8.1 Peters and Waterman (1982) provide evidence of how effective change in organisations is fostered by visible top-management support. Results of documentary review and in-depth interviews revealed that top management members were at the forefront of the planning and implementation of the change process in NWSC. "There was even an added advantage in that the new managing director was new in both the NWSC and the water industry. He had the ability therefore to assess issues, plans and mode of work without being inhibited by the past. The obvious benefit from this is that NWSC problems could be assessed more rationally" (NWSC, Feb 1999). With the overall guidance of the M.D the top management team where chairmen of the various committees (Ibid.). They also played the role of leadership, monitoring and evaluation of the programmes at the area level.

Results of questionnaires for middle managers presented in Figure 4.1 confirm that senior managers were personally involved in the change process. On whether involvement of senior managers encouraged everybody to follow suit, managers from NWSC exempting Kampala-KRIP were in agreement but middle managers from Kampala-KRIP were in disagreement. This response from middle managers from Kampala-KRIP could be due to the lack of internal awareness reported above. Results of in-depth interview attributes the success of the programmes to active involvement and commitment of top-management in planning and implementation compared to previous periods.

Participation and Involvement: NWSC was particular in staff participation in carrying out situational analysis of the corporation operations prior to initiation of the 100-days Programme and planning its implementation (NWSC, Feb 1999). Even the workers union was involved in the planning and implementation process and any decision was taken with their full participation. This was done to create general consensus on the whole Programme, balance bottom-top and top-bottom approach and tap the varied experiences. This is in line with what Nolan et al (1993) recommends in section 2.8.3 "Use a high-involvement approach to achieve a high commitment, a commitment that is essential for the success of the change effort"

Results of in-depth interviews also confirm the adoption of a participatory management style in planning and implementation of the programmes both at headquarters and area level. Senior managers also attributed the success of the programmes to the high involvement and participation, as people tended to own the programmes. The strategy adopted by NWSC here is the shared power strategy outlined in section 2.7.3 which normally results in a longer lasting and internalised change (Schermerhorn, 1982).

Results of questionnaires from middle managers presented in Figure 4.1 reveals that managers from NWSC exempting Kampala-KRIP were in agreement that all staff were involved in planning and implementation of the programmes. They also believed that involvement of all staff was instrumental in avoiding suspicion and resistance. However managers in Kampala-KRIP were in disagreement.

Assessment of whether the workers were involved in the decisions making process revealed that this was adequately done in NWSC exempting Kampala-KRIP but it was found to be lacking to sufficient level in KRIP. It was further revealed that the KRIP management though supposed to be actively involved in the Programme even refused to release information to the staff (chart 4 appendix IV & Figure 4.4). This exclusion of the employees in KRIP was quite detrimental to the change process. Cole (1990) suggests that if 'participation', in the sense of genuine decision-making, is to have any chance of success, the employee involvement in decision-making should take place at the plant level.

It is more critical to get employees involved to make things work. It is also reported that when employees are involved change initiatives took off. The limited and slow implementation in KRIP could be blamed on the leader's views of the work force as ignorant and needing a lengthy and close supervision before it can be entrusted with powers envisaged by the new system. It is generally recognised that mistrust of workers led to the failure of many programmes. This implies that worker's pieces of advice or contributions in the decision making process should not be ignored wholesale; rather they should be analysed with the view of reaping some useful facts from them.

Although the change in NWSC was revolutionary in nature, there was lots of involvement of staff in NWSC exempting Kampala-KRIP. This was therefore a mix of different approaches from both revolutionary and evolutionary change, which normally maximises benefits.

Encourage Communication: Chart 1 appendix IV show that the communication system adapted during the Programme was quite commendable with NWSC exempting Kampala-KRIP exhibiting higher scores compared to Kampala-KRIP. What sticks out more prominently in NWSC exempting Kampala-KRIP was that: communication made people understand the motives and goals of change, commitment to change was gained through effective communication and that the programmes were the most widely communicated in the history of NWSC. The results in consistent with what Saade et al (2000) and Johnson and Scholes (1993) pointed out about communication in section 2.11.1. Similar results are exhibited in Figure 4.4 were the lower cadre staff from NWSC exempting Kampala-KRIP believed that the reasons for the 100-days Programme and SEREP were widely

communicated to the workers. Lower cadre staff from KRIP however scored this variable just on average, which signifies weaknesses in internal communication in KRIP, also reported earlier.

Need for right culture: Successful change requires cultures, which encourage group working, autonomy and flexibility (literature reviewed in section 2.8.5). Gilgeous (1997) pointed out that if organisations don't have cultures which matches how they wish to operate in future, they must create one. Information derived from documentary review (NWSC, Feb 1999) and in-depth interviews pointed out that teamwork in NWSC was created/reinforced by implementation of the programmes through task force committees. Results in chart 2 appendix IV show that team working in NWSC exempting Kampala-KRIP is well developed. However for KRIP middle managers believed that the team working after the programmes was lower compared to previous period. Similar results are exhibited in chart 8 appendix VI. Senior managers attributed success of the programmes to team working. This is in line with what Gilgeous (1997) reported in section 2.11.2.

For autonomy, although results of the SWOT analysis (Table 4.1) pointed out that there was relatively good organisational autonomy, results from middle managers detailed in chart 4 appendix IV reveals the absence of autonomy more especially in Kampala-KRIP. This is consistent with literature reviewed on management in corporitised utilities in developing countries (section 2.12.2) where it was reported that most corporitised utilities were autonomous on paper but not in practice (Blokland et al, 1999). This therefore calls for need to strengthen the autonomy in NWSC with supervision of course from headquarters for effective implementation of programmes. Successful organisations model their jobs and work organisations on ideas of "responsible autonomy", with minimum specification of tasks (Clark, 1993).

Flexibility during the programmes was assessed using various parameters. Chart 5 in appendix IV shows that NWSC exempting KRIP were flexible in their operations as indicated by the degree of interaction between the leaders and subordinates. Leaders in NWSC exempting Kampala-KRIP listened to comments and suggestions from subordinates, shared responsibility of both success and failure, and were impartial in sorting difficulties encountered by the workers. This was found to be inadequate in Kampala-KRIP. Chart 2 in the appendix also revealed that most decisions in NWSC exempting Kampala-KRIP were reached by consensus. Then chart 4 appendix IV shows that NWSC exempting Kampala-KRIP involved others in defining their roles and responsibilities besides sharing information openly among staff. All these were found to be lacking in Kampala-KRIP. The management of Kampala-KRIP should therefore address these issues as recommended by Gilgeous (1997) in section 2.8.5. This will not only regain worker confidence in the organisation operations but will also go a long way in boosting performance.

Use of individual skills and innovativeness: Change management programmes introduced commercialisation that required the organisation to be market oriented and customer focussed. The work culture therefore changed from supply-driven to demand driven and profit-driven type. From the information gathered from documentary review, it was against this background that emphasis was put on customer care during the Programme (NWSC, Feb 1999). Since most staffs were deficient in these skills, training programmes were organised by the corporation to

enhance the skill. Chart 4 in appendix IV reveals that middle managers from NWSC exempting Kampala-KRIP agree that there was some training conducted to equip workers with skills though not adequate but those from Kampala-KRIP were in disagreement. However both groups of lower cadre staff were in agreement that they were trained on how to achieve better performance (chart 9 in appendix VI). Oldcorn (1989) pointed out in section 2.8.6 that training courses make workers have confidence and be excited about the changes being implemented. The workers also become adaptive and forward looking.

Successful charges begin with results: Results from documentary review, in-depth interviews and from questionnaires for middle managers (Figure 4.2) all confirm that the entire process was result-oriented and aimed at achieving SMART targets. This could have contributed to the success of the programmes as Schaffer and Thomson argued in section 2.8.7. This approach facilitates the prioritisation of activities, measure the extent to which each goal has been achieved and guides the designing of the subsequent phase of the Programme.

Give regular feedback: Feedback on performance enables employees understand their strengths and weaknesses in implementation of programmes. Results of questionnaires for middle managers detailed in Figure 4.2 show that the corporation was keen in giving feedback on performance to employees. It is a good approach of work as employees are able to device means of improving their performance. Middle managers were also in agreement as shown in Figure 4.2 that model results were publicised. Gilgeous (1997) pointed out in section 2.8.9 that publicising the change programmes which are seen as models of how to undertake change and the positive effects it can have for employees, creates a positive attitude towards change. The results above concur with those obtained by documentary review and in-depth interviews.

Reward system: Previously the work culture of the corporation was such that employment terms were permanent and pensionable and conditions of service and remuneration were fixed not flexible according to input or output. There was therefore no extra incentives given for excellent performance. This was quite a detrimental work culture which could be likened to the 'survival' culture described in section 2.12 since the employees were assured of same pay at month end irrespective of efforts put in. It is derived from documentary review and results of interviews that during the Programme period, the management of NWSC put in place a reward system whereby best performing areas were awarded trophies, which went together with cash prizes. Middle managers fully concur with the above results as shown in Figure 4.2. However the lower cadre staff in Kampala-KRIP disagreed.

Schermerhorn (1982) points out that availability of rewards highly motivates people in work settings and this results in achieving better performance. Senior managers in NWSC had similar views with Schermerhorn's as they pointed out that the reward system brought a lot of competition among managers and raised morale, which led to achievement of better performance.

Barriers to successful change: The force field theory postulates that when planning change, the initial task of the manager is to anticipate the nature of resistance and thus plan to avoid it. In practice the nature of resistance may not be active resistance due to

the gap between those initiating the change and those to implement the change. However it is useful in the planning stage to avoid any likely breakdown or opposition of various types and groups in the organisation. Resistance may also be an indicator to management to re-think over the change initiated.

Results of in-depth interviews indicate that workers initially resisted the change. From documentary review and interviews, it was clear that the resistance was anticipated by top-management when initiating the change. They pointed out that to minimise resistance, a participatory management style was adopted whereby most stakeholders which included the union were involved in the planning of the programmes right from initiation (NWSC, Feb 1999). This is consistent with one of the methods recommended by Gilgeous (1997) for managing resistance (participation and involvement) in table 2.2 and thus reducing the resisting forces as par the force-field theory in section 2.9.

Involvement of the union in planning minimised resistance. There existed a joint agreement between the union and management that required the union's involvement in all aspects of the management and operations that affected the workers. The workers had always convincingly accepted the union's representation and the outcome of their negotiations and discussions (Ashoka, 1998). This revealed a high skill and knowledge by management in anticipating resistance and adequately preparing for it. The area managers, heads of sections and union members involved were then to spread the gospel of change to the workers under their jurisdiction. This was to minimise resistance among the lower cadre staff by effective communication, which was effectively done in NWSC exempting Kampala-KRIP but not to an adequate level in Kampala-KRIP as earlier reported. Further to the above strategies of minimising resistance, management designed an attractive voluntary retirement scheme to pay off those who could have been uncomfortable with the change process. This procedure adopted is in line with change management approach recommended by Ashoka (1998) and the reaction of a typical work force in an organisation to a major change by Saade et al (2000) in section 2.5.

4.7.6 Refreezing

The final stage in the planned change process is refreezing where emphasis is on stabilising the change and creating the conditions for its long-term continuity (section 2.4.4). Results from in-depth interviews pointed out that SEREP was initiated to enable the change created during the 100-days Programme become normal working life in the corporation. This was necessary to enable the workers maintain the already created spirit and consolidate achievements. It was to avoid the tendency of relaxing and reverting back to the old ways. Gide in Blanchard (1996) further recommends that the pressure should be kept on until the new habits are established. The change process in NWSC therefore continued up to the last phase of Lewin's planned change process.

Concluding remarks on the change process. From the above discussion it is evident that all the four pre-requisites of change existed prior to the initiation of the change process. The resistance to be encountered during the change process was also anticipated and catered for. During implementation all factors that lead to successful change except autonomy were fully catered for in NWSC exempting Kampala-KRIP.

However for Kampala-KRIP many weaknesses were experienced during implementation phase. This include:

- Low staff involvement,
- Weak internal communication,
- Reduced teamwork,
- Low organisational autonomy, and
- Low degree of flexibility.

4.8 Was there real change in organisational behaviour in NWSC?

To answer the research question whether the change in NWSC resulted in change of organisational behaviour, this section discusses some of the behavioural factors in the literature review in section 2.2.1 under organisational culture and the ideas of Armstrong in Gilgeous (1997) and Cullivan et al (1988) outlined in section 2.11.

• **Perception for change:** While top-level managers see change as an opportunity to strengthen the business, for many employees, including middle managers change is neither sought after nor welcomed (Ashoka, 1998). There is therefore need to examine the terms of reciprical obligations and mutual commitment that define the relationship between employees and organisations. This therefore suggests that it is important to endeavour to find out how the employees view change and compare with the managers views before any change initiative can be made (Ibid.). It shows that even when changes are well planned at the top, there will be no success unless there in alignment between what managers say and do at the top and the attitude of those at the bottom.

The results on staff perceptions about benefit of the change to workers depicted in chart 9 appendix VI shows a positive attitude to change by lower cadre staff. However results from middle managers shown in Figure 4.1 shows that managers from NWSC exempting Kampala-KRIP have a positive attitude to change whereas those from Kampala-KRIP have a negative attitude. The attitude to change is an indicator of the middle manager/staff's support for the change, which has an overall influence on performance during Programme implementation.

• **Communication:** Although change processes start at the top, regular communication and continuous sensitisation and consultation among employees or their representatives greatly enhances the success rate of change. Chart 1 in appendix IV and Figure 4.4 both depict that there was improvement in communication during the Programme period. If we go by the quotation in section 2.11.1 by Moorhead and Griffin (1999) higher levels of job satisfaction and work performance would be expected because of the effective communication reported above.

