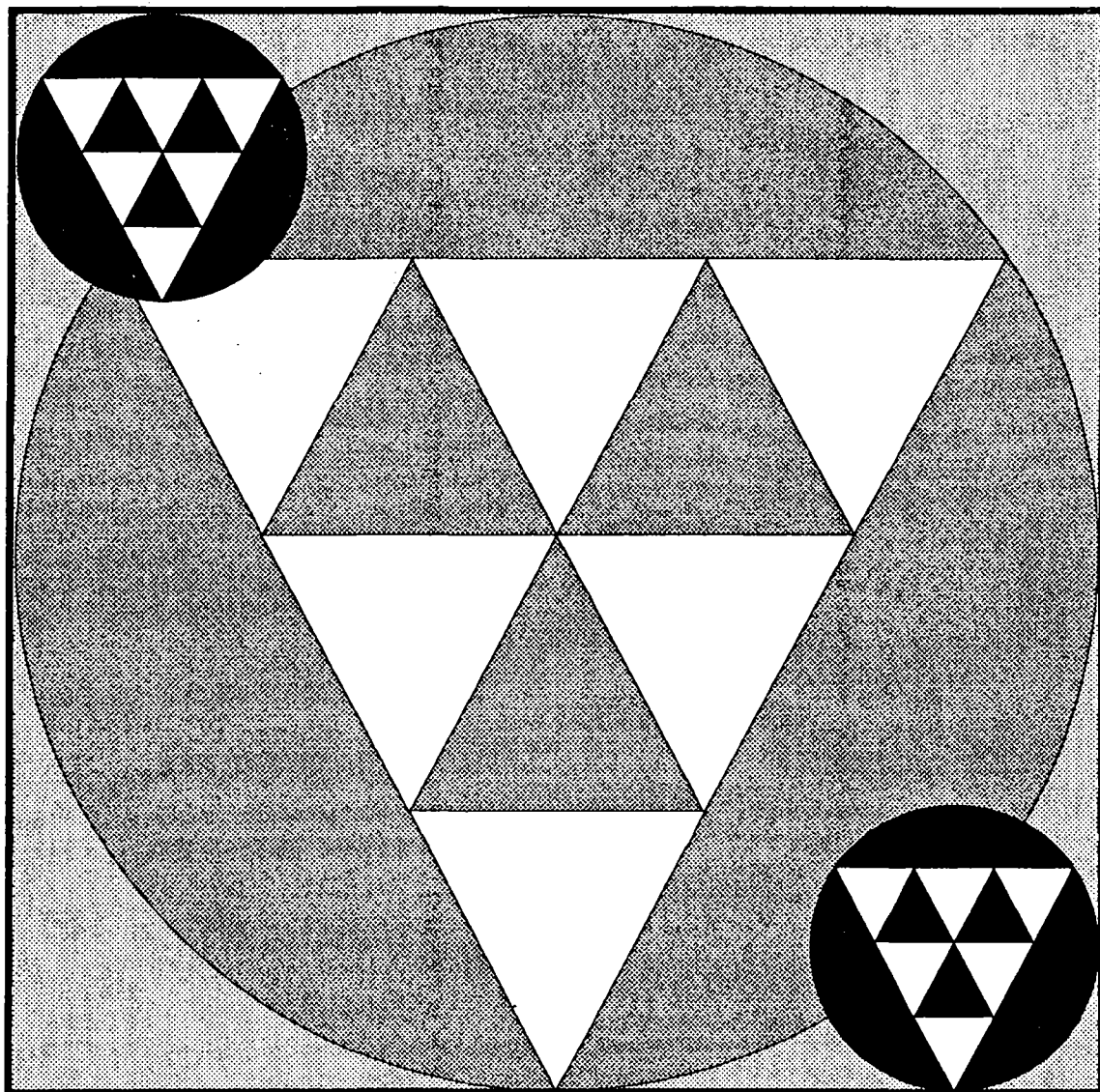# INSTITUTIONAL DEVELOPMENT SERIES

Management of water utilities in low-income countries: India and Uganda

Richard Franceys

WEDC

*Water, Engineering
and Development Centre*

Management of water utilities

in low-income countries:

India and Uganda

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PROJECT SUMMARY

Management of water utilities in low-income countries: India and Uganda   Richard Franceys

This project considers the water and sanitation industry in the urban areas of low-and lower-middle-income countries, that is the 'Third World' or 'Developing Countries'. During the recently completed United Nations 'International Drinking Water Supply and Sanitation Decade' an extra 369 million urban people received clean water supplies and an extra 314 million received sanitation. However this left 18.2% still without adequate water supplies and 28.3% without sanitation. Supply of these basic services required primarily for life and health (as well as for convenience and status) has not even been managing to keep pace with the growth of population in urban areas from 933 million in 1980 to 1332 million in 1990. And those urban areas measured as having water supply and sanitation are not always successful in maintaining their position. For example, it is reported that no city in India has a constant twenty four hour supply of water and that only 7 out of 3119 towns and cities are maintaining adequate sanitation.

The developments that have been making an impact on the industry may be summed up as the growing realisation that water supply and sanitation can no longer be provided by government as a 'public good', free of charge. In the past it has been recognised policy that clean water is a 'basic need' which has to be supplied to all, regardless of income. This has been seen as a key duty of government. However, governments have been unable to provide resources necessary to the task. The use of taxation has failed as governments have not been efficient at collecting taxes and have then had to borrow to attain a minimal (and inefficient) level of expenditure. The use of tariffs has failed as present figures suggest that average tariffs are only one third of average costs, tariffs often being reduced to insignificance by inflation because of politician's beliefs regarding water as a social service (and vote catcher).

Therefore the key development has been the understanding that tariffs have to be raised to an economically efficient level. This is vital to overcome the anomaly where the poorest in one city end up paying 120 times as much per unit for their few litres of water from informal vendors than the rich pay for their utility supplied water with the convenience of piped connections. The change in understanding over viable tariffs has led to the corollary of the need for a more commercial orientation of water utilities in order to obtain usable basic needs. This is subsequently creating the need for institutional development and management development to service these revitalised institutions. Opinions still differ as to whether evolutionary institutional change is possible or whether the revolution of privatisation is required to produce significant progress.

The aims of this project are to investigate the current state of efficiency of the management of a number of public water utilities, to compare and contrast these utilities, to look for common themes which explain the apparently low level of performance, to consider whether the reasons for this performance are characteristic of the society in some way or are a function of the economic standing of the country or reflect the capacity of the existing mangement.

The conclusions suggest that the physical and financial indicators determined in the project are the symptoms of institutional failure which can be partly explained through limited organisational autonomy and variable leadership. Perhaps more significant is the need to find some mechanism to enable personal staff goals to coincide with organisational goals.

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Introduction

1.1 Water and sanitation in low-income countries

Domestic water is used primarily for drinking, cooking, washing and bathing. In some parts of the world an equal amount is used for transporting domestic waste down sewers.

The main justification for government involvement in the provision of an improved domestic water supply is the health benefit. However consumers normally demand improved water supply primarily for convenience, for which they are often willing to pay. Because convenience influences the amount of water used which affects health benefits, these two factors, health and convenience, have to be kept in balance.

At present 1,332 million (82%) urban dwellers in the lower-income countries are believed to have a suitable water supply along with 2,659 million (63%) of the rural population. However, many of those counted as having an adequate supply suffer because it is inoperable or at best is working only intermittently. In addition to improving existing supplies, the population requiring a new service by the year 2000 is estimated to be 813 million people in the urban areas and 1,301 million in the rural (UN, 1990).

Recognising this enormous and continually increasing demand, there are three key issues in domestic water use:

- What is an adequate water supply and who will have access to it?
- How can the supply of domestic water be financed and managed?
- Will there be enough water to meet the 'adequate' demand?

The main area of interest for this study is the second point. However the answer to all three questions begins with an understanding of the role of economics in water supply and sanitation provision.

1.2 Water supply and economics

In order to determine efficient, sustainable levels of service and their necessary tariff levels it is necessary consider the Theory of Supply and Demand and the factors affecting the supply and demand of water and sanitation services. This agrees with Lipsey's definition of economics as the study of "the ways in which a society uses its resources and distributes its output among individuals and groups in society; the ways in which production and distribution change over time; and the efficiencies and

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inefficiencies of economic systems" alternatively defined as "the study of what we produce, how and for whom" (Begg, Fischer and Dornbusch, 1984).
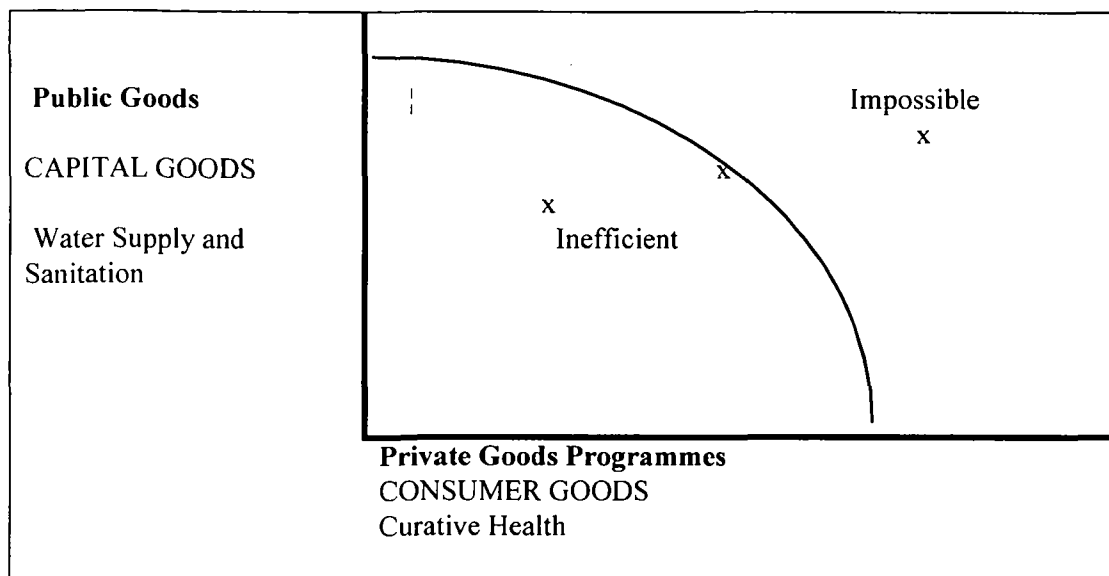
Figure 1.1 Production possibility frontier

The Production possibility frontier illustrates how society as a whole has a choice between the production of **Private Goods** or **Public Goods**/social services. And within that chosen efficient level of social services, government can choose to improve public health through investment in medical facilities for Curative Health or Water Supply and Sanitation for preventive medicine. That is between CONSUMER GOODS or CAPITAL GOODS. These alternatives are sketched in Figure 1.1. Having made those initial choices the Production possibility frontier could describe the alternative technological means of improving water supply and sanitation, describing the process known in the industry as Sector Planning.

Elementary Supply and Demand

Figure 1.2 outlines elementary supply and demand curves for urban water supply, taking into account the influences to demand and supply of Prices and Costs, Income, Alternatives, Preferences or Tastes and Technology

The diagram shows a low-income demand curve, representing limited (but vital) amounts of water required for the two billion people with an average income of less than $1 per day and describes a possible dry season shift in the demand curve. There is no suggestion of an income increase related shift with average incomes only growing at 0.1% per capita over the last couple of decades. There is however a high-income demand curve representing that small percentage of the population which in many countries has monopolised the government provision of household water connections. A new

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demand curve represents the effect of the 'related' or 'complementary good' of sewerage being introduced which requires large amounts of water for waste transport.
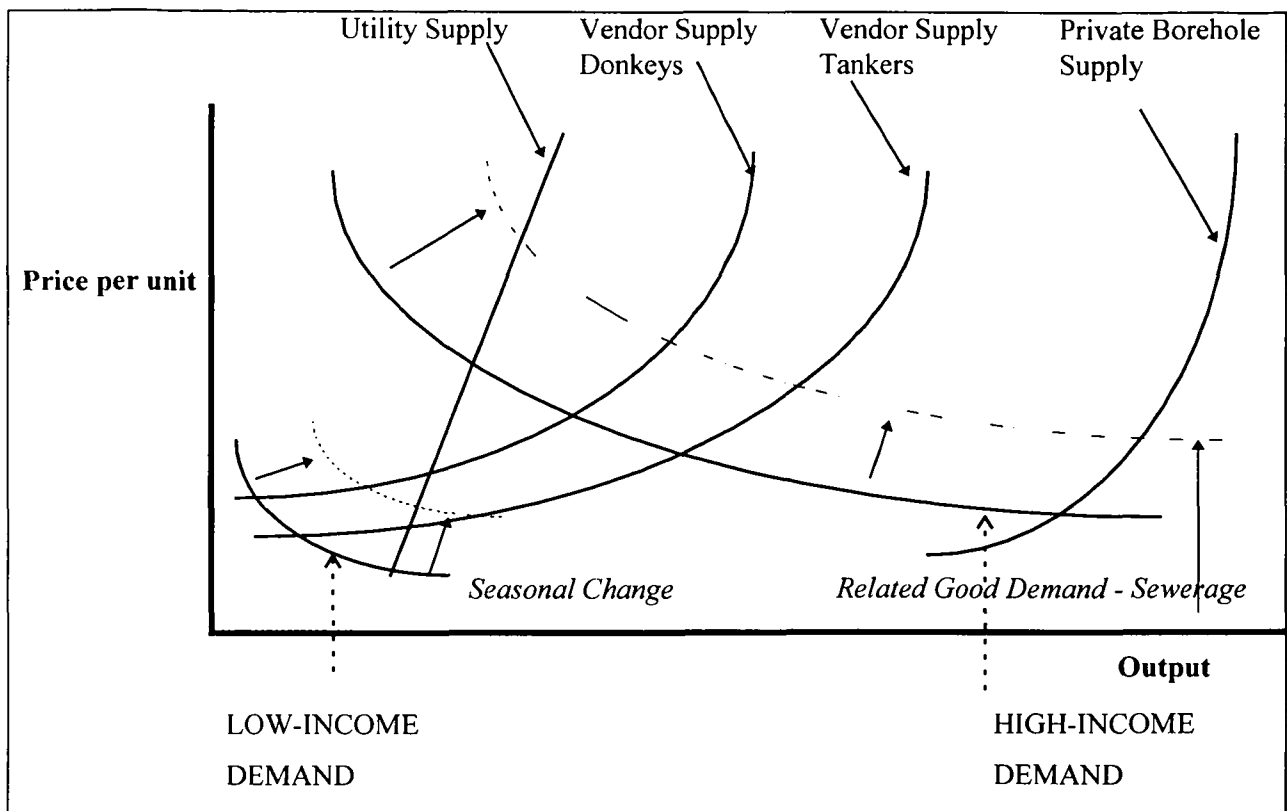
Figure 1.2 Elementary Supply and Demand

The first supply curve suggests water provision through the public utility and is shown to be almost inelastic because of structural or institutional inertia (and lack of resources because of ineffective tariffs) which prevents producers from increasing output in response to rising prices. Substitutes for water supply are limited ('let them drink Perrier' does not seem to be a realistic cry). In practice the alternatives are to walk and collect polluted water from a surface stream or drain or to purchase water from vendors. Two alternative supply curves aresuggested, one representing water supplied from a vendor's barrel on a donkey cart and the second representing economies of scale of providing water from vendor's tankers. The final supply curve represents a common approach of the high-income group of drilling their own on-plot boreholes.

Because water supply is a 'necessity good', price elasticity is less than one. Measured values suggest average figures of between 0 and 0.3 for low-income consumers whose needs are absolute but for small amounts and ranging between 0.3 and 0.6 for higher-income consumers. See Figure 1.3. There are no significant cross-price elasticities because of the lack of substitutes.

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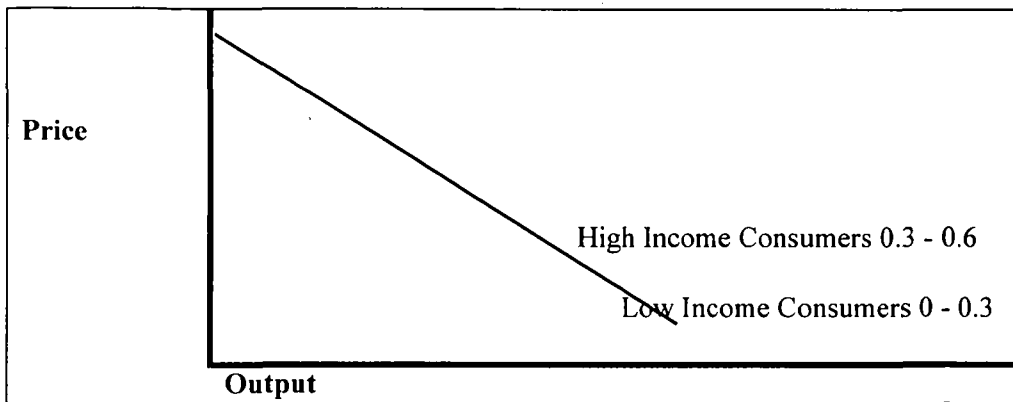
Figure 1.3 Price elasticity

Demand

Figure 1.4 suggests a series of Indifference Curves representing the balance between the need for basic services of food and housing compared with the equally necessary water supply. It is proposed that the different Indifference Curves could represent the different utility to be obtained from different technical means of delivering water. Although all four curves provide the necessary public health benefits the extra convenience represented by the successive curves is eventually being realised as a significant component of project demand. Assumptions as to the Budget Line for low-income consumers or 'Affordability to Pay' at 3% of household income have recently been shown to be incorrect as the 'Willingness to Pay', even of low-income consumers has on occasion been at a higher level or indifference curve because of the higher level of convenience.
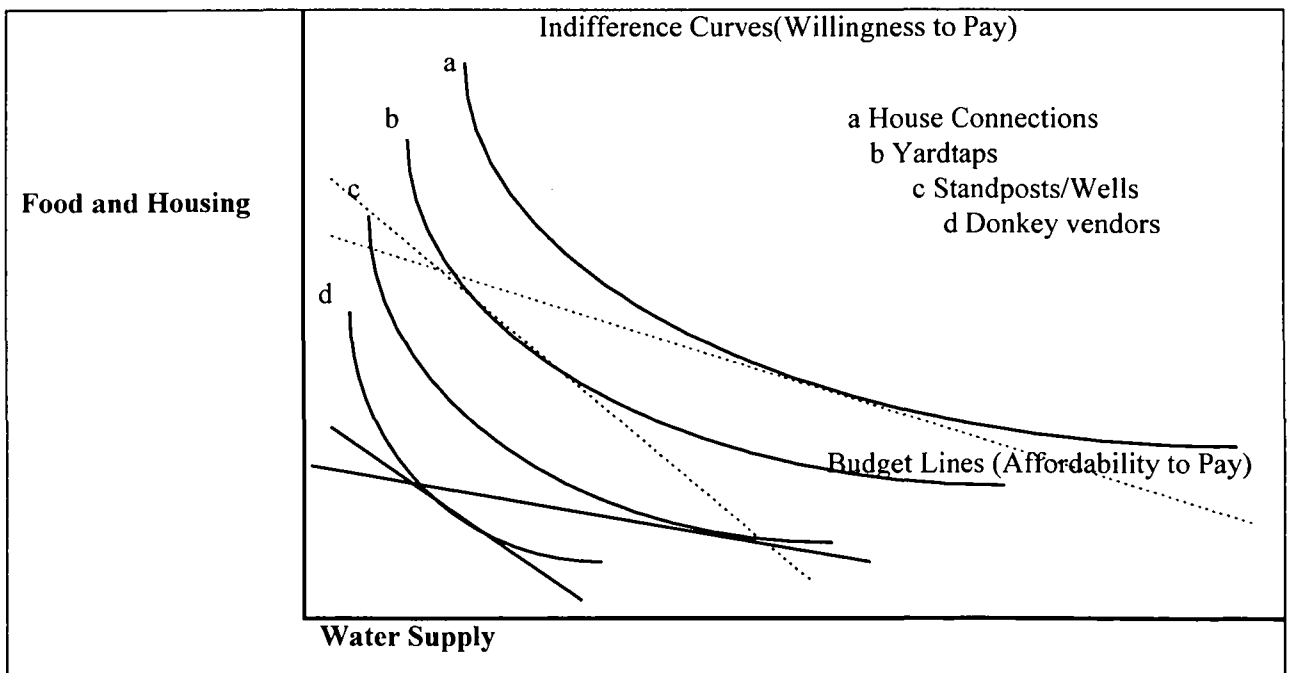
Figure 1.4 Indifference Curves

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Supply

Figure 1.5 illustrates the Long Run Marginal Cost curve for a monopolist urban water supplier, demonstrating the very high initial costs of constructing abstraction, treatment and distribution systems. This falls to a minimum due to economies of scale and then rises again reflecting the increasing costs as the system reaches capacity and then the smoothed out marginal costs of adding to the abstraction and treatment system. The long run average costs curve tends to rise as quantity increases because in practical terms the simplest and cheapest sources are always exploited first. Each additional dam or transmission pipe will be further away from the city and more awkward and more expensive to build.
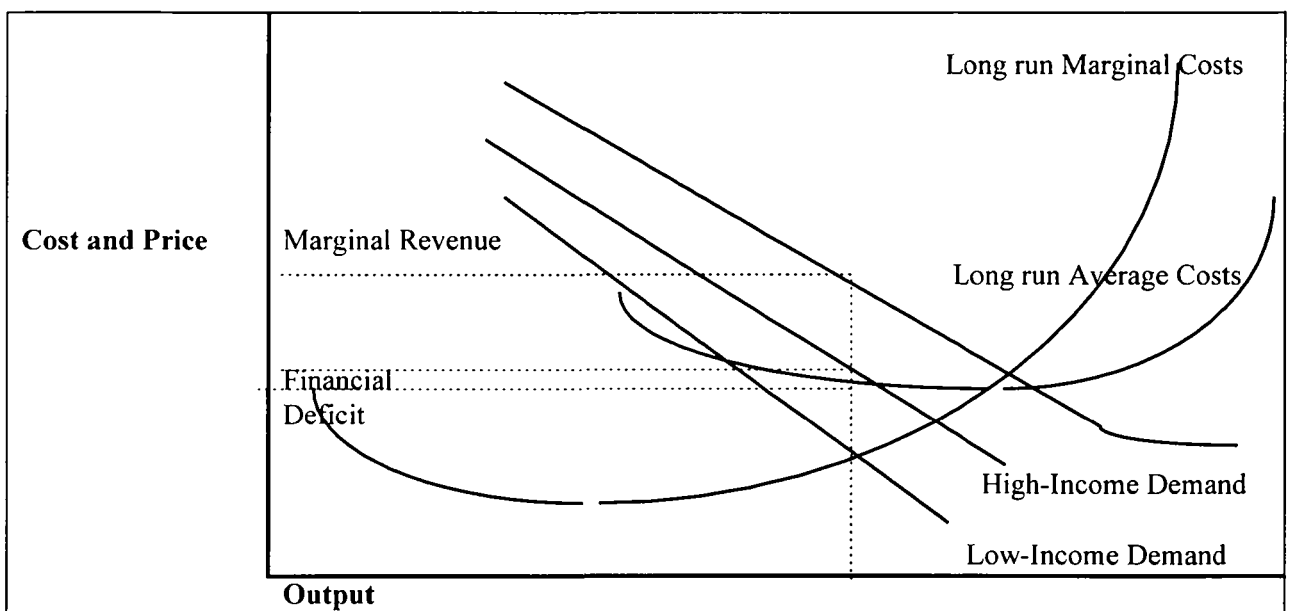
Figure 1.5 Long run marginal cost - monopoly supplier

A Marginal revenue (or benefit) curve along with the income related demand curves is illustrated in Figure 1.5. The steeply sloping low-income curve represents the inelastic nature of low-income demand. The optimal production level of the monopolist utility for low-income consumers where Marginal Revenue equals Marginal Costs is drawn as below the long term average cost curve, representing the all too common financial deficit which many utilities experience. The demand curve for high-income consumers suggests the potential for generating revenue over and above the average cost and therefore for cross-subsidising low-income consumers.

Industry solutions

As a result of applying these theories of supply and demand the water industry and particularly the international development banks and donors have settled on the use of Average Incremental Cost as a means of determining the most efficient tariff based upon long run marginal costing (Gilling, 1980). Average Incremental Cost is determined by dividing the present value of investment, operation and

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maintenance costs by the present value of water anticipated to be supplied from the new investment. This in effect is equating long run marginal costs with long run marginal revenue.
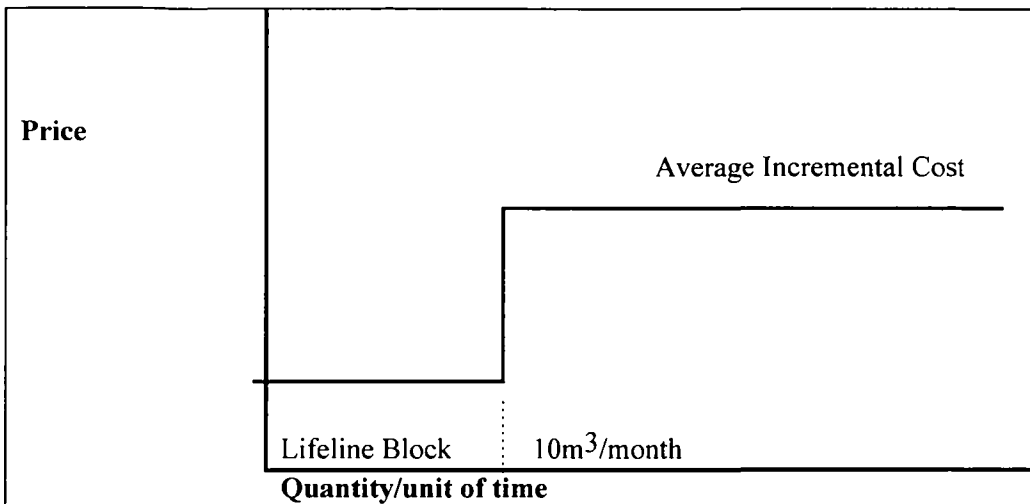
Figure 1.6 Increasing block tariffs

The price per cubic metre resulting from this approach is normally beyond the means of low-income consumers. However, as there is usually an existing water supply system, fully depreciated, the compromise used is to take an increasing block tariff, as shown in Figure 1.6 whereby the initial 'Lifeline Block' at 10m3 per household per month represents the water needed for survival and health, charged for at operation and maintenance costs only.. Above that amount, in theory, usage is paid for at the Average Incremental Cost in order to signal to larger (and richer) users the economic value of the resource they are consuming. In practise very few utilities feel politically strong enough to impose such high tariffs and end up with a politically bargained compromise.

1.2.1 What is an adequate water supply and who will have access to it?

It is estimated that diarrhoea caused by inadequate water supply and sanitation results annually in deaths of 4.6 million children under the age of five. Improvements up to an 'adequate' system can lead on average to a reduction in the overall incidence of infant and child diarrhoea by one quarter and total infant and child mortality by more than one half (Warner and Laugeri, 1991). Although children suffer most acutely from inadequate water and sanitation the recent outbreak of cholera in Latin America led to a reported 251,568 cases resulting in 2,618 deaths whilst the on-going outbreak in Africa had 45,159 cases and 3,488 deaths over the same six month period (WHO, 1991). In addition, infections such as Guinea worm lead to serious debilitation in adults and loss of productive output, with attack rates ranging from 10 to 40 per cent of the population leaving victims completely disabled for periods lasting 3 to 29 weeks (Smith et.al., 1988). In addition to the health problems, many people (almost all are women) still spend hours each day collecting water from a distant source which also leads to a potential loss of productive output.

The agreed slogan for the water sector for this decade is *'Some for all, not all for some'*. Kalbermatten (1991) reports that at present 70 to 80 per cent of funds go to serve 20 to 30 per cent of the population. The population served are mostly the rich who have access to formal housing and also the political power to achieve the average capital expenditure of $200 per capita for household water connections and $350 per capita for sewerage (Christmas and de Rooy, 1990).

The quantity of water and the proximity of the supply point to the home have been found to be more important than actual water quality in improving health. Even then water supply is only effective when linked with adequate sanitation. Therefore an 'adequate' water supply following the *'Some for all, not all for some'* guideline will require standposts delivering 40 lpcd within 100 metres as the first priority with yard taps designed to supply 60 lpcd as second priority to meet the health criteria (Cairncross, 1990). To define these service levels as adequate does not preclude higher levels for those who desire them. However the higher water use resulting from house connections with its subsequent increase in drainage requirements should not be seen as a suitable service to subsidise. These 'adequate' levels of water service can be provided for an estimated investment of $100 per capita in urban areas, a significant reduction in cost.

1.2.2 Will there be enough water to meet an 'adequate' demand?

There is a growing concern that the dramatic growth in the population of the urban areas will lead to a shortage of water. Undoubtedly bringing a dispersed population together demands a much greater point supply than was needed previously. Engineering can be effective at developing sources ever more distant from a city and transporting water over long distances. Where water sources are limited clever engineering can desalinate (at high cost). Domestic water demand management is one way of ensuring that there will be sufficient water at an economic cost. The major areas of demand management to consider are the use of technical, social and economic techniques and most importantly the choice of sanitation.

The use of technology for water saving depends upon leakage control, pressure reduction and the introduction of reduced water-using appliances such as aerator taps and showers and low flush toilets. These technical solutions are simple and effective though require a significant initial investment. In the case of household appliances some form of promotion is usually required with the support of changes in bye-laws.

Social techniques of demand management refer to the use of education and legislation. Often these approaches appear to have most value at special times of drought but in the long term as attitudes towards use of resources change they may have a significant part to play in continuous demand control.

Economic techniques depend upon tariffs and metering. For tariffs to have an effect on water consumption they have to be linked with meters. Whilst at first sight it is entirely logical to have a

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system whereby people pay directly for what they consume, the problem with meters is that they are expensive to install and maintain. There has been a 13 per cent average reduction in domestic water use in the UK metering trials but it is anticipated that this will decrease as coverage increases, for most of the reduction is achieved in the richer suburbs with large gardens. Binnie (1992) also reports that the cost of meter installation rises significantly as coverage increases (the simplest properties tend to be metered first).

If in this country where meter installation would cost only 2 per cent of average annual income we have not yet been persuaded of their value is it reasonable to expect them to be used in countries where the cost represents 28 per cent?

The reduction in demand may not be worth a reported increase in water supply costs of 25 per cent in low-income countries. Alternatives to consider are the use of flow restrictors in delivery pipes or some form of design limitation in pipe size and pressure to limit overall supply to low-income, subsidised consumers. Another approach is to consider the use of district meters with private or community vendors selling on the water as described earlier.

In addition to domestic water use, sanitation has to be considered because of the implications for water demand (in addition to the health implications). Demand for improved sanitation by the year 2000 is estimated to be 947 million people in the cities and 1,676 million people in the rural areas. If this total of 2,623 million is to receive sanitation through conventional means the increased demand for domestic water supply will be insupportable when considering an average four flushes per day at 10 litres (or even a reduced 5 litres) per flush.

On-plot sanitation (very improved latrines or septic tanks) can reduce per capita water demand by between 25 and 50 per cent (as compared with sewerage) whilst providing all necessary convenience, cleanliness as well as affordability. Currently the focus of an ODA research project, many countries still see on-plot sanitation in urban areas as worse than second best. Intriguingly it is reported that in Japan only 42 per cent of households are connected to sewers - 'the rest have to make do with septic tanks emptied by suction truck once every few months' (Independent, 1991).

The major fear regarding on-plot sanitation has been the danger of pollution reaching the groundwater. This pollution is represented primarily by nitrates as pathogens do not normally travel any significant distance. In the successful Maputo sanitation programme there has been a measurable rise in nitrate levels in the shallow groundwater but following experience in other areas with higher than recommended nitrate levels there have been no recognisable health implications. If in the end problems do arise with local deterioration in shallow groundwater quality the figures suggest that it is always more economic to pipe clean water in to a city than it is to pipe waste water out.

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All these techniques show that domestic water demand can be significantly reduced. However, in the context of overall water resources it is necessary to recognise that only 15 per cent of the water abstracted from the hydrological cycle is used for non-irrigation purposes and of that only one third is directly for domestic use (ICWE, 1992). This puts into context the apparently high wastage of 34 per cent average unaccounted for water - especially when it is suggested that 'losses' in irrigation, representing 85 per cent of water abstracted, are of the order of 60 per cent.

The choice therefore becomes clear. In a year one thousand cubic metres of water may be used *either* to provide water for 80 people *or* to grow food for between 1.6 and 3 people. This imbalance of between 1: 30 to 1:50 in the ratio for daily water use to irrigation grown food suggests that in the context of competing demand for water then domestic water use should win every time. It is far more economic to move food from a rain rich area to a dry area than it is to move water. 'In some regions it has been demonstrated that more efficient agricultural irrigation would release sufficient water to meet all additional urban needs'. (Okun and Lauria, 1991)

Present thinking therefore says that water for irrigation <u>and</u> for domestic use must be valued as an economic good. If this policy was followed, particularly with regard to groundwater abstraction, then many apparent shortages of drinking water could be overcome.

1.2.3 Water and sanitation summary

To be effective domestic water supply requires a moderate amount of water of moderate quality as close to home as possible. To be sustainable water supply requires revitalised institutions that have control over their finances. What are the implications for engineering once domestic water is seen to have priority over irrigation water? This project does not focus on engineering for after all, 'what is difficult about connecting a power supply and some lengths of pipe to a pump and turning on?' This gross oversimplification is meant to suggest that the basic engineering is relatively easy. Optimisation of the engineering is a challenge - but remains worthless when the underlying problems are institutional.

The extra percentage points of efficiency are only achieved once an effective institutional system is in operation. Even then, engineers must avoid the temptation to concentrate on the functional aspects of planning and think more of the normative aspects. UNICEF imported over a million small plastic taps into Nigeria to fix to water pots. Now that people no longer have to dip a contaminated container into the household water store health benefits are more assured than when the effort went into achieving ever higher 'engineered' quality of water at the standpost. The objectives still have to be considered before the means.

To maximise benefits from investment of aid in domestic water use it is necessary to draw back from the engineering and enable institutional development based on commercial and customer orientation.

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'Capacity building and the institutional and human resources development effort that are integral to it, is essential to provide program and project sustainability'(Okun and Lauria, 1991). Without this targeted investment we will continue to see inadequate and intermittent supplies with the resultant disease and dis-ease afflicting tens of millions.

1.3 Management in low-income countries

The capacity building required is dependent upon the capabilities and effectiveness of managers in low-income countries. Developing countries, by definition, have weak economies. Now that so many years have passed since nominal 'Independence' it is suggested that any weaknesses may not necessarily be the result of colonial degradation or a slow start to economic development but rather may be inherent in the culture or style of management of development.

In summary, at present rates of progress the number of people in the world without safe water will rise from one billion to 2.2 billion by 2030 and the number of people without adequate sanitation will rise from 1.7 billion to over three billion. Accelerated investment in the sector can reduce those growth rates but the World Bank (World Bank, 1993) suggests that the only way to turn the growth curves around so that the number without safe water supply and sanitation begins to decrease is to achieve 'efficiency reforms' in the management. Hence management becomes the key issue in this study.

1.3.1 Management in low-income countries - a literature review
Are the principles of management different in low-income 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. 'In fact 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 fulfill one's societal obligations to the extended family, then the clan and then the tribe, rather than to the employing organisation.

The key factors described to the author in the Ugandan context are the necessity for staff to be corrupt ('eating') because of the low remuneration; it was suggested that take home pay would only meet one quarter of a head of household's financial responsibilities. Therefore nobody trusts anybody else's decision-making because each person believes that the other was making their decision on the basis of what they might personally get out of it.

Leonard (1987) suggests that 'African administration is distinctive in the degree to which it is penetrated by its politicised and patronage-prone environment and that it is not amenable to management methods that are based on a Western conception of purposive rationality.'

Kiggundu (1988) reports that in developing countries, society and environment pervade organisation and management and Adamolekun (1989) describes the critically important issue of the impact of culture on management. 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 organisation's relationships with their environments.'

Brown (1989) 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 it 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 these 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).

They go on to explain that cultural and institutional factors underlie the propensity among Chinese and African managers to personalise and centralise transactions to a greater extent that among Western Managers.

Corruption and politicisation are described above as significant characteristics of low-income country management. Another is the style of leadership whereby many managers 'become habituated to intervention from above and invite and expect it, as in the case of the subordinate who refuses to take even the most routine of decisions not governed by a rule for fear that he or she will be blames, and punished, by a superior if anything goes wrong'. (Blunt and Jones, 1992)

The author has personal experience of attempting to obtain agreement over some relatively unimportant matter and being ushered up the management hierarchy to the most senior person who

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holds court with many chairs in the room with each request being considered in front of all other supplicants in rank order of perceived importance. Whereas the original manager had all the information and would have given the same answer but he knew that he was not 'allowed' to give that answer.

Montgomery (1987) writes that the personalistic interpretation of African bureaucracy is perhaps oversimplified, but turns out to be a recognisable explanation of observed realities. 'African managers are more concerned with internal matters than other issues'. Therefore the best way to get acknowledged as such and to obtain favourable treatment is to try and personalise relationships with the manager to get him involved (Blunt and Jones, 1992).

The combination of centralisation and personalisation of relationships coupled with fear of 'failure' and responsibility for error at lower levels leads to overload at the top. 'This in turn depresses decision quality and causes inordinate delays' (ibid.).

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 advancement. '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.' (Leonard, 1987)

The examples given relate mainly to public sector organisations. It could be argued that the private sector organisations might be different in their style of low-income country management. Montgomery's study (1987) produced little evidence for this. He found that there was little or no difference between the management styles and skill requirements of large public and private organisations.

'African managers are unusual among the world's elite in the extent of their patronage obligations to poorer peoples and the strength of the moral pressures they feel to fulfill them. For these reasons and for selfish ones that are far more universally, state organisations in Africa are extensively used to pursue informal, personal goals of the managers rather than the collective ones that are formally proclaimed (Leonard, 1987)

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1.3.2 Management in India - comments from water sector managers

Comments from Indian managers on their style reveal that they believe that good managers have a much broader understanding than managers they met in UK. However they are also more frustrated in their work. *'The Chief Engineer will phone at 5.00pm on a Friday and say that he wants to see me on first thing on Saturday morning. so I will come in and have to unlock the office (for all junior staff will be on weekend) and then other middle rank engineers might come in because they have been summoned - and then it might be 2pm before he calls me in.'* This confirms the centralisation viewpoint described earlier.

Regarding industrial relations they report that it is impossible to sack anybody - so one has to manage a vast staff with no motivation; in some rare cases fourfold rise in productivity was reported just with the threat of the sack. However this was most unusual as labour cases and appeals over 'dismissals' can take at least ten years and up to fifty years to get through the courts, even for an unskilled labourer on £0.50/day

'The unions have such power that when an individual complains about something it can easily go right up to the State Minister' - and then the manager is got at for disturbing the system and so they quickly learn that it is *'better not to make waves'.*

Promotions are by age and entry score (i.e. ranking in interviews and academic qualifications on joining at age 21 which follow the engineer/manager right through their career) which is severely de motivating but oddly promotions can still take place even when the manager is working abroad! So managers ask the *question 'Why should staff be interested in team building when they have already achieved a 'job for life'* ? Albeit at a very low salary and have full protection of powerful unions and can extract money for their services - i.e. they only sweep certain streets, empty certain solid waste bins if the local residents pay an extra amount.