• **Leadership:** Leadership as depicted in chart 5 in appendix IV is quite strong in NWSC exempting Kampala-KRIP. However in Kampala-KRIP it's quite clear that the leadership is weak and inadequate. Mugisha (2000) when carrying out a research on organisation behaviour in Kampala-KRIP reported similar results. There is need therefore to strengthen leadership in Kampala-KRIP if improved performance is to be achieved. Blunt and Jones (1992) articulates the behavioural approach to leadership, which focuses on the behaviour of leaders. The approach

states that successful leaders achieve a balance between the need to be task-oriented in their relationship with sub-ordinates, and the need to be considerate and supportive towards them.

The ideas above therefore appreciate the need to change the behaviour of sub-ordinates through good leadership. The necessity to manipulate the workforce (subordinates) in a "calculated manner" seems to be the emphasis of these authors. It appears that a leader must not change things in the organisation at the expense of motivation and teamwork if performance is not to be interrupted. This is to say the change attitude and values have to go hand in hand with the mentioned performance drivers.

- **Motivation:** The results in chart 3 appendix IV indicate that there in high staff motivation in NWSC exempting Kampala-KRIP but the staff in Kampala-KRIP seem to be demotivated. The factors used in the analysis of staff motivation are those highlighted by Herzberg in section 2.11.3, which focus on the motivators and factors to achieve job enrichment and hence increased performance. Since the staffs in NWSC globally are paid similar salaries (which could be attributed to the difference in motivation in NWSC exempting Kampala-KRIP and Kampala-KRIP), it therefore becomes clear that the poor staff motivation in KRIP is a function of inadequate leadership.

- **Team working:** Results in chart 2 appendix IV point out that middle managers from NWSC exempting KRIP believed there was more teamwork after the programmes compared to 3 years ago (before the programmes). However the managers from Kampala-KRIP were of the view that there was less teamwork after the programmes compared to three years ago. There is need therefore for the management of Kampala-KRIP to enhance teamwork to increase employee commitment and participation. It will also improve performance, job satisfaction, quality and morale as quoted by Gilgeous (1997) in section 2.11.2.

- **Staff involvement:** As discussed earlier the results of questionnaires for middle managers presented in Figure 4.1 revealed that managers from NWSC exempting Kampala-KRIP agreed that staff were involved in planning and implementing the programmes. However managers from Kampala-KRIP disagreed. The employee's views on the change process were therefore missed in KRIP. This exclusion of the employees was quite detrimental to the change process. Cole (1990) suggests that if 'participation', in the sense of genuine decision-making is to have any chance of success, the employee involvement in decision-making should take place at the plant level.

- **Staff action in line with organisational goals:** Results presented in Figure 4.3 show that prior to the programmes, workers actions were towards personal gains. For NWSC exempting Kampala-KRIP, this mentality was turned round during the Programme period and people's actions became directed towards achieving organisational goals. This according to Cullivan et al (1988) is a necessary condition to achieve effective performance. However for Kampala-KRIP the situation after the Programme was worse with peoples action still towards personal gains. This could be attributed to poor motivation and facilitation and no

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assured job security depicted in chart 3 in appendix IV that could be the result of poor leadership.

- **Laziness (I do not care attitude):** On the issue of laziness, NWSC exempting KRIP has recorded a marked improvement as depicted in Figure 4.3 and workers attitude are perceived to have changed from "I do not care attitude" prior to the programmes to being result-oriented. The results from in-depth interviews attributed this to the in-built incentives during the programmes and the pride & satisfaction of being associated with a winner. Although the score on the change of this attitude after the programmes was above average for Kampala-KRIP, it showed no significant improvement from the previous situation. A lazy and demotivated staff cannot be expected to effectively carry out the assigned O & M tasks to curtail the poor operating efficiency. There is need for the management of Kampala-KRIP to re-orient the culture of their staff if performance is to improve.

- **Sharing of information:** Chart 4 appendix IV shows that information was shared openly among all staff in NWSC exempting Kampala-KRIP. This was found to be inadequately done in Kampala-KRIP. This is very detrimental to performance as people live on rumours and suspicion. They also feel untrusted. According to literature review in section 2.3.3, Taylor (1994) attributes this to poor management. He points out that effective management climate should be characterised by co-operation among staff. There is need therefore to strengthen this among the staff in Kampala-KRIP if their confidence is to be regained for effective service delivery.

- **Risk taking:** Blunt and Jones (1992) quote in section 2.12 that sub-ordinates in low-income country management refuse to take even the most routine of decisions not governed by a rule for fear that he or she will be blamed, and punished, by a superior if anything goes wrong. Figure 4.3 reveals that in the past this tendency of avoiding risks was prevalent in NWSC. However after the Programme the tendency above has changed and both groups of managers (from NWSC exempting Kampala-KRIP and from KRIP) now take risks and are ready to learn from occasional failures. This tendency reduces the workload at the top, which in turn minimises delays in decision-making.

- **Corruption:** Literature review in section 2.12 on management of WATSAN sector in developing countries point out corruption as a significant characteristics of low-income country management. Figure 4.3 revealed that there has been a considerable reduction in corruption during the Programme in NWSC exempting Kampala-KRIP, but Kampala-KRIP is still a victim of the above scenario typical of developing countries. The workforce in KRIP that is grossly involved in illicit activities in the field cannot be expected to put organisational goal achievement at the forefront at the expense of personal gains as reported above. The repercussions of this corrupt tendency therefore results in to inadequate performance outputs.

- **Organisational autonomy:** Peters and Waterman (1982) pointed out in section 2.3.2 that most excellent companies push organisational autonomy to the shop floor or product development team. However it is pointed out in section 2.12.2 that many corporitised utilities in Africa and Asia were autonomous on paper but not in practice. Results shown in chart 4 appendix IV shows that during the

Programme period the organisational autonomy granted to staff in Kampala-KRIP was inadequate but that in NWSC exempting Kampala-KRIP was average. This therefore calls for enhancement of organisational autonomy as it is reported by Chaudry et al (1992) in section 2.3.2 that teams who had the freedom to make their own decisions were successful in their operations.

• Figure 4.3 gives a rather impressive view that the workers in NWSC exempting Kampala-KRIP have developed a sense of ownership and pride about working with the corporation. This is a good culture, as it would make the workers put emphasis on achieving organisational goals and thus improve performance. The workers view in Kampala- KRIP is rather disappointing as the above is yet to be achieved. This could be the result of poor motivation and inadequate leadership discussed before. This does not augur very well and if not checked could lead to poor performance, individual frustration and alienation at work (Kiggundu, 1988 in Blunt and Jones, 1992).

• Finally there were also remarkable improvement in the following behavioural factors for both NWSC exempting Kampala-KRIP and Kampala-KRIP: Performance measurement (Figure 4.2), Punctuality in the work place (Figure 4.3), and Cleanliness at corporation premises (Figure 4.3).

Concluding Remarks on organisational behaviour: From the discussion above, it is apparent that NWSC exempting Kampala-KRIP has transformed organisational behaviour during the Programme period. Some weakness though was observed in organisational autonomy. Organisational behaviour in Kampala-KRIP has however not shown significant improvement. The major areas of concern are:
- Workers not involved in planning organisational activities,
- worker's actions are in variance with organisational goals,
- Rampant corruption,
- No emphasis on getting the problems in the open,
- Reduced team working,
- Low motivation,
- Poor leadership,
- Workers not being proud about working in the corporation.

With the above trend, it is therefore necessary to address the issue of organisational behaviour in Kampala-KRIP as a matter of urgency in order to improve performance further.

4.8.1 Why was there no change in organisational behaviour in Kampala-KRIP?

To fully understand the possible causes of non-leverage of organisational behaviour in Kampala-KRIP, the KRIP contract was studied further to map out shortfalls in contract inception, award and regulation. Most of the information on the contract in extracted from the study of organisation behaviour in KRIP by Mugisha (2000)

(a) Procurement process.

Wenyon and Jene (1999, in Mugisha 2000) point out that given the limited scope of introducing competition in the market to provide water services, there is a particularly

pressing need to ensure effective competition for the market. This means that the tendering process must be organised so as to attract a significant number of well-qualified bidders. "Competitive bidding has a likelihood of delivering gains out of reduced tariff, more investments (in case of concessions), better operating expertise, better performance targets etc" (Mugisha, 2000). There is no doubt that competitive bidding can bring in an operator with better knowledge to transform organisational behaviour especially if the array of demonstrated operating experience is vetted during the contract award process (Ibid.). Braadbaart (2000) also points out that competitive bidding: ensures fairness (no special treatment of individual firms), sets performance standards and saves money (lowest bid wins).

In the case of KRIP contract, no competitive bidding was done. The badly needed benefits of competitive contract procurement were not secured right from the beginning. The nominated contractor (with no demonstrated experience in water operations), was given terms of reference to submit financial and technical proposals within a period of 3 weeks (Mugisha, 2000). Within a period of two months the management of NWSC (with no prior experience in PSP contract design) had awarded the contract (Ibid.). While it is recommended that excessive transaction costs and delays in designing and awarding PSP contracts should be avoided (Rivera, 1996 in Mugisha, 2000), the total time frame for NWSC was surely little to conclude this vital exercise. 'This is especially; given the fact that there was limited experience in PSP engagement on the party of management and the situation information asymmetry that existed between the contractor and the client" (Mugisha, 2000).

(b) Regulation.

Rivera 1996 in Mugisha (2000) asserts that effective regulation is the cornerstone of a sustainable private sector participation. "According to Rivera some of the most critical regulatory issues that need to be addressed, regardless of the model PSP, include:
- Definition of regulatory functions and interpretation of contracts.
- The setting of appropriate incentives and strategies to deal with information asymmetries, with the threat of capture of the regulatory agency by the regulated companies or by political interests, and
- To increase the perceived legitimacy of regulatory decision making" (Ibid.).
The regulation of the KRIP contract was designed to be by contract. The contract was however poorly structured and does not seem to define key terms adequately, leading to differences of interpretation related to target and actual performance (and incentive payments arising from this). Additionally, the performance targets in the contract did not consistently follow the SMART criteria commensurate with the targeted performance leverage" (KRIP contract, 1997). The nominated project monitor ('regulator') therefore finds it difficult to make a consistent demand for agreed performance targets from the contractor. The inadequate regulation above, therefore is part of the reasons for inadequate performance registered" (Ibid.).

Mugisha (2000) also pointed out that unlike in Cartegena and Tunja (all in Columbia) where the management contracts are remunerated based on customer tariffs collected, in KRIP the contractor receives a fixed monthly fee of about US $ 160000 (where 55 % is dollarised). In addition to these, there is an entitlement of a bonus of 25 % of the extra collection over the projected collections without PSP (leave alone the rationality of the projections). While this may be taken as one of the risk guarantee measures

because of prior information asymmetry, it looks rather not pressing enough on the contractor to perform; payment to the operator is ensured regardless of performance. This tended to have a decelerating effect on the efforts to transform organisational behaviour in Kampala area.

4.9 Was there improvement in service delivery to the customers?

Cullivan et al in section 2.3.2 quotes that people in effective institutions see serving the customer as their primary function. All work, programs, and innovations are directed towards greater efficiency, effectiveness, and equity in service to the customers. A customer survey carried out in NWSC reveals that there was improvement in the quantity of water supplied to the customers as evidenced by improvement in hours of water supply (Figure 4.5 and Figure 4.6) and improvement in pressure in the distribution system (appendix VIII). The results in the appendix also depicts improvement in awareness of NWSC services & customer responsibilities and the way staff render their services (asking for something before providing service). This shows that the corporation has become customer oriented in its quest to achieve commercial viability. The perceived quality of water supplied as measured by the colour and taste was found satisfactory.

The analysis in table 4.4 shows that NWSC exempting Kampala-KRIP is effective in providing service to the customer. However for Kampala-KRIP, there is still a very big gap in effective meter reading and accurate billings. This could be a result of the poor organisation behaviour in Kampala-KRIP, which may have an effect on customer's willingness to pay (demonstrated by the high accounts receivables). This discussion therefore reinforces the previous ones in suggesting the improvement in organisational behaviour in Kampala-KRIP as a possible leverage to performance output. The response to customer complaints was found to be adequate and timely.

Suggestions by customers depicted in table 4.5 show that the customers have complaints with the sewerage charge (which is perceived as very high) and other charges (new connection fee, reconnection fee, and minimum charge) but no comments was made on the water price. Management had earlier carried out a tariff review study with the view of drawing up a structure which is customer friendly (NWSC, June 1999). However because of political and legal environment as reviewed in section 2.2.2 and the lack of organisational autonomy for the corporation to effect tariff review which is typical of public utilities in low-income countries (section 2.12.1), the tariff structure was not approved during the Programme period (NWSC normally makes proposals on tariff structure but the final decisions is still with government). Results of in-depth interviews revealed that some of the tariff provisions were impediment to the customer's enjoyment of corporation services, which could be affecting its revenue collection.

All in all the above discussion has established that there has been improvement in service delivery to the customer more especially in NWSC exempting Kampala-KRIP. The notable weakness in Kampala-KRIP is on the effectiveness of service delivery as evidenced by the accuracy in meter readings and bills produced. This has to be addressed in order to improve service delivery to the customers.

4.10 Was there change in performance output?

The performance of NWSC as measured by the operational performance indicators and financial indicators in section 4.6.1 & 4.6.2 depicts dramatic improvement within the programme period. Infact the combined efforts of PSP and the change management initiatives seemed to yield better results in Kampala-KRIP compared to the period before the change process. Notable improvements recorded are:

- Increase in plant capacity utilisation from 37 % before 100-days programme to 41 % after SEREP I (for NWSC exempting Kampala-KRIP) and from 58 % before 100-days programme to 61 % after SEREP II for NWSC globally.