'If managers try to manage and dare to criticise or even comment on the work of their staff - then the staff simply accuse them of taking bribes and accepting purchase of faulty/low standard tools and materials (which is why operatives cannot do job properly) and if it goes further take managers to Labour Board.'

Each politician or commissioner, to show that they are important and popular, can only visit places or receive visitors if they are surrounded by their staff - their 'team' - but this team is not expected to do anything or contribute anything - simply to be seen. But these staff may be senior managers who should be doing many other tasks. *'This sort of system perpetuates itself remarkably effectively as this is the only model managers have experience of'.*

Senior people are always calling for statistics and information which they won't really use but which tie up enormous amounts of manager's time. Items can be starred which demands a response within

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twenty four hours.' Information is required 'just in case (JIC)' according to another manager which can absorb an inordinate amount of time to prepare but which is unlikely ever to be used.

One manager remarked *that '80 percent of our time is taken up in meetings which have zero percent effectiveness.' 'The most important task of any manager, (the bottom line), is to avoid questions from Members in the State Assembly, that is to keep your nose clean.'* (All quotations are personal communications with the author, Nagpur, 1992).

1.3.3 General Management - Conclusions

Management style in low-income countries might be characterised as 'chiefly' rather than the 'dictatorial' style with which it might be compared in rich countries. 'Chiefs' have considerable centralised powers of patronage which they are expected to use for their own benefit <u>and</u> for the benefit of 'their' people. However wisely they make their decisions it means that all decisions have to go up the chain of command - which turns managers at surprisingly high levels in any hierarchy into 'supervisors' rather than managers. But which also means that very junior staff have the right to appeal at the highest level. For example an operative in the Ugandan Water Corporation will have to talk directly to the Managing Director about improving his housing allowance or borrowing a vehicle for a relative's funeral. And the MD is pleased to be seen to be distributing largesse in this way whilst knowing that he <u>has</u> to do it to remain 'chief'.

Management thus becomes reactive to a significant degree as 'managers' cannot challenge the 'chief'. They can only wait their turn to move up the ladder of advancement. Low-income countries can be described as having a 'survival culture'. In management terms this can be seen as reflecting the bottom two steps of Maslow's hierarchy of needs (though Maslow may not be transferable to different cultures), that is physiological and safety needs. 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 mangers will do everything possible to avoid uncertainty in their work place with considerable tolerance for those who apparently (in western eyes) are doing nothing. Collectivism therefore rules all encounters, there is no sense of managers knowing all the answers - only the very top man is expected to take on that role. Conflict is to be avoided for it will not get you anywhere.

Management training, as with all professional training is seen as a useful excuse to spend some time in a richer country but there is little belief that it can make much difference to their own organisation.

Meetings become the place for the senior manager to demonstrate their patronage and chiefly control and largesse rather than as a forum for solving problems and coming to a common solution.

In terms of nationalistic pride, there remains considerable frustration at their own countries' apparent economic and technological backwardness and neo-colonialism in the form of World Bank/IMF structural adjustment programmes is resented intensely. But yet many managers say that their own leaders are not prepared to propose or taste the bitter medicine that they know their economy needs.

Certain professions are seen to be advantageous to personal progression (surprisingly in the UK context engineering is seen in this light) but in India the old British arts favouritism for managers is retained in the Indian Administrative Service from where managers are imposed at the highest level on the myriad government connected organisations. At that level there is reasonable mobility but for the middle managers working their way up the ladder there is minimal mobility with the exception of the obligatory trip to the Gulf for two years to be able to build a house and purchase a car. Apart from this there is little mobility between the public and private sector because nobody willingly gives up a job for life with guaranteed housing and little responsibility and often many opportunities for extra earnings.

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. The hierarchical pyramid still retains all its power which staff cannot bypass but have to endure.

On top of all this industrial relations have taken on a powerful legal status which must not be offended. So managers have to bow down to their junior staff, never expecting much and rarely disciplining whilst also deferring all decisions up to the senior management.

The values of managers reflect considerable tolerance for outsiders, unbelievable patience (resignation?) with their system and a determination to take out of the organisation anything they can to further their extended family's needs - not through the western style of career progression with subsequent salary enhancement but through continually 'borrowing' the organisation's resources, through working part-time unofficially and through direct corruption.

1.3.4 Management in public utilities - Conclusions

Discussion in the previous section considers the nature of management in low-income countries in general. Management in the public sector perhaps exaggerates all these aspects and is doubly significant because of the disproportionate size of the public sector. Dia (1991), for example, 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.'

A particular problem of a low-income country utility is that staff will be paid very low wages relative to international comparison ($1 per day for unskilled staff, $100 to $200 per month for managers), and also low wages relative to traders and private enterprise within that country. Immediately this leads towards the temptation to over-manning such that a manager can ring the bell on his desk to summon a 'peon' from outside to bring a file just two metres within the room from a shelf to the sitting manager at his desk.

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 for OECD 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.

'I once visited an Indian organisation that employed 20,000 people, suffering from bureaucratic arthritis. Everyone seemed to have a power of veto over every decision. There were on average twenty rungs in each ladder, 20 levels of command. You see, they said, 'we are enormously taken with this British idea of annual appraisal, but good appraisals need to be rewarded with promotion, otherwise Indians lose face. Therefore we had to create all these opportunities for promotion.'' (Handy, 1989) Handy goes on to comment that 'the days of British India thinking are over, the kind of thinking that boasted in the fact that 2,000 Britons ran India. It was the kind of thinking that led to management trainees and fast tracks to the top for a selected few.' Unfortunately for India, it seems they have not been able to dispose of this concept quite so easily.

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 in recruitment, transfer or dismissal. Interference in all these matters is common. 'Public enterprises have failed significantly when faced with a challenge of a 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 Rajan, 1991) This situation might be summarised therefore as a lack of leadership and teamwork.

The problem might well stem from a failure of the traditional approaches to institutional development to fully integrate the political and socio-cultural values that influence economic decision-making. 'Traditionally institutional development projects have been based on a mechanistic and linear conception of development, a technological approach to management that assumes western techniques are the only roads to modernization; and an ethnocentric approach to culture.' (Dia, 1991)

Dia goes on to comment that 'western values are not always congruent with traditional incentives and behavioural patterns prevalent in most African countries. Self-reliance and self-interest tend to take a back seat to ethnicity and group loyalty. The main concern seems to be maintaining social balance and equity within the groups, rather than individual economic achievements.'

African economic psychology is generally characterised by powerful connections between objects, humans and the supernatural. The frontiers separating collective preferences from individual ones are often non-existent or quite vague. Typically a higher value is placed on inter-personal relationships and the timely execution of certain social and religious or mystic activities than on individual achievements.(ibid.)

There are particular attitudes to *savings and investments,* which have to be shared with the community lavishly; to *authority,* which tends to be paternalistic and hierarchical; with *commitment,* which has to be in front of several witnesses; to *decision-making,* which is by consensus rather than 'by the book'; and to *labour* where a high value is placed on leisure and the attendant ability to engage in rituals, ceremonies and social activities. (ibid.)

1.4 Chapter Conclusion

In conclusion, from the comments of managers involved and 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) finds that there is no reason to believe that forms of teamwork and worker participation are not as applicable in developing countries as they are in the rich countries. 'An unexpected finding was that the educational level of workers did not appear to be a critical factor in determining the success or failure of work reorganisation.'

Peters' comment (1987) that there must be a reduction in bureaucracy, excessive rules, regulations, and paperwork and 'liberation through the elimination of excessive procedures' is even more true in the highly centralised government based hierarchies of many low-income country public utilities.

So this author suggests there must be freedom to generate sufficient revenue to reward staff adequately whilst understanding that a manger's conduct will always be influenced by the cultural setting and the different forces operating in his personality. 'Most certainly he will view leadership problems on the basis of his personal background, knowledge and experience'. (Abisheganaden, 1988)

The managers interviewed want to be part of effective teams and they want to receive and provide leadership within an environment which recognises and rewards them. And this is necessary if their customers are to receive their basic needs requirements for efficient, affordable, sustainable public services. But there is also a cultural difference which impacts on managment style. The similarities in management culture may be masking the differences which are then not given due understanding.

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Institutional and Financial Analysis

2.1 Institutions

It is proposed in this thesis that a significant reason for the failure of public water supply and sanitation in low-income countries is the weakness of management and the institutions within which they have to operate.

At the simplest level "an institution is an established way of behaving", representing the beliefs, practices, laws and roles of a part of the structure of society. At another level the institution is the structure or organisation rather than just the behaviour. "Institutions are the organs that perform societies' functions" (Mitchell,1979).

Infrastructure projects require established behaviour patterns and organisations that promote rather than hinder the development process. Various groups have an interest in infrastructure from the Governmental bodies directly responsible along with other interested Ministries to local government and so to the community or consumer groups. In addition internal and external aid organisations (ESA's), both bi-lateral and multi-lateral, non-governmental organisations (NGO's) and voluntary agencies as well as the private sector may have a part to play.

The conventional approach sees infrastructure as the institutional responsibility of the government of any country. It has been believed that if the government is not meeting the basic needs of their people for water supply, for example, it is not carrying out its due functions. Politically it has been advantageous for a politician to prove that he is serving his electorate by 'bringing' an improved water supply or other infrastructural facility to the area.

However, the fiscal or tax base of the majority of low income countries is extremely limited - and subsequent government support (following implementation) of any infrastructure institution is woefully small. Recurrent budgets and therefore staff remuneration and training and general resources for carrying out the job are not adequate which leads to limited motivation and consequent problems.

Into this situation come the multi-lateral and bi-lateral funding agencies. The funding agencies know that to be involved in a development need as understandable as infrastructure meets their criteria for serving the poor with 'basic needs'. And it is relatively easy (if extremely expensive in local terms) to employ an international firm of engineering consultants and to set up a special Project Unit within the recipient institution. The unit can seize upon a readily manageable need and make the appropriate studies and employ international contractors to build the system. Add on a bit of training for the nominal counterparts and the completed system can be handed over.

The host institution is left to reabsorb their own staff from the special project (who have become used to the benefits that go with working with international firms) and of course to ensure the operation and maintenance of the system so generously provided.

There may alternatively be an NGO trying to become involved, often bypassing the official sectoral institution altogether, or working through the Ministry of Health or the Ministry of Community Development - trying to

establish effective community based organisations (CBO's), often very effectively, but finding it difficult to replicate the approach nationwide.

At the two extremes, the system appears to be working relatively well - that is the brand new urban motorway or water treatment and distribution system and the small scale community based rural approach (though long term sustainability may still be in doubt). However, there appears to be a large 'grey' area in the middle of the spectrum where institutions are trying their best with limited resources but often have a declining quality of service. This is the area which is not large enough to attract significant bilateral and multilateral funds and capable institutional support but which has appeared to be outside the scope of community participation schemes.

2.1.1 Key problems

The key problems in the urban water institutions discussed in this thesis are said to be (Coopers & Lybrand, undated):

- Government utilities/departments often LACK DIRECTION

- Planning framework and procedures are often WEAK

- Financial and physical objectives are POORLY DEFINED

- Control over project design standards and execution is LACKING

- Operating and maintenance procedures NOT FORMALISED

- Division of responsibility between management and operating units UNCLEAR

- Management information is POOR

- Performance standards are not DEFINED

- Bureaucratic controls INHIBIT effective management.

Cullivan et al (1986) point out that "Institutional problems are qualitatively different from specific technical or procedural problems. They affect broad areas of operational performance and therefore are 'cross-cutting'. Often deficiencies in an easily identifiable area of institutional output are identified as the primary problem when in reality the deficiency identified is merely a symptom of the larger problem."

Institutional Development (where do we want to be?) seeks to encourage the development of appropriate organisation structures within as well as linkages between the various groups to the ultimate benefit of the consumer. This can best be done by analysing or assessing the present situation in a systematic manner (where are we now?). The use of objective verifiable indicators to measure behaviour or procedures related to subjective performance descriptions within a framework of an activity and responsibility matrix are vital tools of analysis.

From the analysis comes an indication of the strengths and weaknesses (and opportunities and threats?) of the institution. With formal organisations it is then possible to design and implement a programme of improvement and strengthening (how are we going to get there?).

2.2 Institutional analysis

Some methodology is required to understand the existing situation in an institution. There are a number of alternatives such as the McKinsey's 7'S' shown as a diagram below.

Structure ——————— Strategy

Systems ——————— SHARED —————— Style

VALUES

Skills ——————————— Staff
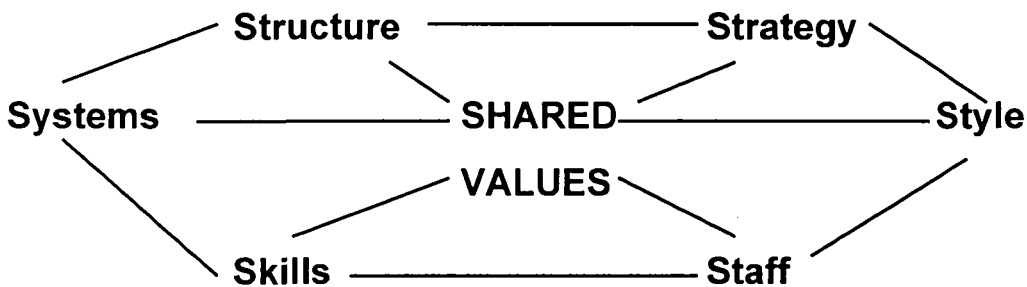
Figure 2.1 Institutional Factors (McKinsey)

Other techniques include the Johnson and Scholes Framework (1993) and the Michael Porter value chain analysis which considers a firm's infrastructure, human resources management, technology development, procurement, logistics, operations, marketing and sales and service. These alternatives are clearly aimed at the needs of businesses in a competitive environment. Authors in the public service sector consider categories of: Public policy-making, Leadership, General internal administration (management - the organization of work), Bureaucratic hygiene (accounting, auditing, procurement, contract compliance and personnel systems), (Leonard, 1987) or alternatively: Operations, Marketing, Administrative support, Personnel (EDI, 1985).

2.2.1 The competitive arena

The focus of this study is on the water supply function as a strategic business unit. In public sector organisations Johnson and Scholes (1993) describe how an SBU might be a part of the organisation or service for which there is a distinct client group. However, because of the low regard in which the sanitation functions of most water utilities are held it must be acknowledged that SBU's described here verge on the corporate level. As described above, the water function can be seen as a social service and as a deliverer of convenience. The SBU considered in this study is the basic needs aspect of water supply.

It also has to be acknowledged that it is rather forcing Porter's ideas to fit a monopolistic supplier with only indirect competitors into the model of a competitive arena. However, several other authors have applied 'strategic planning' ideas to the public sector, most noticeably in America, though 'public and third sector organisations face problems quite different from those faced by firms and that therefore they require their own distinctive brand of strategic planning' (Backoff and Nutt, 1988, p120). They suggest that considerably more attention has to be paid to the need for political awareness rather than competitor awareness. For the real competition for resources and perceptions of success come in the political arena rather than alternative suppliers. Water utilities tend to be

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monopolistic because the capital cost of water treatment and distribution makes it uneconomic to have competition.

Johnson and Scholes (1993, p28) also comment that many of the Porter concepts are just as important in public sector. However, 'their role in providing public services is problematic from a strategic point of view because they may not be able to specialise, and may not be able to generate surpluses from their services to invest in development. As is frequently pointed out by government, press and the users alike, this combination of lack of market focus, lack of involvement and a very broad role can lead to a mediocrity of service.'

In a low-income country such as Uganda there is competition amongst the poorer income groups in that private vendors distribute water at anything up to ten times the official price to the informal housing areas. It is not at all clear whether the national supplier perceives this to be competition. If they could supply water through pipes at their subsidised prices any consumer would instantly change. In some of the peri-urban areas handdug wells and handpumps and even springs form alternative supplies of water.

The real competitive arena in which water utilities operate therefore is the 'basic needs' sector by which people live. Food, clothing, shelter, schooling and medical health care in addition to water are the critical elements of any household budget which have to be found. A more restricted competitive arena may be seen as that applying to health which would include medical health services, water supply, sanitation, drainage and solid waste disposal.

Because of the fixed and extremely limited incomes this can be perceived as a competitive arena because an increase in market share (i.e. through a price rise) by one of the other basic needs SBU's will automatically lead to a decrease in the market share of at least one other SBU in the arena (Lawrence, 1993).

Notwithstanding the value of Porter et al, the approach taken in this thesis follows and adds to the WASH approach (Cullivan et al, 1986) which has been specifically aimed at the needs of the water supply and sanitation sector.

2.2.2 Activity and Responsibility Matrix

Initially it is necessary to determine which institution is doing what and which institution is actually responsible for doing what. A simple Activity and responsibility matrix shows at a glance what activities are being covered, which have dual responsibility and which are missing out key players.

Activity	Legislation	Water Resources	Allocation of Finance	Tariffs	Project Planning and Design	Project Implementation	Operation and Maintenance	Water Quality	Training	Community Involvement
Responsibility										
Central Government										
State Government										

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Water Supply and Sewerage Board										
Municipal Corporation										
Health Department										
Development Department										
Pollution Control Board										
Donors/Banks										
Private Institutions										
Consumers										

Responsibility ██████   Involvement ▨▨▨▨   Interest ▭▭▭

Table 2.1 Activity and responsibility matrix - example for water supply

2.2.3 Objective (Verifiable) Performance Indicators

Having determined who is doing what (not always as straightforward as it might appear) the output measures of any significant institution are assessed to determine whether a more detailed analysis is required. These output measures or performance indicators (or objective verifiable indicators) are also invaluable for development, control and evaluation.

Shearer (1988) points 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. In some areas where absolute values (ie customer complaints) are difficult to determine, an improving trend is often the best which can be achieved."

The most common performance indicators for water supply institutions relate to production, delivery, consumption, efficiency, effectiveness and finance. The list below attempts to give a comprehensive view of a water and sanitation organisation, taking into account special factors such as source difficulties or consumer affordability. Clearly no single indicator can tell the whole story but if one attempts to tell the whole story the list becomes so exhaustive that it is not possible to make any sense of it. The list developed below attempts a compromise. The financial indicators are described in a subsequent section.

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			Most Recent Year	Average Trend	Industry Average
Production	Quantity of water produced	Volume treated (mld)			
	Quality of water produced	Percentage samples acceptable			98%
	Transmission factor	Source distance X Elevation /100,000			
	Production factor	Energy & Chemicals costs as %age Operating Costs			
Delivery	Target population				
	Connections				
	Service coverage	Percentage of population served			95%
	Service delivery	Percentage connections/standposts			
	Service timing	Average supply hours per day at acceptable pressure			24 hours
	Population density	Population/service area			
Efficiency	Unaccounted for water	Percentage water not measured in consumption			20%
	Maintenance	Frequency of bursts per ? km pipes			
Consumption	Quantity of water consumed	Served population/water consumed			100lpcd
	Metered consumption	Percentage of working consumption meters			varies
	Quality of water delivered	Percentage samples acceptable			98%
Sanitation	Service Coverage	Percentage population connected to sewers			
		Percentage population with acceptable on-site sanitation			
	Maintenance	Frequency of failure per ? km sewer			
	Treatment	Percentage waste water treated to 20:30			100%
Effectiveness	Extent of water related diseases	Diarrheal morbidity/CholeraTyphoid cases permillionper year			
	Customer satisfaction surveys	Proportion customers questioned expressing satisfaction with service			
Productivity	Employees				
	Staffing levels	Connections per employee			200 (EDI 1985)
		Population served per employee			1000(EDI1985)
		Staffing costs as %age Operating costs			

Table 2.2 Performance Indicators for Water Utilities

An approach from the Local Water Utilities Administration in the Philippines takes this even further with details of 26 indicators (some of which may vary according to population size) divided into four categories of importance. Category 1 is weighted 1.2 times higher than category 2 which is rated 1.2 times higher than category 3 which is rated 1.2 times category 4. From these (arbitrary ?) weightings an overall score for the institutions is calculated (Mendoza, 1989).

2.2.4 Subjective institutional performance descriptions

It is likely that the objective performance indicators will highlight areas of weakness but these may well be the symptoms of problems rather than the causes. It is also extremely likely that it will be impossible to determine any more than a handful of these objective performance indicators as often very little management information is recorded. An analysis of the 'softer' elements of management is therefore required which will be difficult to measure in numerical terms and is unlikely to be particularly objective. The "WASH" approach (Cullivan et al, 1986) considers 'performance categories' for institutional analysis, though these could be described as individual perceptions or subjective descriptions of performance under certain categories, described by the author as subjective institutional performance descriptions.

The main categories are:

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┌─────────────────────────────────────────────────────────────┐
│                      Organisational                         │
│                                                             │
│                       Autonomy                              │
│                                                             │
│        Legislative                          Management &    │
│                                                             │
│        Framework                            Administration  │
│                                                             │
│                                                             │
│                                                             │
│   Technical Capability                      Human Resources │
│                                                             │
│                        Leadership           Development     │
│                                                             │
│                                                             │
│        Commercial                      Consumer Orientation │
│                                                             │
│        Orientation                                          │
│                                                             │
│                  Organisational Culture                     │
│                                                             │
└─────────────────────────────────────────────────────────────┘
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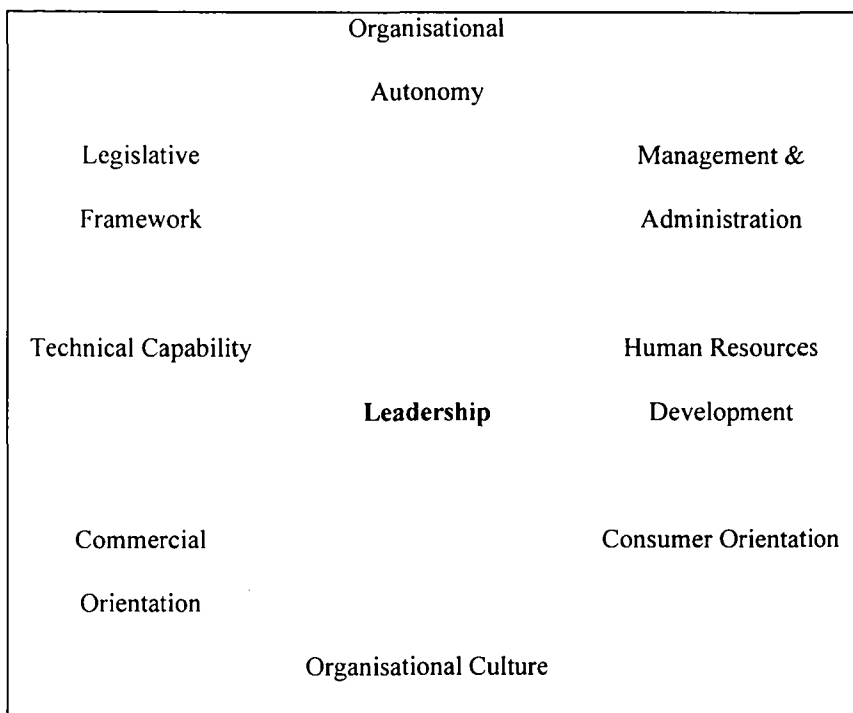
Figure 2.2 Subjective Performance Descriptions

Each category is expanded or explained by the headings or descriptions in Appendix 1.

To measure effectiveness in each of these performance categories (in addition to any relevant performance indicators) there are four primary data-gathering techniques:

- interviewing (giving rise to two thirds of the usable information collected according to Cullivan)

- one page surveys

- reading institutional documents

- observation

These are not scientific or objective measurements, even where an attempt is made to assign a numerical score, they are the perceptions of the information gatherer. Therefore they are open to debate about the categories which make up a 'successful' water and sanitation institution, the headings to be considered under each category and the score that any particular observer might give to that heading.

2.2.5 Organisational culture & corruption

The importance of each of these performance description headings could be described in detail (further information is given in Appendix 1) but because of space constraints only one idea, of vital relevance, but not always realised from the UK perspective is investigated, that is the aspect of corruption within the organisation culture.

"All societies have corrupt features in the sense that some public money is illicitly diverted for private gain. The particular circumstances of developing countries - rapid social and economic change, strong kinship ties, new

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institutions, overlapping and sometimes conflicting views about proper public behaviour - may be peculiarly conducive to corruption." (World Bank, 1988)

Corruption seriously undermines the effectiveness of government because :

'over time corruption tends to corrode popular confidence in public institutions. This makes it harder to raise the standards of public service, deflects public debate away from economic performance towards this single issue and in extreme cases prompts violent changes in government;

public officials will do nothing without bribes and many people are unproductively employed in securing their favours or buying their silence;

corruption tends to favour those with economic or institutional power;

some corruption is on a scale that it has major economic consequences: it may stimulate the illegal export of capital or result in large projects being awarded to contractors according to the size of their bribes rather than the quality of their performance' (ibid).

Institutional analysis must consider the issue of corruption and consider ways of minimising both the corruption and its effects. Eradication of corruption as a feature of public life depends upon the gradual creation of a political and public climate favouring impartial institutions, as well as on specific actions by government. Anticorruption drives tend to be ineffective and short-lived. More effective is to avoid administratively created scarcities by reducing controls on international trade and payments; and by improving the incentives and accountability of officials in the areas where regulations or administrative discretion remain. Corruption is usually better fought by a combination of fewer, better-paid officials controlling only what really needs to be (and can effectively be) controlled."(World Bank, 1988)

Corruption scandals in recent years have led to changes at the highest levels of the governments of Holland, West Germany, Great Britain, Israel, Japan and the United States. In Massachusetts, a recent enquiry revealed that 76 per cent of a sample of public buildings manifested at least one 'structural defect' that could not have occurred without corrupt deals by building inspectors. . . . however .. corrupt activities are more widespread - and more systematically embedded - in many governments of the developing world than in the West. (Klitgaard, 1988:10)

Webster's Dictionary Definition :'Inducement (as of a public official) by means of improper considerations (as bribery) to commit a violation of duty.' Behaviour which deviates from the formal duties of a public role because of private-regarding (personal, close family, private clique) pecuniary or status gains; or violates rules against the exercise of certain types of private regarding behaviour. Klitgaard, 1988:23

Economists may say that 'corruption may introduce an element of competition into what is otherwise a comfortably monopolistic industry' (Leff in Klitgaard). Political scientists may say that corruption can be a mechanism of political participation, particularly by ethnic minorities and foreign corporations. "In most underdeveloped countries, interest groups are weak and political parties rarely permit the participation of elements outside the contending cliques. Consequently, graft may be the only institution allowing other interests to achieve articulation and representation in the political process."(Leff in Ekpo in Klitgaard, 1988:30)

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Managers may say that if bureaucratic rules are constraining, the organisation may sometimes benefit by the employee's corrupt circumvention of the rules and a limited amount of theft and embezzlement may be tacitly allowed by top management because such illicit sources of income may in the long run substitute for higher wages.

BUT others argue that "Only when corruption circumvents already existing 'distortions' can it be economically, politically or organisationally useful" (Klitgaard, 1988:35)

A study in Ghana showed that corruption 'had intensified ethnic conflict, ruined the efficiency of municipal government and federal agencies, crippled merit systems of hiring and promotion, generated 'an atmosphere of distrust which pervades all levels of administration' and undermined the philosophy of African socialism.' (Werlin H, p253 in Bureaucratic Corruption, ed Ekpo, p272)

Graft and corruption has strongly affected development efforts negatively . . corruption leads to the favouring of inefficient producers, the unfair and inequitable distribution of public resources, and the leakage of revenue from government coffers to private hands. Less directly, but no less perniciously, corruption leads to loss of confidence in the government (Carino L V and de Leon J H, in Klitgaard, 1988).

"Illicit behaviour flourishes when agents have monopoly power over clients, when agents have great discretion and when accountability of agents to the principal is weak." Klitgaard (1988:75) goes on to propose a formula to describe the roots of corruption:

CORRUPTION=MONOPOPLY+DISCRETION-ACCOUNTABILITY

The costs of corruption are believed to be: (Klitgaard, 1988:46)

Efficiency	Wastes resources
	Creates 'public bads' (negative externalities)
	Distorts policy
Distribution	Reallocates resources to the rich and powerful, those with military or police power, or those with monopoly power
Incentives	Distorts energies of officials and citizens towards the socially unproductive seeking of corrupt 'rents'
	Creates risks, induces unproductive preventive measures, distorts investments away from areas with high corruption
Politics	Breeds popular alienation and cynicism
	Creates regime instability

But it is the reality of corruption which many managers have to face every day of their working lives which affects the organisation and the effectiveness of their service to the public. Recent conversations the author has had relevant to India suggest that 30 per cent is the accepted bribe for water projects. A reported conversation is given below to enhance the flavour of the problem.

How does the corruption process actually take place? "*Well the first and most obvious is the straight percentage deal. You know the idea. I may be a minister or whatever but I have a big family, lots of responsibility, that kind of thing.*

What kind of percentage? Ten? Twelve and a half?

Goodness me no. This is Africa. At least 20, maybe even 25. I've even heard of 50 per cent. Goodness, if it were only ten per cent we wouldn't have such problems. It would be cheaper to give everybody a straight ten per cent and forget about corruption.

But how can you give such huge commissions?

You can't. It's as simple as that. But they do.

How is it paid?

Into a bank; usually Pairs, sometimes New York. Not so often Switzerland. It's too obvious. Sometimes cash.

Fifty per cent in cash?

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I've seen trunks of cash dragged across hotel lobbies in the South of France, in Monte Carlo, even in the London Hilton. I was in the lobby when I saw some officials from the embassy dragging this big trunk across the floor. They wouldn't let the porters touch it. I asked them, What's in it? A dead body? They said it was the commission of some deal a minister had just completed.

They knew all about it? They weren't trying to keep it quiet?

They're quite open about it. In some countries they throw parties to celebrate their latest deal.

So if you don't want cash, how else can you take it?

Buy a house in Europe, that's a favourite. But that's old hat now, the big operators have all the houses they want. Now they are trying to set up their own companies so they can get a commission and part of the sub-contract work.

How?

Well, in the old days if a new building was to be put up they would take a commission and that would be that. Today they want a commission and they would want their architect to design it and their construction company to build it. " (Biddlecombe, 1993:164)

2.3 Financial Analysis

For an organisation which is providing a service to consumers a vital component of any analysis must be an understanding of the financial position. To begin with it is necessary to understand the stated financial objective. Is it to break-even, to generate some sort of profit or 'surplus', to achieve a specified Return on Fixed Assets? Or is the given task to meet the basic needs of the poorest consumers in a programme designed to promote social equity?

2.3.1 Financial objectives and social equity

There are different approaches to paying for water and sanitation. The most oft-quoted statement heard in rich and poor countries alike is that 'Water is a free gift for all in the same way as air is free and nobody should have to pay for it.' Which means that government has to pay in some manner and all consumers hope that they won't be the ones who end up paying the necessary taxation. However, in developing countries the tax to GDP ratios are in the 10-20 percent range, about half the levels of the industrial countries whereas expenditure levels are in the 20-30 percent range, much closer to the levels of industrial countries.(World Bank, 1991)

Alternatively economists are tempted to say that 'If the people want clean water delivered to a convenient location the people have to pay for it themselves.' The compromise usually declared is that the cost of providing clean water for the benefit of poor people should be subsidised by the richer people and the government - but they should pay something towards the cost in order to understand the value of clean water.

"An integral and essential part of an effective strategy is to mobilise the community's own resources, both financial and non-financial. This is necessary to assure that the community is truly in control, that systems remain operating, and that the limited funds available to governments are directed to wherever they are needed most.

A goal of every improvement effort should be to bring closer the day when the community can cover all of the costs of its water service or other infrastructural improvement from its own resources. Many communities could and should contribute more now to meeting their costs than they could have been expected to in the past. The primary role of government agencies and donors must change from that of direct providers and financiers of services to that of facilitators" (Briscoe, 1988).

2.3.2 Ability to Pay and Willingness to Pay

In considering financial practice and potential it is necessary to ask what these costs mean to the people who have to use the services and ultimately will have to pay for them. There are two ideas to consider - Ability to Pay and Willingness to Pay

Ability to pay is judged by estimating average incomes in an area and then taking a percentage of income as the assumed ability to pay for that service. For example, a figure of 3 per cent of household income per year has often been taken as the ability to pay for water and another 3 per cent per year for sanitation. Therefore it is necessary to design any service within these 'affordability' limits. However, several reviews have shown that this simple model of behavioural response is usually incorrect. For in many communities the level of service provided is too low. The community does not value the improved service when compared with existing facilities and therefore will not pay for it even though it can apparently afford it. Alternatively, the level of service is too high, the community wants the service but cannot afford to pay for it unless there is significant subsidy.

Therefore it is necessary to consider willingness to pay. Willingness to pay describes the level or standard of service that consumers want - and therefore it is appropriate for designers to attempt to provide infrastructure which the people desire and are willing to pay for.

Various factors are believed to influence willingness to pay. The most significant appears to be the perceived convenience and amenity of the proposed scheme. This means how convenient it is for consumers to use the service at its point of delivery. This convenience is closely related to the level of service and the existence of any alternatives. If the level of service is perceived as being too low or if very cheap alternatives are close at hand then consumers will be less willing to pay for the new service. Also the socio-economic status of the household or community will play an important role, whether the family size is large or small, what the average income level of each household is. If the proposed service can be put to different uses and if it might bring economic benefits to any small scale enterprises then again willingness to pay might improve. If a significant amount of time can be saved by the new service, for example having a water point close to the house rather than several hundred metres away, then willingness to pay increases but only in proportion to the value placed on women's time (as they are likely to do the collecting) and the extent to which they are involved in making the decision. There are also the perceived health benefits of public health improvements but these do not always increase willingness to pay in the early stages when consumers remain to be convinced of the benefits.

With so many factors involved it is clearly difficult to determine willingness to pay. There are two main approaches, the direct method (by asking people) and the indirect method (by attempting to measure the above benefits). A direct method using the 'contingent valuation' approach is currently favoured as the best way, where people are asked their preferences in a 'bidding game'. (Whittington, 1987 & Briscoe and Ferranti, 1988)

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2.3.3 Financial Statements

Having determined potential revenue it is then possible to turn to the conventional financial statements of the organisation - if any exist. Can the institution pay its way or has it over-borrowed? Can lenders safely lend to it? Can suppliers safely supply on credit? Is it totally dependent upon grants from central or state government? Is it using its resources in the most efficient manner?

Many of these questions can be answered by looking at the information contained in the Financial Statements which provide a standard structure for organising and comparing financial data about an institution. This can be used to compare the financial status of different institutions in the same sector or the financial status of one institution over a period of time.

Although widely used in commercial life detailed financial statements which account for all resources used are relatively new to public utilities.

The information in the Financial Statements can then be interpreted in the normal way by relating figures to other figures reported in the same accounts, to figures in previous years accounts or by references to the accounts of other similar institutions. The particular amount disclosed for a particular item has little meaning in itself - only in relationship to other amounts as determined by ratio analysis does it become meaningful. From the determination of financial ratios or relationships over a period of years, trends can be seen which may give an indication of future events.

Managers should be interested in controlling the financial affairs of the institution. The financial statements report figures which can be related to corresponding budgeted figures or the prior year reported figures and the presence or absence of acceptable statements is another indicator of the capability of an institution. It is reported for example (personal communication, 1993) that government parastatals similar to water utilities in Nigeria, that is Nigerian Airways and Nigerian Railways have not had their accounts audited for at least twenty years.

2.3.4 Ratio Analysis

Over time, managers and analysts have judged certain relationships and ratios between items on financial statements to have a particular significance as indicators of financial health and good management practices. These ratios are calculated directly from specific items on financial statements. The ratios of most relevance to water utilities are:

Profitability ratios - focus on the profit realised by the institution in relation to the revenue generated or to the resources employed. 'Profit' is taken before tax and interest. Assets are normally taken as the average between opening and closing figures.

Return on Fixed Assets = Profit (Net Income)/ Net Fixed Assets   (average fixed assets over year)

Return on Capital Employed (ROCE)= Profit/Capital Employed   (equity and long term loans)

Liquidity ratios - indicators of the institution's ability to discharge current obligations in times of financial difficulty.

Current ratio = Current assets/Current liabilities

Quick ratio = Cash & Accounts Receivable/Current Liabilities

Creditworthiness ratios - demonstrates the sources and methods of financing used to acquire assets, giving an indication of the safety of future lending

Debt equity ratio = Long-term debt/Long-term debt + Equity   (gearing)

Debt Service ratio = Net Internal Cash Generation (net income plus depreciation)/Total Debt Service

Self-financing ratio = (Net Internal Cash Generation - Debt Service)/Capital Expenditure

Efficiency ratios - deal primarily with the way in which revenue is collected and used

Days receivable ratio = Accounts receivable x 365/Annual operating revenue

Operating ratio = Operating expenses/Operating income (ie arising out of normal operations)

Clearly one year's figures are insufficient; ideally trends are obtained from a comparison of at least five years. When comparing with other institutions, it is necessary to ensure that the bases upon which the ratios have been calculated are similar. Valid comparisons can only be made with firms of the same size and activity. Ratios do not stand in isolation - no single ratio can give the whole answer as all ratios are interrelated. Ratios relate to a particular point in time - seasonal factors can distort them and these should be known. Figures in financial statements and the subsequent rations can be 'window dressed', that is made to look better than they really are- for example at the simplest level, loans can be repaid temporarily and then renegotiated after the production of the financial statements (Griffiths, 1986).

For water utilities desirable ratios are suggested by some authors, for example Jones (1985) proposes that the operating ratio should be 60 per cent, a debt service ratio of 1.5, a current ratio of 2 (though commercial companies would say between 1 and 2) and a quick ratio of 1. However the quick ratio is not particularly relevant because the item for inventory or stocks does not refer to finished goods waiting to be sold but to items of pipework and valves. The debt-equity ratio can be considerably higher than for a normal business because it has been assumed (until the present) that the government owns and backs the utility. Some utilities therefore finance their capital investment entirely by debt. The ratios generally acceptable now are in the region of 60 per cent (Johnson, 1990) to 75 per cent mentioned by UK's Ofwat. The key ratio of Rate of Return on Fixed Assets has to reflect that even commercially oriented water utilities are generally presumed to be service oriented rather than profit oriented. The UK privatised utilities are an exception to this. World Bank commonly requires a ROFA of between 6-8 per cent which reflects the cost of borrowing and therefore ensures the potential for interest repayment but does not amount to 'profiteering'.

The financial information judged to give the best overview of water utilities is summarised in Table 2.4

			Most Recent Year	Trend	Industry Average
Marketing	Socio-economic	Average household income - Highest quartile			
		Upper middle quartile			
		Lower middle quartile			
		Lowest quartile			
	Accessibility	Connection fee/Lowest quartile household income			
	Affordability	Lifeline tariff/Lowest quartile household income			
	International affordability	Weighted average tariff as percentage GNP pc			
	Willingness to Pay	Average payment to private vendors			
Financial sustainability	Average domestic tariff				
	Average commercial/industrial tariff				
	Water supply sustainability	Costs [op cost+ dep+ RoFA/ consumption]/Weighted average tariff			<1
	Sewerage sustainability	Sewerage charge as percentage of average water charge			120%
Profitability	Operating ratio	Operating expenses/Operating income			60%
	Return on Fixed Assets	Profit (net income)/ Average Net Fixed Assets			6%-8%
Liquidity	Current ratio	Current assets/Current liabilities			1.5
	'Quick ratio'	Cash/Current Liabilities			1
Creditworthiness	Debt equity ratio	Long-term debt/Equity (gearing)			300%
	Debt Service ratio	Net Internal Cash Generation/Total Debt Service			>1
Financial Efficiency	Days receivable ratio	Accounts receivable/Daily operating revenue			45 days
	Bill collection efficiency	Percentage of bills collected			95%

Table 2.4 Financial Indicators

2.4 Chapter conclusion

These tools of analysis have been used to investigate the status of three water utilities, two in India, Hyderabad and Nagpur and the main focus of this study, the National Water and Sewerage Corporation of Uganda. The results of the analysis and given in the following two chapters.