- Increase in active accounts from 65 % before 100-days programme to 72 % after SEREP 1 (for NWSC exempting Kampala-KRIP) and from 63 % to 73 % for Kampala-KRIP.

- Increase in metered accounts from 81 % before 100-days programme to 87 % after SEREP 1 in NWSC globally.

- Reduction in UFW from 44 % before 100-days programme to 29 % after SEREP 1 (for NWSC exempting Kampala-KRIP) and from 53 % to 44 % for Kampala-KRIP.

- Increase in billing efficiency from 56 % before the 100-days programme to 71 % after SEREP 1 (for NWSC exempting Kampala-KRIP) and from 47 % to 56 % for Kampala-KRIP.

- Improvement in productivity for NWSC globally from 31 employees per 1000 connections before the 100-days programme to 22 employees per 1000 connections after SEREP I.

- Turnaround of corporation operations from deficit before the 100-days programme to a surplus after the programmes.

- Improvement in profitability from declining trend before the 100-days programme to a rising trend after the programmes.

- Reduction in operating ratio from 127 % in June/1999 to 79 % in June/2000 (for NWSC exempting Kampala-KRIP) and from 72 % to 55 % for Kampala-KRIP.

- Reduction in days receivable ratio from 472 days in June/1998 to 304 days in June/2000 (for NWSC exempting Kampala-KRIP) and from 406 days to 351days for Kampala-KRIP.

The subjective performance in the five key areas of water production and sewerage services, water distribution, revenue generation, cost reduction and customer care as perceived by the middle managers showed remarkable improvements (Chart 6 & 7 appendix IV). The highest improvement was recorded in customer care, which signifies that the corporation has become customer oriented. Results of in-depth interviews with senior managers presented in sections 4.2.7 and 4.2.9 confirm the above performance improvements.

However despite the above performance improvements, some of the targets were not achieved as anticipated (appendix IX to XI) and some performance outputs were not sustained during SEREP II. This could be attributed partly to the short duration of the programmes, which made it difficult to have most of the requirements (inputs) in time and due to the inadequate funding during SEREP II. For Kampala-KRIP, the poor organisational behaviour reported above could also have played a role. This therefore

calls for additional efforts on the part of the corporation to further improve on performance.

4.11 Major constraints to performance improvement

During the implementation of the programmes, the corporation experienced some constraints, which affected the achievement of targets set. The major constraints experienced are hereby outlined below (NWSC, June 1999; NWSC, November 1999; NWSC, Feb 2000; NWSC, September 2000):

- Delays in procurement of equipment, tools, and materials due to long government procurement procedures that slowed down the process of change.
- Lack of adequate logistics- transport, materials and tools.
- Inadequate funding especially during SEREP II thereby affecting sustainability of outputs.
- The requirement to report on change reduced managers' ability to implement the change. This was due to the short reporting period of one week, which involved a lot of work.
- Strict Corporation policy of registering accounts in the names of the landlords as opposed to tenants. Because of the debts accrued on some premises, the policy is deterrent on tenants willing to be connected to water supply.
- The tariff review report was not approved. This had implications for revenue generation as certain elements of the tariff are viewed by customers as impediments to their enjoyment of corporation services.
- Bad V.A.T law which demands payment on billing as opposed to collections. With the high arrears portfolio, this is seen as a great disadvantage to the corporation.
- Salary incentives are a significant ingredient of motivation. During the programme period, salary was increased by a minor percentage in an attempt to keep the wage bill within an acceptable limit.
- Lack of autonomy.
- The existence of a contract for the management of the Kampala water supply service area could not allow for changes to be easily effected. This slowed down the adoption of strategic change activities.

4.12 Recent management initiatives.

(a) Area performance contracts

"As a result of the confidence government and other stakeholders have had in the NWSC, government decided to go into a service contract with NWSC management for a period of three years starting from September 2000 to June 2003. The contract is between the National Water and Sewerage Corporation and the Government of Uganda represented by the Ministry of Finance. The NWSC will therefore be governed by the management contract for the next three years" (Uganda Confidential, November 17-23, 2000).

As a means of operationalising the government contract, the management of NWSC pro-actively formulated performance contracts at its areas of operation. All areas of the NWSC are now operating as autonomous commercial entities with the main aim

of improving: service delivery, sustainability of operations and achieving financial viability (Ibid.). The area performance contracts were launched at a ceremony presided over by the Hon. Minister of State of Water and Lands at a function held on the 10th October 2000 and are to last for one year initially.

The salient features of the area performance contracts are:
- They give autonomy to the area managers in running the affairs of the respective areas,
- The contracts are for an initial period of one year renewable,
- The contracts provide for incentive payments to the management of an area upon achieving a certain level of performance,
- The contracts also spell out penalties to the management of the area in case of poor performance.

The area performance contracts therefore addresses the weakness of organisational autonomy identified during the discussion of organisational behaviour in section 4.8. The evaluation of the corporation performance under area performance contracts conducted by management in November 2000 revealed that the initiative was already having a positive impact.

(b) Management services for the Kampala water supply and sewerage services area.

The contract for the management of services for the Kampala water supply and sewerage services area was tendered (New Vision The, October 10, 2000) since the present contract under KRIP is due to expire on 30th/June/2001. The advertisement invited firms with proven prior experience in managing delivery of water services in urban centres preferably in Africa, for not less than five years. It is therefore envisaged that the firms to be selected will have the necessary experience in changing organisational behaviour problems identified and hence improve performance.

(c) Tariff review.

The management of NWSC carried out a tariff review study with the aim of coming up with a customer friendly tariff structure. The proposals of the study were presented to government for approval, as NWSC still has no autonomy in adjusting tariff. Some of the tariff provisions as earlier discussed were having an effect on customer's enjoyment of corporation services. Some of the adjustments made to mention but a few are highlighted below. This will result in reduction of suppressed accounts, expansion of the customer base and hence improve on revenue generation.

New connection fee	Old tariff (Ushs)	New tariff (Ushs)
1/2 inch water connection	125,300	50,000
3/4 inch water connection	164,700	100,000
1 inch water connection	206,500	200,000
2 inch water connection	821,300	750,000
> 2 inch water connection	1,642,500	1,500,000
Reconnection fees		
Connection below 2 inch	38,280	10,000
Connections 2 inch & above	38,280	20,000

Previously the corporation also billed customers a minimum charge (for metered customers) for any water consumption below the minimum allowable. On realising how unfair this charge was, compounded with numerous customer complaints, the minimum charge was scrapped and replaced with a customer friendly service charge. The service charge billed now for domestic customers compared to the minimum charge previously raised is highlighted below for illustration purpose.

Connection size	1/2 inch	3/4 inch	1 inch
Minimum charge previously raised (Ushs per month)	3,696	18,480	27,720
Service charge billed now (Ushs per month)	1,500	2,000	5,000

The above management initiatives are a clear indication that NWSC has continued to monitor its environment, accepted and embraced change in order to further improve on service delivery to the customers.

5 CONCLUSIONS AND RECOMMENDATIONS.

5.1 Conclusions.

(a) Application of generally accepted change management practices in the change process.

(i) Initiation

The NWSC change process applied generally accepted change management practices in initiating the change. All the pre-requisites for effective change management (section 2.4) existed prior to the change process.

(ii) Preparation for resistance

The change process adopted generally accepted change management practices in anticipating and preparing for resistance. This was done by use of shared power change strategy where most stakeholders including the union were involved in planning for the programmes right from the beginning. The change plan also had provision for an attractive voluntary retirement package for staff laid off.

(iii) Implementation

During implementation, it was established that NWSC exempting Kampala-KRIP endeavoured to create or reinforce and therefore utilised all factors which lead to successful change (section 2.8) except organisational autonomy which was inadequate. However for Kampala-KRIP there were many notable weaknesses during implementation, which included:

- Low staff involvement,
- Inadequate internal communication,
- Reduced teamwork
- Low organisational autonomy, and
- Low degree of flexibility.

(iv) Refreezing

The NWSC change process continued to final stage of refreezing (third phase of Lewin's planned change process). This enabled the workers maintain the already created spirit, consolidated achievements and stabilised the change. This implies that the change followed Kurt Lewin's change process of Unfreezing, Change and Refreezing.

(b) Change in organisational behaviour.

This study has found out that NWSC exempting Kampala-KRIP positively transformed organisational behaviour during the programme period. The organisational behaviour in Kampala-KRIP was however not significantly improved as the following notable weaknesses still raised concern:

- Workers were not involved in planning organisational activities,

- Peoples actions were not in line with organisational goals but on personal benefits,
- Corrupt tendencies by field staff still prevalent,
- KRIP management put no emphasis on getting problems in the open,
- Reduced team working among staff and between sections,
- Low staff motivation,
- Poor leadership, and
- Workers not being proud about working in the corporation.

(c) Improvement in service delivery to customers

The results and discussions of customer responses show that there was improvement in quantity of water supplied to the customers as measured by the increased number of hours of supply and improvement in pressure in the distribution system. The perceived quality of water was good. There was also improvement in the way staff render service to the customer in relation to collusion and customer interfacing relationships. NWSC exempting Kampala-KRIP was also reported to be executing its service delivery effectively. However the effectiveness of service delivery by Kampala-KRIP as measured by the customer responses on accuracy of meter readings and bills is still inadequate.

The response to customer complaints was found satisfactory. The customers had complaints on the sewerage charge and other charges (new connection fee, reconnection fee, and minimum charge). With the recent management initiatives outlined in section 4.13, some of these problems have been addressed. It is therefore apparent that there has been a general improvement in service delivery to the customers.

(d) Improvement in performance output.

From the results presented and discussed in section 4.6.1 & 4.6.2, it is evident that there was great improvement in performance for both NWSC exempting Kampala-KRIP and Kampala-KRIP. Infact the combined efforts of PSP and the change management initiatives seemed to yield better results in KRIP compared to the period before the change process. However it is worth noting that some of the targets were not met due to the constraints enumerated. It is further noted that some of the performance outputs were not sustained during SEREP II. NWSC should therefore address the constraints experienced to further improve on performance.

Summary of Conclusions.

(1) For NWSC exempting Kampala-KRIP, it is apparent from the above that the change was conceived and implemented following generally accepted change management practices, and it resulted in improved performance output and change in organisational behaviour. This therefore proves the research hypothesis formulated " *Short term programmes in NWSC were conceived and implemented following generally accepted change management practices, and it resulted in improved performance output and change in organisation behaviour"*

(2) For the control group (Kampala-KRIP) it is apparent that although the programme was conceived following generally accepted change management practices, its

implementation did not strictly follow the accepted practices and although it resulted in improved performance, there was no significant change in organisation behaviour. ~~and so~~ For the control group we therefore reject the hypothesis and conclude that the change did not achieve the desired level anticipated.

5.2 Recommendations.

(1) The duration for future short term programme to be at least one year long. This is to cater for the period required for procurement of equipment, tools and materials if they have to be imported. This is necessary because of the long government procurement procedures, which normally takes a minimum of 3 months.

(2) There should be provision of adequate logistics-transport, materials, tools and financial input. Without adequate logistics, many activities cannot be implemented, thus resulting in poor performance output.

(3) Worker participation and involvement in planning, implementation and decision-making should be reinforced especially in Kampala-KRIP. This according to Nolan et al (1993) is one of the well-documented psychological laws of organisation behaviour in that involvement leads to commitment. "Use a high-involvement approach to achieve a high commitment, a commitment that is essential for the success of the change effort" (Ibid.).

(4) Management should do everything possible to make the lower managers autonomous by devolving most of the responsibilities and authority to lower levels. Top management should however carry out routine supervisory roles to make sure that the autonomy granted to the lower managers is not abused. Franceys (2000) quotes that if you don't inspect it, don't expect it.

(5) In future programmes, the requirement to report on change should not reduce manager's ability to implement the change. The reporting should therefore be done fortnightly with the second report in the month amalgamated together with the monthly report.

(6) The management of Kampala-KRIP should improve on the internal awareness of the programmes initiated. This makes the workers understand and appreciate the need and conditions of change. Internal awareness also makes workers have support for the programmes.

(7) The management of Kampala-KRIP should put emphasis on openly sharing information among its staff. This makes the staff feel trusted and avoids rumours and suspicion.

(8) The salary structure as a significant ingredient of motivation should be rationalised into one that drives motivation as well as performance. It is recommended that the structure be largely performance based.

(9) The management of Kampala-KRIP should strengthen leadership at all levels if performance improvement is to be achieved. Effective leadership would minimise most of the weaknesses identified in the discussion of organisational behaviour

and implementation of the change process. Effective leadership for example will manipulate the workforce in a 'calculated manner' so that the worker's actions are in line with organisational goals and they become proud of working in the corporation. Leadership can be enhanced by:

- Encouraging sub-ordinates to participate in planning and implementation of the programmes. This will facilitate increased understanding, acceptance and commitment by the workers to the final plans.
- Empowering the lower managers by devolving most of the responsibilities, authority and control of resources to lower levels.
- The senior managers themselves should live by example by being committed to the change implemented. If others lower in the organisational hierarchy see senior managers totally committed to the change, they will be bound to fully buy into the new procedures (Peters and Waterman, 1982).
- Clearly defining people's roles in the change, the goals of the change and the performance indicators to be achieved.
- Supervisors should be impartial in sorting out difficulties encountered by the workers. It should not be based on preferential treatment to some workers based on 'camps' created in the work place.

(10) It was pointed out in section 2.11.3 that motivation is one of the major elements, which contribute to high performance. In line with Herzberg's motivational factors and factors to achieve job enrichment, it therefore means that NWSC as a whole and Kampala-KRIP in particular focus on the above factors if performance is expected to change. It is recommended that the following be done to reduce weaknesses identified.