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Chapter Three

Water utility management in India - Hyderabad and Nagpur

Chapter Three uses the tools of institutional analysis described in the previous chapter to investigate the existing position of the management of water and sanitation provision in two Indian cities. This is designed to give a useful comparison or benchmarking for the main focus of this study in Uganda.

3.1 Hyderabad - Andhra Pradesh, India

Hyderabad city is the capital of the state of Andhra Pradesh in India. The twin cities of Hyderabad and Secunderabad extend over an area of about 169 sq km. In 1981 (1981 census) the population was about 2,100,000. In 1991 the population of greater Hyderabad was declared to be 4,273,498, this figure taken from the 1991 census. The rise in population in the State as a whole was estimated to be 23.82% during the decade whereas in urban areas in the state the rise was 42.26%. The population of the urban area of Hyderabad in 1991 was estimated at 3,300,000 with 2,800,000 in the Municipal Corporation of Hyderabad area of 169 sq km. From the information collected it was uncertain whether the 'greater Hyderabad area' and the 'urban area' were the same areas or different.

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
90	184	110	98	10	13	66	30	68	24	11	14

Table 3.1 Representative Health Information :Cholera cases (Source: HMWSSB water works)

3.1.1 Institutional analysis - performance indicators and descriptions
The Hyderabad Metropolitan Water Supply and Sewerage Board was constituted on 1st November 1989 under the provisions of Hyderabad Metropolitan Water Supply and Sewerage Act 1989. The Board is responsible for the planning, implementation, operation and maintenance of water supply and sewerage for the twin cities of Hyderabad and Secunderabad.

There are currently serious problems due to lack of water resources; the supply is due to be increased from 270 mld to 400 mld by mid 1991. The rapid industrial developments have caused waste disposal and pollution problems.

Figure 3.1 Organisational Chart for Hyderabad

Table 3.2 Activity and Responsibility Matrix for Hyderabad

Table 3.2 Activity and Responsibility Matrix for Hyderabad

3.1.3 Quantitative Assessment

From the information detailed in Appendix II a summary of the physical perfomance indicators for Hyderabad has been prepared.

			Most recent data
Water Production	Quantity of water produced	Volume treated (mld)	270mld
	Quality of water produced	Percentage samples acceptable	
	Transmission factor	Source distance X Elevation /100,000	
	Production factor	Energy & Chemicals costs as %age Operating Costs	35.4%
Water Delivery	Target population		2,800,000
	Connections		190,000
	Service coverage	Percentage of population served	90%
	Service delivery	Percentage connections/standposts	55%
	Service timing	Average supply hours per day at acceptable pressure	1hr
	Population density	Population/service area	165.7/ha
Efficiency of water supply	Unaccounted for water	Percentage water not measured in consumption	40%
	Maintenance	Frequency of bursts per ? km pipes	
Water Consumption	Quantity of water consumed	Served population/water consumed	45lpcd
	Metered consumption	Percentage of working consumption meters	
	Quality of water delivered	Percentage samples acceptable	
Sanitation	Service Coverage	Percentage population connected to sewers	
		Percentage population with acceptable on-site sanitation	
	Maintenance	Frequency of failure per ? km sewer	
	Treatment	Percentage waste water treated to 20:30	0%
Effectiveness	Extent of water related diseases	Cholera cases permillionper year	4.2
	Customer satisfaction surveys	Proportion customers questioned expressing satisfaction with service	
Productivity	Employees		3,500
	Staffing levels	Connections per employee	55
		Population served per employee	720
		Staffing costs as %age Operating costs	51.7%

Table 3.3 Performance Indicators for Hyderabad ((Source: author's analysis of data, see Appendix II)

This information shows a low per capita delivery with high unaccounted for water, compounded by high production costs. Staffing levels are average but sewage treatment is unacceptably low. However, a new treatment works was being constructed at the time of this survey.

3.1.4 Qualitative Assessment - Performance Categories

In addition to collection of the objective performance indicators the organisation was assessed for more subjective performance descriptions.

Organisational Autonomy

The organisation does not have well defined policy regarding autonomy. Their operating and capital funds are controlled by the Government as are the tariff and service charges which are not even sufficient to meet the operational expenditure. Salaries and other benefits are decided as per Government Policy. Autonomy is therefore deemed to be low.

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Leadership

Clear performance standards are not fixed by management. There is a communication gap between different levels of organisation. The Managing Director is an IAS appointee and therefore likely to be transferred on after a limited period of time. Leadership is rated as medium because there is some discernible progress in the organisation notwithstanding these criticisms.

Management and Administration

The staff lacks well defined responsibilities and performance standards. The employees are non-accountable, there is a lack of communication. No performance standards are fixed to evaluate the performance of individual staff. Hence Management and Administration are deemed to be ineffective.

Commercial Orientation

The Board was very recently formed and it is only now beginning to define its policy on its approach to a commercial style of operation which has not been of any concern previously.

Consumer Orientation

Staff at most levels do not demonstrate any orientation towards the needs of consumers. The level of complaints from consumers is relatively high (one consumer told confidently that the performance based on regularity, efficiency, quality and quantity sums up to "very bad" simple two words). No effective measures are taken to educate consumers about institutional services and requirements. However, there is now the proposal to set up area offices of the Board in an attempt to make it more responsive to the needs of its customers. To gauge the beliefs of the consumers it is useful to note the comments in the local newspapers which tend to reflect general opinions.

> **"Water Connection"**
> "A few days ago a new water line was laid in Chaderghat area and the existing water connection was disconnected and some lines were also damaged without informing the residents of the area. Later we were given a connection from the new line but the damaged ones were not repaired. The new connection is leaking and water is going waste and we are not getting sufficient water. Will the water works department take steps and ensure adequate water supply at the earliest?" Narayan Das, Chaderghat, Hyderabad
> (Indian Express, Hyderabad Wednesday, April 3, 1991:7)

Technical Capability

The Board is technically well versed and is staffed with qualified persons who have all the necessary skills. Similar to many utilities in India, the engineers are excellent as engineers, but perhaps not as managers.

Human Resources Development

The employees are getting same benefits as given to other departments of Government which needs to be revised to meet the new requirements of the Board. There is little in the way of formal training

programmes and staff are promoted according to age and seniority rather than performance so there is no sense of any planned human resources development.

Organisation Culture

As the Board was only formed recently, employees are still working on the same lines as other Government staff. The staff have not developed an organisation culture suitable for an autonomous organisation.

3.1.5 Financial Analysis

In its present organisational form the Board is only one year old and the balance sheet is yet to be prepared. The trend of the performance of the Board cannot therefore be predicted on the basis of analysis ratios as worked out from the limited financial statements. However, the Financial Director, in interview, was committed to a commercialised approach to accounting for the Board.

The existing tariff was revised in 1987 for domestic supplies and in 1986 for other users. The Board has prepared revised proposals for presentation to the Government for approval. The tariff is sufficient to meet the operating expenses but does not account for depreciation, interest and profits. The tariff is a block tariff which takes into account the needs of low-income consumers but the average tariff is too low.

The best financial information available is detailed in Appendix II and summarised below:

Marketing	Socio-economic	Average household income - Highest quartile	17%>$1080
		Upper middle quartile	53% $684-$1080
		Lower middle quartile	30% <$684
		Lowest quartile	
	Accessibility	Connection fee/Lowest quartile household income	
	Affordability	Lifeline tariff/Lowest quartile household income	
	International affordability	Weighted average tariff as percentage GNP pc	
	Willingness to Pay	Average payment to private vendors	
Financial sustainability	Average domestic tariff		$0.05/
	Average commercial/industrial tariff		$0.09
	Water supply sustainability	Costs [op cost+ dep+ RoFA/ consumption]/Weighted average tariff	
	Sewerage sustainability	Sewerage charge as percentage of average water charge	20%
Profitability	Operating ratio	Operating expenses/Operating income	96.4%
	Return on Fixed Assets	Profit (net income)/ Average Net Fixed Assets	0.16%
Liquidity	Current ratio	Current assets/Current liabilities	na
	'Quick ratio'	Cash/Current Liabilities	na
Creditworthiness	Debt equity ratio	Long-term debt/Equity (gearing)	na
	Debt Service ratio	Net Internal Cash Generation/Total Debt Service	na
Financial Efficiency	Days receivable ratio	Accounts receivable/Daily operating revenue	286days
	Bill collection efficiency	Percentage of bills collected	

Table 3.4 Financial Indicators for Hyderabad(Source: author's analysis of data, see Appendix II)

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Although only limited financial information was available it appears that the tariffs are too low with a poor bill collection efficiency.

3.1.6 Hyderabad Summary

From the above information it would appear that the Hyderabad Metropolitan Water Supply and Sewerage Board is a fairly average organisation, failing to meet the needs of its customers for water and failing to collect any reasonable tariffs. However, from the conversations with the Managing Director and the newly appointed Finance Director it is clear that Senior Management is beginning to recognise the organisational shortcomings and is making efforts to become more commercially oriented. Evidence of this is the introduction of accounting for fixed assets and the setting up of area offices to make the organisation more responsive to the concerns of customers.

3.2 Nagpur - Maharashtra, India

Nagpur City is almost at the geographical centre of India and situated at the crossing of the North South and East West Highways, Railways and Airways of India. The area of Nagpur Municipal Corporation is 218 km2 and the city area is 125.6 km2, the remaining area is designated as green belt but is under increasing pressure of unauthorised development.

In 1971 the population was reported as 866,076 which by 1981 had grown to 1,219,461 of which internal growth was 194,235 and migration 159,150. Nagpur has a 1991 census population of 1,622,000. It is spread over 217.56 square kilometres, divided into 98 electoral wards. Of this approximately 300,000 people live in 34 'villages' which are included in the NMC area. One of characteristics of Nagpur is the low population density. City development has been 'horizontal' and unauthorised construction is widespread, many with the full knowledge of the Corporation. The total number of dwelling units is reported as 268,837 with 1,434 'slums' containing 77,348 households and a slum population of 410,843. Improvement work has been completed in 143 slums. In addition there are 1,500 unauthorised developments (572 'officially') representing many plots on each which can't be taxed as they are unauthorised and can't be bulldozed as they are too many and which are now being refused power supply and water supply to apply some sort of pressure , that is if they are not already connected following pressure from politicians.

In the absence of more accurate data, estimated household income is assumed to be one third earning up to Rs 8,500 ($285) pa, one third at Rs 18,000 ($600) and one third at Rs 60,000 ($2,000) per annum.

3.2.1 Organisational arrangements

Nagpur Municipal Corporation is the organisation responsible for supply of water to Nagpur. By and large the organisational set-up appears to be systematic but there is confusion at middle and basic management levels. There is only one Executive Engineer in charge of the water works to supply 256 mld of water to 1.6 million people spread over a large area. It is very difficult for one Executive Engineer to satisfactorily maintain the water supply. Public complaints are by and large communicated not through complaints registers but through ward councillors who each want their own complaint to be given top priority.

Figure 3.2 Organisational Chart for Nagpur

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Table 3.5 Activity and Responsibility Matrix for Nagpur

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3.2.3 Quantitative Assessment - Performance Indicators

There are certain indicators from which the performance of an organisation can be suitably judged. In case of water supply they could be the level of complaints received, reliability of system, quantity of water supplied, quality of water supplied, optimum utilisation of sources, functioning of various units and water meters, inventory control and revenue collection efficiency.

The reliability of the water supply system is not adequate. In some areas it is daily, in some areas alternate days. In summer when the demand increases, additional borewells are dug, distribution mains laid and tankers used. Despite these measures, there is irregular water supply in those areas which is evident from the frequent reporting of water complaints in newspapers.

			Most Recent Year
Water Production	Quantity of water produced	Volume treated (mld)	256mld
	Quality of water produced	Percentage samples acceptable	
	Transmission factor	Source distance X Elevation /100,000	
	Production factor	Energy/Chemicals cost as percentage operating costs	2%
Water Delivery	Target population		1,622,000
	Connections		90,448
	Service coverage	Percentage of population served	60%
	Service delivery	Percentage connections/standposts	54%
	Service timing	Average supply hours per day at acceptable pressure	1-2 hrs
	Population density/ha	Population/service area	74.4
	Industrial use	Percentage supplied to industry/commerce	36%
Efficiency of water supply	Unaccounted for water	Percentage water not measured in consumption	29.7%
	Maintenance	Frequency of bursts per 100km pipes	
Water Consumption	Quantity of water consumed	Served population/water consumed	180lpcd
	Metered consumption	Percentage of working consumption meters	40%
	Quality of water delivered	Percentage samples acceptable	74.6%
Sanitation	Service Coverage	Percentage population connected to sewers	
		Percentage population with acceptable on-site sanitation	
	Maintenance	Frequency of failure per 100km sewer	
	Treatment	Percentage waste water treated to 20:30	0%
Effectiveness	Extent of water related diseases	Diarrheal morbidity/Typhoid cases per millionper year	1,064
	Customer satisfaction surveys	Proportion customers questioned expressing satisfaction with service	
Productivity	Employees		3,000
	Staffing levels	Connections per employee	30.1
		Population served per employee	
		Staffing costs as percentage operating costs	57%

Table 3.6 Performance Indicators for Nagpur (Source: author's analysis of data, see Appendix II)

Nagpur is fortunate in having reasonably adequate sources of water through an irrigation canal and a supplementary river source which is not so reliable. A nominal payment is made to the irrigation department for the water abstracted from their canal system.

The indicators show poor and unreliable service coverage though with high estimated consumption by an overlarge staff which is ill-equipped. The lack of sewage treatment is unacceptable, particularly as the raw sewage is used to irrigate vegetable growing directly.

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3.2.5 Qualitative Assessment - Performance Categories

Organisational Autonomy

NMC which is solely responsible for supplying water to Nagpur can be termed as a semi autonomous organisation, because although it is run by elected representatives who have their say in the developmental activities, recruitment of staff, approval of budget and taxes, they have to get the bye-laws and tariff structure approved by government. Compensation of staff can only be given according to government rules. The administrative head of NMC is a commissioner who is the Government of India representative and he has to ensure that any development work is carried out according to government priorities.

Within NMC the water supply function, which could be seen as a large business in its own right, has no autonomy.

The autonomy of NMC is further constrained by the requirement that it carries out all major works through Maharashtra Water Supply and Sewerage Board. In effect MWSSB act as a consulting engineer but even though NMC are free to choose an alternative source of assistance MWSSB still get their 17.5 per cent fee of contract value. It is suggested that a major MWSSB function is to ensure that NMC does not misdirect water loans.

Leadership

In NMC the leadership quality was found to be of medium nature at top and middle level management but there is scope for improvement in leadership at basic management level. Though employees were found attending the complaints there was a lack of enthusiasm and seriousness in their actions. Until there is a sense of responsibility and leadership at basic management level and subordinate level, no improvement is possible. This can be seen from the working of Kanhan Treatment Plant and Seminary Hill Reservoir as already explained.

Management and Administration

The main task of NMC management and administration is to maintain a regular supply of potable drinking water. They were found to be very responsive and receptive in this regard but there is scope for improvement at the basic management level. One example is sufficient to explain: the vehicles of solid waste section could not be washed due to shortage of water - but the same organisation is supplying 256 mld of water.

Some re-thinking is required at top management level regarding allocation of duties specially with regard to chemical and health officers. One suggestion is that the 'bottom line' for any engineer in management and administration is at all costs to avoid MLA questions in the State Assembly. This is unlikely to lead to effective management.

There used to be only one distribution engineer for Nagpur but now there are five zonal engineers so the situation is better, but they are still on 24 hour call with no extra allowances, and no 24 hour crew to help along with poor maintenance equipment. One engineer describes having been threatened with a sword on one occasion. The maintenance staff are not well looked after - they receive a Rp25 per day allowance but no food if working late to meet demands and hopes of consumers so engineers buy food from their own pockets to help.

One indicator of the effectiveness of administration and management is the style of inventory control. This was noticeably lacking in the example of the number of GI specials lying outside Seminary Hills Reservoir boundary fence. They were neither properly stacked or secured.

Even the funds made available for such important works such as replacement of damaged pipe lines in polluted water complaint areas, improvement of distribution mains and repairs of vehicles and water meters have not been fully utilised. However, it is not clear whether this represents management inefficiency or cash flow and political constraints.

Commercial orientation

Commercial orientation is the degree to which actions in an institution are driven by cost effectiveness and operating efficiency. NMC was not found to be cost effective because the expenditure on operations and maintenance are far more than the revenue realised by the sale of water. This is because the water tariff charged for domestic connections is far less than the expenditure required to maintain the system. Unless the system is made cost effective, reliable services cannot be provided. During the year 1990-91, revenue realised was Rs 124,800,000 and maintenance expenditure was Rs 161,900,000. There is no motivation to staff to work in a businesslike manner.

The production cost of water on Pench II project is expected to be Rs 2.9/m3 whereas presently the tariff charged for domestic consumption is Rs 1/m3 up to 8m3 per month and thereafter an increase of Rs 0.25/m3 up to 40m3 and Rs 0.30/m3 above 40m3. The tariff charged for industrial connections is Rs 12/m3 but it is still very low. NMC are now paying 40 paise/10m3 but this being raised to 70 paise, still a low rate, for water supplied by irrigation department through Pench canal.

The water department believes they are collecting enough revenue for operations and maintenance but accept that it is not sufficient for capital investment or amortization of outstanding loans.

No politician wants to be seen raising taxes - and they have to spend so much on being elected (bending the election rules) that there is no sense in wasting that investment on raising taxes. When there is no legal requirement for them to prepare 'balanced budgets'. The centre has shown the way by cancelling all outstanding loans to municipal corporations - so why should any future loans be repaid?

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Consumer Orientation

The distribution staff was found to be more responsive to attending complaints but the level of complaints received each month was very low. This could indicate that consumers are well satisfied with the service or alternatively that they know their complaints will not be pursued. Another reason is that the complaints are aired through the respective ward members which takes a lot of time for the supervisory staff. There are only six complaint centres (one in each of the five distribution zones and one at divisional office) which is not many for a population of 1.6 million.

A senior officer of the Corporation stressed that 'we must take into account the interest of the public' but in general staff see their role as an engineering task to be completed rather than meeting the needs of consumers. The great temptation, usually accepted, is to divert money for maintenance into building new schemes as that is what politicians and engineers really want to do. There was the understanding that the tariff should be raised for water supply but also that the service not good enough to justify the rise to consumers.

To gauge the beliefs of the consumers it is again useful to note the comments in the local newspapers which tend to reflect popular opinion.

'Dry times ahead'

The city continues to face a shortfall of 20 million gallons per day. According to an estimate, the city with a population of about 1.8 million needs a steady supply of 65 million gallons per day during the summer months and a well laid out system to ensure equitable distribution. At present, the actual supply varies between 35 and 40 mgd and at times 45mgd when all the pumps function. The Municipal Administration has however claimed that a regular supply of 57.5 mgd has been maintained. The claim has been disputed by residents who have complaints about the irregular and scanty supply of water. Be it the poor dwellers of shanties sprouting up on vacant land for the residents or well laid out localities, there is no respite from acute water shortage. The residents of posh areas are already up in arms. Staging demonstrations, they have come out on roads to draw the attention of the civic authorities towards their plight. And for the first time housewives have joined in large numbers. Nearly 500 residents of Pandey, mostly women, today went all the way to the offices of the Municipal Corporation and staged a rare demonstration, braving the heat. It was a rare sight to watch such a large number of women from posh localities agitating to highlight the problem faced by them because of irregular and scanty water supply.
(The Hitavada, Nagpur, April 8 1992)

Technical Capability

NMC has technically competent personnel who are capable of maintaining the water supply system. They have a need for proper training, leadership and initiative at all levels.

From the installed capacity there should be no need to overload the treatment plant but it was found that Pench I and Kanhan were overloaded by 30 per cent. This may result in deterioration of quality of water and shows improper working of supervisory staff and a relaxed approach from the management level.

As an example of technical preparedness, the vehicles available for maintenance duties on the distribution system comprise:

	Years since purchase	
Petrol jeep	26	
Diesel jeep	15	
Diesel jeep	>15	
Matador	8	
Matador	8	(out of action for three months)

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Human Resources Development

There are about 3,000 technical employees to supply water to the 1.6 million population of Nagpur, that is one employee per 530 population. This is not particularly efficient. Moreover 42 per cent of the total maintenance expenditure is utilised in payment of wages. There appears to be no shortage of staff but the need is to utilise their capabilities and distribute them properly to the different units.

There is no organised system of providing training to different cadres, least of all the operating staff. Some Junior Engineers have been sent to the Indian Institute of Public Administration, New Delhi for ten days or to NEERI for training in leak detection techniques. This is not sufficient.

Every cadre of staff from Junior Engineer down to Pump Driver or Filter Attendant, Meter Repairer or Chemist should be sent for training in their respective fields. Supervisory staff above Junior Engineer should be sent for basic management level training and for proficiency in the field in which they are working.

At field level an O&M worker on leakage repairs is paid Rs 31 / day, with no increase in pay for the last four years and for one person interviewed at random it had not been possible for him to receive established status after eight years doing the work. A skilled worker in an established post would expect to receive Rs 1700/month and a Supervisor Rs 2,500/ month.

3.2.6 Financial analysis

Marketing	Socio-economic	Average household income - Highest income group	$2,000
		Middle income group	$600
		Lowest income group	$285
	Accessibility	Connection fee/Lowest income group household income	
	Affordability	Lifeline tariff/Lowest income group household income	
	Willingness to Pay	Reported payments to private vendors	
	Exchange rate to US$ Dollar		Rs30
	GNP per capita		
	International affordability	Costs per thousand m3 as percentage GNPpc	
Financial sustainability	Average domestic tariff		$0.04
	Average commercial/industrial tariff		$0.40
	Average costs of water	[Operating costs+Depreciation+8%RoFA/ Consumption]	
	Water supply sustainability	Costs/Weighted average tariff	
	Sewerage sustainability	Sewerage charge as percentage of average water charge	20%
Profitability	Operating ratio	Operating expenses/Operating income	75%
	Return on Fixed Assets	Profit (net income)/ Average Net Fixed Assets	
Liquidity	Current ratio	Current assets/Current liabilities	
	'Quick ratio'	Cash/Current Liabilities	
Creditworthiness	Debt equity ratio	Long-term debt/Equity (gearing)	
	Debt Service ratio	Net Internal Cash Generation/Total Debt Service	7.5%
Financial Efficiency	Days receivable ratio	Accounts receivable/Daily operating revenue	
	Bill collection efficiency	Percentage of bills collected	91.8%

Table 3.7 Financial Indicators for Nagpur ((Source: author's analysis of data, see Appendix II)

The financial information of the water and sanitation section have to be abstracted from the accounts of the Municipal Corporation. It is not always clear where the dividing line between different activities is to be drawn. The Corporation as a whole is very dependent upon the Octroi Tax, that is the levy on transporters bringing goods into the city. The Water Tariffs are notable for having been unchanged since 1966. Domestic tariffs are extremely low whilst those for industry significantly above cost. Reported bill collection efficiency is surprisingly high.

Future planning

'Mayor assures adequate drinking water supply'

The Mayor assured today that he is making every effort to expedite the temporary water supply scheme to overcome the drinking water problem during the current summer. He said that the temporary works, involving an expenditure of Rs 28,600,000, includes the works of digging 300 bore wells and 30 new wells, installing PVC tanks at 150 wells having pumps. So far 276 bore wells have been drilled out of 300 and pumps have been installed at 189 wells. Similarly, out of 30 new wells, seven wells have been dug and the residents are taking benefits of the same. With the digging of 300 bore wells the total number of such wells would be 838. While admitting that the citizens would have to face drinking water problems, he said that the concerned authorities of NMC would make efforts on war footing to solve it. (The Hitavada, March 14, 1992)

The Nagpur Municipal Corporation general body's decision to make a provision of Rs 8,500,000 for emergency water schemes will sadly not help improve the situation. The fact is that the Water Works of the Corporation is staffed by a whole lot of incompetent people, bulk of whom even do not realise that they have to save the citizens from an acute water shortage. If ignoramuses man the department the administration is not prepared to take them to task, maybe because it is worried about the consequences.

It is not that the entire staff of the Water Works Department is incompetent. There are some very competent people in the department, but they too have become inert by choice, possible because they just cannot do anything to improve the situation. The other disease that the department must be rid of concerns irregularities. It does not need an oracle to tell that there are irregularities galore in the department. Many know of them, but nobody is prepared to take on the bull by the horn.

We are sure, if a survey were to be launched, the findings would be shocking. There are thousands of illegal connections and these could not be sanctioned given without any favour. However we are confident nothing would be done to improve the situation because almost everybody in the Corporation would be exposed. The joke is, it is only with a view to diverting the people's attention from the main issue that such provisions are made for emergency schemes. The citizens of Nagpur are not interested in sops of mere monetary provisions. All they want is regular equitable water supply.

The Water Works Department has taken the citizens on a ride for far too long and the time has come for the citizens to teach them a lesson. They have seen that even court orders have not meant anything substantial only because the powers that be in the department are too indifferent.   *It is not that there is no overall water shortage. This is there, but the pinch is being felt by* a limited groups of people who have as much right to the civic amenities as others. Sadly however, so long as there is no major rethinking in the Water Works Department, things would continue to be as they are now.

(The Hitavada, April 8, 1992)

It can be seen from the figures of water demand and capacity available that there is adequate water available to the city for the present after the completion of Pench II project. What is need is a proper and equitable distribution of the same to the city whilst controlling wastage. The actual average per capita rate of water supply is around 90 lpcd as assessed by NMC. However, there are some areas where adequate water is not available and the problem becomes chronic, especially during summer when the demand and need for water increases. To overcome this problem NMC has started an emergency water supply scheme including drilling borewells, water by tankers and measures to control and reduce pilferage of water by unauthorised pumping and leakage of water are also undertaken with trained staff being employed.

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In conclusion, Nagpur water supply is hampered by being part of a large municipal organisation which has other overriding concerns and is not willing to allow the water section to be managed in a systematic manner.

3.3 Management and leadership in India

Both the organisations described above are failing to meet the needs of their customers both in quantity of supply and quality of delivery. The objective performance indicators prove the extent of this failure. The subjective performance descriptions show some of the reasons why this failure might be occurring, with the key areas appearing to be organisation autonomy, leadership and organisational culture. The other aspects of commercial and customer orientation, human resources development and management and administration might be seen to flow from the three key points. The organisational autonomy is detailed and can be investigated from the legislation which sets up each organisation. Leadership is more difficult to measure but is apparently playing a key role. Particularly in the context where the senior officer of each organisation is appointed from a separate government cadre, that is the IAS, Indian Administrative Service.

As part of the preparations for this study, the author therefore undertook a survey of management styles and approaches to leadership and teamwork amongst a group of senior Indian public utility managers. The survey was carried out in the city of Nagpur, India and involved twelve managers from twelve different locations in India, from Assam in the north east to Trivandrum in the south West.

The respondents were mainly Executive Engineers/Managers (one was a more senior Superintending Engineer and one a more junior Assistant Engineer), averaging at level Four in a Ten Level hierarchy. In practice they were no longer operating as engineers but as managers of the supply of basic needs services. On average each manager had four assistant engineers reporting directly to them with overall responsibility for 250 staff, having direct responsibility for providing water for between 120,000 people and 1,200,000 each. On average they were directly responsible for annual budgets of Rs 27,500,000. (Current exchange rate Rs45=£1) Average monthly salary was in the region of Rs 4,000.

The participants were asked about how they judged their own superior's management style, either a Secretary, Member Secretary, Chairman or Managing Director. The styles offered as models were those described by Likert (quoted in Huczynski and Buchanan, 1991). A summary of these styles was written on a card and respondents were asked to describe what style they thought their senior management used and then what style they used themselves.

E - Exploitative autocratic (no trust, no confidence in subordinates, imposes decisions and motivates by threat)

B - Benevolent authoritative (superficial confidence in subordinates, imposes decisions never delegating, motivates by reward)

P - Participative (has some confidence in subordinates, listens to staff but controls decisions, motivates by reward and some involvement)

D - Democratic (complete confidence and trust, allows subordinates to make decisions, motivates by reward for achieving goals set by participation, shares ideas and opinions)

Respondent	1	2	3	4	5	6	7	8	9	10	11	12
Senior's style	E	P	B/P	D	P/D	E/B	D	P	P	P	P	B
Own style	P	D	D	D	D	B	D	P	P	P	P	P

Senior management was felt by the respondents to care about all the staff and was seen to be keen to travel and see what was happening out of the office. However the vast distances sometimes involved and the constant round of meetings required by the bureaucratic and political system worked against this ideal.

The managers were asked how many times each year they believed their senior managers were able to get out of the office and actually see what was happening in the field. This was to determine how committed managers were to talking and meeting with their subordinates where it mattered.

Respondent	1	2	3	4	5	6	7	8	9	10	11	12
Trips/year	4	6	12	50	12		12	30	6	6	12	

The managers were questioned as to their confidence in the technical ability of their senior management which has in the past been a serious problem when commonly non-technical civil servants were imposed at the head of public utilities. However, because of a recent apparent changeover in several boards of the IAS Civil Service Management Experts being replaced by management trained Chief Engineers, only one respondent was concerned with technical understanding whereas all the remainder were well satisfied.

When questioned whether senior management was felt to care personally about the level Four staff being interviewees, the answers were: 'somehow reluctant/ doesn't really care as long as output is maintained/ yes/ yes/ interested and concerned/ doesn't really care/ cares/ he knows about me/ he cares

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but has his own problems/ always gives importance to my work even when involved in other meetings.'

Concerning respondents view of the effectiveness of their senior manager's style: 'in implementation style is effective but not in operation and maintenance/ effective/ not ideal but they want to improve - lower level staff do not work sincerely - juniors do not like going to site/ effective and no enemies made compared with previous man who had 'come to destroy the department'/ very dashing/ good at making decisions/ gets my purchases on time and sanctions against ineffective staff/ fairly effective at what they want to achieve/ effective except for political interference/ he will rescue anybody if they are working or trying to work hard/ leadership style good, effective and gives a lot of leeway on administrative matters until they become policy issues/ serious reservations , he doesn't give importance to people who have responsibility, relying too much on finance people not the engineers who actually have to do the work

One respondent described the experience of being in office of his senior when a local politician rang up and demanded the repair of the water supply system *'we have been without water for some time and now we have dug a hole of pipe and will break it unless you help immediately. '* The respondent couldn't get hold of the responsible person and so taking the responsibility to help within his organisation went to visit the situation himself. When he got there 'the crowd tried to toss him into the hole and threatened his life'. He then made the not unreasonable comment *'why should I bother?'*

In the city of Nagpur there was a Distribution engineer/manager responsible for supply of water to 400,000 people who had no transport to visit any of his area. Engineers may be given a monthly travel allowance (for using own scooter) of Rs 115 and there is no alternative to get out and visit the work - no jeeps or staff vehicles. There was an experienced leak repair man - who is still classified as temporary daily paid (Rs 31) after seven years service and therefore has no holiday pay or allowances or sick pay. But who has to take complete responsibility to go out and find the leak, excavate and repair it.

During a survey of services provision in Nagpur it was discovered that very expensive refuse trucks are only used for half the day because of the power of the unions. And this in a country of staggering unemployment and underemployment. Similarly there were 118 staff at a water treatment works -but still the work was not being done adequately. There were 28 staff at a waste water treatment plant - but the plant has been bypassed and is totally inoperative.

A major source of concern and demotivation to the Engineer/Managers was the special provisions made for 'scheduled castes and backward tribe'. These minorities (who in the past have suffered greatly) now pay no income tax , have reduced standards of University admissions and quota allocations of government posts between 30 per cent and 50 per cent at present - and if any are clever enough according to normal standards they don't count towards the quota. (The scheduled castes are

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believed to represent 10 to 15 per cent of the population on but even Brahmins are trying to get themselves registered as 'minorities' now.) These privileged entry castes also receive accelerated promotion so that they may receive two promotions in 4 years rather than the normal 20 years. The Mandal commission has recently raised the quota which resulted in strikes and rioting and self-immolation but no reversal as the issue is 'very political'.

Normally, for the managers being interviewed, promotions are by age and entry score (i.e. ranking in interviews and academic qualifications on joining at age 21 which follow a person right through their career). However these promotions can be side-tracked when Scheduled Castes are inserted which is ' demotivating as it means there will never be the potential to achieve Chief Engineer according to skill or work or experience'.

On the more positive side for these managers, they were able to take leave of absence for ten years and study leave for two years and special detachment for five years. And their promotions, in some cases, could still take place even if they were working abroad. At certain levels there is also plenty of scope to receive 'gifts' from contractors who want jobs and householders who want connections. Opinions differed as to how extensive such gifts might be but one respondent described a certain level of management and explained how a person in that position could make enough to retire after four years if they so desired.

The existing situation is illustrated in Figure 3.3, best summed up as a multi-level bureaucratic hierarchy under considerable pressures from politicians, unions and consumers which somehow manages to produce the lowest acceptable level of service without any regard for efficiency. So, as ever, the poorest have to pay the most for the worst service. There has to be a way to improve the efficiency of such organisations and because they are so heavily dependent upon high levels of staffing human resources management has to play the major role.

3.3.1 Management development in India
The situation described above suggests that a revision of leadership and teamwork styles is required to promote an efficient and economic public utility. 'To lead an organisation or part of an organisation effectively is one of the hallmarks of an effective manager.' Oldcorn's comment (1989) confirms that managers have to be leaders and Huczynski and Buchanan (1991) report that although many managers reject the concept of participative management, 'researchers concluded that a permanent change in relationships between workers and management is necessary to create a climate of effective participation' - that is teamwork - in order to see an overall rise in performance.

Woolhouse (1988) points out that 'there is no single best style of leadership' and Handy (1989) describes how 'leadership has to be endemic: the fashion not the exception - "a leader shapes and shares a vision which gives point to the work of others."'

In western society managerial leaders are said to derive from: 'high parental expectations, early experiences of leadership, ability to have clear objectives, ability to take risks that come off, autonomy, psychological and physical stamina, ability to pick people, awareness about personal strengths and weaknesses'. (Golzen and Garner, 1990). As leadership is affected by cultural considerations, the final question in the survey of twelve Indian managers described earlier was to determine how respondents might like to manage if 'you were appointed to be Member Secretary/Chairman tomorrow? Although wanting to find out their approach to leadership and team management the question was designed not to bias the answers in favour of a certain style of management:

'The staff must be convinced what is their duty, that is their objectives in work - I don't know of anything else except that staff should become involved in planning and execution of projects before they have to be responsible for operation and maintenance.'

There should be 'Quarterly meetings down to Executive/Sub Divisional Engineer level - to discuss field problems, technical difficulties and then ask them to suggest answers to problems - and try to solve them from my side - go to people informally in their place and remain with them for some time.'

'Relax the authoritarian behaviour - but to some extent it is still required as discipline is needed.'

'Rules and regulations should be made more stringent after promoting more self-discipline at ALL levels - efficiency needs a good management information system - you yourself must be separate so that you can be hard to make them move - but also to be social with them and help in distress - but until you work NO help! Be selective of persons who understand you. Whenever there is a team, they want to control managers and do no work - so managers must divide and rule and not allow teams to form. Team work is the best route IF everybody is committed. One fish will spoil the whole barrel. Avoid nepotism and hearsay about staff in appointment interviews. Use all communications systems with staff - political interference is always there, IAS people don't like technical people coming into management.'

'I would follow the same as the existing model but increase frequency of tours out - because I have started at the bottom and know what it is like.'

'Everyone should be exposed to developments in new techniques around the world. Exchange of observations on improvements that have been done - to make some juniors who have good ideas but no access to senior staff to get a chance - group discussion within circle, objective measurement of performance - promotion should not just be on seniority.'

'Autonomy seems to be a vital component of leadership and team-building - but one example of a Board which is 'autonomous' up to Rs 300M where suddenly the Chief Minister demands to see tenders and extra companies are added to the approved list, or the Tender Committee Members are changed until they accept a particular tender with a 'rubber stamp'. Or 'experience' of tenderers from

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other states is doctored so where does that leave the engineers who wants the best tender for the most efficient management of services provision?'

'Engineers in India (the good ones) have a much broader understanding than in UK - experience of participants who when asking questions on visits often found UK engineers saying they didn't really know what is going on .'

'In many cities, even permission for a new water connection has to come via a 'licensed plumber' through Junior Engineer, then Deputy Engineer then to Executive Engineer and then back down again. Hyderabad has just dared to give responsibility to Junior Engineer - but what will middle level staff do in future?'

'I believe in 'team-building', I give my staff a job on a chit and expect them to get on with it. My door is always open - I don't worry about the set 'visiting times'; Home means home - I don't take any work home but I might work here until 8pm or 9pm. For maintenance work you have to use team approach, sharing tiffin etc. .'

'Why should operatives be interested in team building when they have already achieved a 'job for life' (albeit at a very low salary) and have full protection of powerful unions and can extract money for their services - i.e. they only sweep certain streets, empty certain solid waste bins if the local residents pay and extra amount.'

'If managers try to manage and dare to criticise or even comment on the work of their staff - then the staff simply accuse them of taking bribes and accepting the purchase of faulty/low standard tools and materials (which is why operatives cannot do job properly) and if it goes further they will take their managers to the Labour Board.'

'Take them into confidence, hold meetings and field visits.'

'Move from Participation to Democratic style, hold frequent meetings with subordinates, seeing which suggestions can be implemented.'

'Try to inform them of output - how to improve for everyone - criticising is not effective, go to sites and ask, try and help them to solve problems, use confidence building.'

'I would hold meetings at Superintending Engineer level and go on more visits to see what is actual happening, reviewing progress and talking as a team.'

'You have to look down at subordinates and look up at seniors and compromise - extract the good from what you find - assign responsibilities, guidance and encouragement; ask about people's families, help them feel as though they are working in a family - you have to satisfy their grievances, at the same time you have to extract work from them - you cannot assign and go, you have to be a part with them, give

an example or model of punctuality and behaviour. Politicians and lack of money are NOT the only problem. ' 'I like my staff like anything'

'We are sitting about every day in the evenings at the end of work for thirty minutes to an hour with my Assistant Engineers - sometimes I impose my decisions based on my experience, otherwise I agree; one time I was faced with a union strike and by working through new regulations until midnight was able to create a new union; I would like unions and junior staff plus other competent men who have sense to be called for regular meetings with technical staff - I have on occasion asked an Assistant Engineer to apologise to the workers (VERY unusual in sub-continent terms); you are paid to listen to all members; have a group of staff members who can form a committee for administrative decisions about establishment with junior staff. It took about two and a half years to change the attitude of my junior staff not to simply pass everything up to me - and when they got into it they really appreciated it - but it took time. '

'Staff participation is required before you can achieve community participation. I never sit in the office for more than one hour - then I'm off to site, doing the paperwork in the evenings between six pm and eight pm; my staff never know when I will turn up to visit; but they know they are expected to work and when a project goes into the evening I will hire a cook if we are in the field or personally pay for food in the office. And although there is no overtime I will give them time off for holidays unofficially (I never keep a holiday record, I trust my staff) - and so far my superiors have turned a blind eye because they know I perform; I bring staff together for discussion and ideas. '

Clearly there are mixed views on team-building but several of the respondents are trying hard to involve their staff and improve the effectiveness of their organisations. From the analysis of the existing situation it appears that there is a very significant structural or organisational problem to be solved in order to improve the conditions in which leadership and teamwork can be effective. The constraints described by the respondents, particularly the hierarchical nature of Indian management, restricts progress and innovation through team-building. There is no room in the present system for any significant leadership and teamwork. So the first step to improve leadership and teamwork is to address the organisation problem.

One of the major problems appears to be the outside interference from the politicians. 'There is a useful consultants saying - 'most shop-floor problems have their roots in the board room'' (Kubr, 1976) and this statement appears to be valid for low-income countries if we substitute 'politicians' for the 'board room.' Figure 3.3 attempts to illustrate the common situation for many utilities which form a part of wider government municipalities.

So it appears that the first priority to improve leadership and teamwork has to be organisational change - to carve out from the large pyramid of hierarchical management self contained, autonomous units with clear performance goals, commercially and consumer oriented. This is illustrated in Figure 3.4.

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Once this has been achieved it is possible to consider the more conventional approaches to improving team-building

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Figure 3.3 Representation of existing water organisations

Figure 3.4 Representation of proposed water organisations

and leadership. Because only then will there be a demand from the staff to improve management. Under the present situation, to implement leadership enhancement and team-building exercises is to have a supply driven project. What is need to be effective is to have a demand driven process where the staff want to improve and are able to put into practice immediately the ideas on offer. It is apparent from the survey that some of the managers interviewed are already working in a participative manner - but they are restrained from extending this because of the organisation.

When there is a demand for improved management techniques because the institutions are given freedom to manage then there is the opportunity to begin to break down the existing hierarchical approach. Groups of managers within similar levels can be brought together to begin to discuss how management could be improved to meet the new targets. They can be given introductory training sessions about new techniques and external management advisers can be brought in as change agents to stimulate and develop teams. However, it must be stressed that the objective is NOT to impose teams from outside but to enable them to develop from the existing staff. Within these teams certain staff will begin to take a lead. These are the people to be supported and encouraged as future leaders within the organisation. For effective leadership is not imposed or created but is recognised and then encouraged and channelled.

Following the liberating necessity of organisational change, the management authors are fairly agreed as to how to promote development: 'perhaps the most interesting and efficient method is the development of the client personnel through direct co-operation - the development of a co-operating Team' (Kubr, 1976). Woolhouse, (1988) believes that the key to all change in behaviour is learning. 'Not theoretical learning, but learning about the facts, the myths and the conditions which are present in every human and social situation. This type of learning process is one in which the 'agenda' is not a syllabus but a real problem: it draws on the combined knowledge and experience of members of the group, incorporates any external advice that may be appropriate; and its purpose is to take action and not solely to acquire knowledge of skill.'

'Team building sessions are a major component of all programmes designed to accelerate the development of new organisations, to facilitate the transfer of new technology and to improve the performance of existing organisations.'' Team building is time consuming and expensive, but it is important to help people achieve good team behaviours. People tend to alter patterns very reluctantly because most people are comfortable the way they are - leading to static personal development. To break out teams may be encouraged to: develop an overriding purpose for the team members. Encourage members to perform new activities which introduce new opportunities for success - with new personal experience, reinforce team members' changed beliefs in themselves - creating better self-images and attitudes - and then repeat the cycle until the process of transformation becomes routine.'(Sunday Times, 1992)

However, there is a factor peculiar to low-income countries which affects team-building and leadership which is the tribal or caste element. When staff see their primary responsibility not to their work organisation but to their kin, their extended family or sub-clan, then this has to be acknowledged in team-building. Blunt (1983) describes the effectiveness of entrepreneurs utilising staff from one tribe or clan and accepting the tribal organisation to take responsibility within the enterprise. Sheth (1968, quoted in Blunt, 1983), investigating an Indian factory found that new employees were hired on the basis of recommendations made by their kinsmen already working within the factory. This facilitated coordination and control and ensured commitment to the organisation. 'At the same time, workers benefited from the system by being able to fulfill social obligations to kin.' There is also the amazing example of the 'tiffin carriers' of Bombay who each day transport several hundred thousand 'lunch-packets' from an individual worker's home to his place of work, performed without sophisticated organisation but as teamwork with all the team members coming from one 'village' or district many miles away.

Rice (1958, quoted in Blunt, 1983) found that semi-autonomous teams were successful in India following reorganisation within a textile mill. But Tanzania tried an experiment within its centrally planned system to require worker participation through workers councils and specified numbers of worker directors. However, along with other elements of its top down approach to economic development it was found that managers did not accept worker involvement in decision-making. But this was not team building, it was imposition. Dia (1991) addressing the particular problems of low-income countries states that there must be a high degree of national identification with the programmes and projects - 'internalisation' or 'ownership'. 'So we must use traditional values as efficiency stimuli, using formalism and ritual to reinforce contractual bonds, using group dynamics to foster productivity.'

'Teamwork goes with empowerment. It is central to total quality management.' . . 'A team is a more complex creature than most people imagine. For it to work as a problem-solving tool it must address seven fundamentals: raison d'etre, rules, roles, relationships, ritual, rewards and results.' 'In the end, teams produce well only when they draw the benefit of all individuals' input and at the same time use it to add greater value. The results come from a complicated human process - and its complexity is always underestimated'. (Thorne, 1992)

One of those 'R's , rewards has to be considered more closely. for we cannot expect dynamic leadership and group management with salaries ranging from $200 to $30 per month. Blunt (1983) quotes Thorsrud: 'one of the most important issues, probably even more crucial in developing countries, is wages.' Western based management development is beginning to discuss the need for skill-based pay systems to support team-building. In these employees are paid for the range, depth and type of skills they are capable of using, not necessarily for the jobs performed. 'These systems acknowledge that without well-motivated workers a company is nothing.' (Economist, 1991) Before

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such systems can be considered in low-income countries however, reward has to be raised to something approaching realistic levels and then directed at the particular cultural needs of staff as explained earlier. This could lead to a more paternalistic approach with benefits shared on a more communal basis rather than on the excessively individualistic western approach.

3.4 Chapter Conclusion

The institutions analysed in this Chapter are failing to meet the needs of their customers. They are not managed efficiently. However they are meeting the needs of the politicians and they are meeting many of the needs of their employees. This balance between the needs of the organisation and the needs of the supposed beneficiaries of the organisation has to be disturbed if service coverage is to be improved in terms of quality and quantity in order for the lowest income groups to benefit from improved water and sanitation for health.

Using the same techniques of institutional analysis, but in greater detail, the following Chapter investigates the performance of an African utility to see whether there are any differences in management effectiveness between the continents and then to investigate the potential for institutional development to overcome the reported inefficiencies.

Water utility management in Uganda - National Water and Sewerage Corporation

4.1 Institutional assessment for management development

This chapter investigates the strategic management of the National Water and Sewerage Corporation of Uganda. NWSC is a semi-autonomous parastatal charged with supplying potable water and waste water disposal in the major towns of Uganda, ranging in size from just under one million down to 25,000 people. An Institutional Analysis was carried out in February 1993 along with a training needs assessment through interviews with twenty senior staff and collection of objective performance data.

NWSC emerged from the aftermath of the Amin era with two vehicles, one engineer and almost no water supply to the capital city of Kampala. It has since built up into a significant operation with the seven small towns as well as the capital. However, it is still struggling with regard to its financial stability as government subsidies have been progressively withdrawn but the tariff enhancement and collection has not kept pace. With average GNP per capita at a level of $140 (fourth poorest in the world) but the cost of water and sewerage investments at world levels the Corporation has a difficult task. It has now succeeded in the critical task of obtaining new four wheel drive vehicles for each of the Headquarters' Heads of Department so that they can drive to the office and have their driver ferry their children to and from school. Meanwhile the operations division for Kampala had, at times, just one working vehicle to serve nearly a million people.

It should be self-evident what business the water corporation is in. However the supply of water and sanitation is confused in that the first twenty to thirty litres per person per day is required as a 'basic needs' requirement for public health. All subsequent water and its means of delivery are required for reasons of convenience, status, luxury and privacy. The justification for a water utility to be in government ownership is to be found in that first twenty litres per person per day. The main function it serves in the eyes of the middle and high income groups is to provide a reliable service directly through a house connection to the formal housing of the elite with upwards of 150 litres per person per day. Meanwhile the poor continue to receive unreliable, intermittent supplies through standposts some distance from their homes.

The Corporation is also involved in sanitation services through its sewerage operations (one particular, high cost means of providing sanitation). Therefore NWSC as a whole maybe perceived as involved in the provision of public health services.

NWSC's current revenues are Ushs 6,723 million shillings (approximately $5,603,000) with an expenditure of Ushs 5,630 million in 1992 ($4,692,000). The Corporation has 1,580 staff to meet the needs of 950,000 consumers (some remain potential consumers). NWSC will never be viable unless it can sell over and above the basic needs for health water but it will not be able to supply the required amount to each household without significant investments which will require potentially unacceptable increases in tariffs to finance.

4.1.1 Organisation's operating environment

Investigating NWSC in more detail than the Indian utilities, because of the subsequent management development programme, the analysis begins by considering the environment within which the organisation operates. The 'PEST' environment is very different from a typical OECD environment. Average incomes are very low, people are living in a survival culture, struggling very hard to overcome the ravages of civil wars and the plundering of their nations' wealth by previous rulers. They are desperate to ensure that the next generation, their children, receive an adequate education to escape the unskilled worker poverty trap.

The political leadership at the highest level is reportedly admirable but corruption at all levels below the President appears to be significant. Decisions in a semi-autonomous parastatal are therefore heavily influenced by political considerations as well as by the 'eating' (corruption). All this in a country once famously described by Churchill as the 'Pearl of Africa' where food is in ready supply in a well balanced climate with excellent agricultural land.

All technology is imported and is not always well suited to the operating environment. The need for continual imports to acquire spare parts or operating chemicals is a drain on any organisation in a weak currency environment.

There has been little strategic change for a long period, with most organisations following the old model of public utilities without realising that the world has changed. The author encountered notable resistance in discussing new ideas and organisations models with the senior management of NWSC.

NWSC operates in the major urban areas of Uganda and has the potential (often seen as a threat) to become responsible for water supply in the smaller towns. In terms of competitive scope, the corporation is providing basic needs water, convenience water, convenience sanitation (sewerage) and has so far decided not to be involved in basic needs sanitation (on-plot latrines). This can be described as two main customer types ('formally housed rich' and the majority poor) with two main segments or product varieties (water and sanitation).

Water authorities have traditionally been vertically integrated to a considerable degree and NWSC takes this to extremes by providing housing for its staff (officially) and transport for its employee's children to get to and from school (unofficially). The Corporation also carries out all functions of the

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water supply chain from pumping the water out of the lake (or rivers), through treatment, transmission, distribution, reader metering, billing and collection of revenues through a payments office (no banking alternatives). Suppliers are therefore limited to providing spares and chemicals following the construction of any major works.

4.1.2 Issues in the wider environment

The issues that affect the overall competitive arena of public health are the changing perception of the role of government with growing involvement of the private sector in providing medical health care (due to government hospital based medical care being so limited) and the changing perception of the necessity for a commercially oriented approach in public sector organisations. There is also now the threat of privatisation as this fashion permeates to all corners of the globe.

Additionally in Uganda in the health sector the threat of Aids is ever present. There is a steady trickle of deaths in the urban areas amongst the professional/skilled middle aged though the threat reported in The Independent that 'next year there will be no parking problems in Kampala' made some three years ago now has not materialised.

Although there is no direct perception at consumer level of any link between, for example, Aids and water, at the political and most importantly the donor aid level, there is a direct trade-off between grants and loans for Aids programmes and/or for water programmes. The donors, who wield considerable power and influence perceive the justification for involvement in water programmes usually as health related at the basic needs level rather than the boosting of economic production or consumer convenience.

A more direct threat to water investment has been voiced in the development of Oral Rehydration Therapy, a very cost effective measure of salt and sugar and water which will ensure a babies' survival through a bought of diarrhoea. It has been suggested that it is more cost effective to allow continued poor quality supply of water and then use ORT to avoid the resultant infant morbidity and mortality. Another threat to the basic needs demand for clean water for all is the slow development of an effective cholera vaccine.

4.2 Internal analysis

4.2.1 Internal analysis and organisation's mission

The internal analysis has to investigate the objective capabilities and the more subjective culture of an SBU, that is the shared philosophies, values, beliefs and assumptions that knit together a community, the implicit, informal consciousness of the organisation which guides the behaviour of individuals and the pattern of learned assumptions in an organisation (Lawrence, 1993)

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Activity / Responsibility	Legislation	Water Resources	Allocation of Finance	Tariffs	Project Planning and Design	Project Implementation	Operation and Maintenance	Water Quality	Training	Community Involvement
Central Government	░	░	░	░						
Water Supply and Sewerage Corporation					░	░	░	░	░	
Municipal Corporation										
Health Department										
Pollution Control Board								?		
Donors/Banks			░		░	░				
Private Institutions										
Consumers										

Responsibility ▮   Involvement ▨   Interest

Table 4.1 Uganda urban water activity and responsibility matrix

4.2.2 Organisation Structure

The organisation structure shows a suitable number of levels but with some confusion over grouping of functions, particularly between Operations Management and Technical Department. The span of control of Operations Manager is considerable, leading (by default?) to an impressive degree of delegated authority and responsibility at Area Manager level. For other sections the degree of authority and responsibility is less clearly defined as is the actual line of command which reportedly leads to some frustration.

4.2.3 Objective Institutional Performance Indicators

The Objective Performance Indicators currently available to senior management in NWSC include:

. Water production as a percentage of design/realistic output, vehicles and pumps availability, static plant downtime, raw water, treated water and distributed water quality, number of connections and disconnections, monthly expenditure and revenue collection by area, annual staffing and annual financial statements.

The majority of these indicators are not presented in a fashion suitable for management purposes of planning and control.

Figure 4.1 NWSC Organisation Structure

The objective indicators NWSC uses to measure its performance are shown in Table 4.2.

Population percentage served by:	Percentages
House connections	20
Yard taps	17
Standposts	14
Installed and functioning water meters	26
Disconnections	47
Water production as percentage of design output	74
Unaccounted for water (leakage)	35
Pumps availability	83
Static plant downtime	30
Distributed water quality: acceptable samples	75
Bill collection efficiency	54

Table 4.2NWSC reported indicators

Some of this data may be deemed to be reliable. An analysis of the only available Performance Indicators for December 1991 shows that the information is so variable that it is difficult to trust elements of it. However the figures do indicate that NWSC is only serving half its target population with water, that it has very ineffective metering, relatively high unaccounted for water and dangerously little quality monitoring. The financial indicators will be discussed under financial analysis.

Other performance indicators determined from the available information are as below, given for each of the main towns. This illustrates the particular problems NWSC has with its smaller systems.

	Population	Population Served	Total Employees	Consumers/ Employee	Production MLD	Connections 31/12/92	Connects/ Employee
Kampala	747,008	432,000	806	536	84.9	19010	24
Jinja	142,000	112,000	258	435	20.4	5475	21
Entebbe	28,000	40,400	100	404	2.8	2075	21
Mbale	40,000	44,100	173	255	5.2	2837	16
Tororo	32,000	35,900	119	302	2.8	595	5
Masaka	48,000	53,400	136	393	6.1	1222	9
Mbarara	42,000	47,300	151	313	6.6	850	6
Lira							
Gulu							
Secondary Towns	190,000	221,100	679	325	48.7	7579	11
TOTALS	1,079,008	373,500	1742??	214	128.7	32064	

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Table 4.3 NWSC Outline indicators by centre

The main indicators of consumers per employee and connections per employee show that NWSC is overmanned in Kampala and Jinja when related to world averages and drastically overmanned for the small secondary towns.

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The overall indicators for the Corporation are summarised in the table below

			Most Recent Year
Water Production	Quantity of water produced	Volume treated (mld)	128.7mld
	Quality of water produced	Percentage samples acceptable	75%
	Transmission factor	Source distance X Elevation /100,000	varie but low
	Production factor	Energy & Chemicals costs as %age Operating Costs	
Water Delivery	Target population		1,079,000
	Connections		32,064
	Service coverage	Percentage of population served	34%
	Service delivery	Percentage connections/standposts	70%
	Service timing	Average supply hours per day at acceptable pressure	
	Population density	Population/service area	varies
Efficiency of water supply	Unaccounted for water	Percentage water not measured in consumption	35%
	Maintenance	Frequency of bursts per ? km pipes	
Water Consumption	Quantity of water consumed	Served population/water consumed	
	Metered consumption	Percentage of working consumption meters	26%
	Quality of water delivered	Percentage samples acceptable	na
Sanitation	Service Coverage	Percentage population connected to sewers	
		Percentage population with acceptable on-site sanitation	
	Maintenance	Frequency of failure per ? km sewer	na
	Treatment	Percentage waste water treated to 20:30	50%estimate
Effectiveness	Extent of water related diseases	Diarrheal morbidity/CholeraTyphoid cases permillionper year	na
	Customer satisfaction surveys	Proportion customers questioned expressing satisfaction with service	na
Productivity	Employees		1742
	Staffing levels	Connections per employee	5 - 24
		Population served per employee	325-536
		Staffing costs as %age Operating costs	

Table 4.4 NWSC Performance Indicators (Source: author's analysis of NWSC data, see Appendix II)

4.2.4 Subjective Institutional Performance Descriptions

In order to understand the efficacy of the existing institution and management and to determine management development needs a series of interviews were conducted with approximately twenty staff members at appropriate levels. The researcher also welcomed the opportunity to attend the Area Managers monthly meeting and the Senior Managers (fortnightly) meeting.

The researcher was seeking to gain an understanding of the Knowledge or Theory, the Skills or Practice and the Attitudes and Beliefs of the interviewees so as to build up an understanding of the capabilities and any deficiencies of the staff. He was also trying to understand the nature of the organisation and its preparedness for change, working on the basis that management development requires institutional development in parallel in order to achieve long term benefits.

Knowledge (Theory)

'What do managers think that they know?'

Staff were asked about their formal qualifications in their functional task and whether they had undertaken any management courses. They were also asked their length of time in post and their previous experience. This to build up a picture of the background that managers already have.

Skills (Practice)

'What do managers think that they need to be able to do to be more effective?'

Managers were asked what they spent their days actually doing, how effective they felt themselves to be in carrying out these tasks and what they believed they should be doing. The particular management skills the interviewer was trying to assess for capability and deficiencies related to planning, both strategic and tactical, goal setting, setting and monitoring performance indicators for their section. Also to Staff development, job descriptions, specifications, task and skills analysis, staff performance measures, reviewing, monitoring and appraisal and line management of staff training. Aspects of communications skills were also investigated along with the necessity for leadership, delegating (giving responsibility and authority), motivating, problem solving and decision-making. Finally aspects of time management and use of micro computers for management (spreadsheets and scheduling) were questioned.

Attitudes (Beliefs & Understandings)

'What do managers think are the constraints to effective management?'
'What is keeping you form doing a good job?'

In the interviews staff were asked what they thought of what was happening at present and what they wanted to happen. Experience in other programmes suggest that for management development and institutional development programmes to be effective there must be a felt need for change in the organisation, a clear vision of the future, people ('champions') who are seen to be committed to change and in addition some momentum. Staff were therefore being asked about their perceptions of these issues as they saw them in the organisation. Clearly these perceptions need not be correct or shared by senior management.

The constraints and opportunities to be discussed were seen to relate to the institutional capacity to reform, the organisation structure and goals, the feedback, information and support from above, how decisions are made, staff morale, inclusion in planning, delegation and trust. Related to these are motivation, remuneration and incentives, staff capacity, ability, experience and training and finally the resources, facilities, equipment and working conditions.

A list of some of the major points which came out of the institutional analysis are described below. The list demonstrates the potential for development as a result of management education but it also shows

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how important institutional change is if such problems are to be overcome. A detailed summary of individual interviews and the meetings attended may be found in Appendix II.

4.2.5 Points from interviews

- Absence of formal management training though functional staff acting as managers
- Management training strongly desired
- Remuneration not a significant issue though generally felt to be insufficient
- Motivation good except where staff feel there is no career ladder for progression
- Little experience in finance, personnel development, use of micro computers
- Lack of trust at many levels - both upwards and downwards
- Suspicion that others are benefitting disproportionally from institutional resources
- Transparency now acceptable
- Management by inefficient committee to avoid accusations of malpractice
- Personal survival taking precedence over organisational improvement
- Patronage management rather than organisational management
- No problems with patronage style of management - better to keep a distance
- Reactive administration rather than proactive management
- An illusion of a management system
- Any mistrust takes a long time to dispel, usually out of ignorance in the past, now transparent management
- Now you can criticise openly
- Too much subjectivity in decision-making
- Relatively free hand in decision making whilst recognising need for HQ's ultimate authority
- Can't trust junior staff to do their job consistently
- Supported better from above than below
- Corporation being carried forward by events - not by plan
- The will is there to change and progress
- Spending half the day having to chase each voucher personally, never being told when rejected
- Responsibility but no authority
- Commercial orientation only recognised at highest levels
- Institutional inertia
- Frequency of transfer of Area Managers
- Insecurity of postings
- Desire for others to be exposed to management training
- Delegated authority acceptable
- Parallel transfer perceived as punishment? if no good dismiss, otherwise clog up organisation with demoralised paper pushers
- If lower levels also trained it would be easier to implement new ideas
- Headquarters generally supportive of areas
- Desire for assistance in public relations function as manager
- Some malaise in departments where not enough to do - used as clerks, no career progression
- Lack of senior management involvement in area's concerns at practical level
- Flexibility & trust required in delegated decision-making powers
- Financial training is required

Following on from the individual interviews, as a first step to identify the key issues a SWOT analysis is a useful tool to investigate the distinctive competencies and deficiencies. The Management of the National Water Corporation of Uganda were asked as a group what they considered to be the strengths and weaknesses of the organisation that they managed.

STRENGTHS	WEAKNESSES
Abundant Qualified staff	Poor pay
Openness to change (or to ideas of change)	Reactive management
Accessible leaders	Inadequate planning
Good Board	Management weakness
Water delivered	Partial payment of tariffs
Basic infrastructure Donor confidence	Overstaffed
Willing to work	Low morale
A training Plan	CORRUPTION
A viable organisation	Poor management
Strong capital structure	Low remuneration
Freedom of speech	NOBODY TRUSTS NOBODY
Audit department	Poor interpersonal relationships
	Lack of trust
	Poor public image
	Individual interests taking precedence
	Weak legal department
	Inefficient procurement
	High arrears
	High Unaccounted for Water

In terms of investigating the organisation culture one senior manager suggested that 'it is up to us to set the stage to enable the workers to perform.' The Operations manager responded that 'the monetary reward has to be there and in order to be there we have to expect to satisfy our needs'. The Managing Director, in front of his Board Members and Internal Auditor responded that 'over the long time society has acquired certain habits, 'eating' - because, for example, a pension cannot satisfy one beyond one year of retirement' (so everybody has to try and acquire land and build a house whilst in employment).

Other managers responded that 'there is considerable inertia' and that 'we are constrained by our own inefficiencies', 'we are in a vicious circle'. The question was asked 'how to improve the income of individuals? are some sections paid better than others?' It was then suggested that all the 'eating' should be put into a common pot so that everybody benefits with a good conscience; 'then we commit ourselves 100% and then no unofficial 'eating' - this will reduce mistrust.'

The World Bank representative pointed out that 'the purpose of managers and workers is not the same as the purpose of corporation. Everybody is motivated by personal needs. If you have divergency of personal needs and Corporation needs we must do something. Why do we cheat ourselves? What about facing reality?'

When asked what concrete steps can we take to improve the Senior Managers responded with promises to be better at time-keeping, to be more transparent, to give more information, to be consistent, less impatient, less outspoken, to talk to colleagues, to hold regular meetings of senior staff and give timely decision-making. But when challenged to draw a new line on rational decision-making by giving up 'eating' from an agreed time with subsequent dismissal for transgressions . . nobody could agree.

However it was later stated that the group had agreed to 'equitable eating', 'not sitting down in a dark place and sharing it out but if we all reduce it we can all benefit in terms of our remuneration going up.' 'We can't stop it now all together, that would be a miracle but we can all bring it down - we are

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gearing towards transparency. Unless we are all honest with ourselves {we cannot progress}, we don't want you to fear, do your job, you know how to do it, the truth can never be buried. Systems are being developed but always people are trying to bypass it because of eating - as time goes on we have to do better. We all want change for the better, we are not fully satisfied with our present status.' (Personal communications, 1993)

From these interviews and discussions the researcher prepared his understanding of the subjective performance descriptions for National Water and Sewerage Corporation.

Leadership

In NWSC clear goals have been demonstrated by the senior management along with their hopes for the future, both through the results of the ZOPP process and in management meetings and discussions. These goals are well understood to be dependent upon revenue collection. However, the goals have not been so clearly perceived at the lower levels of the organisation where there are elements of mistrust of the motives of management. This illustrates an aspect of management which could be addressed in the training programme.

Organisational Autonomy

The Corporation has apparent autonomy from government control even though government departments have significant representation on the Board. This autonomy is tempered by the necessity for Cabinet approval of tariff increases which has led to significant delays and thus shortfall in revenue collection. In addition, substantial debts are owed by government ministries and staff in respect of unpaid tariffs over some years. However, the Corporation is clearly expected to behave in an autonomous fashion with regard to finance and cash flow. Senior appointments remain subject to high level approval, hence actual autonomy must be considered limited at this stage.

Management and Administration

Although there is an organisational chart there is confusion in the minds of some staff as to their actual superiors in the organisation. In addition there is a serious problem over delegated powers as (some) middle managers appear to have responsibility but little authority. The budgeting procedure is not working as effectively as it could. The reason appears to be a mixture of cash restraints (due to understandably limited revenue collection) as well as uncertain delegated powers and trust. The Area Managers have a much clearer vision of their powers.

Organisational Culture

Staff energy at many levels of the organisation is aimed at personal 'survival', both survival of a person's position within the organisation and survival in the wider world of housing and school children and social influence. Some staff at middle levels perceive this to be equally true of senior management though any perception is not necessarily correct.

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Organisation Structure

The organisation structure shows a suitable number of levels but with some confusion over grouping of functions, particularly between Operations Management and Technical Department. The span of control of Operations Manager is considerable, leading (by default?) to an impressive degree of delegated authority and responsibility at Area Manager level. For other sections the degree of authority and responsibility is less clearly defined as is the actual line of command which reportedly leads to some frustration.

Commercial Orientation

At the senior levels of the organisation there is an impressive commitment to making the corporation more commercially minded. This is manifested in the willingness to disconnect major institutions and senior officials in the government and to carry that political risk. Definite progress has been made in the financial reporting of the Corporation in that senior managers now know the financial position. However, there is still some mistrust at the middle levels as to the extent and reasons for this new commercial orientation.

Consumer Orientation

Understandably, consumer orientation has not been apparent in discussions with staff at all levels as at present energies have had to go into maintaining the supply of water and of beginning to re-educate the public as to the necessity to pay for water. An exception to this is demonstrated by the Area Managers who realise that it is impossible to force people to pay for water when they simply have no money available and in Kampala where there is the intention to create extra places for tariff payment in the city. This last point may have more to do with enhancing revenue collection than with serving consumers or rather customers.

To complement and perhaps contrast with the researcher's subjective performance descriptions the Senior and Middle Managers separately were asked to score their organisation according to the questions found in Appendix I. Respondents had to score the comment describing the institution from 1 (very low agreement) to 5 (high agreement) with a high score reflecting a 'more effective institution'.

	Senior Management	Middle Management
Leadership	2.5	2.6
Organisational Autonomy	2.8	3.2
Legislative Framework	2.6	2.9
Management and Administration	2.3	2.4
Consumer Orientation	2.1	2.8
Commercial Orientation	2.4	2.9
Organisational Culture	2.4	2.7
TOTAL	2.4	2.75

Table 4.5 NWSC own scores for subjective performance descriptions

A score of '3' represents a perception that the institution is 'average' and so all the managers in the Corporation perceived themselves as worse than average in their performance.

'Value Chain Analysis':

To give a different perspective on the institutional capability it is helpful to use the Porter 'Value Chain Analysis':
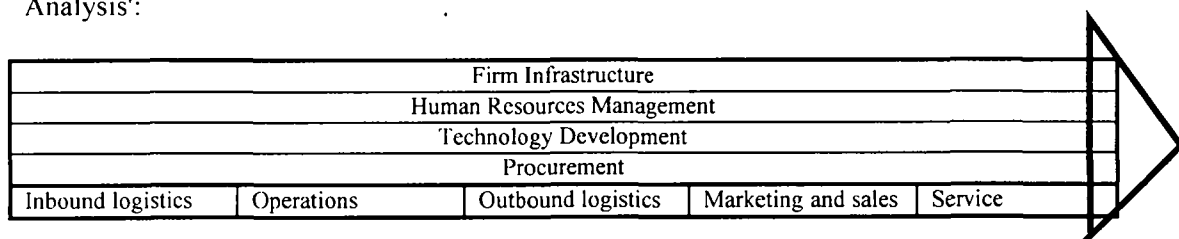
Figure 4.2 Porter's Value Chain Analysis

The 'Firm Infrastructure' is good in terms of capital equipment built as part of aid programmes but is very limited in terms of plant and equipment, for example vehicles and tools. The Human Resources Management is abysmal, as an example only 75 out of 1,500 of the staff have been appraised but the real problem lies with the inability to pay people properly and therefore the inability to enforce any discipline. There is no Technology Development except that which is brought in by foreign consultants and contractors. The Procurement system is extremely long-winded to try and reduce the corruption but it fails to do that and simultaneously fails to supply almost any required goods on time or within budget.

The Inbound logistics is eased by the main resource, raw water, being readily available (for at least the three major towns) from Lake Victoria. The other necessary inputs of chemicals for treatment are badly handled, requiring importing from Europe and a long sea and land journey with erratic arrival times. Operations in terms of treatment are reasonably effective, disturbed by the water hyacinth at the abstraction point, but too reliant upon unskilled operators without any adequate water quality monitoring. The Outbound logistics, that is the distribution is managed as well as possible considering the shortage of tools and vehicles to keep the system working. Marketing and sales requires consumers to receive a bill which by all accounts bears no relationship with any metered reading of water

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consumption and then to make a long journey to a single NWSC office to pay the bill. Service does not exist as a concept but there is a distinct advantage related to service and marketing in that NWSC can disconnect non-payers. Disconnecting the biggest hospital in Kampala and the Zoo in Entebbe, thus raising the concern of the President's wife and all the newspapers does wonders for encouraging payment and disturbing the political consensus.

As described earlier, with an operating ratio of 0.43 and a bill collection efficiency of 54% the Corporation is extremely inefficient and may be deemed to have no value chain advantages. It only survives because of its monopoly within its arena of indirect competition.

4.2.6 Detailed competitor analysis

It is not possible to give a sensible competitor analysis for the reasons described earlier. The competition faced by NWSC is from informal water vendors who could never compete on a cost basis if the Corporation was ever organised enough to supply the water demanded, even if this meant tariffs increased by a factor of two or three. The other competitors in the health sector are indirect.

The political competition described above for scarce resources either at national or international level are of critical importance. However, the way that decisions are made in the aid business are so arbitrary as to which bilateral country or multi-lateral development bank will support which sector in which year cannot be analysed realistically.

In this sense, the competition may be represented by water utilities (and other public health utilities) in other countries who can demonstrate competence in this area. Donor funds tend to flow now to institutions that demonstrate competence in using them, whatever the starting state of their service provision.

4.2.7 Detailed operating environment analysis

In this section it is necessary to consider the Porter description of the operating environment.

The threat of entry is very low because of the high capital requirements for abstraction and water treatment, the large economies of scale available in treatment plants, the restricted access to distribution channels (pipe network) and the assumption that there is only ever one supplier of water.

The supplier group is powerful in terms of power supply (as pumping stations have their power cut off if the bills are not paid) but they not powerful for all other items because of international bidding to supply at the lowest tender (particularly for contractors building new works) with international agencies such as the World Bank checking up.

The buyer group is not powerful because it is highly dispersed, purchasing in very small volumes, with no information as to real costs whose purchases form an insignificant fraction of service cost. It does however have political power but this is not usually demonstrated by the poorest needing basic needs

for public health but rather by the rich demanding higher standards of convenience. Recent world-wide figures (WSSCC, 1993) suggest that the rich have their high level of service subsidised at a level of 70% of operation and maintenance costs while the poor who have a supply are subsidised at a rate of 50% for a much lower level of service.

Rivalry is not at all intense, partly because competitors do not even see themselves in a competitive arena (except for foreign funding where rivalry is intense), but there is high differentiation of supply in terms of the basic needs described above. There is competition from very small water vendors but it is not significant.

However, there are high fixed costs, high exit barriers and large increments in capacity required which should in theory lead to more intense rivalry except that water supply, along with its indirect competitors in the public health arena, is a monopoly.

In terms of the remote political environment there is unlikely to be any threat of monopolies legislation aimed at the water sector, environmental protection laws are now being discussed and will have to be taken notice of in the strategic horizon, taxation policy is unlikely to be significant, employee law is already extremely restrictive and may require adjustment if any form of privatisation is carried out. The government appears to be stable even though IMF sponsored Structural Adjustment Programmes always impact hardest on the poorest. The President has postponed multi-party elections with the agreement of the donor community in the interests of stability but this issue will have to be faced within a few years.

The economic environment of business cycles does not have a strategic influence at present because whenever industrial demand for water declines the unmet consumer demand easily takes up the slack. Interest rates on foreign loans and exchange rate stability are vital to the Corporation's investment programme but are extremely difficult to predict. Energy supply because of the nearby Owen Falls dam at Jinja is fairly reliable now that the switchgear has been modernised. Trends in GNP with minimal growth rates, significant underemployment and minimal disposable incomes is guaranteed to continue.

Social population demographics are being affected by the Aids pandemic to a limited extent, the major factor remains the very high proportion of young people in the population. Income distribution is highly skewed with the majority being very poor, there is minimal social mobility or lifestyle changes and it is very hard to see attitudes to work and leisure and consumerism changing in the medium term. Survival remains the goal.

In terms of the technological environment, there is an excellent University in the country which is best characterised by its weakness in technology. The only government spending on research is via aid

programmes and most of that is into Aids. It is unlikely that there will be any new discoveries in the water sector but rates of obsolescence of the existing equipment is slow.

4.2.8 Financial Analysis

National Water and Sewerage Corporation uses a cash accounting system, not a double entry system. However the figures are reported in a conventional set of Financial Statements given below. The Revenue Account shows that NWSC made a surplus of $910,733 in 1992 which is a satisfactory amount. However a more realistic picture of the financial state may be seen from the summary in Table 4.1. This indicates the very high expenditure necessary in the Secondary Towns because of the low economies of scale but also the level of debtors, usually but not exclusively representing government institutions. The loss of cash from the Corporation puts them continually on the knife edge of being able to pay wager each month and leads to the lack of flexibility which managers find so frustrating.

REGION	REVENUE $ Per Person per year	EXPENDITURE $ Per Person per year	*Debtors* $ Per Person per year
Kampala	5.1	2.4	4
Jinja	5.8	5.5	4
Secondary Towns	5.2	11.0	3
Total Revenue	5.2	4	

Table 4.6 NWSC Revenue and Expenditure by region derived from financial statements

CUSTOMER	July 1989	Jan 1990	July 1990	Jan 1991	June 1991	Average
Government	29.30	45.96	123.60	287.88	419.49	44%
Parastatals	7.16	8.11	15.70	19.39	27.75	5%
Industry	9.14	7.69	15.71	29.68	26.56	6%
Local Authority	17.85	30.04	44.65	66.41	74.58	16%
Domestic	31.67	40.09	84.52	145.07	192.34	29%
Total	95.12	131.88	284.18	548.42	740.73	

Table 4.7 Outstanding Debts to NWSC Jinja Area by type of Customer Ushs (Amis/DAG/1992)

It was reported in the Senior Mangers meeting there was an existing overdraft at the bank of UShs 300 million ($250,000). Table 4.7 illustrates that it is the government which is the worst payer.

At the end of February 1993 there was a positive cash balance of UShs 46 million ($38,000) but a cumulative overdraft of UShs 342 million ($285,000). The Financial Director reported that there was a UShs 5 million ($4,100) commitment fee on the UShs 250 million ($208,000) overdraft facility.

The Uganda Electricity Board was owed UShs 482 million ($400,000) representing two months outstanding bills. Staff needed to be paid UShs 183 million ($152,000) and total receipts for the month might be UShs 806 million. ($671,000). The cash shortfall at the end of March was expected to be UShs 660 million ($550,000). The Departed Asians Property Custodian Board owed NWSC UShs 150million ($125,000) and UShs 50 million ($41,000) per month. There was a Promissory Note from

Government for UShs 741million ($617,500) for December. In a management meeting the question was asked if the note could be sold but *'no chance'*.

One means of increasing revenue was to maximise the sales through water points commonly known as kiosks. At present it is illegal to sell-on the water at kiosks so NWSC has registered the connection to the head of the most local Revolutionary Committee and encouraged the sale through the RC to the community. There was a tacitly agreed factor of 3 times to get to the agreed selling price from the NWSC tariff of UShs 4/90 per jerry can ($0.20 per m3) to the selling-on price of UShs 15 per jerrycan ($0.60 per m3). This should generate revenue of UShs 50-100,000 ($41 to $83)per month for the licensee.. However the tacit acceptance of this practice meant some were taking advantage and on-selling for UShs 50 or 100 or even 200 per jerrycan.

Marketing	Socio-economic	Average household income	na	
	Affordability	Lifeline tariff/Lowest quartile household income		
	Willingness to Pay	Average payment to private vendors	$2.08-$8.33/m3	
Financial sustainability	Average domestic tariff		$0.18-$0.26/m3	
	Average commercial/industrial tariff			
	Water supply sustainability	Costs [op cost+ dep+ RoFA/ consumption]/Weighted average tariff	1.77	
	Sewerage sustainability	Sewerage charge as percentage of average water charge	100%	
Profitability	Operating ratio	Operating expenses/Operating income	84%	62%
	Return on Fixed Assets	Profit (net income)/ Average Net Fixed Assets	2.42%	5.03%
Liquidity	Current ratio	Current assets/Current liabilities	6.7	4.12
	'Quick ratio'	Cash/Current Liabilities	0.53	0.67
Creditworthiness	Debt equity ratio	Long-term debt/Equity (gearing)	0	1.8%
	Debt Service ratio	Net Internal Cash Generation/Total Debt Service	2.85	15.70
Financial Efficiency	Days receivable ratio	Accounts receivable/Daily operating revenue	242 days	212 days
	Bill collection efficiency	Percentage of bills collected	55%	

Table 4.8 NWSC Financial Indicators ((Source: author's analysis of NWSC data, see Appendix II)

4.3 Chapter Conclusions

The results of this assessment suggest that in 1993 National Water and Sewerage Corporation showed signs of change, of wanting to change, of being committed to change, and of having some momentum for change. Much progress had been made over the past years. The pace of change may well have been slower than many wished but it appeared to have been paced according to the level of development and change in the country as a whole. It is presumably not practicable for a small (though important) parastatal with limited autonomy to move too quickly ahead of the level of development of many government institutions. However, by requesting a management development programme the leaders of National Water clearly indicated that they wished the organisation to be at the forefront of change in the country's institutions, not simply a follower.

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The institutional assessment demonstrates that in addition to this willingness to change there is also some confusion in the organisational structure with regard to grouping of function and lines of authority, a tendency towards management by patronage rather than by defined organisational authority, a lack of communication between the senior management and some of the middle management (but not the Area Managers) and a continuation of the past necessity for staff to have to concentrate more on personal survival than on meeting organisational goals. Institutional development could encourage a sharing of the corporate vision and a gradual building up of trust amongst all employees. However, there was significant overmanning.