- Reduce control over the workers in the corporation. This will make the workers fell trusted, result in commitment and motivation which will lead to improved performance.
- There should be emphasis on job rotation, which introduces workers to new challenges. Saade et al (2000) points out that job rotation gave the worker the opportunity to exercise his skills in a new environment, giving him greater personal job satisfaction.
- Management should develop a policy of regularly seeking employees' views on their work, since they are the people on the ground.

(11) The management of Kampala-KRIP to enhance team work through the following:

- Encouraging working through effective teams and having all problems thought of as group problem
- Each member's responsibility in the team to be clearly specified.
- Strengthen the spirit of mutual trust among members of the team and between teams.
- Create an environment where one man's decision is unacceptable but where most problems are openly discussed and decisions reached by consensus.

(12) To improve on service delivery to the customer the following recommendations are made to address the problems of effectiveness in service delivery and the corruption tendencies identified in Kampala-KRIP.

- An environment where activities leading to collusion and corruption are unacceptable should be created to stop these counter productive tendencies.
- The pay system should be structured in such a way that the workers are paid according to the effectiveness of carrying out their duties (e.g. payment based on the number of accurately read meters for the meter readers). The system of same pay irrespective of effective performance output seems to be detrimental to corporation enhancement of service delivery to the customers.
- The staff should be re-oriented to serve the customers promptly and they should familiarise themselves with and internalise the corporation slogan "Customer is the reason we exist".

(13) To address the problems identified in the KRIP contract, it is recommended that future management contracts be:
- Put to competitive tender. This will increase the chances of bringing in an operator with the relevant experience required to achieve the contract objectives.
- Structured in such a way that allows clear interpretation of the contract by both parties.
- The performance targets in the contract to consistently follow SMART criteria commensurate with the targeted performance output.
- There is need for adequate preparation and capacity building in order to effectively evaluate the contracts.
- The pay structure should be designed into one that drives motivation as well as performance. It is proposed that the structure be largely performance based.

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APPENDICES

Appendix I   :Face-to-face Interview Schedule for senior managers.

Appendix II   :Responses by senior managers on change management programmes-Interview Schedule Appendix I.

Appendix III   :Questionnaire for the evaluation of 100-days programme and SEREP 1completed by middle managers.

Appendix IV   :Results of questionnaires for middle managers.

Appendix V   :Questionnaire for the evaluation of 100-days programme and SEREP 1 completed by lower cadre staff.

Appendix VI   :Results of questionnaires for lower cadre staff.

Appendix VII   :External customer questionnaire on NWSC service delivery improvement.

Appendix VIII   :Results of external customer surveys on NWSC service delivery improvement.

Appendix IX   :NWSC operational performance indicators showing targets achieved during-100-days programme.

Appendix X   :NWSC operational performance indicators showing targets achieved during SEREP 1.

Appendix XI   :NWSC operational performance indicators showing targets achieved during SEREP II.

Appendix XII   :Summary of NWSC operational performance indicators before and after the Programmes.

Appendix XIII   :NWSC Corporate Goals (1999-2002).

Appendix I: Face-to-face interview schedule-for senior managers.

1. How was the 100-days programme initiated and what were the reasons for change.
2. What was involved during the planning stage of the 100-days programme
3. How was the change implemented
4. What were the worker's reactions
5. How was resistance managed
6. What was the role of Top-Management during implementation
7. What in your perception were the impacts of the 100-days programme
8. Why was it necessary to implement another programme (SEREP)
9. What again in your perception were the impacts of SEREP
10. How was desired behaviour and performance recognised/rewarded
11. What was the greatest contributor to the success of the programmes
12. What was the greatest obstacle to the success of the programmes.
13. What would you do differently next time to increase the success of change management programmes.

Appendix II: Responses by senior managers on change management programmes (Interview schedule /Appendix I)

RESPONDENT 1

1. It was top-bottom approach initiated by top management. M.D was main person who initiated the programme. The programme was initiated because the corporation was operating at a deficit and not able to meet its financial obligations (statutory deduction would delay, suppliers would wait for months before payment, payment of Electricity bills was a problem, rementence of V.A.T would delay thereby prompting the authorities to lock offices including that of the M.D). This prompted top management to institute this programme in order to reverse the trend. The intention was not only to balance the budgets but have some surplus to be re-invested in areas like mains extension thus increasing revenue base.

2. Planning involved identification of key problems. These were categorised into five main areas: water production and sewerage services, revenue improvement, water distribution, cost escalation especially personnel related costs and handling customers. Five committees were formed in the workshop organised to discuss the programme, people asked to volunteer where to fit and others assigned to particular committees. The members then elected the chairpersons for the respective committees. Main targets were identified and activities formulated. Budgets were then drawn and some money set aside to implement the activities. The director technical service was appointed overall chairman of the programme (this was because the programme was operational in nature and since he was the chairman of management tender committee).

3. Area Managers were asked to form their own task force in their respective areas to address specific issues, set targets, allocate people to implement and submit weekly reports to the chairpersons in headquarters. Weekly reports gave insights of what would be accomplished in a month. Evaluation was done monthly. Areas that excelled in the respective disciplines and best overall area were given prices. Prizes were divided into trophies and cash. Trophies were used for recognition and customer care, whereas cash prices were to motivate staff (some divided cash among themselves and others organised bull roasting).

4. There was tremendous pressure on the workers. 100-days programme did not prepare the workers for change. Unfreezing period was short. Some staff started working like robots. There was fear of loosing jobs. Area managers felt they spent a lot of time writing reports instead of managing.

5. Resistance was managed by motivating workers with cash prices and special bonus for outstanding achievements sent to areas for the respective areas to decide on who to be awarded. Parties (Ndombolo, Obangaina etc) were also instrumental in avoiding resistance as workers interacted with top-management and board members. It brought self-pride to well performing areas, self-confidence and job satisfaction.

6. The role of top management during implementation was monitoring, evaluation and recognising the best performers.

7. Changed work mentality and work culture. Everybody started concentrating on his work and learnt how to work on pressure. Improved efficiency; collections went up 1.5 times in most areas. Teamwork was greatly enhanced, everybody felt responsible and started measuring performance. Data was interpreted critically as

it could make one shine or lead to his downfall. Dishonesty however set in, as some people would send wrong figures to win awards.

8. 100-days programme did not attain strictly the objectives, for which it was set, so it was necessary to have another programme. The programme was also too short and management felt that longer programme would enhance performance. Some targets had no realistic time frame. 100- days programme was however a reference as people realised they could perform better. Longer programme was therefore required to facilitate achievement of targets like procurement, wooing customers and carrying out mains extension.

9. Work habits had become a norm though strenuous. It became monotonous in terms of weekly reports. It was time consuming and wasteful in terms of stationery. SEREP 1 had no incentives in built and so people started asking for money incentives and bonus. Customer awareness however went up. More people were brought back to supply, which brought dividends, but it was short-term achievement (payment of Ushs 10,000 on reconnection but disconnected again immediately). It made public aware of payment of service and why they should pay. M.D and board members would visit municipal authorities to discuss modalities of payment and reconnection. Most municipal authorities started advising other utility organisations to follow the example of NWSC.

10. Desired behaviour and performance was recognised/rewarded by issuing trophies and cash incentives.

11. The greatest contributor to the success of the programmes was the application of the theory of carrot and stick. (You do well, we give you a trophy and cash; You don't do well we flog you)

12. Inadequate funding and facilities like pipes and unrealistic demands were the greatest obstacles to success. There was also poor planning (wanting to achieve everything within a short time without looking how).

13. Set realistic targets, provide the resources as budgeted, provide required facilities and equipment, put trust and responsibility to the respective managers to achieve targets. Use modern management techniques not carrot and stick, time period should be realistic, over ambitious programmes to be avoided. Realistic programmes to take at least one year and programmes to fall within financial obligations of the corporation (amount of money injected in the programmes gradually diminished).

RESPONDENT 2

1. When the new board came in office, they were given specific objectives to turn around the corporation to a viable institution. Revenues generated was not balancing expenses, staff productivity was low etc. The board was therefore to restructure corporation with the view of increasing productivity. With these in mind, the new M.D took the challenge of wanting to transform the organisation in 100 days. His aim was to turn around the situation to a state where it is able to meet surplus.

2. Five key areas were looked at- Water production and sewerage services, revenue generation, water distribution, cost reduction and customer care. Targets were set based on smart criteria. Most of the stakeholders (Heads of departments, Heads of sections, Area managers and other key staff) were involved in setting/reviewing the targets.

3. Implementation was chaired by director technical services. Five sub-committees were set at headquarters. Duties of committees were to drive the process and monitor the programme. At the area level there were similar committees created. Weekly reports were submitted by areas, which would be evaluated and feedback given where necessary. Weekly reports were evaluated against set targets and well established set criteria. Areas were graded according to their performance. Monthly awards given for the best area. Overall evaluation was done after three months, during which the best performing areas were rewarded. Winners in respective committees were rewarded with trophies and cash prizes. These were used as incentives, which had never existed in NWSC. This acted as driving force to performance. Winning area would host area management and senior management meeting and thereafter conduct bull-roasting festival.

4. 100-days programme involved a lot of work. People previously did not want to work. However they latter took the challenge because of motivation and cash incentives. A lot of reporting to all the committees. The fatigue of making reports was so demanding.

5. No resistance was experienced, as most stakeholders were involved in planning for the programme.

6. Top management facilitated the implementation of the programme. They also monitored progress of the programme.

7. There was improvement in revenue collections, cost reduction and situation turned from cash deficit to surplus. Water production was sustained through planned preventive maintenance. UFW however didn't change because of short period of time. Response to consumer complaints (leaks, blockage) and customer image improved. Above all, attitude of staff changed to being performance oriented.

8. A lot of achievements were made during the 100-days programme, lessons learnt, constraints and weaknesses experienced. Another programme was required to maintain the already existing spirit and look at constraints, weaknesses and ways of addressing constraints. This was also required because some targets had not been achieved.

9. There was further reduction in costs and UFW. Revenue however didn't improve because government didn't pay. Capacity utilisation and staff productivity improved, and good quality water sustained. There was increase of coverage through mains extension and installation of kiosks to extend services to the poor. The number of suppressed accounts reduced as a result of amnesty granted to consumers. Over 1,400 meters were installed on unmetered connections and billing efficiency increased from 50-57%.

10. Offering cash prices and trophies rewarded desired behaviour and performance.

11. There was commitment on part of management compared to previous period. Money was made available to finance capital expenditure. Active participation of stakeholders and in built incentive mechanism were all key contributing factors to success.

12. Cash problems were major obstacle to success. Delays in procurement due to naturally long cycles also contributed to failure in achieving targets. Fatigue started developing after working such a long journey from 100-days programme. People required a rest.

13. Programme should be properly financed so that whatever is planned is implemented. Realistic targets with realistic time frame should be set. There is need for bottom-up approach instead of imposing programmes on workers. This will result in full acceptance. New implementation mechanism to be periodically

developed to avoid fatigue. Realistic evaluation of programmes is important to pave way for future programmes.

RESPONDENT 3

1. 100-days programme was formed in line with the corporate plan. It was to address activities in the corporate plan in a more focussed manner. The reason for initiation of the programme was to address certain ills that were apparent at that time (Low capacity utilisation, High UFW, Low billing/collection efficiency etc).
2. Taskforce under the chairmanship of Director of Technical Services was formed. Five sub-committee were formed in headquarters, for the different areas to be addressed. Similar committees were latter formed at the area level. The committees carried out situational analysis of the corporation at that time and set targets and activities to be carried out to improve performance.
3. The area managers and heads of department did implementation of the programme with overall guidance from top management. Competition between areas was developed. The respective task force committee members carried out evaluation of activities that were planned under their respective committees. Evaluation was done monthly and trophies given to the best area.
4. Initially there was some panic, but latter they became excited and enjoyed themselves, as they were motivated particularly with trophies and money in form of bonus. New trend of thinking developed, as workers became results oriented.
5. No resistance experienced particularly because people were fully involved.
6. Top management gave general guidance to the way of implementation. The director of technical services as the chairman of the programme could regularly report to top management the progress, constraints and weaknesses experienced. Top management could then advice on the way forward.
7. The impacts of the programme were improvement in revenue, cost reduction did very well and the corporation started making surplus instead of deficit.
8. Tremendous achievements were made during the 100-days programme. It was necessary for management to consolidate the achievements and address constraints and weaknesses experienced.
9. There was general improvement in performance in all areas. The corporation was also able to increase coverage and extend service to the poor by installation of kiosks.
10. Desired performance was recognised by issue of trophies and cash prices to the best overall performing area. Best area managers and areas in the respective problem disciplines addressed were also awarded prices.
11. There was general commitment, proper planning and desire to carry out the programme. A lot of public relations in form of radio programmes and discussions with civic leaders (who were enthusiastic to assist). Activities were also prioritised and finance availed for their implementation.
12. Resentment on cost reduction e.g. Transport policy (vehicles to be parked after work), New medical scheme policy (corporation to treat only one spouse and six biological children of each staff).
13. 100-days programme had just picked momentum and registered reasonable success. Programmes to be changed from short term to annual planning.

RESPONDENT 4

1. The new management team (board and M.D) initiated the programme. They saw that the traditional way of doing things was not appropriate thereby necessitating change.
2. Planning of the programme was based on setting smart targets, related to the corporate plan, which was on going but not properly implemented. It was initiated to expedite the implementation of the corporate plan.
3. Five committees (water production and sewerage services, water production, revenue improvements, cost reduction and customer care) were created. These were headed by chairmen and drew membership from all levels in the organisational hierarchy. Members carried out situational analysis and worked out methodology for implementation (Targets were set and activities with costs and time schedule for implementation developed). Committee heads liased with the area managers on weekly basis and prepared weekly reports.
4. Workers especially the area managers embraced change. They realised a lag in implementation of activities due to lack of funds. With commitment from management to finance the programmes and provide incentives in recognition for good performance, the programme was wholly embraced.
5. There was no resistance. Workers were happy with the empowerment granted to them and with the reward scheme, which were very helpful in boosting moral.
6. Mostly co-ordinating and facilitating the whole exercise. They also provided the required resources and did the monitoring.
7. It showed that there was a great potential for change in NWSC. It further highlighted that controlled expenditure and management can turnaround the corporation.
8. Continuation of what was not achieved in 100-days programme and consolidation of achievements attained.
9. Almost same as 100-days programme. More extensive because of longer period. Whole process reached maturity and workers started to stagnate again especially at the end of SEREP II. Change was growing during 100-days programme and SEREP I but started declining in SEREP II so another change was inevitable. The funding and management commitment also slackened.
10. Issue of trophies and monetary rewards rewarded desired behaviour and performance.
11. Management was committed in funding the programmes. Priorities were clearly identified and more focussed.
12. There was lack of adequate logistics- transport, materials and tools to execute the work. There were procurement delays and slackness of funding which developed latter. There was no parallel increase in revenue to facilitate the programmes. Any further change therefore would need extra funding.
13. Shift from task force management, which is designed, on temporary basis to strategic management having full participation of the respective departments.

RESPONDENT 5

1. Before the new board and management was put in place, only 3 towns were break even, there was a huge labour force of 1800, UFW was exceptionally high at 60%, there was high operational costs, there was poor organisational culture (staff getting used to late coming, corruption and poor hygiene even in treatment works)

and above all the corporation was incurring financial deficit of Ushs 348 million per month resulting from poor billing and collections. With this background, the board and M.D initiated the change with the aim of turning around the corporation within 100 days.

2. Participatory type of management style was adopted whereby task force with five committees were created at headquarters to carry out the planning. The chairmen were heads of department with specialists from the lower hierarchical structural levels and the union as members. This balanced top-bottom and bottom-top approach. Similar committees were formed at the area level. Targets were formulated for each of the five key areas.

3. Each area and each department was given a set target in the five key areas mentioned. The programme was managed through the committees, which met periodically to review the progress. A reward system was also put in place whereby best performing areas were awarded trophies, which went together with a cash price. This was done in order to keep the momentum of the programmes alive. Awarding of trophies was done on a monthly basis in the winning area, which also conducted a bull roasting function to motivate area members. Best customers in the area were also visited and offered certificates.

4. At the beginning, the 100-days programme was referred to as a beast programme. It was something new and reception was not favourable. Latter with awarding of trophies to best performers and interaction between management and customers, staff attitude changed. They initially thought they were going to loose jobs but latter saw that the programme was initiated in good faith geared to make them better.

5. There was no resistance only that people in some areas did not understand the concept and looked at the programme as a beast programme (which in a way can be thought of as some form of resistance). Their performance throughout the 100-days programme was not good.

6. Programme designed on participatory management approach. The overall chairman of the programme was the director technical service who is also a member of top-management. There was complete involvement of top management in planning, implementation and evaluation.

7. There was reduction in UFW, increase in water production and reduction in suppressed accounts. The biggest impact that was felt was turnaround of the corporation deficit of Ushs 348 million to surplus of Ushs331 million through cost reduction and revenue improvement.

8. Immediately 100-days programme was complete, SEREP was initiated to consolidate the achievements and address constraints and shortfalls. Longer period was also required to see how it could work.

9. There was further increase in water production, sewerage overflows reduced and response time to blockages reduced to less than 24 hours (sometimes 8hrs), UFW reduced to 42% with significant reduction achieved in Kampala area. Coverage was increased by 70 km all financed by corporation's own resources. There was also proper handling of customers and reduction in suppressed accounts. Above all as a result of cost reduction, five other areas were able to breakeven (Mbarara, Masaka, Mbale, Fortportal and Kabale).

10. Award of trophies and cash prices recognised/rewarded-desired behaviour and performance.

11. After 100-days programme, workers realised that the programme was good. They embraced change. Salaries were increased by 15-20%.

12. We would have preferred to do more especially in main extension; People wanted the services, but because of financial constraints, we were not able to achieve it. There was still resistance from some die-hards who were afraid that the corporation was to be sold. They felt that management was just playing a trick meanwhile making NWSC juicy before it can be sold.

13. Realised there was need to give more powers to the implementing units. This resulted in creation of new programme (PREP), categorised by performance contract and autonomy to achieve more success. Commercialised all areas with hope of improving and sustaining their operations.

RESPONDENT 6

1. This came because of change in management in 1998- new board and M.D. M.D found the situation in NWSC where performance both technically and financially needed change. He initiated and supervised the change in order to turnaround the corporation performance within 100 days.

2. Task force was formed to plan and co-ordinate the implementation of the programme. The task force was headed by DTS. The programme deviated from the corporate plan but narrowed focus on five key areas. A situational analysis was carried out to determine the corporation strengths, weaknesses, opportunities and threats. The weaknesses were dealt with particularly on the five areas and where small input would create big impact. The programme was well managed because money (Ushs 300 million) was put aside to facilitate its implementation. Everybody was involved (government, board members, staff and other stakeholders)

3. The task force committees at headquarters and the areas monitored the programme on regular basis. Weekly reports were submitted by the areas to the task force committees at headquarters. Regular meetings were held to review progress. The best performing areas were awarded prices on monthly basis.

4. Workers embraced the change. Although there was some resistance, generally it was well received with enthusiasm.

5. Workers were convinced that the change had benefits. The entire planning was participatory and in the end even those who were resisting, embraced the change.

6. Top management drove the process. Most members of top management were in the task force committees and were therefore involved right from planning stage to implementation.

7. The biggest impact was on attitude change. Work culture changed as new concepts were driven into people e.g. customer care- people learnt how to handle customers, woo disconnected customers back to the system. Concepts of cost consciousness also came in. Good decisions made on medical scheme and new transport policy. There were also good public perceptions on NWSC. People started to understand and appreciate what the corporation was doing though there are still few sections of public who feel quality of service is not good.

8. New concepts, attitude and impetus of work created needed to be kept alive. 3 months was short period so some issues not accomplished were to be continued with in a follow up programme. Above all it was necessary to have another programme to sustain achievements.

9. The biggest impact was the very fact that it purely consolidated the gains achieved in the 100-days programme. SEREP I achieved most targets but SEREP II had financial problems and so not much was gained. Having accomplished most

targets in SEREP I, operational performance in SEREP II required investment of capital nature. SEREP paved way for the present performance contracts.

10. Desired performance was rewarded with cash prices and payment of lunch allowance whenever staffs work throughout lunchtime.
11. The greatest contributor to the success of the programmes was teamwork.
12. Financing was the greatest obstacle to the success of the programme. Over ambitious plan- some things could not be accomplished in 3 months but they were good learning grounds.
13. Give more autonomy to the areas; reduce the form of reporting and evaluation to be done after 3 months. System of control to be made flexible.

RESPONDENT 7

1. The 100-days programme was initiated because the corporation was facing numerous problems and the implementation of the corporate plan was relaxed. It focussed attention on the key operational areas.
2. Five committees were formed at headquarters. These committees formulated targets and activities to be implemented together the required budgets. Similar committees were set up at the area level.
3. The programme was implemented through committees. Committees formed brought in democratisation in decision making and deciding the fate in various committees. Issues of departmentalism almost disappeared. ``Staff say in technical were involved in customer care activities".
4. Workers were worried about the cost reduction measures instituted (e.g. medical policy of treating only one spouse and 6 biological children instead of the whole clan). Fortunately the union was involved so the workers understood. Workers were required to increase on their productivity to cater for increased work due to staff reduction. Workers felt they needed better pay for the extra work. Although the salary was increased by 12-15%, they felt that the increase was low. There was a lot of anxiety among the managers because of the restructuring talked about by the board. Every body was therefore worried of being laid off.
5. There was no resistance as the union was represented. There was no victimisation in the lay off. Workers laid off applied voluntarily because of the attractive terms. However there were those who were forced to go because of indiscipline, drunkardness, theft, laziness and some of them resorted to courts of law.
6. Top management was involved in overall co-ordination and supervision of the programmes. They also provided the necessary inputs.
7. There was tremendous reduction in operational costs. They was also achievement of better results especially on revenue improvement.
8. 100-days programme was too short. Targets were too ambitious and could not be achieved within such a short time frame. These were to be rolled over to another programme thus the creation of SEREP.
9. There was further reduction in costs due to monetisation of benefits (water, electricity and telephone) to chief officers and introduction of the transport policy. For the first time in NWSC the cost of such items could be known well in advance. There was also stress among managers due to pressure of work. People were compelled to work very hard. Managers were ever on their toes to produce reports and achieve targets.

10. Rewards were given for best performance. This included cash prices and trophies. The reward system brought a lot of competition among managers, which led to achievement of better performance.
11. Management system put in place in form of committees. All those with specialised knowledge were involved in the planning of the programmes. Participatory approach was encouraged not only in headquarters but also in the areas. There was adequate financing and most of the money saved was ploughed back into the operations.
12. Materials that needed to be imported had not come within 100 days. KRIP management was not willing to change as they had a running management contract.
13. Corporate plan should always be supplemented with such short term programmes which are more focussed. 100-days programme and SEREP were steps in the right direction.

RESPONDENT 8

1. The 100-days Programme was initiated by the M.D. The new managing director was appointed by the board to initiate change. Though there was a strategic plan (corporate plan), it was not working and the corporation had stagnated for sometime. Short programmes were therefore required to breathe in new life in the corporation operations.
2. During the planning, what could be achieved within the 100 days was looked at. Realistic targets were formulated and strategies to accomplish: reduction of UFW, cost reduction, revenue improvements was designed. Most crucial problems and those, which could be implemented within the 100 days, were addressed.
3. Actual activities were done at the area level using a participatory approach.
4. This was a new concept and a new sense of direction from a new M.D. It involved initiation of cultural change-strict attendance in office, performance measurements, rewarding people who perform, which was not there in NWSC before. These could have brought about mixed reactions.
5. There was no noticeable resistance though this cannot be completely ruled out. There could have been resistance at the very low staff level. Involvement could have been a strategy to weaken resistance.
6. The role of top-management was to create control units to monitor and give reports where there were variances. Top management was also responsible for procurement, co-ordination and role of leadership.
7. There was reduction in costs, reduction in UFW among other measurable output. There was increased morale, and commitment especially on the part of area management. This played a big role in increasing productivity. There was also cultural change e.g. awarding of trophies, which sent a message that it is better to be a committed employee.
8. This is part of the methodology of adapting change. There should be a period for weakening the status quo (unfreezing), change and then refreezing. SEREP was therefore initiated to enable the change created during the 100-days Programme become normal working life in the organisation.
9. These built on the achievements of the 100-days programme. What it actually did was to institutionalise the cultural change of hard work and commitment. The issue of performance contracts cropped from SEREP.

10. Issue of cash prices and trophies rewarded good performance. These raised staff morale, and competition among the areas.
11. A whole cross-section of top-management and middle management was involved in the planning stage of the programmes. This is a very good approach in planning, as people tend to own the programme.
12. Procurements could not be done on time. The real reason for these was that any procurement costing more than Ushs10 million involved a lot of bureaucracy thereby requiring a minimum of 6 months. These also coincided with the re-organisation in the government procurement agencies that made it even take longer to receive items ordered. Whereas it was possible to change the status quo in the other areas, it was not possible to do these in Kampala-KRIP because of the management contract. Since KRIP represents 70% of NWSC operations, improvements done in other areas was therefore overshadowed. Since the performance of KRIP during SEREP was inadequate, most of the demands could not be acquired.
13. Participation of all workers besides the mangers should be addressed. They should be informed in the beginning about the intended change and direction in which the corporation is moving. The change should also be implemented slowly.

RESPONDENT 9

1. Performance was not satisfactory among other issues. The level of UFW was very high and unacceptable, collections were very low and arrears very high. There were also many complaints from consumers in the way they were handled and on water bills. Leaks were also not attended to promptly. There was therefore a basic need for new management (Board and M.D) to turn around the corporation.
2. M.D made observations that culminated into a working paper for management to look at. On that basis, management formed committees to carry out situational analysis of the issues pointed out by the M.D. The committees formed included: Water production and sewerage services, Water distribution, Revenue generation, Cost reduction and Customer care. These committees were in charge of formulating targets, milestones and activities to achieve the stated goals. Eventually these were discussed in prelinary sessions and after amendments formed the working document for the programme.
3. Implementation was done through the involvement of top and middle management together with the union and workers generally. Similar committees were formed at the area level. The areas were also sub-divided into zones for easy of monitoring operations. Regular meetings were held to review progress and any hindrances identified.
4. Initially when the programme was launched, people had misgivings about it especially on cost reduction. But when they got involved, they got to understand and embraced it. They realised that the programmes had no bad intentions but only to change their work methods.
5. Initially there was resistance particularly as regards cost reduction. When these came to attention of management, incentives were given in form of allowances for additional tasks. Trophies were also awarded and bull roasting organised for the winning areas. This overcame resistance. There was also facilitation in form of additional transfer of funds to the areas.
6. The role of top management was to monitor and evaluate performance of the programme at the area level. They also made sure that rewards were appropriately

given out at the end of the evaluation. They also made sure that the necessary inputs like materials are forwarded to the areas in time. They also participated in massive campaigns to attract customers who were off supply back to the system and came up with a proposal on review of the tariff, which was seen as a bottleneck to revenue generation.