The financial assessment shows that NWSC is not too unrealistic in its setting of tariffs having accepted the principle of using Kampala and Jinja to subsidise the small towns. However, it has major problems with its revenue collection, particularly from Government.

The individual training needs assessment showed a lack of management knowledge at all levels. Staff are competent functionalists (e.g. accountants or engineers) but do not have the management training to carry out their roles which may be up to fifty percent management. Many staff have clearly taken up the challenge of their management responsibilities effectively and would benefit from having a more structured framework for their management skills. Another group is functioning more as administrator/supervisors rather than as managers and would benefit from a clearer definition of their management responsibilities and authority as well as training in the skills to be used. There was therefore good potential for an effective management development programme.

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Institutional Development

5.1 Strategic objectives

Having determined where an institution is at present it is necessary to consider what an improved or developed institution would look like. This can be described as the strategic objective. Strategy (long term planning) takes into account future social attitudes, future consumer demands, future legal/environmental structures and must be considered in relation to future markets, future resources, future technologies and future organisation and management styles.

Traditional corporate planning was to a large extent an extension of the annual budgeting process. In a supposedly rational process goals were set, broken down into subgoals and the process of implementation initiated. In a stable socio-economic environment this traditional approach worked fairly well.

In a world of uncertainty the focus in developed market economies is shifting from systematic planning to implementation of action programmes which in the short run produce visible results against which the long term strategic plan can be further refined.

The fundamental difference between the two philosophies is that traditional planning assumes that all relevant knowledge is available at the beginning of the process whereas the 'new strategic planning' approach is designed to exploit information as it is required.

In organising a strategic review it is necessary to recognise the importance of analysing all the mutually reinforcing elements of success in each area of work, to provide visible commitment from the top, be prepared to remove organisational blockages, to 'sell' the ideas within the organisation, to measure performance clearly so as to provide fast feedback and develop systematic implementation by problem solving and systematic reinforcement of success. This approach therefore uses the planning process to create the self-reinforcing spiral of success

Defining the hierarchy of OBJECTIVES in an organisation

Part of the strategic planning process is to define the objectives of the organisation, that is its mission. This is the most fundamental statement of intent by any enterprise. It states the purpose of the organisation - its raison d'être. It should address:

- what 'business' are we in?
- what 'business' will we be in?
- what 'business' ought we to be in?

The mission statement is expected to be relatively short and differentiates the enterprise from other public sector organisations. It should not define the enterprise too broadly ('we're in the water business') or too narrowly ('we pump water through the treatment works to consumers')

In addition it is valuable for public sector enterprises, as with all organisations, to have 'a dream'. This dream or vision is something which can bind and motivate disparate groups towards a common end. It is described as shorter, and more 'punchy' than the mission statement. The vision should:

- Provide an image of success for the organisation
- Be challenging
- Nevertheless be achievable
- Be able to be shared by all staff
- Inspire.

Following the determining of the mission and vision, the organisation objectives are the more specific statements of what the organisation wishes to achieve in the future, usually expressed in financial terms, such as desired surpluses or return on assets, production costs and revenues. Performance Indicators of physical output and quality of service are developed to 'support' the financial objectives.

5.2 Institutional development - model institutions

Focusing on water utilities there are certain key issues in organisational design which have to be considered. The first focuses on the management of the water cycle with regard to integrating or separating the water supply, sanitation and drainage functions and whether this should be managed within the context of an overall river basin, that is a geographically defined area or whether the utility should simple be focused on an urban or rural district.

The second issue looks at centralisation or decentralisation. Centralisation provides absolute control, ensuring adherence to policies and enabling the use of common standards through the organisation. The high salaries of functional experts can be justified because centralisation enables them to work exclusively in their specialism. But control can become autocratic and inflexible which frustrates managers who are unable to use their discretion.

Decentralisation provides flexibility to meet changing needs at local level which is rewarding to managers because it enables them to use their own judgements and initiative, giving good managerial experience for personal development. But there is a danger that some decentralised sections may become narrow-minded.

Within the decentralisation argument there is the specific question as to whether urban water supply should be a section of the Municipality or whether is should be a separate utility. What makes water supply different from other businesses is that the most efficient organisation for abstracting, treating where necessary and transmitting large volumes of potable water will almost certainly remain a

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monopoly institution under the influence or regulation of government. However, within that monopoly provision there is a whole spectrum of choice.

To have an efficient water supply institution it has to be managed as well as any commercial business organisation. Water institutions have to escape from the vicious cycle of low revenue leading to shortage of chemicals and equipment and low remuneration of staff which leads to poor standards of service leading to even lower collection rates for tariffs and stronger resistance to tariff increases.

Private sector as *purchaser*

Railway transport?	Taxi rides?
Government as *producer* ————————	———————— **Private sector as *producer***
Armed forces	Road construction?

Government as *purchaser*
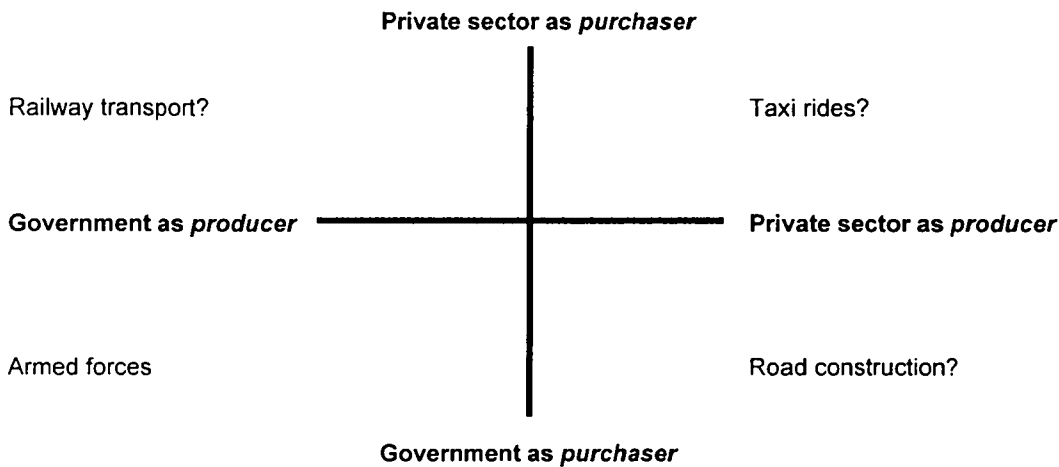
Figure 5.1

Roth (1987) demonstrates in Figure 5.1 the provider/puchaser split for services provision. It is not necessary for governments to meet both roles. The Working Party on Government Expenditures, Kenya, (Kenya, 1982) write that 'A major role of Government is to establish opportunities, effective incentives and appropriate polices to promote the mobilisation of private resources in the course of national development.'

Following from this, the 'revolutionary' solution currently fashionable is 'privatisation' - selling off the entire water sector to private individuals and financial institutions. An evolutionary solution in many cases is to introduce an institutional development programme, moving towards greater financial and managerial autonomy whilst remaining under government ownership.

However, it is not necessary to transfer equity to private owners in order to reap the benefits of privatisation. One possibility in use in Ivory Coast is what is known as the 'affermage' system whereby the government pays for the construction and installation of the water supply but then licenses a private company to run the system at agreed tariffs. Variations on this theme such as BOT are now being tried in Buenos Aires, Mexico, Malaysia.

Another possibility is that the Government (or it's water institution) should be seen as water wholesalers only. Municipalities or licensed vendors or community associations become more formally involved than they are at present as water retailers - taking responsibility for greater or smaller parts of the distribution system as they are able. Maheri (1990) tells of urban groups so impressed with the

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management potential of rural water committees that they have begun to demand the same procedure in the suburbs of the towns. A very good example of a 'moving of the boundaries'.

A single 'community water meter' simplifies the institution's work with a water community taking responsibility for all waste and illegal connections and tariff collection beyond that point. Within this whole approach is the assumption that consumers pay a sufficient tariff for financial viability of the institution and/or that where there are subsidies they are deliberate and measurable rather than simply the result of poor management. Willingness to pay then becomes more important than the traditional 3% to 5% guide for ability to pay.

These alternative approaches try to overcome one of the major problems of publicly owned organisations in that the employees are civil servants and come under the general personnel policy of the civil service. Huang (1979) points out that while performing similar duties to their counterparts in privately owned enterprises they are often paid considerably less. In addition, most civil services operate in a very rigid and bureaucratic manner, not conducive to the attraction of high quality workers and leading to the dampening of morale and creativity in existing staff. Managers are plagued with problems of keeping their systems going under conditions of severe resource shortage. "It should not be implied that managers in developing countries are less capable, on the contrary a successful manager in a developing country, having to work against such unfavourable odds is an example of resourcefulness which few managers in a developed country can match."(ibid)

5.2.1 Institutional models for infrastructure

Figure 5.1 illustrates a whole range of alternative models for a developed water supply institution as shown above. Leonard (1987) comments that "in African conditions the best project might well be the one that has done the least to directly manage its environment and has left the most to the play of market forces - for in the several developing countries for which we have evidence the institution today lacks the resources it needs and is no longer performing its intended function."

5.2.2 Privatization for WATSAN Institutions: Fashion or necessity?

The results of a questionnaire survey and literature search by Morales-Reyes (1992) suggest that privatisation is still a very new topic in the water sector. Consequently there are few experiences and only isolated studies available to assist the gestation of the process and the questions that arise such as: is privatisation the solution to the inefficiency of public institutions? Would it improve the service or be appropriate to serve the poorest?

Efficiency is the key point of discussion in the assessment of state owned enterprises or utilities since it has been argued that private involvement promotes efficiency. There are many reasons that promote the inefficiency of utilities, mainly political but also financial, Organizational and human factors.

Studies in other sectors have shown that a change in ownership does not necessarily improve efficiency and there

INSTITUTION		PROVIDER		PURCHASER
GOVERNMENT	*Characteristics*	**Wholesale (Bulk provision)**	**Retail (Distribution)**	
Government Ministry	Centralised government control			
Municipal Department *Regie Directe*	Centralised municipal control			
Decentralised Government Department *Regie Directe*	Encouraging autonomy at district or municipal level			
Semi-autonomous Utility Department *Regie Autonome*	Managerial autonomy			
Autonomous Utility Board *Regie Personnalisee*	Managerial, financial and legal autonomy			
Regulator	Ensures adherence to agreed performance standards including tariffs			
PRIVATE ENTERPRISE				
Services Contractor	Fees per task - conventional contractors			
Informal Sector or 'Mini' Contractors	Fees per task - small scale enterprises			
Management Contract *Gerance*	Fees proportional to physical output of fixed assets			
Shared Profit *Regie Interesse*	Fees proportional to output plus bonus or shared profits			
Leasing Contract *Affermage*	Agreed amount of tariff to lessee of fixed assets			
Concession Contract (BOT/BOOT) *Concession*	Agreed amount of tariff to concessionaire who has constructed fixed assets			
Private Equity	Profit from operations to shareholders who own fixed assets			
COMMUNITY				
Cooperative	Formal group,			
Community Group	Informal group			
Non Governmental Organisation (NGO)	Voluntary agency			
CONSUMER				
Household	Owner or tenant			

Figure 5.1 Institutional models for infrastructure

are cases of successful state owned enterprises that have been upgraded and are working efficiently as shown in the Sri Lanka study described below. However privatisation is used to describe more than just a change of ownership of an institution. It is also used to describe the growing involvement of the private sector in a state owned organisation.

The study has shown that there is a general lack of information and analysis on privatisation in low-income countries, a situation that is worse in water enterprises since the better studies that are available are not related at all to water and sanitation.

However the indications are that financial efficiency may improve under private involvement provided that an adequate political and economic environment exists. But there must be effective regulatory systems.

Brief descriptions of privatisation experiences have been found in the literature describing management contracts in Guinea (financial improvement following an increase in tariff collection from 15% to 70%) and Mexico, leasing contracts in Cote D'Ivoire (tariff reflects real costs, staff are trained and adequately compensated) and the Indonesian process towards concession contracts (primarily to meet industrial needs for water).

There are a range of types of private involvement from vendors selling water on the streets through community management of rural systems to total transference of control and ownership of an organisation. Within that range there can be cooperatives of vendors, small services contracts as well as leasing and concession contracts. The experiences in the high income countries provide valuable lessons such as the necessity of a developed regulatory system and the continuing role of government as facilitator; nevertheless the conditions of application differ greatly from those of the low income countries.

To localise, classify and analyse experiences in privatisation Morales carried out a survey. Completed questionnaires (36% response rate) were received from 91 respondents in 35 countries (65% Africa, 15% Asia). Services contracts (89%) followed by vendors (71%) were the most frequent use of private enterprise described with very few instances of change of ownership. However there was a trend towards an increase in management contracts with 43 cases described as planned. Twenty seven respondents report plans for future privatisation (30%) ranging from major village water supplies through meter reading, billing and collection contracts, operation and management of water treatment plants, private water tanker services, management of water distribution networks to leasing contracts for all operations and two sales of water utilities.

Information determined by direct letters and interviews shows an even greater number of organisations planning privatisation in, for example, Mexico, South Africa, Panama, Argentina, Philippines and Hungary.

However, it is apparent from the study that many organisations are moving towards greater involvement of the private sector with uncertain goals or objectives. Management fashion appears to suggest that privatisation is the solution to all ills. Morales in the conclusion to his study recommends that the process of private sector involvement should not be subject to strong pressures towards fast privatisation of distribution systems but to experiment with two or three pilot programmes in any country before moving forward. 'In the public sector the water companies should continue the process of development, decentralisation and increasing financial autonomy. These processes can ensure a more steady progress that may avoid big social problems and give better resources allocation although they will also imply higher tariffs reflecting the real cost of water services.'

Privatisation examples

Programmes of privatisation are now being experimented with in all parts of the world. In Sri Lanka the government prefers to describe its programme as 'peoplisation'. Financial experts say that will merely mean 'more of the same old mess'. They could well be right, as they are presently managing to lose $120M per year. (Economist, 1992) The Vietnamese prefer to call it 'equitising'. (Economist, 1993) and in Kerala the authorities talk about 'involvement' so as not to antagonise the unions.

Sydney's water authority is to be divided into private-sector trading and core service divisions, a restructuring that will end what is regarded as the last bastion of public sector engineering in Australia. Consultants are devising a new management structure for the core activities and the best method of disposing of the water and sewerage operations to private firms.

The Water Board's Managing Director only partially supports privatisation having cut staff from 17,500 to just 9,000. 'I aspire to run a public sector organisation which looks and behaves as much like a private company as possible and I believe corporatisation can do this as efficiently as privatisation' he says. Three new water treatment plants will be built at a cost of $430M under the Board's new Build, Own, Operate and Transfer scheme with the plants remaining in private operation for 25 years before returning to public ownership. This concession has been won by a UK utility, North West Water. While the separation of the Water Board activities may prove a success, continued ministerial influence will cause problems. How this is resolved will determine the Board's future. (World Water, 1992)

In the UK, consultants are recommending the widespread privatisation of 'white collar' local authority services. An extension of compulsory competitive tendering to legal, financial, accountancy, engineering, building related, information technology, environmental health, trading standards, libraries and other professional services is presumed to follow pioneering privatisations by several councils such as the planned contracting out of the entire budget-making process by South Oxfordshire District Council. The bid for taking over the budget-making function at South Oxford for a fee of £28,000 follows an in-house tender for £15,000 (highest external bid £75,000) and includes rates for

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additional work priced between £220 per hour for a partner to £45 per hour for an assistant manager. Extra work on the rejected in-house bid was at a flat rate of £20 per hour (Independent, 1991,5). In a low-income country all would assume they know the reason for such an oddity.

'It is unclear how far the government intends to go with enabling authorities and compulsory tendering but if councils employ only a few people with virtually all services contracted out, then this is a very fundamental realignment of what we know as public service' Cottell (NCE, 1991). A benefit of compulsory tendering will be to clarify the costs of services - 'It will make people think about the cost implications of what they are doing. Too much in local government is done without any thought over whether the task warrants the cost. It will also be good for people to have to specify clearly what it is they want delivered.'

British Water Companies have won contracts worth over $750M to provide water supply services in Mexico City. The ten year contracts were awarded in joint venture with Mexican partners. (The other two quarters of the city were awarded to French companies in joint ventures). The contracts are for mapping of consumers, installing water meters, providing a new billing system, meter reading operations and collecting payments. Stage three includes the repair and maintenance of the system (NCE, 1993). This represents a very considerable risk to the external companies.

In UK there have been undoubted successes as a result of privatisation. Thames Water has apparently doubled the productivity of its staff due to privatisation. Leicester City Council used to have six gully emptiers to empty all drain gullies every two years - though in fact some were don six times per year and some once in two years. After contracting out the service, the new contractor empties all gullies twice a year with two gully emptiers (Trinnick, personal communication, 26/2/91).

In India it has been found that the cost of operating a company vehicle is three times that of a contractor's price (BBC, 1991). It is reported that the Indian Government proposes to privatise municipal services like garbage disposal, street lighting and road maintenance, but the Urban Development Minister denied there was any move to privatise the municipal bodies (Hitavada, 1992,3).

Dar es Salaam City Council decided that it could not continue to be the provider of subsidised services due to the limited central government financial subsidy and poor revenue collection. 'A new partnership approach to city management is therefore required, which broadens the range of actors involved to include the private sector and community based organizations' (Dar es Salaam Declaration, 1992).

'Experience world-wide demonstrates that there is a relationship between public ownership, political interference and under-investment; and that the necessary regulation of water supply monopolies is likely to be more effective when they are privately owned and managed than when they are in the

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public sector. There are no compelling reasons for the public ownership of water services. The fact is that governments, or their municipal arms are ill-equipped to engage in the production and supply of goods and services. The proper role of governments should be limited to those matters which cannot effectively be dealt with by private individuals and organisations. If governments extend their role to business the result is invariably bad.' (Carney, 1991)

5.2.3 Institutional Development without Privatization

However, in an interesting contrast to the research on privatisation as a solution to management problems, Tillekeratne (1992) has completed a study on institutional development in the National Water Supply and Drainage Board of Sri Lanka.

This programme emphasised decentralisation (including delegation of financial responsibility), management development (with training courses, day to day coaching by the consultants and regular workshops), corporate (strategic) planning, financial viability, human resources development and community participation.

NWSDB in 1983 before the project commenced was functioning reasonably well in terms of engineering design and construction of new schemes. However the tariff collections only represented 12 per cent of the operations and maintenance cost with nothing going towards capital costs. The operational deficiencies were summarised as negligible emphasis on operation and maintenance, minimum commitment to financial viability, negligible accounting or budget discipline, lack of strategic planning, little attention to community or users, reliant on government subsidies and totally reactive to political pressures.

An institutional development project was set up in 1984 at the demand of the major donors who wanted to see an increased level of accountability and a greater return on their investments. External consultants (Engineering Science) were employed to guide and assist with WASH providing monitoring and evaluation.

Four key strategies were adopted to achieve successful institutional development. These were inculcating ownership, developing team spirit, establishing a corporate identity and involvement of external environment.

The project has been a success as can be seen from the table of key indicators:

Indicators	Before project (1984)	End of project (1990)
Water supplied	155	219
Billed connections	79,000	185,000
Connections/employees ratio	13	26
Billing (Rs million)	224	503
Billing lag time (days)	180	30
Collections (Rs million)	56	422
Collections (%age O&M cost)	31	99
Complaints (%age connections)	>10	3

Table 5.1 Performance Indicators for NWSDB, Sri Lanka

This tremendous progress has continued with a surplus on operations at the end of 1991 which for the first time also covered debt service on investment programmes.

Progress was not so good initially when the consultants introduced a 'sudden shock' approach to development, questioning numerous areas of the Board and recommending changes. 'There was a reaction by staff, but over a few months the problem tended towards the more traditional philosophy of gradual change. The positive results of the sudden shock approach was that the institution was forced into addressing the issues of change. As the project progressed and the initial resistance began to subside, a strategy was mapped out to arrange the consultant input in such a way that success could be achieved in key areas which would in turn generate increased support for future change.

Institutional development takes commitment and time but the results from Sri Lanka are very encouraging. The benefits have even been extended directly to the staff who received a 30% salary increase (not extended to other government employees) in recognition of their achievements; this increase begins to bridge the remuneration gap between public and private enterprises (Tillekeratne, 1992). Focusing on one district, the development programme lead to an increase in monthly billings of 25% with the billings to collection ratio changing from an average of 53% in the eleven months before the new policy to an average of 105% in the ten months following. The increased management determination utilised a disconnection policy to achieve this improvement with an average of 0.44% of the 4990 connections being disconnected each month (maximum disconnection rate of 1.04%) with users being charged the cost of disconnection before reconnection. A similar response was obtained from the standposts where a 100% collection rate was achieved following a strict disconnection policy. Responsibility for the standpost was shared out between the 5 to 25 families using the standpost (Kulatilake, 1989).

A similar programme with the Provincial Waterworks Authority Thailand transformed an operating loss of 38 million Baht into an operating surplus of 188 million Baht, with the volume of water sold increased by 25%, the number of connections increased by 31% and number of connections per employee rising from 65 to 85 all within four years (Philpott, 1988).

Institutional development, as with all development, is often a slow process with no instant solutions. "All too often we enter into the realm of political fantasy when we talk of what we hope to achieve. Change will only come gradually, with luck and good timing, and at the cost of difficult changes in donor operations as well as in the host countries."

"Institutional development is inherently a process of human interaction and brings with it the need to develop and maintain trust. Human change requires the consent of the client, no matter how well intentioned the change agent."

The goal is a developed institution that has positive performance indicators in key areas and is capable of self- development. It has the proper systems and procedures in place and it performs its mission. "The goal of institution building is to create the skills and procedures for self-sustained development. The basic strategy is a two fold process of improving institutional performance (showing results) and training, both at the same time." (Carefoot and Gibson, 1984)

Sanepar, a major city water utility in Brazil carried out a successful institutional development programme. They report that the lessons learned were:

- Staff motivation is essential for development
- Results orientation may provide a stimulating challenge
- Good products sell better than bad ones
- Appropriate and accurate information is a must for good decisions
- Technical development must be backed up by staff preparation and institutional improvements
- Political pressure may seriously hamper development
- Task oriented job descriptions are a good basis for planning training
- Clearly stated objectives and a common goal are basic ingredients for motivating staff
- Teamwork makes the work easier and more enjoyable (WHO/SIDA, 1991)

However, it is also clear that the major factor was the character and the drive of the Managing Director. He was only in post for a few years and generated a significant change during that period. But following his transfer to another post in government the company began to slide back into its old ways. This may be seen as another argument in favour of privatisation.

5.2.4 Programmes

Whatever the model chosen, some form of institutional development programme will be required. Development of institutions, both formal and informal, to carry out the tasks described, as in all development, has to come from the people involved. "An institutional development project focuses on the development of comprehensive organisational systems and the people within the system which make them work."(Edwards, 1988) External bodies and donors and even NGO's can enable and encourage this process through human resources and institutional development programmes. But only if there is a willingness and commitment amongst the senior staff of the institutions involved.

Initially it is necessary to establish the principle of working through existing government institutions (or newly created institutions with a long term future), avoiding the temptation to create special project units. "It seems preferable to start from a central structure and reinforce it through projects which it implements by itself, with the help of well controlled project units and NGO's as required. These can subsequently be organised in permanent structures (as programmes expand through replicable projects)." (WHO, 1986)

Edwards (1988) believes that a core group of leaders is needed in order to start. "If there is no willingness to change, an institutional development programme is probably not a good idea".

Leonard (1987) agrees that "leadership is second only to a congenial policy environment in its importance for project success." He points out that the developed economies have some insight but no 'technology' to transmit on how to enhance leadership. "Leadership is very hard to affect through training and is not susceptible to the deductive rationality that is the hallmark of Western management science."

Shearer (1988) also agrees that the best source of improvements is an enthusiastic manager (or leader) who is committed to discovering and implementing improvements. He recommends the use of performance indicators to designate areas for improvement. "Resources are usually scarce and broad performance indicators can be used to direct those scarce resources rather than attack on a broad front. Having selected priority areas it is useful to put down a target to be achieved. Ideally this should be achievable within one financial year but be backed with a longer term target for the ultimate goal. The target should be made personal to one accountable manager, and its achievement should be linked to the personal appraisal system."

Edwards also describes the importance of government willingness to improve, consumer demand for a better service and economic factors that would sustain the cost of improved services as important components for success. Paul (World Bank, 1990) emphasises that institutional diagnosis is never complete without an assessment, implicit of explicit, of the capacity and will of the relevant leaders to support reform. It is necessary to identify those leaders who are critical and explain the proposed institutional tasks and their implications. Then to ascertain their willingness (formally or informally) to allocate the required resources whilst cross-checking their responses with other interested people including bureaucrats for realism.

The implementation of a development programme requires components of management development, systems and procedures development, human resources development, structural and organisational adjustment and physical inputs. It also requires outsiders who can work alongside institutional staff without needing to tell the staff 'the right answer' or trying to solve the problems themselves. Edwards (1988) describes it as 80% communication, trust and patience and 20% expert knowledge, all of it being training. A programme also requires counterparts (management consultants?) who are receptive to new ideas, who have the necessary time available but who also have the influence to disseminate ideas within the organisation. Regular workshops for communicating ideas and progress and for determining the institution's own solutions are also useful along with an understanding that development of a national institution takes five to ten years.

According to Edwards a comprehensive institutional development project should include:

- Management development - support and coaching for managers through consultant/counterpart relationships (not simply management training courses) and a recognition of the role of incentives including career progression as well as remuneration;

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- Systems and procedures development - enabling staff to see the need for improved systems and assisting staff in the development of their own improved systems;

- Human resources development - "a developed institution is a learning institution" for the institution must be able to go on learning and training its own staff out of its own resources in the long term;

- Structural and organisational adjustment - changes to the organization chart are not crucial but WASH (Edwards, 1988) report that there is often a tendency for power and authority to concentrate around a single person and this can usefully be rectified;

- Physical inputs - the timely provision of transport, equipment, computers and other items (computers, vehicles etc);

- Clearly defined performance goals

Human resources development

It is the role of the manager of the programme to consider all aspects of human resources development. Carefoot (1987) suggests that deficiencies in human performance, particularly with regard to basic needs utilities (for example water and sanitation), can generally be traced to one or more of the following causes: lack of skill or knowledge; environmental and/or management difficulties; motivational, incentive or attitudinal causes. If lack of skills or knowledge is the primary cause of a performance problem, training is the likely solution. However if problems stem from environmental and/or management causes, or from motivational causes, they will probably not be solved by training alone. In a number of surveys, managers involved with water and sanitation programmes have estimated that only 10-30 per cent of performance difficulties are due to lack of skills or knowledge which can be rectified through training.

A 'dual-focus' approach is therefore advised by Carefoot where solutions to performance problems are sought. This focuses on both the individual and the system within which the individual works. He suggests that personal skill development must be complemented by the strengthening of the organisational environment, whether formal or informal, in which the person works.

Training

For human resources development the people who might need to be involved in a programme must be considered:

- Householders
- Community leaders and councillors
- Artisans and craftsmen
- Local contractors
- NGO staff
- Programme and project staff including the different functional specialists of: public health engineers, architects, physical planners, medical officers, behavioural scientists, anthropologists, health staff, geologists, economists, administrators;

If training is to be relevant and is to produce the desired results, it must be planned systematically. The objective is to enhance a persons breadth and depth of knowledge about their particular responsibility.

It is also aims to improve their ability to carry out particular tasks. In order to do this a process known as the training cycle is followed. This same cycle may be followed for householders as well as for professional engineers.

Preparation of any training programme begins with an assessment of training needs. This requires an organisation chart describing the different jobs to be carried out in order to complete the objective. The objective should not be limited to completion of initial construction but should include operation and maintenance also. Each of the jobs listed then requires a job description, that is a detailed list of the tasks to be carried out by a person in that position (whether or not employed by the programme). Comparing the job description with the knowledge and skills of people likely to be available to do a task leads to a list of training needs. A training plan is prepared from the list of training needs having determined the main priorities. The plan should specify the people to be trained with target dates for completion and objectives for what might be accomplished as a result of the training.

Implementation of training depends upon whether the needs are for:

- knowledge - where lectures and books are particularly useful;
- manual skills - step by step development through demonstration, participant practice and correction of faults, concentrating on key areas;
- social skills - use of role-playing, case studies, discussion, practice under supervision;
- attitude - group discussion, personal interview, case studies and feedback;
- or for systems, for example clerical procedures and stock control - provide check-lists, demonstration and practice with correction (Carefoot, 1987).

The final phase of the training cycle is evaluation of what the participants have learned and determination of what they are subsequently able to do. This leads back to a re-assessment of their training needs for the next training session or programme. It is recognised that training and education is a continuous process which starts from what people know and enables them to build upon that foundation of knowledge.

There is always opportunity for further learning; it cannot ever be said to have been completed which is why management gurus now talk of 'The Learning Organisation' as being a necessary requirement for organisational survival.

Institutional development, as with all development, is a slow process with no instant solutions. "All too often we enter into the realm of political fantasy when we talk of what we hope to achieve. Change will only come gradually, with luck and good timing, and at the cost of difficult changes in donor operations as well as in the host countries." (Leonard, 1987)

"Institutional development is inherently a process of human interaction and brings with it the need to develop and maintain trust. Human change requires the consent of the client, no matter how well intentioned the change agent." (Edwards, 1988)

The goal is a developed institution that has positive performance indicators in key areas and is capable of self- development. It has the proper systems and procedures in place and it performs its mission. "The goal of institution building is to create the skills and procedures for self-sustained development. The basic strategy is a two fold process of improving institutional performance (showing results) and training, both at the same time."

5.2.5 Anti corruption measures

No training programme will be effective unless the organisation and management is ready to use the new skills. And in a low-income country no institutional development programme can be effective in the long term where corruption remains endemic, leading to ineffectual decision-making. It does not follow that raising pay scales will significantly reduce corruption. If nothing else changes, the now slightly richer official will see that he can make (more) money by being corrupt. A salary increase will not make much difference to incentives at the margin. (Klitgaard, 1988:77) Plana in Philippines, Bureau of Internal Revenue states that it is necessary to establish a new performance evaluation system, collect information about corruption and then punish corrupt high-level officials quickly. (op cit, :52). Also recommended are : professionalising staff, identifying corrupters, toughening up control systems, changing laws, tightening central control over regions, rotating staff and changing attitudes towards corruption

"You got it from your father, it was all he had to give
So it's yours to use and cherish, for as long as you may live.
If you lose the watch he gave you, it can always be replaced
But a black mark on your name, Son, can never be erased
It was clean the day you took it, and a worthy name to bear
When he got it from his father, there was no dishonour there,
so make sure you guard it dearly, after all is said and done
You'll be glad your name is spotless, when you give it to your son"

This poem has been quoted by Plana to shame transgressors in a letter to all BIR employees (unattributed in Klitgaard, 1988) where the particular culture meant that the shame attached to being caught led several senior staff to commit suicide.

5.3 Chapter Conclusion

There are no world-wide specific answers available for institutional development. However, certain trends can be seen for institutional development and sustainability. Leadership is to be encouraged and supported wherever it is found. Teamwork and many of the other ideas of management and institutional development current in OECD countries have application in low-income countries.

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Centralised water supply will tend to come from semi-autonomous commercial organisations which are self-financing through viable tariffs, with varying degrees of contracting out of functions to private enterprise. The use of special project units must be limited. At the other end of the supply spectrum community water committees will be equally financially self-supporting through their own collection procedures, taking expanding responsibility for ever larger areas, perhaps as retailers of water supplied by a commercial wholesaler. Utilising the support of private enterprise engineers, workshops and spares procurement. Individual households will be taking responsibility for purchasing, building and maintaining sanitation systems of their own choice with substantial support from private suppliers and contractors.

Various approaches have been used to improve the management of water utilities. The dual focus approach recommended by Carefoot (1987) appears to be valid in that both the institution and the staff working within it have to change in order for there to be lasting improvement.

Following the analysis of National Water and Sewerage Corporation and the description of the different approaches to improvement in this Chapter the following Chapter considers a management development programme for NWSC.

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Management development and change management in Uganda

The analysis described in Chapter Four indicates that the National Water and Sewerage Corporation of Uganda would benefit from an institutional development programme to overcome its existing weaknesses and to extend the quality and quantity of its coverage to its customers. The first step is to consider a strategy for the Corporation to follow to achieve its strategic goals. 'Strategy is the direction and scope of an organisation over the long term: ideally which matches its resources to its changing environment, and in particular its markets, customers or clients so as to meet stakeholder expectations.' (Johnson and Scholes, 1993) The major stakeholders are the consumers who own the public service through their government. Their expectations are for a quality supply with guaranteed reliability at an affordable distance from where they want to consume the water.

6.1 Strategic Choice and Strategic Implementation Strategies

Porter describes the alternatives available to achieve competitive advantage as lower cost and differentiation with different degrees of focus. Johnson and Scholes (1993) write of matching the organisation activities to the environment and to the resource capability which is maybe pertinent in this context. However, the goal of any consumer of a monopoly provider must be to secure a low price and therefore one strategic option is to make cost reduction the goal. Product differentiation is a possibility in terms of the means of water service provision - house connections, yard taps and standposts.

At present, lack of revenue is a significant restraint on all other strategic alternatives and so the reduction of costs and the enhancement of revenues through increased bill collection efficiency and tariff enhancement must be considered.

In marketing terms the options are :

PRODUCT	Present	New
MARKET Present	Withdrawal Consolidation Market penetration	Product development
New	Market development	Diversification Related - backward, forward, horizontal Unrelated

The option of withdrawal is not available in this context, consolidation would be well received by some consumers and penetration of the existing service areas with an effective service would also be considered helpful. The development of new markets, that is extending service into the surrounding areas is an option for an urban water supply service. In the basic needs sector for health, product development cannot be seen as an option. Diversification into related and unrelated products and markets has been an option for other water utilities, for example in UK recently, but is not a realistic option in Uganda at this time.

Consolidation and penetration of the existing market with the existing product are the key issues for NWSC in order to sustain political credibility and donor credibility.

The major strategic options facing NWSC therefore concern the institutional arrangements for managing the supply of water. The most obvious and 'revolutionary' choice is privatisation. Johnson and Scholes (1993, p 271) describing public sector strategies considering privatisation in the USA write that 'the overall conclusion is that establishing a clear positioning strategy is the most important single issue for organisations as undifferentiated size is no longer the basis of a sustainable strategy.'

Porter (1990) describes privatisation as 'dis-integration' which seems a fair description of the possibilities of increasing involvement of the private sector in different activities of water provision. Coyaud (1988) describes a whole range of institutional strategies including services contracts, management contracts (gerance and shared profit)) leasing contracts, concession contracts in addition to transfer of equity as in the UK model of privatisation.

Along with privatisation approaches there are also possibilities for consumer or community involvement in management of small town water supplies, thereby divesting NWSC of that responsibility. There is also the potential for revitalising the existing institution through management development. However, this approach in Uganda is faced with the apparent mismatch between individual and organisational goals as most evident in the continuing problem of corruption - 'eating'.

In terms of options there is also the potential for mixing up these different ideas of parastatal, private company and community co-operative by varying the approach according to size of town and by

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splitting up the concepts of production and transmission (manufacture and wholesaling) from distribution (retailing).

Selection of most appropriate strategy

Strategy is 'prioritising tactics'. Strategy is to set goals which 'stretch' a company beyond what most of its managers believe is possible (Economist, 1993,106). PIMS suggests high investment intensity will produce low profitability, low added value per employee leads to low profitability but high market share leads to higher profitability (PIMSLETTER, undated). The growth of market is indifferent to percent measures of profit but quality, defined as the customer's evaluation as compared to competitors, has favourable impact. Innovation produces a positive effect on performance but little innovation is in sight; vertical integration is good in a mature market - NWSC is highly integrated, carrying out all functions but not effectively.

This does not give any clear guidance for a monopolistic basic needs water supplier. However, the 'criterion of 'acceptability' in strategic choice is probably of greater importance in the public sector than in the commercial sector' (Johnson and Scholes, 1993, p29). In the context of medical health the same authors suggest (p219) 'by separating providers and buyers, buyers would only use the services of those operators who could provide them efficiently in such a way as to meet the demands of the patients. The pressure would grow for providers of the service to seek better value.'

For basic needs supply of water the critical aspects are market penetration and then consolidation. People know what they want, they are simply unable to receive it. With such a large unfulfilled demand there is no need to follow the UK approach to product and market diversification. There is also no advantage in full scale privatisation as there is no local equities market. Leasing and management contracts which at present in the world are all being taken by European countries are presumably not acceptable in the sense that it is unrealistic for low-income, basic needs consumers on an average income of $140 to pay the salaries of foreign experts costing $150,000 per year.

The chosen strategy somehow has to involve revitalising local institutions and local staff to provide an acceptable level of service for which consumers are willing to pay among the competing claims of their basic needs. Tariffs have to rise but in such a way that those who receive most of the benefits at present (the rich) pay significantly more for their high level of service in order that the poor may receive their basic needs. Revitalising the institutions means that all aspects of the value chain have to be improved so that the institution is working efficiently.

The author believes a viable option is to 'privatise' the distribution of water by leasing the existing pipe small diameter network (< 200mm) to community/co-operative/private institutions who will take over the responsibility for selling the water and collecting the revenue. Meanwhile the existing parastatal

would be revitalised by a management development programme with particular emphasis on giving managers responsibility and authority to manage whilst enabling them to meet their personal responsibilities.

Implementation of most appropriate strategy

Johnson and Scholes (1993, p401) talk of the need for 'symbolic activity' in managing change. This is perhaps one of the best arguments in favour of a privatisation approach to bring about a revolution in management thinking. Without that possibility, the symbolic change that would be of most value to the Corporation is to do with the diminishing of 'eating'. Until the junior members of staff know that decision-making will be done on vaguely rational or political basis there can be no progress with the very necessary revitalising of the institution.

The contracting out by leasing various components of the Corporation's activities is another significant symbolic activity. Both steps are vital to bring about the type of management change that is required. The final suggestion to enable the managers to become more aware of what they are trying to achieve is to introduce some form of Priority Based Budgeting System with managers being responsible for considering and costing the alternatives within their span of control and senior management, acting as a ranking and review panel, being forced to define what is expected of their staff and with what resources.

6.2 Management Development Programme

The starting point for development in NWSC was decided, by the funding agencies (primarily the World Bank), to be a training programme. Training was seen as the key rather than institutional development per se. The author, acting as institutional and management training expert, was required to prepare a management development programme. The target group for training in general management techniques was initially specified to be Deputy Heads/Area managers (Middle Management) but was immediately widened to include the Heads of Department (Senior management) at their request. Additionally, a result of the training needs assessment was that many in this level of management felt that the training would only be effective if some form of management training was also undertaken with the next level down in the organisation.

This level of staff are described in some NWSC staff lists as 'Middle Managers' or 'Professionals' and examination of their current roles indicates that they are not functioning as managers.

However, particularly in the areas, in the occasional absence of the Area Manager, one of this grade of staff has to take over responsibility as acting Area Manager. In addition the point is made that for Area Managers to be successful they need considerable support from their subordinates. Therefore, in order

to implement any new thinking arising as a result of the training programme they would need to rely upon the efforts of these subordinates.