7. It changed the work methods of employees (now more focussed on achieving results). Team working was developed and where it was weak, it was enhanced for purposes of winning the trophies. The board also came to appreciate the day-to-day activities of the corporation and learnt more about its operations. There was marked improvement in revenue generation, cost reduction and those other areas that the programme was addressing.

8. SEREP I was brought on board to enhance the achievements of the 100-days programme. There was a lot of goodwill from the workers as they embraced the 100-days programme after overcoming resistance. It was therefore imperative to implement another programme to enhance the new working methods adapted.

9. It consolidated on the achievements of the 100-days programme but because of the length of time, people got fatigue, as the routine work became monotonous. Enthusiasm feuded out mainly because of inadequate funding and monotony of festivities.

10. Desired performance was recognised by payment of special allowances for additional assignments and offering cash prices and trophies to the best performers.

11. Teamwork enhanced by the reward system motivated people more to work.

12. Funding of the programme laxed at the end which resulted in the objectives not being achieved as planned. Allowances were not forthcoming so people lost impetus.

13. Involve people in the planning. There should be adequate funding and targets should be realistic not over ambitious as this one looked to be especially SEREP II. Motivation of staff should be looked into and prompt payment of allowances that should cover virtually everybody. Too much publicity should be avoided in future so as not to lower customer's perceptions in case the targets are not met. Festivities should be reduced (it should change form in away that the areas should benefit by giving them cash prices instead of bull roasting).

Appendix III: Questionnaire for the evaluation of 100-days programme and SEREP I- completed by middle managers.

Dear staff,

We are carrying out a research to evaluate change management programmes instituted by National Water and Sewerage Corporation from 1999. These change management programmes include 100-days programme and SEREP I.

You are kindly requested to fill this questionnaire carefully and truthfully for the benefit of improving performance in future programmes. *The contents of this form are absolutely confidential. Information identifying the respondent will not be disclosed under any circumstances.* For each statement put a tick in the box of your choice or write in the space provided.
Thank you very much for your co-operation.

Management

SECTION 1: PERCEPTIONS FOR CHANGE.

During your service in NWSC, you could have experienced various changes in the corporation. Please indicate the degree to which the following statements apply to the 100-days programme and SEREP I.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. Change was initially perceived as disruptive to mindset method of operation.					
2. Change would make it easier to achieve targets.					
3. Since the corporate performance was low, change was thought to be essential.					
4. Change was believed to be beneficial to the workers.					
5. Staffs at all levels in hierarchy were involved in planning and implementing the programmes.					
6. Involvement of all staff was instrumental in avoiding suspicion & resistance.					
7. Senior managers were personally involved in the process.					
8. Involvement of senior managers encouraged everybody to follow suit.					
9. Worker's fears were recognised and attention given to solving their problems.					

10. Compared to previous programmes, the 100-days programme and SEREP involved more stakeholders than ever before.					

SECTION 2: COMMUNICATION

You could have realised that communication is very important in any working environment. Indicate the degree to which the programmes influenced the following aspects of communication.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. Two years ago, communication was one way from top to bottom. Subordinates were not free to communicate with their superiors.					
2. During the programme period, communication in all directions (top-bottom, bottom-top, and lateral) was strongly encouraged.					
3. Even now, the communication methods in 2 above are still applicable.					
4. Communication methods in 2 above resulted into co-ordinated actions at all levels and between various departments.					
5. Communication made people understand the motives and goals of change.					
6. Commitment to change was gained through effective communication.					
7. Communication was highly effective in turning perceptions of threat to opportunities.					
8. The 100-days programme and SEREP have been the most widely communicated programmes in the history of NWSC.					

SECTION 3 TEAMWORK

During your service in NWSC you could have realised that working as a team results in increased productivity. Indicate how applicable these factors were during the change management programmes.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. All problems were thought of as a group problem.					
2. Effective team meetings were developed to maximise participation & contribution.					
3. Each member's responsibility was clearly specified.					
4. There was mutual trust created among teams formed.					
5. The whole group was held accountable for their actions.					
6. Team working encouraged creativity and brainstorming.					
7. Team working enabled introduction of different solutions to the problem.					
8. Team working resulted in disagreement of the entire group and stimulated conflicts.					
9. Team working resulted in job satisfaction.					
10. Team working resulted in good quality service.					
11. Groups were self-conscious about their own operation and regularly reviewed the way it went about its business.					
12. Most decisions were reached by consensus.					
13. There is more teamwork now than there used to be three years ago.					

SECTION 4: MOTIVATION

You could have experienced different factors, which motivate people to work effectively. Indicate how applicable were these factors during the implementation of the programmes.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. The programmes greatly improved the working conditions.					

2. There was improvement in working environment.					
3. Managers developed a policy to walk around the organisation regularly and seek employee's views on their tasks.					
4. Managers' policy to walk around the organisation regularly and seek employee's views on their tasks greatly motivated workers.					
5. There was reduced control which made workers feel trusted.					
6. There was increased accountability and responsibility.					
7. The creation of work groups enabled workers to discuss their tasks amongst themselves.					
8. There was provision for direct feedback on performance, which motivated workers.					
9. There was introduction of job rotation, which introduced workers to new challenges.					
10. There was assured job security after implementation of the programmes.					
11. There is proper motivation and facilitation at work now than before the programmes.					

SECTION 5: PERFORMANCE MEASUREMENT

Performance measurement is vital in monitoring output and comparing achieved output with set targets. Indicate your agreement with these statements for the period of the programmes.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1.The entire process was result-oriented and focussed on achieving specific, measurable operational improvements.					
2. There was regular feedback on the performance of individual functions and activities within the organisation.					
3. The corporation drew attention to any discrepancy between actual performance and desired performance.					

4. Factor 4 above allowed those concerned to think about how the situation could be improved.					
5. The corporation publicised results, which were seen as models.					
6. Excellent behaviour/performance was reinforced through rewards.					
7. Performance measurement systems applied now had never been widely used by NWSC staff in the past.					

SECTION 6: MANAGEMENT AND SUPERVISION.

During your work in NWSC you could have experienced different management styles. Please indicate how applicable these factors were during the programmes.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. Managers facilitated workers to carry out tasks.					
2. Managers created a continuous learning process by building on the lessons of previous experience.					
3. Efforts were put on training to equip workers with skills to enable them achieve targets.					
4. Managers communicated roles and expectations clearly to others.					
5. Managers involved others in the process of defining their roles and responsibilities.					
6. People were held accountable for getting work done.					
7. Information was shared openly among staff at all levels.					
8. Performance indicators were used to evaluate work output.					
9. Performance indicators were understood at appropriate levels.					
10. High degree of autonomy was granted to staff during the programme.					

SECTION 7: LEADERSHIP.

NWSC has had different leadership styles at various levels of the organisation. Please indicate to what extent change management programmes influenced these factors.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. Leaders helped clarify goals, tasks, roles and responsibilities.					
2. Participation by all workers in planning and implementation of activities was encouraged.					
3. Senior managers were committed to change and were leading by example.					
4. There was adequate support from top- management					
5. Information and resources were placed in the hands of those to implement the tasks.					
6. Power was placed in the hands of those to implement the tasks.					
7. Co-operative environment was created which enabled workers to focus their energies on the tasks of business.					
8. Leaders were oriented towards producing results.					
9. Leaders listened to comments and suggestions from subordinates.					
10. Leaders shared responsibility not only of success but also failures.					
11. Leaders set aside time to review progress with the team and with individuals					
12. Leaders were prepared to help sort out any difficulties the team encountered.					
13. Leaders were impartial in sorting out any difficulties the team encountered.					

SECTION 8: ORGANISATION CULTURE.

Culture is a pattern of behaviour, which can be observed in the organisation. Indicate to what extent the programmes instituted influenced these factors.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. In the past, people's actions and values were mainly geared towards personal gains.					
2. People's actions and values are now in line with organisational goals.					
3. Three years ago, staff would arrive in the work place at any time since there was no monitoring system in place.					
4. The arrival system introduced during the programmes improved punctuality by all staff.					
5. The cleanliness at the corporation installations (water/sewerage works) has tremendously improved during the last 12 months.					
6. Two years ago, the performance of NWSC had been low because most workers were lazy with "I do not care attitude"					
7. The attitude in 6 above has greatly changed with workers becoming result –oriented.					
8. There has been an observable reduction in corruption among staff since the programmes started.					
9. In the past, there was a general tendency by NWSC managers to avoid taking risks					
10. For the past two years the tendency in 9 above has since changed- Managers now take risks and are ready to learn from occasional failures.					
11. Workers have developed a sense of ownership and pride about working with the corporation.					

SECTION 9: GENERAL COMMENTS.

1. How would you rate the performance of NWSC in each of the following five functional areas just before commencement of 100-days programme   [Use sliding scale of 1 to 5; 1 being very poor and 5 being very good]

    Water production and sewerage services...............
    Water distribution.......................................
    Revenue improvement...................................
    Cost reduction...
    Customer care.......................................

2. How would you rate the performance at the end of SEREP 1 using the same sliding scale?

    Water production and sewerage services............
    Water distribution......................................
    Revenue improvement...............................
    Cost reduction...
    Customer care...

3. What are your other comments on the way NWSC can improve future programmes...
    ....
    ....
    ....
    ....
    ....
    ....
    ....
    ....

4. In   which   area   and   section   do   you   work?......................
    ,..........................

Appendix IV: Results of questionnaires for middle managers.

Chart 1-Scores by middle managers on Communication

Agree

Legend	
◆	NWSC Exempting Kampala-KRIP
■	Kampala-KRIP

Average score

5

4 — 3.9 3.9 3.9
3.8
3.6 3.7
3.5
3.4
3.2 3.2
3.1 3.1
3 3 3 3

2.5

2

1
Disagree

Variables (x-axis):
- Communication was one way (top-bottom) 2 yrs ago
- Communication in all directions during the progs.
- Communication in all directions is still applicable now
- Communication in all directions resulted in co-ordinated actions
- Communication made people understand motive &goal
- Commitment was gained through effective comm.
- Comm was highly effective in turning threats to opport.
- Progs were most widely comm in hist of NWSC

Variable

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Chart 2-Scores by middle managers on Teamwork

Agree

5

4

3

2

1

Disagree

Average score

Legend:
- ◆ NWSC Exempting Kampala-KRIP
- ■ Kampala-KRIP

Data points:
- 4.3
- 4
- 3.9
- 3.8
- 3.7
- 3.6
- 3.5
- 3.4
- 3.3
- 3.2
- 3.1
- 2.8
- 2.3
- 2.2

X-axis variables:
- All problems thought as group problem
- Effective team meetings developed
- Members responsibilities were clearly specified
- There was mutual trust among teams
- Whole group held accountable
- Teamwork encouraged creativity & brainstorming
- Teamwork introduced different solutions to problem
- Teamworking resulted in conflicts
- Teamwork resulted in job satisfaction
- Teamwork resulted in good quality service
- Groups were self-conscious of their oper & reviewed wk
- Most decisions were reached by consensus
- There is more teamwork now than 3 yrs ago

Variable

Chart 3- Scores by middle managers on Motivation

Legend:
- ◆ NWSC Exempting Kampala-KRIP
- ■ Kampala-KRIP

Y-axis: Average score (Agree = 5, Disagree = 1)

X-axis: Variable
- Progs greatly improved working conditions
- Progs improved working environment
- Management by walking around developed
- Magm by walking around improved workers motivation
- There was reduced control
- There was increased accountability & responsibility
- Creation of work groups enabled discussion of tasks
- Provision of direct feedback motivated workers
- Job rotation introduced workers to new challenges
- There was assured job security after the progs
- There is proper motivation & facilitation now than before

Data labels: 3.9, 3.9, 3.8, 3.7, 3.7, 3.6, 3.5, 3.3, 3.3, 3.2, 3.11, 3.1, 2.9, 2.8, 2.8, 2.7, 2.7, 2.5, 2.1, 1.8

Chart 4- Scores by middle managers on Management and Supervision

Agree

Average score

5

4

3.9
3.8 3.8 3.8 3.8 4 3.8 3.9
3.7
3.5
3.4
3.2 3.3 3.2
3 3 3
2.9 2.9
2.7
2.6
2.5

2

1

Disagree

NWSC Exempting Kampala-KRIP

Kampala-KRIP

Managers facilitated workers carry out tasks

Managers created a continuous learning process

Training conducted to equip workers with skills

Managers commu roles & expect clearly to others

Managers involved others in defin their roles & resp.

People were held accountable for work done

Information was shared openly among all staff

Perf indicators were used to evaluate output

Perf indicators were understood at appropr level

High degree of autonomy granted to staff during prog

Variable

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Chart 5- Scores by middle managers on Leadership

Agree

5

4

3.9

3.8

3.5

3.6

3.6

3.5

3.3

3.5

3.5

3.5

3.3

3.3

3.3

3.1

3.1

3.1

3.3

Average score

3

2.9

2.7

2.8

2.8

2.9

2.8

2.9

2.9

2.6

2

1

Disagree

Leaders helped clarify goals, roles & resp.

Workers encouraged to participate in plan & impl

Senior managers committed to change

There was adequate support from top-mgmt

Infor & resouces placed in hands of implementers

Power placed in hands of implementers

Co-operative environment created

Leaders oriented towards producing results

Leaders listened to comments & suggs from subord

Leaders shared resp of both success & failure

Leadres set time to review progress with team

Leaders prepared sort any diffi the team encoutered

Leaders were impartial in sorting difficulties

Variable

NWSC Exempting Kampala-KRIP

Kampala-KRIP

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Chart 6-Subjective performance before & after the programmes (NWSC Exempting Kampala-KRIP)

Acceptable

Average score

5

4.5 | 4.6

4.3

4.1

4

3.7

3.6

3.4 | 3.4

3

3.2

2.7

2

1

Not acceptable

Water production & sewerage services | Water distribution | Revenue improvements | Cost reduction | Customer care

Key area

◆ Before 100-days Prog.

▪ After SEREP

Chart 7-Subjective perf. before and after the programmes (Kampala-KRIP)

Legend:
- ♦ Before 100-days Prog.
- ■ After Serep

Y-axis: Average score (Acceptable at top = 5, Not Acceptable at bottom = 1)

Data points:
- Water production &sewerage services: ■ 3.4, ♦ 3.2
- Water distribution: ■ 3.6, ♦ 3.2
- Revenue improvement: ■ 3.3, ♦ 2.8
- Cost reduction: ■ 3.1, ♦ 2.4
- Customer care: ■ 3.8, ♦ 2.9

X-axis: Key area

Appendix V: Questionnaire for the evaluation of 100-days programme and SEREP I completed by lower cadre staff.

Dear staff,

We are carrying out a research to evaluate the new programmes instituted by National Water and Sewerage Corporation from 1999. These programmes include 100-days programme and SEREP I, which commenced on 15-02-1999 and ended on 31-01-2000.

You are kindly requested to fill this questionnaire carefully and truthfully for the benefit of improving performance in future programmes. Please note that your response should reflect performance during the above period.
The contents of this form are absolutely confidential. Information identifying the respondent will not be disclosed under any circumstances. For each statement put a tick in the box of your choice (except for question 1). Pass over the completed questionnaire to your supervisor.

Thank you very much for your co-operation

Management
1. In which area and section do you work? ....,......................
2. When did you hear about the 100-days programme
   [ ] Before Jan/1999   [ ] Between Jan & Mar/1999
   [ ] Between Apr & Jun/1999   [ ] After Jun/1999
   [ ] Never heard about it
3. How did you hear about the programme
   [ ] From the supervisor   [ ] I read about it on notice board
   [ ] I read about it from newspaper [ ] In area meeting
   [ ] During bull roasting festival
4. When did you hear about SEREP Programme
   [ ] Before Aug/1999   [ ] Between Aug & Oct/1999
   [ ] Between Nov/1999 & Jan/2000 [ ] After Jan/2000
   [ ] Never heard about it

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
5. When I heard about the programmes, I thought it would lead to assured job security?					
6. When I heard about the programmes, I thought it would result to increase of salary?					

7. When I heard about the programmes, I thought it would lead to fair rules and procedures?					
8. When I think about new programmes, I often tend to embrace them automatically					
9. In the past, whenever a new programme was introduced, no effective communication would be made to the workers.					
10. The reasons for the 100-days programme and SEREP were widely communicated to the workers.					
11. Expected improvements in performance were clearly explained to all workers.					
12. During the programme period, we were encouraged to work in teams rather than individually.					
13. Working in teams enabled us to understand our tasks.					
14. Working in teams enabled us to achieve better performance.					
15. There is more teamwork now than there used to be three years ago.					
16. Supervisors encouraged us to freely express our feelings about the tasks.					
17. Regular meetings were held to discuss progress of work.					
18. We were always facilitated with the required tools and equipment for the jobs					
19. Transport was always available whenever required.					
20. Roles and expectations were clearly defined for me by the supervisor.					
21. I participated in defining my roles and responsibilities.					
22. In the past, workers were not allowed to participate in defining their roles and responsibilities. Their supervisors imposed these on them.					
23. The corporation developed a means to measure output on regular basis.					
24. This mechanism of performance measurement was previously lacking before the programmes.					
25. Direct feedback on performance achievement was given to workers.					

26. Good performance was rewarded and poor performance penalised.					
27. There was on the job training on how to achieve better performance.					
28. I had adequate support and encouragement from my supervisor.					
29. I had the powers to carry out work efficiently with minimum interference.					
30. Most people believe the programmes were quite beneficial to all stakeholders.					

Appendix VI: Results of questionnaires for lower cadre staff

Chart 8-Scores on Staff response
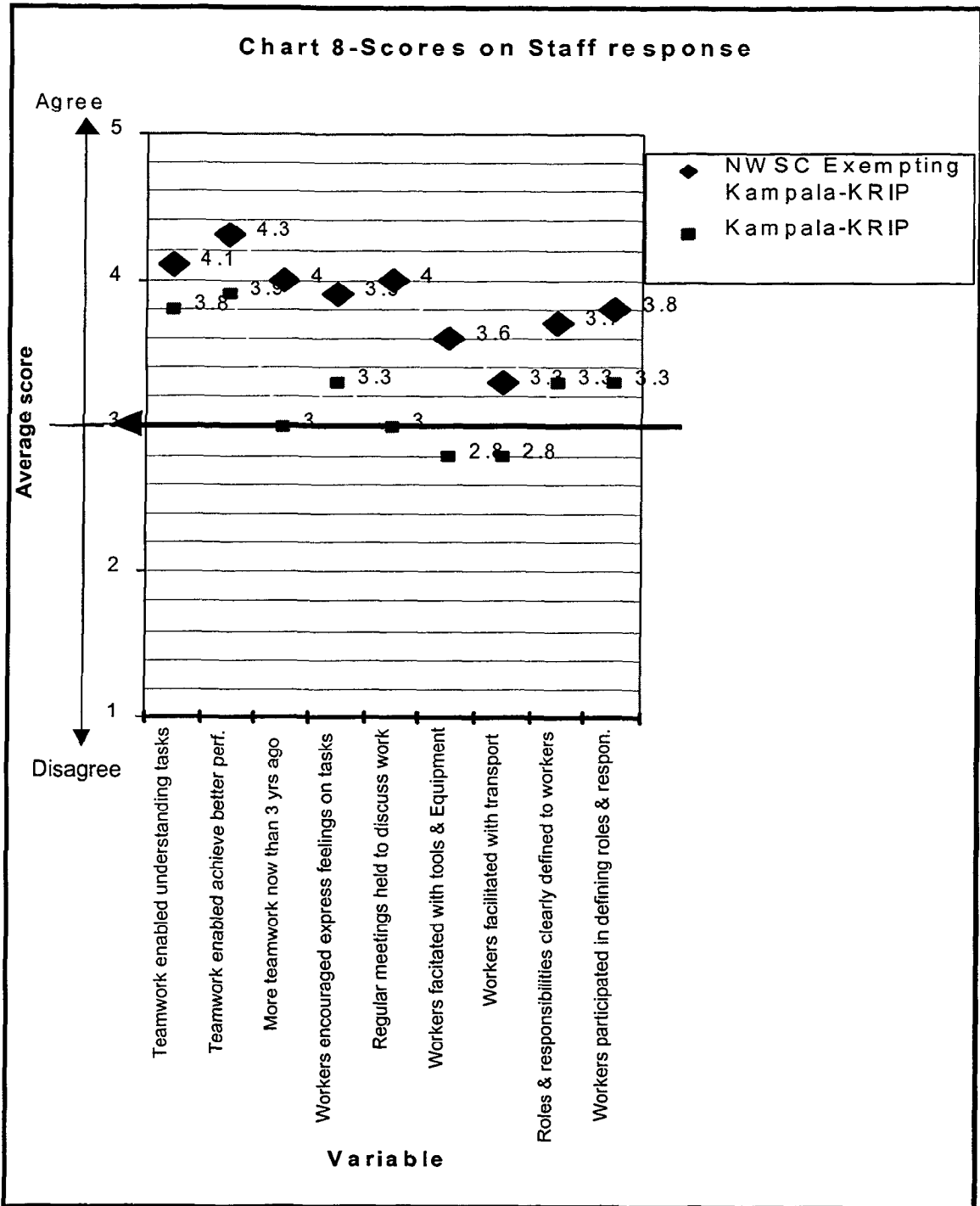
Chart 9-Scores on Staff response

Agree

5

4

Average score

3

2

1

Disagree

Legend:
- NWSC Exempting Kampala-KRIP (◆)
- Kampala-KRIP (■)

Data labels shown:
- 4.1
- 3.7, 3.6, 3.7, 3.6
- 3.8, 3.6, 3.9
- 3.4, 3.6, 3.5
- 3.3, 3.2
- 3.1
- 2.9, 2.9
- 2.8, 2.7

Variable (x-axis categories):
- In the past workers didn't participate in defining roles & resp
- Means to measure output was deceloped
- Performance measurement previously lacking
- Direct feedback on performance given
- Good perf rewarded & poor perf. Penalised
- Training on how to achieve better perf conducted
- Workers had adequate support & encouragement from super.
- Workers had power to carry out work with minimum interfer
- Progs were believed to be beneficial to all stakeholders

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Appendix VII: External customer questionnaire on NWSC service delivery improvement.

Dear customer

National Water and Sewerage Corporation is carrying out a survey to assess the quality of service to their esteemed customers. These will be used to work out ways for improving the service. You are therefore kindly requested to fill out this questionnaire carefully & truthfully and return it to the nearest NWSC offices. The contents of this form are absolutely confidential.
For each statement put a tick in the box of your choice or write in the space provided.
Thank you very much for your co-operation

Management

1. Do you have piped water supply from NWSC?
    ( ) Yes   ( ) No
2. What is your comment on improvement in water pressure in your system since 2 years ago?
    ( )Very good improvement ( ) good improvement ( ) Fair improvement
    ( ) No improvement   ( ) worse situation
3. For how many hours were you receiving water supply 3 years ago?
    ( ) 1-6 hrs   ( ) 7-12 hrs   ( ) 13-18 hrs   ( ) 19-23 hrs   ( ) 24 hrs.
4. What can you say about the number of hours of supply since two years ago?
    ( ) 1-6 hrs   ( ) 7-12 hrs   ( ) 13-18 hrs   ( ) 19-23 hrs   ( ) 24 hrs.
5. Since two years ago, how often have you had interruption of supply due to leakage repair by NWSC staff?
    ( ) Very often   ( ) Often   ( ) Rarely   ( ) Very rarely   ( ) Never
6. How often did you receive notice of the interruption?
    ( ) Very often   ( ) Often   ( ) Rarely   ( ) Very rarely   ( ) Never
7. When you had the interruption, how long did NWSC staff take to rectify the problem?
    ( ) 1-6 hrs   ( ) 7-12 hrs   ( ) 13-24 hrs   ( ) 1-3 days   ( ) more than 3 days
8. How often have you forwarded a complaint to NWSC offices recently?
    ( ) Very often   ( ) Often   ( ) Rarely   ( ) Very rarely   ( ) Never
9. How was the response of the staff you met in the office?
    ( ) Very Good   ( ) Good   ( ) Fair   ( ) Poor   ( ) Very poor.
10. How long did it take to respond to your complaint?
    ( ) 1-6 hrs   ( ) 7-24 hrs   ( ) 1-3 days   ( ) 3-7 days   ( ) More than 7 days
11. Give your comments on the frequency of reading your meter of recent?
    ( ) Very Good   ( ) Good   ( ) Fair   ( ) Poor   ( ) Very poor.
12. Do you have any problems with your meter readings?
    ( ) No problem   ( ) Sometimes not accurate   ( ) Always not accurate
    ( ) Other (Please specify)..
13. What are your comments on the frequency of receiving water bills since two years ago?
    ( ) Very Good   ( ) Good   ( ) Fair   ( ) Poor   ( ) Very poor.

14. Do you have any problems with your water bills?
( ) No problem ( ) Sometimes not accurate ( ) Always not accurate
( ) Other (Please specify)..
15. In case you were disconnected for non-payment, how often were you adequately notified before disconnection?
( ) Very often ( ) Often ( ) Rarely ( ) Very rarely ( ) Never
16. Were you allowed to pay bills in installments on your request?
( ) Very often ( ) Often ( ) Rarely ( ) Very rarely ( ) Never
17. What is your comment on sewage overflows on NWSC sewers of recent?
( ) Very common ( ) Common ( ) Fairly common ( ) Rare ( ) Very rare
18. How long does it normally take NWSC staff to clear a reported sewage overflow (flowing on the surface) since the past 12 months?
( ) 1-6 hrs ( ) 7-24 hrs ( ) 1-3 days ( ) 3-7 days ( ) More than 7 days
19. What is your comment on the control of sewage overflows?
( ) Very well controlled ( ) Well controlled ( ) Fairly controlled
( ) Poorly controlled ( ) Very poorly controlled
20. To what extent has there been improvement on awareness of NWSC services and customer responsibilities?
( ) Very high ( ) High ( ) Fairly high ( ) Low ( ) Very low
21. How do you rate the colour of water supplied by NWSC?
( ) Very Good ( ) Good ( ) Fair ( ) Poor ( ) Very poor
22. How do you rate the taste of water supplied by NWSC?
( ) Very Good ( ) Good ( ) Fair ( ) Poor ( ) Very poor
23. Do you think there is a general improvement in the way staff are rendering their services (asking for ''something'') before providing a service to you?
( ) Very great improvement ( ) Great improvement ( ) Fair improvement
( ) No improvement ( ) Worse situation
24. What are your other comments on the way NWSC can improve services?
....
....
....
....

Appendix VIII: Results of external customer surveys on NWSC service delivery improvement (Showing details of mean scores).