Heads of Departments	Deputy Heads	Area Managers	Junior Management
(Managing Director)	Systems Supervision	Kampala	Area Engineers
Operations Manager	Engineer	Jinja	Senior Personnel Officers
Corporation Secretary	Workshop Manager	Entebbe	Senior Accounts Officers
Finance Manager	Training Manager	Mbale	
Chief Engineer	Chief Chemist	Tororo	THIS GROUP
Personnel and	Chief Accountant	Masaka	REQUESTED TO BE
Administration Manger	Senior Personnel Officer	Mbarara	TRAINED BY SOME
Chief Internal Auditor	Chief Security Officer	Lira	HEADS OF
	Legal Officer	Gulu	DEPARTMENT AND
	Public Relations Officer		AREA MANAGERS -
	Senior Supplies Officer		ALTHOUGH NOT IN
			ORIGINAL TARGET
	PIU Project Manager		GROUP

Table 6.1 Proposed posts for management training

6.2.1 Approach - Definition of objectives and targets

The Programme Objective for management training was assumed to be to enable the management team to make NWSC as effective and efficient as the best water utilities in Africa. The specific project objective was to enable managers to provide effective and efficient service delivery through institutional development and management development (training).

As a result of the management training NWSC managers should be using techniques of strategic and time planning, financial awareness, staff development, leadership, team-building and communications, public relations and computer based modelling techniques for delegated decision-making.

Specific targets for service coverage, water quality and financial returns were to be determined as a result of the management workshop programmes. Outline targets are suggested in the Summary Project Matrix in Table 6.2.

6.2.2 Proposed training programmes

Developing management capability requires a series of planned activities such as training workshops and on-the-job monitoring of new behaviour to reinforce new skills and attitudes. It has to be part of a

broader programme of institutional change which requires an organisation that is receptive to change and is involved in monitoring its own performance.

If the management development programme could be structured to reinforce the institutional development programme and the institutional development programme provides the opportunity to apply new skills and receive consultant support both programmes can benefit immeasurably. However, in this case there was no overt institutional development programme to support the training.

Project Framework	Target Objective Indicators	Methods of measuring & evaluating	Assumptions
Programme Objectives NWSC to be as effective and efficient as the best water utilities in Africa	95% Service coverage at acceptable quality for 24hrs/day ROFA 5%	Consumer surveys Laboratory and pumping records Accounts dept	Government approves necessary tariff increases and pays ministry bills Senior management delegating appropriate authority
Project Objectives To enable managers to provide effective and efficient service delivery through institutional development and management training	80% Service coverage at acceptable quality for min 12 hrs/day ROFA 0.1% Bill collection efficiency at 80%	Consumer surveys Laboratory and pumping records Accounts dept	Delegated authority Resources available for operation and maintenance incl chemicals, spares, vehicles, equipment, telephones and remuneration
Outputs NWSC managers using time planning, finance, staff development, leadership and communications techniques for delegated decision-making	100% monitorable plans and budgets for each manager's span of control 100% job descriptions & specifications and annual appraisal for all staff All mangers with defined responsibility and authority limits	Senior managers reports Finance Dept records Personnel & Admin. Dept records Organisation chart	Managers motivated and trusting about prospect of change Managers & Deputy Heads left in posting for sufficient time, at least two years
Inputs Management and institutional development:- Workshops Self-learning materials Fellowships & courses	100% Senior management attending workshops 50% using self-learning materials 50% using fellowships	Training Manager's records Personal Career Planners	Inception report acceptable Contract continuing Funding available

Table 6.2 Proposed management development and training programme summary

Training plan

As a result of the assessments it was proposed to carry out the management development programme using a combination of management workshops, fellowships and self learning facilities. Two workshops were proposed for Senior Management, the first at the end of July 1993 and the second in March 1994. Three workshops were to be held for Middle Management, the first at the beginning of August 1993, the second in March 1994 and the third in August 1994. At least two workshops were to be held for junior Middle Management, the first in March 1994 and the second in August 1994. Further workshops at this level were to be planned after the results of the first two had been assessed. Workshops for senior managers were to concentrate on perceived issues of relevance to Senior Management:

- Corporate Planning

- Performance monitoring and management information

- Leadership and organisational behaviour

- Commercial and financial responsibilities of service organisations

- Consumer/customer orientation and marketing.

The focus of the Middle Management Workshops was to be on:

- Planning and implementation of organisational goals

- Computing for management and information systems

- Finance for non-financial managers and budgeting

- Leadership, team-building, delegation and staff development

- Communications skills

-

All workshops sessions were to utilise case studies, group problem solving, simulation exercises, role plays, video presentations, and introductory talks with printed back-up material.

In addition to the workshops, self-learning materials were to be made available to Senior and Middle Management within NWSC and also Fellowships for Study Tours and special courses in UK.

6.3 Implementation of management development programme

The programme described above was implemented after some delays in fixing the dates of the initial seminars. Three sets of seminars were held. The first in August and September 1993 for Senior Management at the Lake Victoria Hotel over a three day period and Middle Management at the Uganda Management Institute, Kampala for five days. In addition to the Heads of Department the Senior Management Seminar was attended by the Managing Director and several members of the Board.

The second series of workshops took place at the Equatoria Hotel, Kampala in an attempt to reduce costs for the Senior Managers and improve food and status for the Middle Managers. The Senior Managers' Seminar lasted for one day only and the Middle Managers for three days. The reduction in length was to try and ensure full attendance and overcome the temptation for participants to feel 'we have done all that once already. Although 'on leave' both the Managing Director and the Operations Manager attended the Senior Managers Seminar though the Chief Internal Auditor decided not to. The Middle Managers Seminar had more than expected participants as some who had been transferred since the first seminar still attended.

The third series of workshops was held in July 1994 at the newly completed NWSC Training Centre, sandwiched between the Sewage Treatment Works and the waste dump for the city abattoir. However, this location did not adversely affect attendance with increasing numbers on the middle Managers programme and only the absence of the Managing Director from the Senior Managers Seminar who

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was studying at Harvard. There was designed to be an overlap of one day between the seminars to bring both groups together to discuss important themes openly.

6.3.1 August/September 1993 Seminars

Senior Managers Seminar1

As the seminars commenced it was necessary to come to a common understanding of the nature of management and define what it was that was desired to be developed. Table 6.3 defines the main components which were perceived as being of relevance to NWSC managers.

The Seminar was entitled *'Achieving Excellence through Total Quality Management'*, hence its position under all three categories of Knowledge and Skills and Attitudes. Although it was not believed that NWSC was in any way ready for TQM it was felt to be a useful vehicle of an apparently 'new idea' with which to capture Senior Management's interest and involvement.

KNOWLEDGE (Theory)	SKILLS (Practise)	ATTITUDES (Beliefs)
Total Quality Management	*Total Quality Management*	*Total Quality Management*
Public service organisations and basic needs,	Leadership and motivation	Personal motivation
Social equity, public health and cost recovery	Networking liaison/dissemination	Perception of status; attitudes towards remuneration
Planning theory; strategic and corporate planning	Team Building	Belief in personal skills and development; self-worth in institution
Marketing Information, Education and Communication	Conflict resolution negotiator/disturbance handler	Perception of facilities and working conditions
Management and organisation theory	Entrepreneurial skills planning and risk-taking	Attitude towards colleagues
Institutional analysis and development	Developing unit goals and performance indicators	Flexibility and quality in work
Organisational behaviour and psychology	Information-processing monitor/disseminator/ spokesman	Perception of management culture; respect for management
Human resources management	Communication skills, listening, presenting, meetings	Attitudes towards responsibility and authority
Financial accounting and management accounting	Resource-allocation skills	Customer orientation
Economics	Delegation and organisation of work; time management	Commercial orientation
Technology, engineering and production management	Skills of introspection self-development, learning strategies	Attitude to corruption
Project and contract management .	Planning, goal setting, personal strategy,	Felt need for change Beliefs in institutional future
Management information systems, decision support systems	Decision-making skills	Perception of institutional standing; inter-unit relationships
Administration and law	Customer relations & customer care	

Health and safety and security	Micro computers	
Environmental management		

Table 6.3 Knowledge, Skills and Attitudes for Managers

Evidence has shown that management development programmes cannot be effective unless there is an opportunity for trainees to transfer their skills to their work situations. Figure 6.4 taken from Mumford (1991) portrays the problem.

Effectiveness focus	Generalised knowledge/skills ⬇
↗ ↘	Transfer to own situation ⬇
Enthusiasm for further learning / Perceived relevance	Difficulty in application ⬇
↑ Rewards from application / ⬐	Absence of rewards for learned processes ⬇
↖	
Immediate application	Full stop
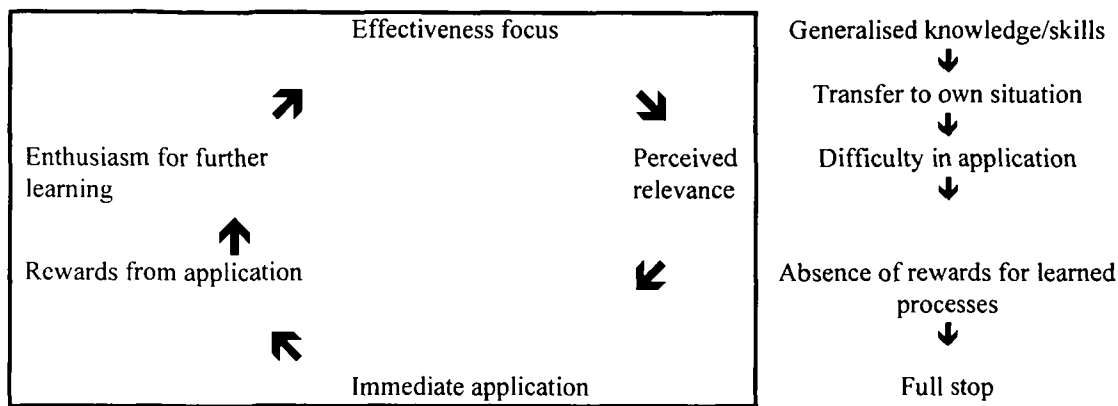
Figure 6.1   Virtuous learning circle   (Mumford, 1991)   Vicious learning sequence

Because of the dangers of the management development input being dissipated considerable time was spent on discussing the organisation and its weaknesses to form a foundation for management training. Part of this analysis has been included in Chapter Four.

Senior Management

STRENGTHS	WEAKNESSES
Qualified staff	Poor pay
Openness to change (or to ideas of change)	Reactive management
Accessible leaders	Inadequate planning
Good Board	Management weakness
Water delivered	Partial payment of tariffs
Basic infrastructure Donor confidence	

Table 6.4 NWSC Senior Management Strengths and Weaknesses

These key weaknesses were expanded and explained when the same question was asked of the Middle Management (who had not seen the Senior Management's response). Only one technical factor is included in the list - high unaccounted for water; all the other items refer to management skills and attitudes.

In the African Ugandan context, one senior manager suggested that '*it is up to us to set the stage to enable the workers to perform.*' The Operations manager responded that '*the monetary reward has to be there and in order to be there we have to expect to satisfy our needs*'. The Managing Director, in front of his Board Members and Internal Auditor responded that '*over the long time society has acquired certain habits, 'eating' - because, for example, a pension cannot satisfy one beyond one year of retirement* (so everybody has to try and acquire land and build a house whilst in employment).'

Other managers responded that '*there is considerable inertia*' and that 'we are constrained by our own inefficiencies', 'we are in a vicious circle'. The question was asked 'how to improve the income of individuals? are some sections paid better than others?' It was then suggested that all the 'eating'

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should be put into a common pot so that everybody benefits with a good conscience. *'Then we commit ourselves 100% and then no unofficial 'eating' - this will reduce mistrust.'*

The donor representative pointed out that *'the purpose of managers and workers is not the same as the purpose of corporation. Everybody is motivated by personal needs. If you have divergency of personal needs and Corporation needs we must do something. Why do we cheat ourselves? What about facing reality?'*

When asked what concrete steps could be taken to improve the Senior Managers responded with promises to be better at time-keeping, to be more transparent, to give more information, to be consistent, less impatient, less outspoken, to talk to colleagues, to hold regular meetings of senior staff and give timely decision-making. But when challenged to draw a new line on rational decision-making by giving up 'eating' from an agreed time with subsequent dismissal for transgressions . . nobody could agree.

However it was later stated by the Managing Director that the group had agreed to 'equitable eating', *'not sitting down in a dark place and sharing it out but if we all reduce it we can all benefit in terms of our remuneration going up.'* *'We can't stop it now all together, that would be a miracle but we can all bring it down - we are gearing towards transparency. Unless we are all honest with ourselves {we cannot progress}, we don't want you to fear, do your job, you know how to do it, the truth can never be buried. Systems are being developed but always people are trying to bypass it because of eating - as time goes on we have to do better, we all want change for the better, we are not fully satisfied with our present status.'*

Total Quality Management for NWSC?
As a means of stimulating debate and discussion about management and institutional change a video was presented on Total Quality Management. It was not intended to 'teach' NWSC how to implement TQM at this stage but to raise everybody's sights and consider the possibilities and come to a consensus about where the organisation should be moving.

The first impressions were that *'We do not treat our customers as customers.'* However this concept was overtaken by discussions about staffing and remuneration as summed up by *'Recognition of staff may be important in a rich country but where the salary doesn't even reach ¼ of your needs for food and housing and education and health how can it help?'*

On the second day of the seminar, to keep up the momentum of discussion the question was raised as to what constituted quality in the context of a water utility.

Answers ranged from 'Wholesomeness' to the important need to consider quality 'In the eyes of the customer, not the provider's idea' to a more conventional 'Reliable availability of services at an affordable price - conveniently supplied.'

Then moving the discussion on to consider what is TQM? Suggestions were

- Commitment
- Creation of team spirit
- Satisfying the internal customer in order to achieve quality to the external customer
- Aspiration to achieving excellence
- Effective, efficient management systems
- Satisfying internally and externally
- Continuity
- Self-sustaining
- Flexibility

Having provided the framework the facilitator asked of TQM's relevance for NWSC and a sample of the responses are given:

'It is tempting to let nature carry on as before . . .but for example in health care we are trying to progress against nature, to use the scientific research ways to move forward and similarly TQM is very appropriate to adopt for water supply.

'It is relevant, our shortfalls are obvious, we are not able to satisfy the TQM points as there are too many things that take our staff's mind away from what they do here.'

'Our targets are too qualitative.'

'We want to move on the road to TQM.'

' Headquarters is too big.'

'TQM is only really a buzz word for 'good management' but the ideas are still very relevant.'

'Some of the points of TQM are already the aim of NWSC - but emphasise the pulling down of the barriers between departments.'

'It requires a state of mind - do we have the aspiration for self-improvement?'

'It is up to us to set the stage to enable the workers to perform - example of some staff working 'voluntarily' on Saturdays.'

'We must ask what can our subordinates do?'

Then the discussion moved on in an appropriate path:

'I am delighted by TQM but how can it be transferred? Looking from the position of our present context - what about action? Do we have a system? we must have a plan of action before we go.'

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'One point has delighted me is that we all have customers to serve, internal and external.'

'Yes but the monetary reward has to be there - in order to be there we have to expect to satisfy our needs

'Over the long time society has acquired certain habits - because, for example, a pension cannot satisfy one

beyond one year of retirement - so everybody has to try and acquire land and build a house whilst in employment

'We can do things over and above 'hygiene' factors - for example we can be customer focused.'

'But recognising above average performance for below average pay.'

'There is considerable inertia.'

'We are constrained by our own inefficiencies.'

'We are in a vicious circle.'

'How to improve the income of individuals? are some sections paid better than others?'

'Senior management getting 'allowances' - should they be divided equally?'

At this point the real issues began to be discussed:

'If we paid proper prices for everything we buy (i.e. not inflated by corruption) we'd have lots of money to pay

people.'

'Why not put all the 'eating' into the pot so that everybody benefits with a good conscience

then we commit ourselves 100%.'

'And then no unofficial 'eating' - this will reduce mistrust.'

'At present if you offer to buy a beer for someone they say 'you must have been 'eating' more than me'

'TQM must relate to Procurement Committee - we are going to discuss disparities in salaries and review the

payment structure.'

'Going back to the point of measurement, why is it that the performance bonus is paid to everyone . . .even when

they are on leave or absent.'

'I disagree with MD, discipline cannot come in 'slowly' - it is like saying the British are going to change over to

Right Hand Drive but for a trial period only the heavy lorries will change . . . '

'There can be no worker commitment to TQM if they know their seniors are 'eating.'

'Can the income be equally distributed?'

'It would never be equitable distribution.'

'Why not?'

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'Policy has been 'lets work harder, lets improve revenue, then we shall pay ourselves better' - but we are in a chicken and egg situation.'

'We must reduce the cost of poor quality, the cost of leakage in Kampala is $30million.'

'Our bonuses are bribes to extract average daily output.'

'Test our commitment for six months and see the effect on our 'eating'.'

'How can we break into the vicious cycle?'

'We must examine all areas, e.g. stores - I will ask the Board to examine it all.'

'Coming from a private enterprise I find there are unnecessary delays, for example as shown in planning this training exercise. It is a culture in NWSC that everything is delayed.'

'I am suspicious about the majority of our regulations - for example everybody asks for a 7 day allowance when only going for five.'

'When I first joined NWSC I tried to pay back the balance of my expenses after my first trip and people laughed at me.'

'We need a practical first step . . . but what?'

'What is happening in other parts of the world?'

'Management styles are all very well but if they are not addressing welfare of our people then . . .'

'We can come half-way by meeting our internal needs for remuneration.'

The next comment reflected a very important concept which has been quoted from an academic author in Chapter 1 of this study and reflects another comment quoted in Chapter Four: ***'The Purpose of managers is not the same as purpose of corporation and the purpose of workers is not the same as the purpose of NWSC.'***

The discussions about 'eating' and about remuneration bear out this point. Staff appear to be skilled at managing their own needs which in a 'survival' economy have to take precedence over the needs of any employing organisation.

'Everybody is motivated by personal needs, If you have divergency of personal needs and Corporation needs we must do something

'Why do we cheat ourselves? What about facing reality

'What practical steps:?

'We need realistic procurement figures to allow not to cheat

'We can't eat out of an empty bucket - if we start with the small amount we can afford but commit ourselves that

for every 1000/= we improve revenue so much goes to the staff??

'The Corporation should identify poor performance

'We must be retrenching those whom we don't trust

'We can have 40% TQM

'HQ costs are too high, needs retrenchment

'Within departments everybody should be able to identify costs of poor quality e.g. costs of indecision, of delay

for example we can't manage to pay 50,000 on time to save the Corporation 700,000

'Are the problems of central workshop too few staff? No, people are sitting everywhere doing nothing. I asked

three staff- would they be prepared to stay under present conditions with 1/3 of reasonable pay or risk being one

of the two who are sacked - they would all prefer the 1/3rd

'Don't say 'if we improve you might get sacked' - they would prefer no change

'We should be saying 'produce more and then we pay you more'

'We must reorganise first - to have a more efficient staff after retrenchment

'The biggest customer is yourself - self-evaluation, what is contributing to my own inefficiency - what time do I

get to work? how do I mis-use official transport/

The discussion was centering on crucial ideas so when one participant commented *that 'There are many areas where individually we can improve our own performance'* the facilitator suggested that everybody write down five steps/things/actions that they could improve on next week to help their internal customers and five things they wanted their internal suppliers to do for them. This was followed by a discussion and then a request that one of each should be publicly declared.

There were signs of some confusion and uncertainty with very amorphous commitments initially. The final result is shown in Table 6.5 below.

MD	Keep time	be transparent give full information
PAM	be consistent	trust and respect
INI	timely execution	timely execution dhl spirit
OM	brief weekly meetings with heads of sections (applause)	Intercom /internal phone system (old system destroyed by power spike two? years ago)

FA	Less impatient less outspoken	relevant, precise accurate memos/vouchers
CIA	turnaround time (RF one day?) problem of PIU	prompt feedback to memos (OM within span of SenMgt Meets)
CEAD	get rid of junk in stores and sell for scrap obsolete items	assistance of CE to define what still needed
PIU	Teamwork	Save time
CS	Timely answering o queries	not to raise queries already covered by regulations
FM/CE/TM	prepare work programme concentrate of real issues talk to colleagues Time	Departmental meetings weekly
Board	Timely decision-making	Timely information of problems

Table 6.5 Senior Managements's commitments to change

The third day of the seminar commenced with the MD proving his commitment to his declaration about time-keeping by arriving half way through the morning, but very apologetic and still showing great interest.

Participants were asked to score the institutional analysis questionnaire (the results of which have already been reported in Chapter Four). When some participants appeared to show that all was well, the question was asked again 'so what is wrong?' The answer given was 'leadership'. This particular questionnaire was then scored by everybody which resulted in an average of four, that is much better than average. Each participant appeared to think that leadership was the problem but of course it was the other managers leadership which was at fault. In addition, within this discussion there was probably an element of coded talk in that privately many people saw the MD's leadership as the key problem but could not admit to it openly. Nobody doubted the MD's skills as a leader but only his present commitment to that task.

HIGH

Effectiveness and Efficiency

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Figure 6.2 within the box:

```
                                            Autonomous
                                            Leadership of
                                 Proactive  Team based
                                 Systematic Commercially
                                 Management viable
                                            Customer
                    Reactive                oriented
                    Patronage               TQM
                    Administration          Learning
        Political                           Organisation
        Administration

LOW        Input to management - knowledge, skills, attitudes        HIGH
```
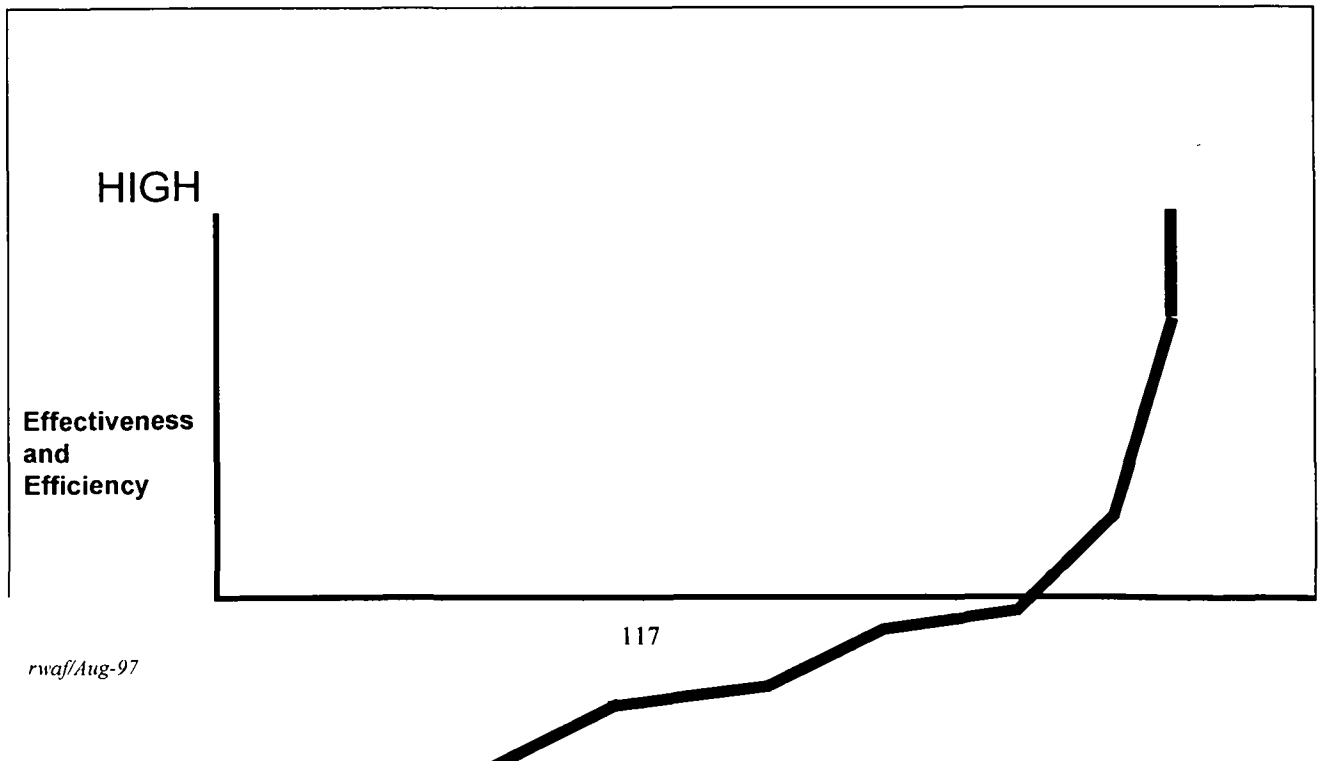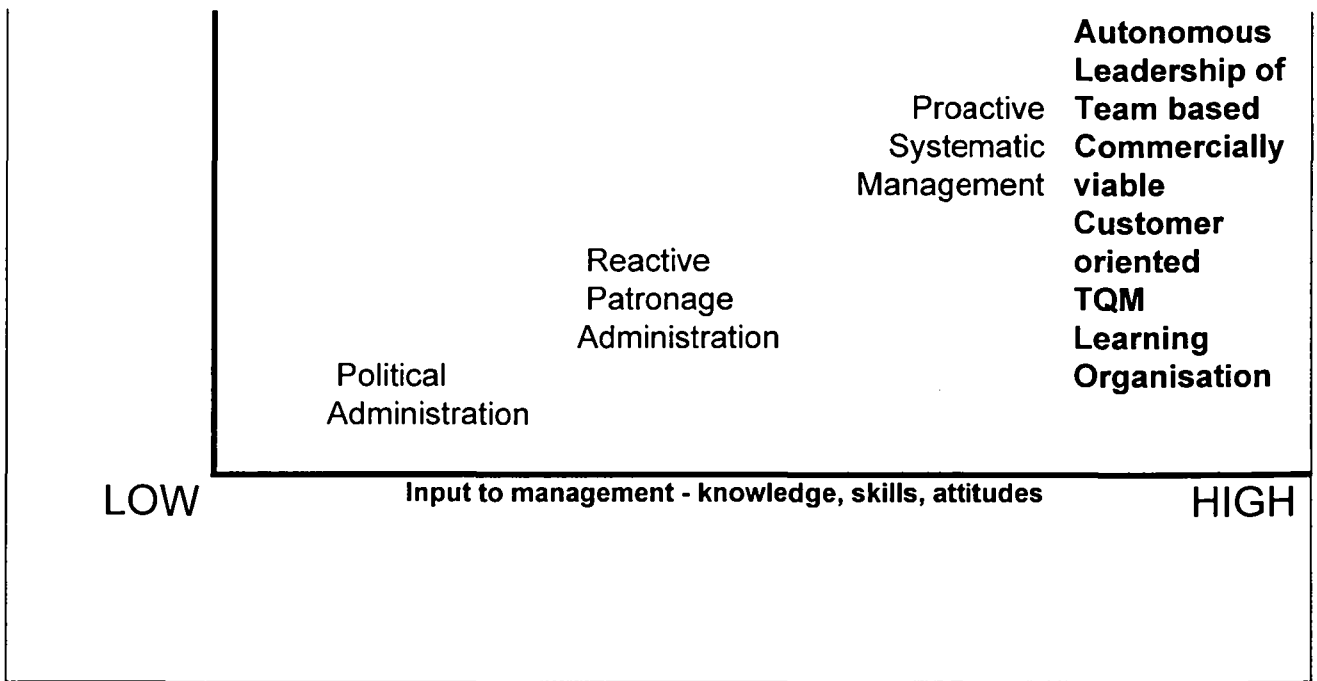
Figure 6.2 Institutional Effectiveness

Then participants were asked where they though NWSC could be in five years time - the consensus was that they could achieve 'average' capability.

To give the institutional development target in another form, Figure 6.2 was shown and participants were asked to judge where NWSC was at present and where they wanted to be.

'Yes we are patronage/centralised management at present but yes we want to be 'the best in Africa'

The key problems identified in restricting the chance of achieving that goal were seen to be inertia and mistrust and corruption leading to lack of authority. Other comments made can be read in the Appendix.

In the closing remarks (see Appendix V) the MD said all the right things about external and internal customers, TQM and personal development and team work and ending with: *'I challenge you to reexamine ourselves, and come from our departments with set targets - then set standards and monitor performance. I ask PAM as Secretary to the Senior Management Meeting to coordinate this.'*

In the second senior seminar six months later none of this had been done.

Middle Managers Seminar 1

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The Middle Management Seminar was designed much more as a management development programme but a significant part of it ended up as an opportunity to discuss and decry all that was felt to be wrong with the Corporation.

When asked 'How effective are you as managers?', acknowledging the institutional restraints the participants responded as Figure 6.3 in terms of percentage effectiveness.

```
                      X
                      X
                      X
                      X
                      X
          X           X
          X           X           X
X         X           X           X         X         X         X
40%       50%         60%         70%       80%       90%       100%
```
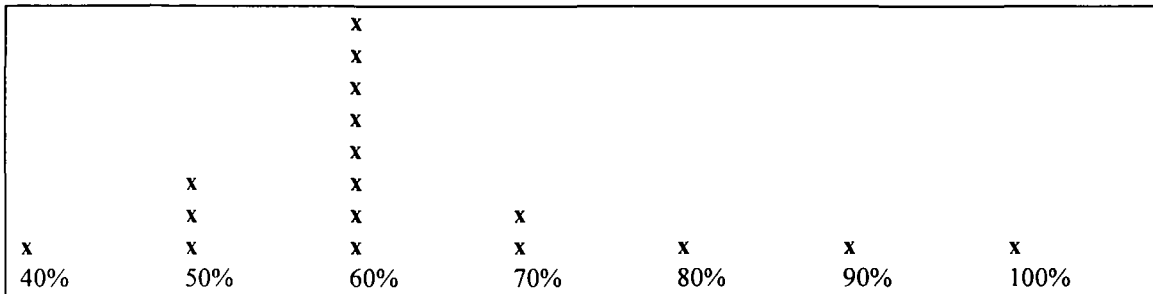
Figure 6.3 Middle Managers Views of managerical effectiveness in NWSC

To put this in perspective the participants were explained concepts of the difference between Managers and supervisors. The response was very clearly that they felt themselves only to be 'supervisors' as they had no delegated authority. *'Nobody trusts innovation because we automatically think 'how is he trying to eat from this?'*

This theme continued throughout the seminar with comments such as *'Nobody trusts nobody'*, *'We have no confidence in others, both in professional competence or in personal integrity'*, *'There is no devolved power'*,

and *'Innovation from any level is seen as a challenge - or personal threat implying that senior was at fault in not see it first'*.

During the course of various management games, exercises, lectures and discussions these issues were returned to time and again. The question was posed' How can we address these weaknesses?

A list was prepared for presentation to MD, OM and PAM on the final morning requesting from Senior Management:

- Personal integrity (an end to eating, no more empty promises, no mishandling of facilities, to act as role models, time conscious etc)

- Team spirit both Horizontal and Vertical

- Clear authority and responsibility limits in agreed

- Minimum take home wage increase from 100,000 to 150,000 or better still 200,000

- Clear performance standards

- Adequate facilities, equipment, tools and vehicles

- Senior management to visit and listen

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job descriptions after consultant's recommendations (nobody trusts management to do it)

- Methods and systems developed and used regularly
- An end to complacency - CHANGE

- Senior Management to plan and control, not organise and direct
- Timely decision-making
- Personnel development policy

At the insistence of the facilitator participants also prepared another list of what they would offer in return:

- Our honesty and trustworthiness
- Commitment to deliver results, that is productive work
- To promote a positive image of NWSC
- To see cost minimisation as a priority
- Our respect rather than our fear
- Promotion of teamwork

- More effective supervision
- To promote customer satisfaction and improved services (no cheating)
- To be more time conscious
- A commitment to change
- Improved revenue collection
- Cooperation and support

On the final morning the three Senior Managers came for the closing ceremony and were shown these lists.

The Personnel, Administration and Management Department Head (PAM) was asked to respond first. *'In some respects, yes you are supervisors, but in your areas you are mangers, managing in your environment. Globally you may feel you have responsibilities but not authority and this can be looked at. In this training there are no exams but there can be a change of attitudes as a result.*

Every day since Senior management met at Entebbe there has been a change in our approach, we may joke and laugh about time-keeping and TQM, but there has been a change.

I want to avoid creating scapegoats, either Senior or Junior management, we all have jobs to do, if we can aim for excellence then we will have achieved total Quality. Senior Management is committed to giving their support'

The Operations Manager then responded. *'I would like to address the first item on the list - integrity.*

My office is unique, most things seem to converge on it. Integrity and eating is very important as close to 90% of the money spent in the Corporation is sanctioned by my office. So that is where the problem is, not actually my office but we are all part of this chain which leads through my office. It is not Senior Management alone, it is all of us. You know what is going on, after a while in a place you know which votes are available for manipulation - I can't possible check it all

The Senior Management meeting at Entebbe agreed 'equitable eating', not sitting down in a dark place and sharing it out but if we all reduce it we can all benefit in terms of our remuneration going up. We can't stop it now all together, that would be a miracle but we can all bring it down

We have been struggling over Job Descriptions and appraisal but we are gearing up towards transparency

Unless we are all honest with ourselves {we cannot progress}, we don't want you to fear, do your job, you know how to do it, the truth can never be buried. Systems are being developed but always people are trying to bypass it because of eating - as time goes on we have to do better. We all want change for the better, we are not fully satisfied with our present status. Facilities cannot be said to be lacking, for example office equipment is good, (though no telephones in HQ), training is good.'

Interjection from an area manager: 'But there are only two working vehicles in Kampala area'

OM *'I will leave it to MD to tell you the good news on vehicles'*

'I am guilty of not visiting you in your places, my office is busy, perhaps if you see me in your area you should be worried!! I am aware of our shortcomings in this area - we are trying to improve, we do owe you visits and will try and coordinate this among senior management.'

We are all looking forward to change which can only be for the benefit of NWSC, if we all work honestly we can now succeed' Thank you for being open.

Finally the Managing Director responded. *'You know my approach to training, training is No 1 so that we can overcome many of our mistakes and draw-backs. It is better to strive to learn more, not just as we used to have to learn to pass exams; it is through training we can improve our quality, we need training and training;*

The most important group of our staff are the Middle Mangers, you, to radiate positiveness through the organisation. The heads of department have arrived and have stopped struggling to move up and have become fixed but you are still striving to progress. The course you have been through is to help you evolve from past habits, if you go away and do nothing this has wasted our time.

Lack of integrity is the cause of all our problems; you have promised to be honest, so 'OM, sign the vouchers' - we will assume from now on that we are all honest; You can only promote teamwork if you are transparent; don't think that your workers don't know what you are doing. If you carry your workers to do a personal job they will know what you are doing, that you are not transparent, so there will be no teamwork

From today onwards you are changing. Let us be fair to each other. We know what happens, but how can we sack you and replace you with other Ugandans who we know have the same idea. At Entebbe

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we even discussed declaring the percentage 'eating' on procurement and distributing it - but this is not the way. We have to reform - if the line we have drawn [as to what is acceptable 'eating and what is unacceptable] is wrong we must move it.

The first point on the list of requirements dictates the rest of the list, integrity - then you will command respect, not demand it, all the rest then comes.

Try to be out-going in your work as managers to encourage your workers. If you keep quiet in a village are people may think you are a wizard! Radiate positive attitudes to them, be transparent. We have all graduated now from this course - perhaps the organisers could give us all a certificate!

A few positive things have trickled in to each of us, how can we evaluate our performance in the coming months - perhaps the Training Manager can help us? Courses such as this, geared to mobilising to help us change our ways seem to have a good result in the first month, then we begin to backslide in the second month and by the third month we are back to our old ways. We need constant follow-up. I used to think that training should just be in technical matters but now I think that these management issues should be looked at much more.

Returning to the list [of requests to senior management] - The bottom line is how much you take home - to limit eating. I have instructed FM to investigate take home pay, .particularly because of the pay dip (see diagram)

Yes, my salary is fixed in my letter from the Minister. If AM's can get up to 250,000 or 300,000, then if you are caught doing untransparent work you will be sacked after what we have seen in this course.

That is the word - 'The customer is King' You are my customers, you must leave my office satisfied, but do not leave me with vouchers at which I scratch my head because I am also your customer.

Discussions have been reported from these seminars in detail because they give such a powerful sense of the state of leadership and organisational culture in NWSC. The indications were that such comments could have been made about any number of government related organisations in Uganda. What was less clear was the extent to which any particular organisation could progress, through institutional development, ahead of the rest of the pack. Would 'culture' or 'self-interest' or political involvement 'rein them in'?

6.3.2 January 1994 Seminars

Senior Managers Seminars 2

Following the declared 'success' of the Entebbe seminar, which had failed to generate any reportable change, the objectives of the course facilitator for this day were to bring out the question 'Why Change?' before going back to the issue of 'How Change?'

It seemed to the facilitator that NWSC is 'an average sort of organisation, having grown successfully from nothing in the space of ten years, but which is now muddling along in an average sort of way, and perhaps by Ugandan standards doing a 'good job'. so Why change? What is in it for each individual to make the effort?

This question was partly borne out of frustration in that it was the facilitator's perception that there was at present no organisational need for management development as there was no institutional development.

And then to consider How Change' in an organisation where 'Nobody trusts Nobody' and where staff goals and organisational goals do not coincide.

The facilitator was unsure how far he could push the issues as an outsider and particularly as an outsider in a strange culture but resolved to follow the advice of Nixon (in Mumford, 1991) to 'stand tall and state clearly what you believe . . '

The second Senior Management Seminar was therefore entitled by the author *'Achieving Excellence through ....?* to try and remind participants that they had made no real progress since discussing TQM at the previous seminar. Although there was an outline programme for the day it was found that participants really wanted to use the meeting as an opportunity to have a Senior Management Meeting but in a way that allowed for open discussion. Even then it was noticeable that certain senior staff did not participate either did not attend or pointedly did not comment at all during the day.

In the absence of the MD who was on leave but who nevertheless had promised to be there at 8.45 the proceedings were opened by OM who was also on leave but felt it worthwhile to attend.

'There is no point in continuing to have seminars if we don't do anything. Are we serious about TQM?

I was listening to a Professor from Indiana on Voice of America last night talking about this new thing TQM which was really quite interesting (implied in private conversation that he was pleased to know about it already)'

This seemed to be a good starting point and after an introduction from the facilitator reminding participants what they had said and pledged at Entebbe.

The mood appeared to be summed up by the donor's representative: *'Time-keeping has got worse since Entebbe (when several people pledged to improve their performance) . . .each manager thinks he is a boss 'so why bother?' Why have we not changed?*

At the break the now arrived MD commented to the facilitator *'I asked all heads of departments to draw up quality targets [as suggested at Entebbe] but they did nothing - sometimes I feel very demoralised.'*

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Following that discussion (contained in Appendix V) the facilitator asked the participants to consider two or three reasons why NWSC should change.

To make work more enjoyable and satisfying To provide customers with a better service For NWSC managers to be recognised as some of the best in the country	Develop national capacity in water industry Remunerate well Expand the services which now cover less than 10% of Uganda's population Contribute to National development
Reduce the cost of poor quality in view of ever-rising operational and investment costs (combat external factors which are beyond our control) Create a working environment conducive to satisfactory delivery of water supply and sewerage services To eliminate the possibility of divestiture, which is politically undesirable	As basis for personal professional advancement A better NWSC is good for the staff including me Contribute to national development? To justify our continued existence to public To enable personal job satisfaction To deliver an acceptable level of service to our consumers To optimise on use of human and financial resources at our disposal
To reduce the burden on consumers who are not getting water and sewerage services To maximise revenue collection at minimum tariff levels To live up to Government expectation as stipulated in Decree 34	Improve service to customers Improve personal contribution Personal satisfaction
Self satisfaction Recognition by others Personal gains (10% from an empty ('eating') bowl is less than 5% from a full one	

So it appeared that participants knew why they wanted to change and saw the need to change. But. And when the MD commented *'How can MD get motivated? You may get demotivated by several factors... '* It was clear that there was one very significan obstacle to development. MD continued: *'At our level, it is not the money that is motivating (not all seemed to agree), we haven't done well among ourselves, to work as a team. Are we not socialising enough? I remember when we used to go to a hotel for a beer with Jeugen. At the top we are not pulling in the same direction. Have we run out of energy ..?*

'I could see my subordinates trying to bring me down. apathy is creeping in - what motivates us either way? Yes we are at the self-fulfillment level '[following the facilitator's illustration of Maslow's hierarchy of needs]. 'I had to be called in from leave last Friday by acting MD as there was no cash in NWSC and we had to go to a bank to borrow. Those fellows in Finance have not done their part. I feel let down by some Heads. Do we need new management?

Advisor: *'I don't think the Corporation needs new management. Our MD is a nice guy - but is that always right? As an employee of NWSC I would sometimes like stronger management. When I was acting MD there was simply no information reaching me. Each Head should be able to give figures when required. MD must have a whip as well as carrots.*

'We should concentrate on how to motivate ourselves in this seminar. The problem is at the top, not the bottom, perhaps I should leave . . if there is no support from below'

Advisor II: *'So tell us what to do. '*

MD Perhaps I should use the stick . . maybe the Amin way of ruling was right. 'Kill a few as an example to the others. '

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The remainder of this discussion is included in Appendix V but the focus has been on what the MD said because to the researcher it appeared to be coming clearer that the problem was the most senior leader.

At the end of the morning OM suggested that we really had to face up to the things that were frustrating us/holding us back. MD requested that we spend the afternoon really considering these issues rather than going on with the programme regardless.

The facilitator summed up that the main points of discussion centred round motivation and inertia, lack of management information, authority and responsibility limits, trust (and eating) though in fact there was very little mention of 'eating' on this occasion - and only passing references to the severe difficulties all heads of department faced in relationship with CIA who had refused to come to this meeting.

To start the afternoon session the facilitator reflected the OM's question to ask all participants *'Why is Senior Management not pulling together as a team?' Why are we pulling in different directions?'*

The requested written anonymous responses explained perceptions that:

- Communication (MIS) not performed, instutionalised. Management is not updated - only when crisis;

- Senior Mangers not accountable when going out of line. Result: MD frustrated, that goes down the line - stronger TOP required.

- Individuals objectives and team (NWSC) objectives are not the same.

- Some people do not know their ROLES; bosses do not recognise/respect professional views/confidences; patronage still exists; inputs not planned, forthcoming

- Differences in approach of roles between Senior Mangers, especially the complementary Departments. MD rather too soft on non-performers or non-cooperators

- Poor Pay (despite denials to the contrary); lack of support for (and sometimes) countering correct decisions taken within one's authority limits; apparent lack of uniformity in reprimands

- One NWSC expatriate has observed that the Corporation's top brass manage the outfit for their own amusement. According to this TA 'whatever water and sanitation services trickle down to consumers as a bye-the-way are a bonus and NOT as a product of the management input."

- Lack of appreciation of importance of internal customer care relations; insufficient guidance and motivation; uncertainty on authority and responsibility limits; lack of confidence

- Lack of regular Senior Manager's meetings chaired by the MD personally; false perception that certain offices have more about them than others

- There seems to be a lack of personal responsibility towards corporate goals

- FEAR - no one wants to be blamed for making a mistake or taking a wrong decision

- NO REWARD - there is no reason to improve on job performance as there will be no reward

- SELF-INTEREST - personal goals and corporate goals are not the same

- Poor definition of authority limits

OM had not been present during this period but on his return the facilitator voiced what appeared to him to be the spoken and unspoken conclusion that the problem lay with the MD. This was voiced as the group's feeling that 'there was a need for the 'Captain of the Team' to get more involved in knocking a few heads together.'

This lead to a fruitless discussion about the perceived failure of several heads of department but the researcher became more convinced that the reason for the senior management disillusion was that there had been no leadership for the past couple of years. The MD had obviously one a major job in getting the Corporation to where it was now but had been losing interest, developing other responsibilities. However, because of the power of the 'desk', nobody else could take on that role de facto in his absence - because that is not acceptable culturally. Hence the suggestions for a new General Manager - to allow MD to continue but to put in the leadership that is required . . . .

On his delayed return, MD declared his frustration that Senior Managers don't carry out their duties as instructed and that he could not trust anyone, *'there is a complete lack of confidentiality, with official matters being personalised - some of my heads have never grown, some of my heads have sympathies with certain individuals . .*

Following a leadership video and an introduction to Situation Leadership, the facilitator suggested that what the early afternoon discussion showed was that now was the time for MD to do more 'telling' and 'selling' to his Senior Managers, who although generally skilled were 'immature' in this aspect and needed support again for a while.

On the day after the seminar one of the advisors arrived to say that MD had called him in to say 'I want you to do something as a result of yesterday's seminar. We can't go on like this . . . '

The advisor asked the facilitator 'what should I do?' In response the facilitator suggested that in the two months remaining to him in post that he should work out the Authority and Responsibility Limits and Measurable Performance Indicators for each of the Senior Manager's functions. 'Good, that is

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what I want to do'. By Wednesday afternoon, it was reported that the advisor was already demoralised and had 'taken over' as billing clerk to Kampala to make sure that some cash is collected from the outstanding debtors, seeing this as the best to assist the Corporation.

However, he did continue with the suggestion but rapidly found in talking to individual heads of department how demoralised and uncertain and untrusting they all were. One month later the advisor having carried out a more detailed survey was asking what would motivate the MD to change?

But the MD had commented to the Training Manager on the day following the seminar 'Thanks for the seminar, can we have another in three months times as we really need them.' Which perhaps did not reflect on any 'success' of the seminar but an abrogation of the MD's responsibility to lead and make the hard decisions himself.

Middle Managers Seminar 2

The Middle Manager's Second Seminar tried to avoid getting bogged down in the state of the organisation and focused on management knowledge, specifically Finance for non-financial managers and Tariffs & Marketing & Promotion. However, it was reported that *'I got all the vehicles I needed after the first seminar so that was a real success . .* ' and one head of department who came to the closing ceremony commented that *'These guys don't seem to be as demoralised as the Senior Managers.'*

As part of the attempts to introduce direct institutional change relevance to the programme the participants were asked to consider ideas they might 'research' in groups as part of a management learning exercise which might also be of relevance to NWSC as a whole.

The ideas proposed were: Revenue collection x2, Unaccounted for water, Causes of poor performance, Procurement x2, Tariffs, Billing, Cash Flow, Staffing Levels x3 & Organisation Structure, Central Workshop and Mobile Plant Costs x2, Training, Abrupt transfers, Low morale x2, Inequity in project allowances (extra pay given to those involved in 'projects' including training when they already have special opportunities in contact with foreign money), Remuneration x2, Spending Priorities, Public Image

Participants were then asked to rank their choices and the preferred options were:

- Revenue
- Procurement
- Workshop
- Remuneration
- Staffing and Organisation

Reports on these investigations were to be reported back jointly to the Senior and Middle Managers Joint Seminar in July 1994.

Meanwhile, on a field visit, the researcher arrived at Mbale, one of the small towns serviced by NWSC and met the new Area Manager who had been in post for just 1.5 days. Following the seminar he had that morning been to try and see his 20 biggest customers to introduce himself as the new Area Manager. Arriving at one customer who owed Ushs 1.2M the customer said *'I suppose you have come asking for payment?'* AM replied *'Yes, but my real reasons for coming was to see what I could do for you as a customer.'* The customer responded *'That's what I've been waiting to hear . . . excellent. I'm so pleased that I will give you a cheque now for 200,000 and will pay off the debt at the same amount monthly.'*

Later the researcher asked the Area Manager if he could manage with half the workers (leading to a significant rise in salaries of remaining workers) - 'Easy, in my previous post I reduced staffing by 10% through retirements and deaths.' But in general this approach was deemed to be unacceptable to central government.

6.3.3 July 1994 Seminars

Middle Managers Seminar 3
In the third series of seminars the Middle Managers seminar came first. The programme started by reinforcing the previously learnt skills of financial analysis by requiring participants to work out the financial ratios for the newly released financial statements for NWSC. The results demonstrated a continuing deteriorating trend.

Particpants were then required to report back the results of their research programmes. Some groups had managed to meet on a monthly basis and had impressive documents to show for their labours. One group had only managed to meet once.

In general the proposals were disappointing in terms of the management skills demonstrated. Nearly all the comments were very general and did not show any of the hallmarks of 'SMARTness' which had been one of the key teaching points of earlier seminars (Specific, Measurable, Achievable, Relevant, Timely).

However, the Remuneration group had collected data from the other main parastatal utilities which gives some credence to their complaints of being underpaid.

Ushs per month	Managing Director	Head of Department	Graduate	Group employee
Uganda Posts and Telecommunications	700,000	379,000++	163,000++	

Uganda Electricity Board	2,000,000	222,886++	114,204++	
NWSC	400,000 +house + car	45,000 Basic 260,000 total	40,000 basic 193,000 total	13,780 basic, 86,463 total
NWSC Proposed	822,230, 593,949 take home	715,820, 524,783 take home	508,882, 390,273 take home	216,157, 186,618 take home

Table 6.4 Remuneration in three parastatal utilities

However, because of all the special allowances which can raise a wage of 40,000 to 400,000 Ushs per month it is not absolutely clear to what level NWSC staff are disadvanted. This group suggested that with proper remuneration it would be reasonalbe to expect 20% reduction in manpower, improved revenue collection by 30% and reduced operational costs and they agreed that regulations for discipling offenders of 'eating' must be enacted and followed very strictly.

To enhance the overall quality of SMARTness, participants were taught about Project Frameworks and about Priority Based Budgeting. They were then required to adapt these ideas to their Mangement Research Proposals.

Suggestions were then made that by reorganising the workshop structure and providing adequate training to carry out preventive maintenance using reliable equipment and plant, plant availability could be increased from 80 per cent to 95 per cent by June 1995 with water pumped per kWh increased from 50 per cent to 90 per cent and maintenance costs reduced by 20 per cent. The remuneration research group offered to reduce manpower by 20 per cent and increase revenue collection by 30 per cent by 'paying a living wage', defined as a 150% increase, training existing staff and hiring a management consultant. This group also offered as another outcome a reduction in operational costs of 20 per cent. But whether that was after the salary increase is not clear.

These plans showed that middle managers were beginning to make the connection between inputs and outputs which could be measurable and quantifiable. However, there was still a large jump to get to the stage of using these techniques.

Senior Managers Seminar

For the combined day the programme initially focussed on customer care. This was designed to be a 'neutral' subject to avoid any sense of the Senior Managers immediately being 'attacked' by the Middle Managers through their research proposals.

The benefits of customer care were seen to be that it:	The threats of poor customer care were seen to be:
• enhances employee relationships	• privatisation

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• increases revenue collection	• loss of jobs
• widens market base	• more illegal connections
• generates new connections	• higher UAW
• improves worker motivation through higher pay	• less payment
• improves willingness to pay	• vandalism
• creates customer participation	• high labour costs
• lowers maintenance costs	
• reduces vandalism	
• improved public images	
• reductes arrears	
• improves public health	
• is good for MD	
and is good for NWSC relations with government	

So staff saw clearly what they should be trying to do and why they had to do it. Privatisation is still seen as a considerable threat, not as an opportunity. Reasons appear to be that staff know they could not get away with their current level of performance and pay in a private organisation.

After a customer care video and discussion it was agreed to set up a customer care task force to:

• investigate pricing strategy

• see how to give better information to customers

• investigate potential for customer service officers

• prepare the training of staff in customer relations

The Senior Managers listened with interest to the revised research proposals and queried data used and picked on individuals for saying certain things but there was no sense of management wanting to investigate further up and adapt the proposals for use. So there is still no hope of using theses techniques.

On the following day, which was solely for the Senior Managers, the time was spent considering a series of case studies, written and on video, some relating to water utilities, others to business in

general. Useful discussions took place, often referring back to NWSC but in the absence of the MD there was not so much detailed agaonising over the future of NWSC.

The day was punctuated with the irregular calling away of the Financial Director and the Acting Managing Director as it was reported that the Uganda Electricity Board had disconnected power to the Headquarters building and the area offices in Tororo, Mbale and Jinja. (Thankfully the training centre did not appear to be on the 'hit list'.)

Later in the afternoon it was reported that power to Jinja water works had also been cut off, 'but that was just a mistake by an enthusiastic local officer'. It was not apparent what was done as a result of these cut-offs in management terms. NWSC had recently topped UEB's hit list published in the newspaper with debts of 1.1B Ushs ($916,000). However, government owed NWSC a similar amount in arrears.

During the seminar the facilitator stressed the need to unlock creativity and innovativenss of ALL staff if NWSC was to progress. Acting MD kept saying that Area Managers had all the authority they needed to match their responsibilities and that they could switch cash between budget headings if they wanted. During these discussions, Acting Operations Manager was asked to sign yet another chit which he announced as a request from an Area Manager to withdraw 60 litres of fuel from Kampala stores. In the context of earlier comments about the need to devolve power he queried why he had to sign it. Acting MD (OM) said it was to ensure that the AM was not wasting it and not running around in Kampala when he should be back in his area. The facilitator queried whether the amount is posted to his area account which gives him an agreed fuel allowance. The answer was yes so the facilitator proposed that there was therefore control and the OM should not be expected to take on this role simply becasue the AM was in Kampala. If he was trusted to run a budget in his area, why not when he had to visit headquarters? 'You have to give a degree of freedom and trust if you want the creativity'. Even the Internal Auditor agreed that the control was there. Acting MD could not cope with the idea of actually devolving responsibility over things which really matter (access to fuel) which appeared to sum up his attitude to his area managers who he continued to be politely rude about, almost treating them as errant children.

During the concluding session of the seminar, Acting MD commented to the facilitator along the lines of *'Richard, don't worry, we are listening to what you are saying and we are changing.'*

6.4 Chapter Conclusion

At the conclusion of the first phase of seminars there was no measurable improvement in the performance indicators of the Corporation. In discussion with managers at all levels there was no sense of any change in the subjective performance descriptions. The Area Manager who had originally given

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his expectation of NWSC in the future to be '1.8' (when everybody else had predicted an improvement from '2.6' to an average '3' out of five) continued to remind everbody of his prediction and several were less inclined to disagree with him.

Although there was anecdotal evidence of some individuals changing in some aspects of their work there was no sense of institutional development. The original project framework had promised results based on the assumptions that Government approved the necessary tariff increases and pays ministry bills. They had granted a 60 per cent tariff increase but they were not paying bills, a significant factor in the Corporation's daily scrabble for cash. This meant that the assumption (hope?) that resources would be available for operation and maintenance including chemicals, spares, vehicles and equipment had not been fulfilled.

But perhaps the crucial assumptions for improved managerial performance were that senior management would delegate with appropriate authority and managers would be motivated and trusting about the prospect of change. There has been no improvement in this area even though all managers say they want change.

Threrefore it would appear that the management development training programme has had no immediate effect on institutional development. And so the inability of managers to use, let alone be rewarded for using the new ideas (Mumford) will lead to a waste of the training input and increased frustration.

There has been considerable interest and learning from the Middle Managers as demonstrated by the ever growing numbers who come (without a daily allowance which is necessary in many other low-income countries) .

There has apparently been thankfulness from the Senior Managers for bringing many problems into the open - but then there has been no apparent progress.

The researcher had originally perceived a lack of knowledge and skills as the problem, then it appeared to be corruption and 'eating' with a strong element of failing in the area of 'leadership'. All these are important elements but the key issue in retrospect seems to be that aspect described in the literature and repeated by participants in the seminars that at present in NWSC there is little coincidence between personal goals and organisational goals.

Conclusions and recommendations

The estimated investment to meet the demand for an adequate water supply (and sanitation system) from new or unserved consumers in lower-income countries is approximately $50 billion per year. Average spending is only $10 billion per year and of the $3 billion coming from external sources only about 4 per cent is spent on 'low cost technology' (Christmas and de Rooy, 1990). To put this into perspective, the English and Welsh water companies alone are expecting to invest $4 billion this year to upgrade services.

In addition, for existing water supply systems, the World Bank (1990) reports that the average effective sale price of water is only about one third of the marginal cost of producing the water. This shortfall in finance for both capital and recurrent costs leads to the downward spiral of institutional inadequacy common to many countries. Staff are demoralised because of low salaries and lack of equipment and limited coverage which leads to poor service leading to increased reluctance from consumers to pay even the small tariffs. This, along with erratic government funding, leads to even fewer resources for the sector and even worse service provision and even greater inequity in service coverage. Staff have to promote high cost technology with external contractors in order to finance the necessary informal (and illegal) additions to their salaries that leads to further inefficiency and waste.

The major problem of urban domestic water supply appears to be institutional inadequacy linked to lack of finance. But consumers are willing to pay for water as has been shown by the studies of vendors. One estimate (Cairncross, 1990) suggests that vendors are now serving perhaps 20 to 30 per cent of the urban population with total cost of water at 20 per cent of household income, significantly above the official tariffs and also above the 3 to 5 per cent of income often quoted as acceptable. Clearly even low-income consumers are willing to pay for the service they want. However, public health engineering, as in so much of engineering where 'the professional knows best', has nearly always used a *supply driven* or product based approach. It actually needs to be market based or *demand driven*. This enables customers to show their demand through their willingness to pay for different levels of service.

Only when this change is made will it be possible to achieve the required substantial reduction in costs of services (through efficiency and the use of appropriate technology) and the equally necessary mobilisation of additional funds from consumers. Jackson (1991) makes the point strongly: 'there is no point in dealing with details of engineering design while the financial issues remain unresolved'.

Once there is general acceptance of the need to raise finance for the sector directly, institutional development has to be considered as the next step in improving water supply. This does not mean adding a training component (or even a 'human resources development' component) to an engineering contract. The example of NWSC described in Chapter Six demonstrates the failure of this approach. Rather it means enabling the institution to reform itself so that it can then determine what sort of engineering is really needed. Because it is the institutions of water supply that are failing all around the world which cause the majority of apparent engineering failures.

		Hyderabad	Nagpur	Uganda NWSC	Singapore
Water Production	Quantity water produced	270mld	256mld	128.7mld	1,189mld
	Quality water produced			75%	na
	Energy/Chems%OpCosts	35.4%	2%		
Water Delivery	Target population	2,800,000	1,622,000	1,079,000	3,057,000
	Connections	190,000	90,448	32,064	799,049
	Service coverage	90%	60%	34%	100%
	Connections/Standposts	55%	54%	70%	100%
	Service timing	1hr	1-2 hrs	12-24hrs	24hrs
	Population density	165.7/ha	74.4/ha	varies	48.3/ha
Efficiency	Unaccounted for water	40%	29.7%	35%	8%
Water Consumption	Quantity water consumed	45lpcd	180lpcd		168lpcd
	Metered consumption		40%	26%	100%
	Quality water delivered		74.6%	na	100%
Sanitation	Service Coverage				100%
	Treatment	0%	0%	50%estimate	100%
Effectiveness	Water related diseases	4.2	1064	na	na
	Customer surveys	na	na	na	na
Productivity	Employees	3,500	3,000	1,742	1,952
	Connections/employee	55	30.1	5 - 24	417
	Population/employee	720	540	325-536	1,566
	Percentage staff costs	51.7%	57%		na
Marketing	Socio-economic GNP pc	330	330	170	14,210
	WTP to Vendors	$0.5		$2.08-$8.33	not applicable
Financial Sustainblty	Average domestic tariff	$0.09	$0.04	$0.18-$0.26	$0.44
	Avge comm/indust tariff		$0.40		$0.68
	Water sustainability			1.77	2.54
	Sewerage sustainability	20%	20%	100%	22%
Profitability	Operating ratio	96.4%	75%	84%	43%
	Return on Fixed Assets	0.16%	na	2.42%	
Liquidity	Current ratio	na	na	6.7	
	'Quick ratio'	na	na	0.53	
Creditworthiness	Debt equity ratio	na	na	0	low
	Debt Service ratio	na	7.5%	2.85	
Financial Efficiency	Days receivable ratio	286days	na	242 days	33days
	Bill collection efficiency	na	91.8%	55%	na

Table 7.1 Compilation Table: Comparison of performance indicators for water utilities in India and Uganda and Singapore

The performance indicators summarised and compared in Table 7.1 represent the symptoms of the failure (or success in the impressive case of Singapore) of the institutions rather than the causes.

Although Singapore is no longer a low or even middle-income country it started from the same point approximately 30 years ago both in terms of its economic growth but also in terms of its water and sanitation provision.

The aim of this project has been to investigate the current state of efficiency of the management of a number of public water utilities, to compare and contrast these utilities to look for common themes which explain the apparently low level of performance, to consider whether the reasons for this performance are characteristic of the society in some way or are a function of the economic standing of the country or reflect the capacity of the existing management.

The first organisation investigated, the Hyderabad Metropolitan Water Supply and Sewerage Board is a fairly average organisation, failing to meet the needs of its customers for water and sanitation and failing to collect any reasonable tariffs. They had begun to overcome some of the problems caused by limited organisational autonomy, were revising their management and administration, had revitalised leadership and were beginning to consider the needs of consumers in a commercially oriented organisation. However there was little sense that the organisational culture was changing. The second institution, Nagpur water utility, had a worse set of performance and finance indicators and was considered low in all categories of the subjective performance descriptions. The low level of organisational autonomy may be seen as a controlling factor in that institution which has to be addressed before other factors are taken into account. Unless that is there is substantial change in the host organisation, Nagpur Municipal Corporation.

The National Water and Sewerage Corporation has a better set of physical and financial indicators but they have been strongly influenced by the generosity of donors who have given a full set of fixed assets. The institution has reasonable autonomy but now a weak sense of leadership which is not addressing the failings in the organisational culture which are reflected in the failure of management and administration. It is now making progress in terms of commercial and consumer orientation.

From these comparisons there do not appear to be any significant differences between institutions in India and Uganda.

In trying to bring about institutional change, the management training programme for NWSC has encouraged thinking about change and has encouraged some staff members (and demoralised others). There is little sense that the critical areas are being addressed. There is no improvement in the degree of delegation with authority by senior management. There is still no opportunity for personal and organisational goals to coincide.

From the three institutions studied the political impediments appear to be strongest in India whereas the leadership and personal/organisational goals mismatch appears to be the reason why NWSC fails to deliver services effectively and efficiently. This investigation has confirmed the validity of the WASH performance categories (subjective performance descriptions). For the causes of success or failure do appear to be related to a combination of leadership, autonomy, management and administration, commercial and consumer orientation, organisational culture, technical capability, human resources development and legislation.

Water supply institutions do fail because of their place within politically controlled government departments or municipalities. Organisational autonomy (within a politically controlled framework of responsibility and authority) appears to be a necessary pre-condition to effective water supply in many countries.

The change that is required subsequent to greater autonomy is a commitment to a commercial orientation. This is not a commitment to profit making or to profiteering but to providing the most efficient and effective service to the whole range of consumers in a commercial style whilst retaining a basic needs service to low-income consumers.

This will require enhanced leadership of the institutions and the type of team-building and quality circles and reduction in middle management that has become such a feature of the commercial developed world. It will require the introduction of clear performance indicators and sensible (modest?) management information systems. It will particularly require the upgrading of accounting systems such that there is accounting for fixed assets as well as recurrent costs in order to gain some sort of understanding of the surplus or loss generated from operations in any year. Zero Based or Priority Based budgeting systems will have to be introduced with managers directly responsible for a clearly defined cost centre.

To be effective with a new commercial orientation, institutions also require a new orientation towards their consumers or rather customers. Customers who pay the appropriate tariff have to be cared for and have the right to expect a suitable service.

In urban areas where economies of scale demand integrated systems for water supply (not necessarily true for sanitation) diseconomies of management may demand the separation of the roles of bulk provision of water (production and wholesaling) from the distribution and sale (retailing). Moving the institutional/household boundary back from the property line to some form of site or area boundary can enable a community or private enterprise to take responsibility for managing a distribution network and collection of revenues (retailing). Alternatively the (private?) provision of communal bath houses for bathing, laundry and sanitation is a possible approach to water retailing and on a smaller scale still there can be an individual with a standpost concession.

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Some of these ideas might sound familiar as the need to promote efficiency and effectiveness in public services in UK faces similar challenges in becoming more commercially and consumer oriented. The Citizen's Charters, privatisation (in its broadest sense) and internal markets may represent a more useful UK export to low-income countries than sophisticated engineering.

However, the evidence from Uganda suggests that in themselves, none of these improvements will be sufficient unless there is also a change in the organisational culture. In a review of 38 water utilities the Asian Development Bank (1993) finds that the Singapore Public Utilities Board incorporates one of the best water utilities in Asia. 'That utility also provides ample evidence that it is not necessary to be independent from government to operate efficiently. An innate 'discipline' would seem to be an important characteristic of a successful water utility'(p3). Which suggests that the earlier expectation of the necessity for organisational autonomy may not be crucial.

In a different context, reviewing the effectiveness of strategic planning, Wilson (1994) comments that the 'most provocative conclusion' is the 'growing emphasis on organisation and culture as critical ingredients in the execution of strategy.' 'The attention to culture represents perhaps the greatest departure from the past and is all the more surprising for being an essentially 'soft' factor in a process prone to rely on 'hard' analyses. 'Culture' is, in effect, the internal equivalent of the customer orientation in the corporation's outward facing posture. It represents a recognition that the values, motivation and behaviour of the organisation's members are critical determinants of corporate performance.'

So perhaps the answer for National Water and Sewerage Corporation (as well as the utilities in Nagpur and Hyderabad) is not very different from the needs of organisations in the developed market economies. However, there is the particular requirement to find ways to bring together the individual's personal goals with the organisational goals in order to meet the needs of its customers effectively and efficiently.

How might this individual and institutional development (revolution?) be achieved? It can be assisted and encouraged by consultants but like all development, ultimately it has to come from the people most concerned. Therefore ways have to be found to introduce ideas and suggest changes whilst allowing the institutions themselves to find their own way forward within their own political framework. There appears to be a choice. Either the organisations reinvent themselves (re-engineering ?) or the donors and governments will begin a hazardous journey towards privatisation. The new organisational models that use the private sector to a greater extent such as management contracts or leasing (affermage) are still to be proven in low-income countries. Transfer of equity as in complete divestiture will not necessarily bring significant benefits in the medium term. But some form of privatisation, the mere mention of which scares National Water and Sewerage Corporation executives,

may in fact be the most suitable means of achieving autonomy and a change in the organisational culture. Only then may individuals receive the personal benefits they desire and need to support extended families in a survival culture.. And only then will there be the necessary improvements in leadership - or changes to the existing leadership if it cannot deliver the necessary results in a harsh new environment.

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Appendices

Appendix I

Subjective institutional performance descriptions

Leadership

Effective leaders serve as positive role models, they are more than good managers. They provide motivation for

managers and staff to perform their functions often in difficult and sometimes apparently unrewarding situations.

Effective leaders help transform an institution by making it active, energetic, visionary and making the sum of the

parts greater than the whole. In effective institutions, leadership does not only rest with the top manager.

Very low _1_ Low _2_ Medium _3_ High _4_ Very high _5_	1	2	3	4	5
Provides clear sense of mission; involves people with mission; gets people excited about mission, believing in it					
Serves as a positive role model, hard-working, demonstrates competence, is visibly interested in work, balances people needs with organisational needs					
Shows sense of dynamism, enthusiastic, has an active 'can do', problem-solving attitude					
Demonstrates personal integrity, instils sense of integrity in others, balances personal ambition with organisational needs					
Is oriented towards producing results which move work towards meeting objectives					
Identifies clear performance standards both at institutional and personal level and is strict but fair; gives positive and negative feedback where due					
Visits staff at all levels of the organisation and all districts on a regular basis					
Listens as well as instructs					
Has sufficient operational and technical knowledge to inspire trust					

[after "WASH" 37, (Cullivan et al, 1986)]

Organisational Autonomy

Organisational autonomy is the degree of an institution's independence from the Government. Although still

subject to necessary regulatory control and political oversight, the institution requires independence so that it can

carry out its affairs and meet its responsibilities in an effective manner with minimum bureaucratic or political

interference and controls by other organisations or departments.

Adequate organisational autonomy is necessary for the success of water and sanitation institutions.

Very low _1_ Low _2_ Medium _3_ High _4_ Very high _5_	1	2	3	4	5
Sets own organisational objectives and changes them as necessary to provide guidance and direction in achieving the objectives of the organisation					
Prepares annual capital and operating budgets linked to revenues and needs; successfully obtains approval for budgets					
Establishes and implements levels of tariffs and service charges sufficient to meet capital and recurrent costs					
Maintains control over all revenue generated					
Establishes and maintains staffing levels sufficient to meet needs					
Employs, discharges, disciplines and promotes personnel within established and approved guidelines according to institutional needs					
Establishes levels of employee compensation including salaries and benefits sufficient to attract and maintain capable staff					

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Top management is well informed about external policy, financial and regulatory issues and actions					
Top management maintains direct contact with the key individuals in all important external entities					

Management & Administration

Effective management is demonstrated by the capacity to get the most out of the resources available (human and other) in a deliberate or planned manner. Good managers have a clear sense of objectives and priorities; they know who to rely on to get a job done and how to delegate to them the means to do it. An effective management climate is characterised by teamwork, cooperation and good communication among staff.

To enable managers to perform effectively an efficient administrative system is required. This is the policies and procedures which regulate and guide and facilitate the actions of managers. A mature organisation has effective sub-systems such as personnel, budgeting, accounting, financial management, procurement, contracting out and management information.

Very low 1	Low 2	Medium 3	High 4	Very high 5	1	2	3	4	5
Managers have a clear sense of their own and other's roles and responsibilities									
Managers communicate roles and expectations clearly to others and involve them in defining their roles and responsibilities; they promote teamwork									
Managers know how to plan and delegate to achieve tasks									
Managers regularly set goals with staff and have a sense of priorities									
Departmental/section objectives and performance indicators are clear and understood by staff and are achieved at the desired level of quality									
Staff are held accountable for getting work done according to agreed performance indicators									
Managers trust their subordinates									
Managers seek to innovate and develop new ways of achieving their objectives, through technical and managerial means									
Managers have agreed responsibility and authority levels (including signing for payments)									
Administrative systems for budgeting have been developed and are regularly used									
Administrative systems for accounting for all assets have been developed and are regularly used									
Administrative systems for procurement and inventory management have been developed and are regularly used									
Administrative systems for personnel and staff development have been developed and are regularly used									
An effective Management Information System has been developed and is regularly used									
Technical information is routinely shared among planning, design, construction and operational units									

Commercial Orientation

Commercial orientation is the degree to which actions in an institution are driven by cost effectiveness and operating efficiency. The performance of an organisation should be guided and disciplined by a strategy to achieve financial self-sufficiency at an appropriate stage of growth. This commercial orientation can be viewed at both operational and policy levels.

At the policy level, commercially-oriented institutions structure and stage investments, expenditures and revenues to achieve financial equilibrium annually. At the operational level, everyday activities are guided by quality standards and by constant attention to cost factors.

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The institution strives to establish a reputation as a financially well-run business in the eyes of its consumers (to promote the payment of tariffs) and in the financial and political community in order to obtain financial support for growth and to maximise financial and operating autonomy.

| Very low | Low | Medium | High | Very high | 1 | 2 | 3 | 4 | 5 |
1	2	3	4	5					
The institution achieves a yearly balance between expenditures and revenues. Revenues may be partly drawn from subsidies which are phased out according to a planned schedule or have been assured by Government for very low income users									
Tariffs include payment for capital expenditure through depreciation of fixed assets (amortization of loans)									
Budgets are set according to negotiated priority levels for quality									
Expenditures are monitored against agreed budgets									
There are annual, published, audited financial records									
Staff actions throughout the institution are guided by cost effectiveness as well as quality standards									
Staff belief in a commercial orientation and think of their service function as a business									
Economic and financial feasibility is calculated for all projects and other institutional activities									
Services are 'contracted out' which can be run more efficiently by private enterprise or community organisations									

Consumer Orientation

Consumer orientation is organising and directing the services and output of the organisation towards the demands and desires of the consumer or customer. Staff of a successful WATSAN institution see serving consumers as their primary function. All work, all programmes and projects are directed towards greater efficiency, effectiveness and equality of service to all consumers. Every effort is made to inform and educate customers about the role of the institution and the means it is using to achieve its (the customer's) objectives.

| Very low | Low | Medium | High | Very high | 1 | 2 | 3 | 4 | 5 |
1	2	3	4	5					
Staff at every level demonstrate that they are oriented towards serving consumers; when observed their decisions and actions are clearly driven by what is best for the consumer									
There are identifiable mechanisms for consumers to interact with key areas of the institution over important matters (for example, accessible district offices, emergency telephone hotline, bill disputes, service problems)									
There is clear evidence that the institution responds to complaints, emergencies and suggestions which consumers make									
There are identifiable, ongoing and effective measures to inform and educate consumers about institutional services and requirements									
The institution makes efforts to invite and encourage an effective level of consumer participation									
There are concerted efforts made to project a positive image of the institution to the consumer									
Efforts are made to ensure accessible services to all levels of the public									
Tariffs and/or charges are designed to be fair and equitable and understandable and affordable and payable for all levels of the public									
Consumers are also seen as customers - who pay the bills and thus the salaries									
The level of complaints from the public is relatively low									

Legislative Framework

Every services utility or institution has to work within the framework of a country's political choices, as demonstrated by the legislation passed by politicians to define the institution's roles and responsibilities. This legislative framework needs to assist and guide in a positive manner rather than hinder and restrict negatively.

| Very low | Low | Medium | High | Very high | 1 | 2 | 3 | 4 | 5 |
1	2	3	4	5					

The institution has clearly defined responsibilities and authority					
There is an effective regulatory framework					
There is legislative framework for ensuring tariffs are maintained at suitable level					
There is a political will to ensure adherence to legislative framework					
There is a clearly defined disconnection policy for non payment					
National legislation promotes appropriate technical choice for public health					
Local bye-laws promote appropriate technical choice for public health					
Legislation allows for community/consumer involvement in public health					
Legislation allows for private sector involvement in public health					
There are effective methods open to the institution to seek to adapt its legislative framework as its operating environment changes					

Organisational and Staff Culture

Organisational culture is the set of values and norms which inform and guide everyday actions which translate into behaviour which can be observed. Although often unstated, an organisation's culture serves as a powerful means of defining and justifying organisational operations either in positive or negative ways.

The organisation with a positive culture has a clear sense of mission and identity. This is often expressed by a majority of the employees in the form of 'legends' about the organisation or messages about 'who we are'. In positive terms this often takes the form of a sense of pride in belonging to the group and a sense of history of the organisation which is passed on from old to new employees.

Part of the culture is the way in which staff are maintained and developed. In addition to a regular process of skills transfer (continuous learning) , effective institutions provide sufficient incentives, compensation, employee benefits and promotion opportunities so there is a minimum of unwanted turnover. People are seen as the most important asset.

Very low 1 Low 2 Medium 3 High 4 Very high 5	1	2	3	4	5
An observable team spirit exists among the staff					
People express a sense of ownership and pride about working that is expressed in statements such as 'this is a good place to work'.					
There is a clear commitment to the organisational goals at all levels of the staff; people feel involved in and informed about the institution's activities					
The commitment to personal goals is demonstrated by individual's support for the organisational goals					
Staff believe they are trusted in the organisation with responsibility and authority					
Staff are committed to improving their skills and knowledge and attitudes; people are interested in learning new things and new ways of doing things					
Line managers are committed to and involved in the development of their staff					
The organisation provides adequate salaries and incentives to maintain and motivate staff					
Active systems are in place for providing ongoing formal and informal feedback to personnel about job performance					
Individual corruption to the detriment of the organisational team is seen as unacceptable					
A clear system exists for hiring qualified personnel and firing or disciplining staff when necessary					
Staff place a value on maintaining the facilities of the organisation, for example the offices, treatment plants and grounds, sign boards, so they look clean, well maintained and attractive					

[after "WASH" 37, (Cullivan et al, 1986)]

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Appendix II

Background Information on Utilities Studied

Hyderabad Indicators

Percentage of Population served	90%
Ratio of household connections/standpost	55 to 45 = 1.22
Per capita consumption of water	45lpcd
Unaccounted for water ratio	40%
No of connections per employee	190000/3500=55
Population served per employee	28x90x105 /3500 =720 persons
Supply of Water	maximum 2 hrs a day
Ratio of population served through connection/ standpost	55:45
Quality of water delivered	40% samples were found deficient
Pressure range throughout the day	0 to 7 metres at consumer's end
Extent of regular interruptions of service	23 hrs
Average time to repair leaks	Not investigated
Affordability to pay tariff	85%

Seventeen per cent of the population are estimated to live in Bungalows & flats, 63 per cent in Traditional houses and 20% in slums. The income structure of the community per household is assumed to be:

$0 - $57 (Rs 0 to 1700)/month	30%
$57 - $90 (Rs 1701 to 2700)/month	53%
above $90 (Rs 2701)/month	17%

HYDERABAD	FINANCIAL STATEMENTS						
Revenue	$Budget 90-91	$Actual 89-90	$ 1988-9	1987-8	$ 1986-7	$ 1985-6	$ 1984-5
Water	8,757,767	6,192,700	6,804,333	NA	2,339,333	2,589,333	2,738,33
Sewerage	420,367	0					
Other	8,000	6,115,667					
Grant in aid	0	0			482,667	482,667	482,66
TOTAL REVENUE	9,186,133	12,308,367	6,804,333	NA	2,822,000	3,072,000	3,221,00
Expenditure							
Board Salaries	117,667	48,100					
WS & D staff	1,915,667	1,126,767					
wages	2,016,500	1,568,367					
Sewerage staff	238,500	111,867					
wages	500,467	388,300					
Other wages	158,633	48,933					
Power (WS&D)	3,195,033	2,352,233					
Consumables WS	37,400	127,333					
S	156,967	160,200					

Repairs/ minwks WS	879,200	1,192,500				
S	235,500	220,100				
Vehicle mtce	1,933	114,600				
Admin	76,300	31,433				
Rents/taxes	0	3,333				
Finance chs	45,533	0				
Dep Reserve	1,333,333	0				
TOTAL EXPENDITURE	10,908,633	7,494,067	6,561,667	NA	3,397,667	3,183,667	2,835,66
SURPLUS (DEFICIT)	(1,722,500)	1,399,733	242,667		(575,667)	(111,667)	385,33

HYDERABAD WATER CHARGES		Tariff Previous US$	Tariff Present US$	
DOMESTIC				
	Connction 12mm			
	Reconnection			
	Standposts per month	5.00	5.00	
	Unmetered Flat Rate	1.00	2.00	3.8%
per m3	0- 25 m3 month	0.02	0.05	64.4%@16m3
per m3	25 to 50 m3 /month	0.02	0.06	2.8%@37.5m3
per m3	50 to 100 m3 /month	0.03	0.07	2.1%@75m3
per m3	>100 m3 /month	0.03	0.08	0.7%@200m3
Lifeline		0.33	1.00	
Average			0.05	
Sewerage Surcharge		20%	20%	
INSTITUTIONAL				
per m3	0- m3 month			
per m3	... to .. .. m3 /month			
COMMERCIAL & INDUSTRIAL				
per m3		0.04	0.09	18%+8%
Construction				
per m3		0.07	0.18	

The Tata consultants projection for 1990/91 for the breakdown of domestic use of water is that upto 10m3/month - 21%, between 10m3 and 20m3 - 31%, between 20m3 and 25m3 - 40%, between 25m3 and 50m3 - 4%, between 50m3 and 100m3 - 3% and above 100m3 - 1% of total domestic metered demand of 310.8mld which represented 70% of total demand of 444mld. Industrial demand at 79mld was 18% of total, commercial demand at 30mld, 8% and unmetered of 12mld.