	PARAMETER	AVERAGE SCORE	
		O	K
2	Improvement in water pressure since 2 years ago	3.8	3.7
5	Frequency of interruption of supply due to leakage repairs by NWSC since 2 ago	2.5	2.6
6	Frequency of receiving notice of the interruption	3.3	3.5
7	Time taken by NWSC staff to rectify the problem after the interruption	3.7	3.1
8	Frequency of forwarding a complaint to NWSC offices of recent	2.8	2.8
9	How was the response of staff you met in the office	3.8	3.9
10	How long did it take to respond to your complaint	3.4	3.1
11	How is the frequency of reading your meter of recent	4.3	4.1
13	How is the frequency of receiving water bills since 2 years ago	4.2	3.9
15	How often were you notified before disconnection for non-payment	3.3	3.4
16	Were you allowed to pay bills in installments on your request	3.6	3.6
17	How are sewage overflows on NWSC sewers of recent	2.5	3.0
18	How long does NWSC take to clear a reported sewage overflow since the past 12 months	3.4	3.1
19	How is the control of sewage overflows	3.6	3.0
20	Improvement on awareness of NWSC services and customer responsibilities	3.5	3.4
21	Perceived color of water supplied by NWSC	4.1	4.1
22	Perceived color of water supplied by NWSC	4.2	4.0
23	Improvement in the way staff are rendering their services- (asking for something) before providing service	3.8	3.6

Note: O denotes performance in NWSC Exempting Kampala-KRIP
     K denotes performance in Kampala-KRIP

Appendix IX: NWSC Objective Performance Indicators showing targets achieved during 100-days Programme.

SUB-SECTION	Objective performance indicators (OPI)		Value before 100-days Programme	Value after 100-days Programme	Target	Remarks
Water production and sewerage services	Water produced (Ml/d)	H	126.9	129.4	140.0	*
		K	92.9	93.7	100.0	*
		O	34.0	35.7	40.0	*
	Response time to blockages	H	> 7 days	< 24 hrs	< 24 hrs	***
		K	> 7 days	< 24 hrs	< 24 hrs	***
		O	> 7 days	< 24 hrs	< 24 hrs	***
Water distribution	No of connections	H	53613	53824		
		K	31378	31458		
		O	22235	22366		
	Suppressed accounts	H	19319	17316		
		K	11456	11070		
		O	7863	6246		
	Active accounts	H	34294	36508	36009	***
		K	19922	20308		
		O	14372	16223		
	Active accounts (%)	H	64	68		
		K	63	65		
		O	65	72		
	Metered accounts (%)	H	81	84		
	Response time to bursts	H	> 7 days	< 24hrs	24 hrs	***
		K	> 7 days	< 24 hrs	24 hrs	***
		O	> 7 days	< 24 hrs	24 hrs	***
	UFW (%)	H	50	49	39	*
		K	53	52		
		O	44	34		
Revenue improvement	Billings (bn)	H	2,498	2,539	2,748	*
		K	1,612	1,563		
		O	0.886	0.976		
	Collections (bn)	H	1,939	2,187	2,133	***
		K	1,407	1,638		
		O	0.532	0.549		
	Arrears (bn)	H	33	32		
		K	25	24.3		
		O	8	7.7		
	Billing efficiency (%)	H	50	51	60	*
		K	47	48		
		O	51	66		
	Collection efficiency (%)	H	74	96	80	***
		K	91	104		
		O	58	85		
	Estimated bills	H	4172	2148		
		K	3800	1809		
		O	372	339		

Cost reduction	Expenses (bn)	H	2,287	1,856		
	Surplus (bn)	H	(0.348)	0.331		
Productivity	No of employees	H	1655	1430		
	Employees per 1000 connections	H	31	26	20	*

Key: *** Target achieved,   * Target not achieved.

Note: H denotes performance in NWSC globally

O denotes performance in NWSC Exempting Kampala-KRIP

K denotes performance in Kampala-KRIP

Appendix X: NWSC Objective Performance Indicators showing targets achieved during SEREP I.

SUB-SECTION	Objective performance indicators (OPI)		Value at end of 100 days prog.	Value after SEREP 1	Target	Remarks
Water production and sewerage services	Water produced	H	129.4	128.7	141.0	*
		K	93.7	91.5	100.0	*
		O	35.7	37.2	41.0	*
	Response time to blockages	H	< 24 hrs	< 24 hrs	24 hrs	***
		K	< 24 hrs	< 24 hrs	24 hrs	***
		O	< 24 hrs	< 24 hrs	24 hrs	***
Water distribution	No of connections	H	53824	56189		
		K	31458	33164		
		O	22366	23025		
	Suppressed accounts	H	17316	15529	8658	*
		K	11070	9000	5535	*
		O	6246	6529	3123	*
	Active accounts	H	36508	40660		
		K	20388	24164		
		O	16120	16496		
	Active accounts (%)	H	68	72	84	*
		K	65	73	84	*
		O	72	72	84	*
	Metered accounts (%)	H	84	87	100	*
	Response time to bursts	H	< 24 hrs	< 24 hrs	24 hrs	
		K	< 24 hrs	< 24 hrs	24 hrs	
		O	< 24 hrs	< 24 hrs	24 hrs	
	Coverage	H				
		K				
		O				
	UFW (%)	H	49	42	39	*
		K	52	44	47	***
		O	34	29	30	***
Revenue improvement	Billings (bn)	H	2,539	2,455		
		K	1,563	1,728		
		O	0.976	0.727		
	Collections (bn)	H	2,187	1,871		
		K	1,638	1,325		
		O	0.549	0.546		
	Arrears (bn)	H	32	30.1	25.6	*
		K	24.3	23.2	19.4	*
		O	7.7	6.9	6.2	*
	Billing efficiency (%)	H	51	58	68	*
		K	48	56	68	*
		O	66	71	68	***

	Collection efficiency (%)	H	96	76	100	*
		K	104	77	100	*
		O	85	75	100	*
	Estimated bills	H	2148	1634	0	*
		K	1809	0 *	0	***
		O	339	1634	0	*
Cost reduction	Expenses (bn)	H	1,856	1,781	1.67	*
	Surplus (bn)	H	0.331	0.09		
Productivity	No of employees	H	1430	1260	1350	***
	Employees per 1000 connections	H	26	22	20	*

Key: *** Target achieved, * Target not achieved.

Note: H denotes performance in NWSC globally
O denotes performance in NWSC Exempting Kampala-KRIP
K denotes performance in Kampala-KRIP

Appendix XI: NWSC objective performance indicators showing targets achieved during SEREP II.

SUB-SECTION	Objective performance indicators (OPI)		Value at end of SEREP1	Value after SEREP 2	Target	Remarks
Water production and sewerage services	Water produced	H	128.7	132.4	141.0	*
		K	91.5	95.5	100.0	*
		O	37.2	36.9	41.0	*
	Response time to blockages	H	< 24 hrs	< 24 hrs	< 24 hrs	**'
		K	< 24 hrs	< 24 hrs	< 24 hrs	***
		O	< 24 hrs	< 24 hrs	< 24 hrs	***
Water distribution	No of connections	H	56189	60098		
		K	33164	34179		
		O	23025	25919		
	Suppressed accounts	H	15529	15761	13200	*
		K	9000	9000	7650	*
		O	6529	6761	5550	*
	Active accounts	H	40660	44337		
		K	24164	25179		
		O	16496	19158		
	Active accounts (%)	H	72	74		
		K	73	74		
		O	72	74		
	Metered accounts (%)	H	87	89		
	Response time to bursts	H	< 24 hrs	< 24 hrs	24 hrs	***
		K	< 24 hrs	< 24 hrs	24 hrs	***
		O	< 24 hrs	< 24 hrs	24 hrs	***
	Coverage	H		54%		
		K				
		O				
	UFW (%)	H	42	44	39	*
		K	44	48		
		O	29	36		
Revenue improvement	Billings (bn)	H	2,455	2,390		
		K	1,728	1,616		
		O	0.727	0.774		
	Collections (bn)	H	1,871	2,342	2.2	***
		K	1,325	1,689		
		O	0.546	0.653		
	Arrears (bn)	H	30.1	29.9	27	*
		K	23.2	22.5	20.9	*
		O	6.9	7.4	6.1	*
	Billing efficiency (%)	H	58	56	68	*
		K	56	52	68	*
		O	71	64	68	*

	Collection efficiency (%)	H	76	98	100	*
		K	77	105	100	***
		O	75	84	100	*
Cost reduction	Expenses (bn)	H	1,781	1,744	1,600	*
	Surplus (bn)	H	0.09	0.598		
Productivity	No of employees	H	1260	1199		
	Employees per 1000 connections	H	22	20	20	***

Key: *** Target achieved, * Target not achieved.

Note: H denotes performance in NWSC globally

O denotes performance in NWSC Exempting Kampala-KRIP

K denotes performance in Kampala-KRIP

Appendix XII: Summary of NWSC Operational Performance Indicators before & after the programmes.

PERIOD		1995	1996	1997	1998	Beg. Of 100 days	End of 100 days	End of SEREP1	End of SEREP 2	Target
Water produced (m³d)	H	135100	131200	127700	120500	126900	129400	128700	132400	141000
	K	95300	97500	94200	84900	92900	93700	91500	95500	100000
	O	39800	33700	33500	35600	34000	35700	37200	36900	41000
Response time to blockages	H					> 7 days	< 24 hrs	< 24 hrs	< 24 hrs	24 hrs
	K					> 7 days	< 24 hrs	< 24 hrs	< 24 hrs	24 hrs
	O					> 7 days	< 24 hrs	< 24 hrs	< 24 hrs	24 hrs
No of connections	H	41000	44206	47412	50618	53613	53824	56189	60098	
	K				29000	31378	31458	33164	34179	
	O				21618	22235	22366	23025	25919	
Suppressed accounts	H					19319	17316	15529	15761	
	K					11456	11070	9000	9000	
	O					7863	6246	6529	6761	
Active accounts	H					34294	36508	40660	44337	
	K					19922	20388	24164	25179	
	O					14372	16120	16496	19158	
Active accounts (%)	H					64	68	72	74	
	K					63	65	73	74	
	O					65	72	72	74	
Metered accts (%)	H	59	63	70		81	84	87	89	
Response time to bursts	H					> 7 days	< 24 hrs	< 24 hrs	< 24 hrs	24 hrs
	K					> 7 days	< 24 hrs	< 24 hrs	< 24 hrs	24 hrs
	O					> 7 days	< 24 hrs	< 24 hrs	< 24 hrs	24 hrs
Coverage (%)	H						50		54	
UFW (%)	H	62	61	59	49	50	49	42	44	39
	K		65	62	51	53	52	44	48	
	O					44	34	29	36	
Billings (bn)	H	1,622	1,757	1,809	2,067	2,498	2,539	2,455	2,390	
	K	1,075	1,202	1,292	1,703	1,612	1,563	1,728	1,616	
	O	0.547	0.555	0.517	0.364	0.886	0.976	0.727	0.774	
Collections (bn)	H		1,650	1,900	1,756	1,939	2,187	1,871	2,342	
	K			1,085	1,208	1,407	1,638	1,325	1,689	
	O					0.532	0.549	0.546	0.653	
Arrears (million)	H					33000	32000	30100	29900	
	K					25000	24300	23200	22500	
	O					8000	7700	6900	7400	
Billing efficiency (%)	H	38	39	41	51	50	51	58	56	
	K		35	38	49	47	48	56	52	
	O					56	66	71	64	
Collection effi. (%)	H	91	94	105	85	74	96	76	98	100
	K				71	91	104	77	105	100
	O					58	85	75	84	100

Estimated bills	H					4172	2148	1634		0
	K					3800	1809	0 *		0
	O					372	339	1634		0
Expenses (bn)	H					2,287	1,856	1,781	1,744	
Surplus (bn)	H					(0.348)	0.331	0.09	0.598	
No of employees	H					1655	1430	1260	1199	
Employ/ 1000 connections	H	42	39	36	32	31	26	22	20	20

Note: H denotes performance in NWSC globally

O denotes performance in NWSC Exempting Kampala-KRIP

K denotes performance in Kampala-KRIP

Appendix XIII: NWSC corporate goals (1999-2002)

1. Reduce UFW to not more than 39 % of overall water produced.
2. Manpower strength limited to not more than 20 staffs per 1000 connections.
3. Create a customer care unit in Kampala area, which promotes NWSC image and responds to customer demands and complaints within 24 hours.
4. Ensure continuous all year round water production of not less than 75 % installed capacity in each NWSC area.
5. All existing NWSC areas to collectively yield an annual surplus of Ushs 2.5 billion.
6. Raise annual turnover from Shs 22 billion to Shs 30 billion.
7. Raise the current minimum take home income of staff from Shs 150,000 to 270,000.
8. Establish within the framework of PSP at least 300 water kiosks to boost water distribution in areas targeting the peri-urban areas.
9. Create a conducive working environment that encourages teamwork and is attractive to both staffs and clients.
10. As a basis for future investments, identify new areas that have the potentials to break-even within three years.
11. Establish within the Kampala and Lira area water networks water quality monitoring and where necessary adjustment points to ensure compliance with the Uganda drinking water quality standards.
12. Carry out pilot PSP in five different geographical sectors of the water supply system in three towns and compile a manual.
13. Strategic alliances with relevant organisations to improve services of NWSC.
14. Ensure a continuous all year round sewage collection and treatment that conforms to NEMA standards.

(Source: *NWSC corporate plan document, 1999*)

- Change management programme
- Change of organisational behaviour and improvement of performance
- Lots of investments, management contract etc.
- Objectives not achieved
- 60-70% of operations in Kampala

Questions:

- What is precisely the days receivable ratio
- Is the behavioural chage sustainable?   Why?
- Why can Kampala KRIP be considered as a control group? How about behaviour of other stakeholders (politicians)
- Why do recommendations focus on Kampala. Are the differences really that big?
- Problem of insufficient funding of SEREP II... Is staff becoming dependent on allowances?
- Why does behavioural change not clearly result in significant differences in levels of performance.
- What is the composition of unaccounted for water?
- The hypothesis ws proved????