Nagpur Indicators   Estimated indicators of coverage

Total population	1,687,000
Number of tenements	319,312
Number of metered connections	71,194
Meters working	40%
Coverage of distribution system	60%

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Household connections	88,605 - 28%
Total water supply	180 mld
Rate of supply	90 lpcd
Daily hours of supply	Once per day
Water samples free of pollution	75%
Population supplied through connections	531,000
Persons per connection	14
Persons per standpost	180
Number of public standposts	5,450
Population supplied through wells/handpumps/standposts	1,156,000
Daily supply	256 mld
Water produced for domestic use	125lpcd
Supply to bulk consumers	44.7 mld
Number of bulk connections	1,843
Unaccounted for water	30%

Health Statistics for NMC

Year	1988	1989	1990	Jan-Aug 91	Annual Avge
Cholera cases	15	3	1	0	5.2
Cholera deaths	0	0	0	0	0
Gastro cases	1796	2157	2319	3311	2611
Gastro deaths	0	22	20	23	17.7
Typhoid cases	0	106	745	1154	546.3
Typhoid deaths	0	0	0	1	0.6
Inf Hep cases	608	974	598	124	627.8
Inf Hep deaths	38	27	47	16	34.9
Total Samples	2641	6966	6331	7203	6305
'Polluted'		1041	2268	1827	1924

Financial Statements for Nagpur

	$ 1990-91	$ 1989-90	$ 1988-89	$ 1987-88	$ 1986-87
Revenue					
Arrears Collection	156,267	106,967	94,333	88,133	85,533
Flat Rate	90,767	92,167	105,600	72,900	64,867
Metered	3,833,800	3,295,733	305,400	1,302,067	1,153,533
TOTAL REVENUE	4,080,833	3,494,867	505,333	1,463,100	1,303,933
Expenditure					
Disinfection	17,767	10,467	6,233	3,267	2,967
Capital outlay	727,433	349,433	0	161,467	1,253,967
Water Works	465,500	469,433	416,133	439,300	331,467
Contingencies	2,276,933	1,824,633	1,619,800	1,582,300	1,239,933
Repair & Mtce	321,767	261,767	394,133	192,000	275,067
WW Depreciation fund	16,667	16,667	0	16,667	16,667
New village pipes	4,133	14,000	26,667	33,333	75,033
TOTAL EXPENDITURE	3,830,200	2,946,400	2,462,967	2,428,333	3,195,100
SURPLUS (DEFICIT)	250,633	548,467	(1,957,633)	(965,233)	(1,891,167)

The Water Tariffs are notable for having been unchanged since 1966. The present tariff is:

NAGPUR WATER CHARGES			Tariff Present US$ Dollars

DOMESTIC	Connction 12mm		18
	Reconnection		
	Standposts		
	Unmetered 15mm		0.50
	Unmetered 20mm		1.00
per m3	0- 8 m3 month		0.03
per m3	8 to 40 m3 /month		0.04
per m3	> 40 m3 /month		0.05
Lifeline			
Average			
Sewerage Surcharge			20%
INSTITUTIONAL			
per m3			0.08
COMMERCIAL & INDUSTRIAL			0.00
per m3			0.40

Meter rent Rs 1/month deposit Rs 215 for 1/2" .Rs 5 per month with Rs 365 deposit for 1" meters cost Rs 325, supplied by NMC if available or consumer if not and tested at Rs 7 / test
In total there are 28 meter readers for 71194 metered connections, an average of one reader per 2500 meters. Revenue collection frequency was found to be very good. Against a target of Rs 106,000,000 (for year 1991-92) Rs 97,300,000 have been realised up to 26 March 1992.

Revenue from bulk consumers   79,800,000
Revenue from bulk consumers $0.162 (Rs 4.89)/ m^3
Revenue from domestic connections   25,800,000
Revenue from domestic connections $0.034 (Rs 1.02)/ m^3

Uganda Indicators

Financial Statements
NATIONAL WATER AND SEWERAGE CORPORATION   FINANCIAL STATEMENT

REVENUE ACCOUNT				
	1992	1992	**1992**	**1991**
REVENUE	Water $	Sewerage$	Total $	Total $
Kampala	2,442,934	1,346,156	3,789,090	3,537,173
Jinja	471,147	356,025	827,172	751,529
Secondary Towns	833,579	153,173	986,752	702,924
			5,603,013	4,991,627
EXPENDITURE				
Kampala	1,547,438	277,473	1,824,912	1,875,218
Jinja	661,146	114,262	775,408	412,844
Secondary Towns	1,743,616	348,346	2,091,962	790,786
			4,692,281	3,078,848
SURPLUS (DEFICIT)			**910,733**	**1,912,778**

BALANCE SHEET			1992	1991
Fixed Assets			37,274,929	38,064,619
Deferred Charges			650,416	743,333
Current Assets				
Stock			744,326	471,007
Debtors	Kampala		2,638,252	2,906,227
	Jinja		564,324	
	Secondary Towns		518,237	
Bank			381,223	658,501
Total Current Assets			4,846,360	4,035,734
Current Liabilities				
Creditors			723,504	979,733
Net Current Assets			4,122,856	3,056,001
TOTAL ASSETS			42,048,201	41,863,953
Financed by:				
Accumulated Fund			30,026,428	30,007,758
Other Funds			12,667	12,667
Loans			0	745,155
Equity			515,988	515,988
Revaluation Reserve			8,596,432	8,596,432
Revenue Reserves			2,896,684	1,985,953
TOTAL FUNDING			42,048,199	41,863,953

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STATEMENT OF	SOURCE &	APPLICATION	OF FUNDS	
			1992	1991
SOURCE OF fUNDS				
Surplus			910,733	1,912,778
Depreciation			1,292,289	0
Amortisation deferred charges			92,917	92,917
Sale Fixed Assets			9,667	0
Total FundsGenerated	through	operations		
Others			18,670	11,273
TOTAL SOURCES			2,324,275	2,016,968
APPLICATION				
Capital Expenditure			512,266	121,868
Loan Repayment			745,155	0
TOTAL FUNDS APPLIED			1,257,421	121,868
NET INFLOW FUNDS			1,066,854	1,895,100
CHANGES IN WORKING CAPITAL				
Increase in stock			273,319	114,468
Increase in debtors			814,583	2,166,928
Decrease in Creditors			256,229	(814,971)
Decrease in Liquid Funds			(277,278)	428,675
				0
INCREASE IN WORKING CAPITAL			1,066,854	1,895,100

NWSC WATER CHARGES		Tariff Previous US$ Dollars	Tariff Present US$ Dollars
CurrencyUganda Shillings	Exchange Rate to US$ DollarUShs 1200	Tariff Previous US$ Dollars	Tariff Present US$ Dollars
DOMESTIC			
	New Connction 12mm	45.00	65.25
	Reconnection	18.33	26.58
per month	Standposts	0.12	0.18
per month	Unmetered Flat Rate1 Tap	1.20	1.75
per month	Unmetered Flat Rate2-4 Taps	3.59	5.21
per m3	per 20 litre can	0.12	0.18
per m3	Household connection	0.18	0.27
Lifeline			
Sewerage Surcharge		100%	100%
INSTITUTIONAL			
per m3	0- m3 month	0.23	0.33
COMMERCIAL & INDUSTRIAL			
per m3	0- 500 m3 month	0.32	0.46
per m3	500 to 1500 m3 /month	0.38	0.55
per m3	> 1500 m3 /month	0.43	0.62

APPENDIX III

Uganda Training Needs Assessment Interviews

As part of the Institutional Analysis of NWSC and as part of the Training Needs Assessment a series of interviews were undertaken with representatives of all levels of the management.

Interviews held with:
- Operations Manager
- Personnel and Administration Manager
- Corporation Secretary
- Finance Manager
- Chief Chemist
- Workshop Manager
- Deputy Workshop Manager
- Systems Supervision Engineer
- Chief Accountant
- PIU Project Manager
- Area Manager Kampala
- Area Manager Jinja
- Area Manager Entebbe

Consulted:
- Training Manager
- Advisor to Chief Engineer
- Advisor to Finance Manger
- Advisor to Water Quality Laboratory
- Advisor to PIU
- Advisor to Water Engineer

The interviews were held to try and ascertain the interviewee's existing Knowledge (Theory), Skills (Practise) and Attitudes (Beliefs and Understanding) under the following headings:

WHAT DO MANAGERS THINK THEY NEED TO **KNOW** TO BE MORE EFFECTIVE?
Education
Training Courses attended - functional? managment?
What Job Specificiation
What knowledge required
how long in post
What before
Delegated authority? spending, decision-taking? staffing?

WHAT DO YOU NEED TO BE ABLE TO **DO** TO BE MORE EFFECTIVE?
What do you spend your day doing?
How effective?
What do you think you should be doing?
Planning/goal setting/strategy/OVI's/ Staff
development/Monitoring/appriasial/Communications/Meetings/Listening/Teaching/Leadership/Team
building/Delegating/Time Management/
Use of Microcomputers/ Fiannce & Budgets and Audits/
Public and Customer Relations/ Management Informations Systems

WHAT ARE THE CONTRAINTS TO EFFECTIVE MANAGEMENT? WHAT IS KEEPING YOU FROM
DOING A GOOD JOB?
What do you think of what is happening/
What would you want to happen?
Institution/Organisation structure/goals
Management Styles/Support and Delegation
Motivation,/Renumeration/Incentives
Resources/Facilities/Equipment
Staff Capacity/Ability/Training

INTERVIEWS

The focus was on the perceived institutional preparedness to change and the need of staff for training in management. The interview were undertaken in February and March 1993.

Operations Manager

'We' haven't had any formal training in management as the majority of us have an engineering background. So there are inherent shortfalls in skills. We want all our managers to be equipped with desirable skills in the major skill areas, for example we want Area Managers to understand basic accounting, to have skills of resolving disciplinary matters, appraisal and performance setting for staff and to limit subjectivity in decision-making, also to give performance targets for operational units. The 'hire and fire' levels are defined as the Board give authority to 'Mangers'. Budgets from areas, in cost centres - certain things have to go, for example employees; certain things, where ill???, can't be done.

Is there a push for change? Availability of finance, liquidity, problems of collection, you can't be too ambitious. Budgeting is an indication, not really a plan . . .
How dependent upon disbursements from Government?
Significant, a major impact. Ushs 117 was released in one month and then nothing again.(Refers to payment of blls)
How often permission to raise tariffs?
Must be sanctioned and justified to government and to Cabinet Level. 50% of income from Government institutions.
We can disconnect, for example, Mulago Hospital, the main hospital in Kampala and Makere University.
Finance is a limitation as is security of tenure in staff positions.
For a long time government oversight has been verging on interference since 1989; now the pressure has been easing again over the last yeat. Autonomy is increasing . . we are feeling more secure at top level, so being able to put more pressure on staff at lower levels.
Mangers need to set targets on objective criteria. When he knows he has the confidence of people above him he knows we won't be undermined.
Training has to be lself-learning for Heads of Department and needs to be Workshops for Senior managers.
Delegation is a problem for senior management - how to delegate? and trust ?
External Fellowships are a sensitive issue; we need flexibility, send those who can seed the ideas and pass them down. They should not go belos Area Manager level who are the key people.
NWSC is investigating debt swapping with government who are responsible for repaying the World Bank loans - so if they want cash for repayment from NWSC convert the unpaid bills.

Corporation Secretary 23/2/93

The NWSC Board meets monthly and we prepare monthly reports for them on performance which are detailed but do not show trends. The report shows a strong bias towards engineering. CS reports to the Managing Director although he is legally Secretary to the Board.
Reorganisation is still being discussed; hoped to be completed by end of March.
There is discussion over Performance Allowances - the basic criteria for performance and only paid if minimum criteria reached, for example on morning arrival times but tendency is to pay automatically. The Area Managers are now getting used to it and are using it as a tool, for example upto 5 out of every 100 employees are not receiving.
We are pushing towards Quaterly Board Meetings to prevent the Board getting involved in too many details and avoiding policy considerations. (For example Board is invovled in appoing Training Manager and approves all purchases over Ushs ***)
We are weakest in mangement in this country, we have been trying to restructure since 1984.
We have a desire to improve from the highest level to the lowest level. Initially there has been some resistance to change, especially when job titles are changed but now everybody is used to it.

Financial Manager 26/2/93

Functional management is reasonalbe within NWSC but yes, we do need general management training. The Heads of Department in the Corporation are all speicalists in their discipline (though don't know about Internal Auditor). Deputy Heads, such as the Chief Accountant used to head an institution. Supervisors such as the Senior Accounts Officers all need management development courses. Are they 'supervisors' or 'managers'? They have to write reports and in Departmental Meetings they have to present ideas. If the Head or Deputy is away they have to be responsible so Senior Accounts Officers need exposure on how to manage and run a department.

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Area Mangers aren't trusted because they are lacking in financial managment experience. Three are very good at technical and financial matters. They are all still 'Acting' Area Mangers as The Board has decided that they have to be Registered Engineers in order to be confirmed.

The MD is trying to split the role of engineering and area management so why should't the Senior Finance Officers be Area Mangers?

Is there a desire for change? The Financial Manager reports that he went on courses, but couldn't do anything when it comes to implementation. There is no hope. It is very personalised.

We have done a ZOPP with GTZ including one on revenue collection which is now in the programme but there has been no action even though it is desired.

There is meant to be a regular Friday Heads of Department meeting to resolve problems between departments, but now not held so often. The onus is on the Department, we do it and press on.

There is institutional inertia, not a t Board Level, really at Heads of Department level.

We are now following a work programme.

Enginers do need to learn about financial statements and budgets.

We are anxious about computerizaiton.

Mangers should learn about Spreadsheets. There is good motivation because nobobdy dares miss out on the chance of promotion to Kampala and Headquaters.

Personal and Administration Manger 22/2/93

Very interested in using management training to introduce proposed staff performance targets.

Key problem in NWSC is that nobody trusts anybody else.

There is a need for urgent training; it is badly needed for Heads of Department and Senior Officers and Area Managers. We have come to realise that Area Managers are managers more than engineers.

Definitely ned to train in mangement skills and techniques. They themselves have appreciated the problem. For example accounting for non-accountants is requried.

We need overwhelmingly these leadership skills and counselling staff and interviewing. We are trying to decentralise recruiting to the areas so they have to be able to interview. Supervisory skills are also important. Managing people and delegation is important. In the areas a lot of authority is given to the managers - 'make decisions on your own' is the instruction. Maybe they are not yet taking up the challenge. They don't have confidence - the problem is from us!

The geographical problem is enough to warrant the Area Managers to take decisions without referring to Headquarters.

Dose NWSC want to change? There is mistrust over finances, we mistrust each other a lot, so we are trying to control but no work is done.

A commercial orientation is recognised at Head of Department level but not throughout the organisation. One Area Manager is requesting extra staff without realising the cost implications.

It would be possible to combine the roles of plant mechanic and cleaner/plant attendant. I requested it to be put on the Job Description but the Area Manager is not sure.

Area Managers are involved in setting budgets.

Headquarters pays for electricity costs so there is no incentive for Area Mangfers to optimise their power use.

Wagers and salaries are direct from Headquarters. Area Mangers have two bank accounts, Revenue and Operating. All revenue is transferred back to Headquarters monthly and then money is transferred back again for the operating costs. The Chief Internal Auditor is questioning why the Revenue Account is not used to top up the Operating Accounts to save on bank transfer charges.

Are salaries low? Senior management have discussed this. We are hoping that fraud will reduce as we raise salaries. We already pay much better than government, slightly better than other parastatals (except for Electricity Board). Some private companies pay three times as much, CARE (an NGO) pay four times as much. NWSC pays three times more than government plus transport perks.

NWSC Area Managers should have authority but becasue of mistrust there is a vicious cicle from top to bottom. The Internal Auditor has power . . but . .

We have to trust . . . . the money flows and the work doesn't.

We are discussing delegation in one area this week. The Storekeeper is not allowed by the Area Manager to control his stores. All items from the construction project should have been put on cards and handed over but the Area Manager says that for such expensive items he doesn't want to take any chances.

There is mistruct at every level.

Regarding Performance Objectives, I have designed Appraisal Forms and Job Description Forms and have circulated them to Heads of Department for comments but I have failed to sell this form. Having discussed with OM we are using Area Manager Kampala as a Guinea Pig.

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People are motivated for training, for work reasons and for status.

Discusion regarding local training institutions.

Previously we had the fixed concept of Area Managers as engineers but a new concept is being floated now. Previously water was free and engineers find it easier to run a plant than to collect money. Human Resource management is coming in. Engineers trained in management would be best for the Areas but may not be possible. The use of Assistant Engineers in the areas is a new idea to try and allow the Area Mangaer more time to manage. An 'Annual Confidential Report' is done by the supervisor, not the appraisee which comes to PAM for judgements on increments. He is trying to convince Heads of Department to involve their staff in the process. With regard to change, there is always resistance to change. We are trying out a new form and one Head of Department asked 'what's wrong with the old form?'

Recognising this anomaly is the first step.

Project Implementation Unit Manager 22/3/93

Why do we need management training? At University we do a general or functional degree with no management training. Their is a cross-cutting weakness, we are lost in a crisis. Nobody (except PAM and Accts) has had a proper management course. Is this the best we can get out of them? Have the stars been effectively trained? It is also time for middle management to become involved.

There is fertile ground for change, so long as it does not hurt people's ego. We need to say 'yes, you are doing well but we could help you to do better'.

OM will agree that management training is required. MD is a 'hands off' man who was appointed ten years ago to a debt ridden corporation which was in a deep mess. He has turned this around and there is favourable public opinion. He doesn't tell you what to do but fires you if you do it wrong. He would not want to be outshone by his juniors.

Specifically, nobody is being told what to do. Each unit is unclear of its primary mission. There is no planning, only reacting. Though PAM and Finance fo plan to some extent.

Prepared to 'be the best'? There is no time to compare notes, nobody knows what the others do. The Public Accounts Committee came in recnetly and asked for the Corporate Plan. PIU was given the taks to preapre something.

Motivation is person specific. Some believe they have reached their position and that's enough. But the majority are interested. PAM has started manay target oriented schemes in the past year but tended to impose targets.

Procurement 4/3/93 plus counterpart

Stores has a general understanding but what does it mean? We need a foundation first before moving on to higher things. There is a problem of being fixed in the institutional rules. We are OK within this department where there is good management We are willing to change. Subjective decision-making is a problem. What matters is the attitude of the people first, then the organisation second.

There are problems of devolving power? You have hit the nail on the head. Bulls-eye. Resolutions are made but nothing happens. A few decisions are made but followed only slowly. There was a ZOPP on revenue collection. The decisions reflect on management but there has been no action.

Procurement section is not yet on Appraisal system.

Yes, we are frustrated. The Institution must move first to follow the commitments already made. Requires an Institutional Code of Conduct. There is a certain trust between senior management members, but not if you go down to junior posts.

It has to be made clear from top to bottom, clear goals 'like that' so that everybody knows where we are. The idea of corporate planning is not well understood at lower levels. There is a fight for power in the organisation.

Personal survival, personal tasks come first, the organisation second. But not as criminal as at the Ministry. But an increasing trend so you have to use stick and get them back on track.

The consumer message is not getting through yet. There is no sense of cost centre orientation. Policy should be made clear. Are we aiming to make a profit for reinvestment or just enough to cover costs?

The customers are using bad mateials for connections, leading to higher expenses for NWSC in repairing leaks.

Headquarters is an institution on its own. Supplies should be purchasing for all areas. 1.6 per cent is wrong because consumer has to pay for repair in cash and materials.

NWSC does not know what it pays for repairs and maintenance.

Fellowships are definitely required. Stores have to have the same foundation - start there first.

General management training is required - a key point.

Chief Accountant

There is no delegated authority - same type of red tape with procedures to follow which you want to amend but can't. There should be change in the institution but no signs yet. For example I found people 'pinned' to their desks and tried to rotate staff to learn each other's tasks but there was a lot of resistance from above so did it without authority and then people saw the benefits.

Possible to releinquish power? No, there is too much centralisation. Can't use the management skills that I received when working for the Cooperative Alliance and others.

The question is why appoint them if you can't trust them? You have to allow Area Managers to make decisions. Why move? To widen experience of management. Also felt the need to ensure that my accountancy was up to date, especially in computing having been doing more management.

There is a tendency to send people on Master's courses, then we lose them when they come back and refuse to work for the Corporation. Best to have only short courses therefore.

So the problem is within the organisation, if they can't be allowed to use it then they will go. One year is acceptable

Internal Auditors - Chief and Deputy

Salaries at NWSC are very low, one third of Uganda Electricity Board's who are good at collecting money.

We at Audit have brought this to the attention of Management. UEB leave meter reading with households. We use cyclostyled sheets but manuy of the meter readers don't reach the consumers, they mark up the bills and even then don't deliver them. Recommendations go to MD but then nothing.

It is up to Finance to design documents and then teach staff how to use them.

Audit only or management? I attend senior management meetings, but most meetings don't address themselves to our concerns, only if we totally reject an idea. For example each Areas has a Revenue Account and an Operations Account. Since the Collections Account is controlled by Headquarters Area Managers have no control. Bank draft charges for transfers are costly. The matter reached Senior Management . . .

Another problem with debit notes and credit notes which are received from the government in Kampala, then sent to Area Colleciton Account, then recalled back to Headquarters, then sent back for Operations . . .Why nothing done? Conservatism 'let systems continue' but there is no economic justification.

Concern over power? part of your work is to be made to understand that Internal Audit is not to frustrate or accuse of fraud, but part of management hoping to help the Corporation. We are seen as trying to discredit people or destroy reputations. When 'Economic Sabotage' come from the Presidential Office of Government Audit Office. We are accused of all sorts of things. Management needs to be educated as to the role of Internal Audit. Some think it is only about cash and what is happening. We feel we should look at Personnel and Administration for example and look for overstaffing, appriasal of staff etc but people resent this.

We have avoided blaming anybody for things that are wrong, even in cases of obvious fraud. We say the systme is wrong, not the humans in that section. Some fellows who should give us support block us. 'We are Heads of Department and we have the final say'. We fear being isolated, for example the manager who was shot. We are walking a tight-rope. Very much.

We feel Area Mangers should be trained in principles of management, finance and personnel.

Fraud has not been bad here since we came. CIA has to OK every payment, after checking in stores nad checking in gate pass. It is why we are hated?

Sixth Street was Revenue Section, but now we are beginning to concentrate on them. It was a place of rampant fraud, for example a UShs 20M bill would be revised to UShs 5M. The new consumer ledger with numbers controlled by machine so we can check up at any time.

Audit should be included in managment training.

There is talk of bringing people in from internal audit from areas which will be quite a burden to us, started with Central Stores, then Billing, next accountability systems, very lacking in technical deparetment, problems of vehicle workshop where no receipts were given to us.

When we came there was no emphasis on revenue collection - nobody was reaching the outlying areas of Kampala to collect tariffs. MD has agreed to the proposal to split Kampala into zones. Audit requested transfer of Area Managers who were not 'doing much' thinking they were the only capable people so all change leading to increased revenue colleciton, then AM was shot so more changes.

The argument that watrer is a commodity which we are selling, water must compete with other things consumers need such as transport, food, shool fees, so we must make it easy for consumers to pay. There must be Bank Accounts and Officers close to areas . The new Area Manager Kampala has been asked to implement it and is organising manpower, but the main problem is transport. We are only renting tiny rooms as offices for superintendents to link with consumers.

We want to have a Bank paying-in slip attached to the bill.

Workshop - Manager and Deputy

Our authority is limited. We are required to maintain pumps and repair and ensure they are all in good working condition. except for Gaba II and maybe Gulu and Lira

The original intention was to be responsble fo rall E&M plant.

No purchasing power, but can use anything in stores.

Ways of getting round problems? All depends upon supplies department. Our efficiency depends upon how quickly we get spares in for our work. Should be planned maintenance but it is not. Report for Chief Engineer to Finance Manager to purchasing committee. This Management Purchasing Committee was meant to meet once a week in the interests of protection and transparency - 'we decided' so that no individual could be accused. Most of each day is spent following up things, to prevent a crisis. There should be more time spent on technical matters. Chasing money in Headquarters, then back here (to Gaba) in the afternoon, so much time spent chasing things. You have to chase all orders through the system, never informed if it sticks anywhere. Not good for health. No managment training that includes only Area Managers. All supervisors should be trained as well so that I don't have to spend all my time checking up on them.Mark of frustration, Senior Management get too busy - so decision-making process gets too slow. Senior Management must find a way out of their queue of visitors so that they can attend to our problems. We need Decisions.

Senior Management need to learn from other utilities. I want our Supervisors to be exposed to other systems. We need a change in mentality, not from teaching what a pump is but from seeing a parallel system and being exposed to it. One will never come to realise it until we see what others are doing. Get involved; I developed a work habit after experience in Germany. Staff need to go through the 'bath' of experience.

We went through ZOPP with its goals and indicators, but ZOPP only set targets, not HOW to do it.

I wanted to clear out he workshop for a year but nobody agreed. Then the expatriate did it without permission and nobody complained. Yes, mistrust is there. Corruption has gone into the fabric of society and attempts to control it become a brake.

Management needs a comprehensive programme for Heads of Department, Area Manager Levels and Supervisors. Skills alone are not enough, you have to have management techniques. Mix up the fellowships with Management and Technical training. Training is a continual process.

We should be the 'think tank' for E&M for the good of the Corporation. If the Chief Engineer is a Civil Engineer his knowledge is limited. Any programme would be good, we need something to give the opportunity to move up the ladder to be able to contributr effectively. After years here you a re locked into the system and cannot move up and cannot move out to anywhere else . . We need continual upgrading.

Senior management are taking decisions on what they don't know. They used to be running two management systems in the Corporation, the GTZ system and the Ugandan system.

Chief Security Officer

Joined five years ago. Most of the security staff are poorly educated. New employees need to be ex Police/Prisons (rarely Army) as Corporal, now requirement reduced to Constable. There is a gradual process of replacement, but many are still illiterate. Wanted them to be trained by the Police but would have cost Ushs 0.5M for three month course so unproductive.

There are three categories, Security Officers, Supervisors and Security Guards to look after installations, offices and stores. Approximately 300 guards. I attend Management meetings and report directly to Managing Director. Having got it all organised, since 1990 it is all quiet, nothing to do, brains tend to lag a bit.

Introduced a good simple Appriasal system with scores of 50% for achievement of Efficiency Targets, 30% Attendance, 10% Discipline, 10% Time-Keeping.

Generally, security departments can be seen as jobs for stupid people. But formally there were a lot of thefts, especially from the stores via guards and storekeepers. Since 1990 no problems. I have achieved something.

There are two factors in my vision for security section. The Corporation is going to grow becasue of the inclusion of new towns, but this will be to the disadvantage of the Corporation as we are not very productive - and expensive.

It would be better to have fewer, properly trained staff and as people retire to use private organisations. The costs are high at present, for example all guards are eligible for free medical treatment (includes their families). But the idea will cause chaos so we cannot bring it in abruptly. It could be brought up in management workshops. Our aim is to give the cheapest, most effective service.

We used to have consultation meetings for Security Officers from all the areas but it was found to be too expensive, subsistence and travel claims were too high. We do have a Security Section meeting at HQ every month for all guards, telling them what has happened in the month, what the concerns are. Seems good? Seems to be perfect, only pressure now is to cut costs.

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I have very little management skills.

In an average day there is not much to do. If there is transport I do reports, then move around. If a report, write it. Then nothing.

Authority to hire and fire? If failing to fulfil, written warnings, copy to PAM. If extreme, recommend dismissal, quoting past record. Recommended new staffing levels at the new sites of Gulu and Lira.

Do I prepare budgets? Yes I do. The total budget is high, very high but not known.

Is NWSC prepared for change? Yes, National Water is flexible and wants to change. For example it started in Kampala and the expansion to other areas proves that National Water is flexible. Another example, in transfers and training it shows that people are flexible.

Limitations to effective mangement? Acting on fellow staff is difficult, part of my job but the staff resent it.

Applied for a nine month course at Uganda Management Institute but was turned down. Ther are means of preventing somebody going off after doing a course with agreements to refund. General management training and public administration is required.

Area Manager - Kampala

Arrives early to get people out into the field.

There are plans to split the city into four zones, eventually with an engineer in each, at first one per two zones. There is support from Headquarters.

Areas are being blamed for too much spending but we are victims. The Gaba II opening was charged to Kampala area but was really an Headquarters responsibility.

Performance allowances are under the Area Manager's control, to motivate staff.

Each day's activites are less effective because of lack of transport. There are four new pick-upsat Headquarters but ours are old from 1986. There is a misallocation of resources to Headquarters. It was brought up in the ZOPP. The previous Area Manager was allowed to take the Kampala AM pick-up with him to PIU.

Resources are allocated on an individual basis. All furniture was removed from the Area Manager's house when the last man left.

Senior Managers have had training and think they know all the answers and the Area Managers have no training. They have to change, if all the Area Managers come up with the same arguements they have to listen. If you are alone, nothing.

We have been asking for financial training for two years but it has alaways been refused. We need it.

We describe operational problems, are told to put it on paper and then they sit on it, never saying no.

Since June 1989 I have been transferred every year.

My method of operation is to invovle myself with the team which I learnt from the British management in the sugar factory in my previous job. Very systematic.

Maybe 25 per cent of connections have working meters.

Zonal engineers are to work alongside Area Manager Kampala to learn management skills.

Graduate engineers have been made Area Engineer Kampala three months after graduation so field work is always defeating them. The engineers therefore rely upon the Superintendents - and you find 5" mains coming off 3" supply mains. Two 4" mains in Namirembe are being fed from a 3" pipe, a long reservoir!

Why using graduate engineers in such important positions? People don't stay, of the six who started with me I'm the only one remaining. Job security is poor, salaries are improved but lower than other parastatals, housing policy is good.

An engineer with seven years experience and a new graduate from Makarere are given exactly the same salary which is discouraging. UEB would get twice as much.

We are all still 'Acting' as Area Managers because we have to be Registered to be confirmed but we can't get the technical design work as we do very little engineering here, it is all administration and operations. National Water does not have a strong design department and they don't want to give us the opportunities to do Msc's.

Senior Management thought about closing the laboratories. 'What use are these chemists there?'. But they prove the quality of your product. There are transport problems for the chemists to get out and take samples. They (HQ) do budget but they do not release, they do not implement.

Area Managers have no experience with Personal Computers.

Most Area Mangaers are Civil Engineers but require knowledge of Mechanical Engineering for the pumps. The instructions from Headquarters are 'don't touch', rather than telling them to switch off when there is an obvious problem. Operators are not allowed to switch off until the Central Workkshop arrives from Kampala.

One Saturday I roasted two goats and bought some beers and invited all the billing people, the superintendents and the staff - an idea learnt from the British in Tanzania, in order to encourage my staff. But we had to hide it in the accounts because Headquarters does not support that sort of thing, they always discourage.

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Some of the staff now have uniforms but we need a schedule for replacing. Since 1990 the Operations Manager has not visited the areas. Senior Officers are not getting their boots dirty.

The Systems Support Engineer is meant to be Assistant Operations Manager but has not authority and no transport.

Nobody goes to station.

Area Manger - Jinja

How do I spend my time? On the technical part most, they come to me first rather than to the Area Engineer. The network system is old and you have to make decisions.

I have received no management training, we did Project Administration and Economics in the Russion University at St Petersburg which I completed in 1989.

I wish that others were exposed to it, to save taking unnecessary decisions.

My jobs are in public relations, the internal public and the external public, in administration, in human resources, in appraisal.

Delegated authority? This is exposing too much; each is supposed to be autonomous, there is the organisation chart for the area. Theses people are supposed to perform. I'm meant to be just a channel from one section to another, but with a bias towards engineering.

Trust from Headquarters? Our decisions are usually accepted, they know we are on the ground. There is the political problem of disconnecting the wrong person. All those decisions are on me.

Authority to spend budget? All heads of section at area budget whcih are then forwarded to Headquarters. When it is approved we are sent a monthly vote. It is all sent every month on us to spend it. We have a limit on what we can spend on operation and maintenance. Minor works are controlled by Headquarters. Central workshop do all the maintenance. it worked when we had only three towns, now we are nine and maybe an idea for a regional workshop is required. We budget for small works like welding.

We requisition supplies needed for next month. If they are not brought we then have problems.

The system depends upon funding, so there is a time lag. Most of our problems relate to the machinery whose life span has expired. Then you have difficulties.

if things go right we can 'provide a service to the public.'

Most of the factories which use our water are closing down and the network needs rehabilitating.

It is a tug of war to get the revenue. In January we achieved 75 per cent. Kampala, Jinja and Entebbe are self-supporting. We expect to have computerised billing by the end of the year. The block-mapping is completed. Less than 20 per cent of connections are metered, less than 5 per cent last year. We have 5,000 accounts and 300 meters with routine servicing here. We give a twenty four hour water supply service.

Consumers accept meters but they do not realise that a leak on their own premises could be causeing the meter to run.

We expect people to get information from the radio and newspaper articles. Posters were made for all areas by the Public Relations Officer. Any information on bills? Not at present.

There are weekly radio programmes, contributing from areas. People do listen and respond. In Mbarara (last posting) if people saw a burst they came to report it.

Headquarters does back up the Area Managers, yes but when you cry they do not help. Generally they are supportive. Yes they are preopared to change, they are flexible at the top.

Salaries are an incentive, there was a period when some sections were well remunerated and when we sat together in technical groups we felt not so good and our head was not pushing for us.

Area Managers are feeling left behind. Friends always do best. Should you have an outside job, it is assumed by Headquarters that you must be earning outside. You grumble but cannot say too much. Not comparing with outside salaries, then we would give up.

The problem of being Acting because of not being registered is not entirely problem of NWSC. OM and MD are members and are promoting the idea of O&M being acceptable. Suspect that the institution don't want more members so that they can keep more work for themselves. But people are willing to do the work to become registered, I am gathering material

Workforce need to realise that a decision taken as an ofice is a personal issue so Supervisors need continued training, and we can then delegate.

Area Manager has powers to discipline, but not dismissal of established staff. Can only dismiss group employees.

There are three group employees to each one established. Up to half basic pay and allowances can be withdrawn.

Group workers could be Secondary School Grade 6 but have to take unskilled jobs, so they can become skilled quite quickly. Then we can transfer.

The finance collection is a very important part of the job. Area Manager are now playing thier par, for example in last posting collection rose from 200,000 to one million within a year. Needs good public relations which needs training. Heads of section within areas also have to know how to administer if the Area Manager is absent. Here, the Senior Accounts Officer is on a higher scale and so takes over as deputy but it should be the Area Engineer. Does the Area Manager have to be an engineer? You definitely need a technical background.

Is Headquarters demoralised compared to the areas? Remuneration is low and the is no encouragement and there is nowhere to move however much effort he puts in. Seniors do not know how we work. We tell the Junior staff, 'put on your gumboots before entering a manhole' and they say 'why?'

Seniors should appreciate the practical aspects of the work. Motivation is a big factor.

I don't see why decisions have to go to the Board for Ushs 3M ($2,500). For example, if we need ten bicycles but have to buy just two this wastes money.

Management can now approve 'confirmation' up to SC5 - if people are not confirmed in their promotion it is a hindrance to worker's morale. You lose if you are not confirmed and this is demoralising. People get scared they can be put out. Some policies need to be polished.

Transfer to a new place is a new challenge which is good from a professional point of view and maybe promotion. But personal atachments make it difficult, a family problem which NWSC do not recognise. A spouse cannot be part of NWSC and cannot transfer immediately so there is separation. Children could be in preparatoin for final year exams. Parallel transfer is done as though it is a punishment, this is demoralising.

We don't know anything about computers.

Area Manager - Entebbe 8/3/93

Joined NWSC in 1988 after working as a mechanical engineer in the tobacco industry since graduation from Makarere in 1981. Worked as Assistant Engineer in Jinja and then at Gaba and Kampala. Have received two weeks supervisory training and did basic organisation and management at 'school'.

Have a relatively free hand in decision-making. Headquarters must retain a certain amount of authority. I have the authority I need. But it dose depend upon the financial state of the Corporation. We would like to extend the system but we are hampered by a lack of resources.

You budget for an item each year for three years but there is no cash available so you forget it. We are not doing as well as we hoped so we don't have the resources that we would like.

Does the publicity about disconnecting the Entebbe Zoo's water supply help? People are reading about what they already know. We don't live in an island. The Government is the biggest spender (60%-70%), when they are strapped for cash we all are. And government is the shareholder.

I spend about 30-50 per cnet of my time of engineering work, 10 per cent on personnel issues and 40 per cent trying to collect revenue, talking to people who pay, checking up on the clerks, to make sure they are doing the right thing. WE have not very competent staff so spend a lot of time checkin on them. Can't trust staff.

We have no Senior Accounts Officer, only an Acting Accounts Officer, the Personnel Officer is away doing a Diploma and there is no Area Engineer as there is no need. This is only a small place. When engineering is needed I do it as it is refreshing. The problem is how muchj help you get from under, if you leave it all to the SAO, SPO there is nothing left to do.

We get the support we need from above but not so much from below. We need better qualifications for junior staff, they just don't know how to do it.

For management training we are lacking in certain areas. We are not strong on MIS, although we are generating data on repairs and revenue. We need a better understanding of statistics and what it means for the future of the Corporation. We should leave our assets better than we found them.

I would really like to do an MBA, something very relevant, to get a genreal view of management. Also specialised technology. I haven't used computers.

Is the Corporation wanting to imporve? We are being carried forward by events. We are taking on very unproductive towns. It takes political will and experimenting with political pressures and ideas. Nobody would consciously want to remain undeveloped. It is in everybody's interest to move forward, the will is there.

Salaries are not enough. I know they are low but I know how much is available. All of the revenue goes on salaries. I should be thinking of how to improve revenue before I can imporve salaries. Have to make the best of a bad lot. Ushs 90,000 ($75) is not really enough to cope with a large family.

The ordinary consumer pays Ushs 6,000 ($5) for water and is willing to pay Ushs 20,000 ($16.7) for power. Everybody thinks the water is in the Lake (Victoria) and is free and if they get cut off they can still receive some. There are problems of getting bills paid of Ushs 20,000 when the Reconnection charge is Ushs 30,000. We have to be flexible in negotiations. If World Bank can renegotiate so can we, especially when the debt may be a years salary. Better to remove a pipe length when disconnecting, better and more visible than turning a stop cock.

I like the idea of management simulation games and role plays which give the feel of problem solving. All the topics proposed for the management course are useful but I have been through these sit-in courses before. It will be the presentation that determines use and the benefit comes if people respond.

Mixture of Headquarters staff and Area staff? Looks good on the surface but deeper down it is not so good because of problem of attitudes. Area Manager's tend to be very flexible becasue of their different experiences. We don't always relate to senior management. For example, the trouble over Entebbe Zoo, there was interference from Headquarters before they had been briefed by the Area Manager. We can mis with the Deputy Heads of department, who have very little to do. When they are transferred to Areas there is a real role and people feel positive. Some people talk of patronage but it has not bothered me. I try to keep my distance and do my own job and not get involved in office politics which don't help.

At times certain actions many have been misinterpreted. Mistrust when created takes a long time to dispel. Where we are now, the level of transparency is good now. It could have been out of ignorance in the past. Now you can criticise openly, before everybody mistrusted. Those people who are demoralised don't attend the management meetings and don't realise what is now happening.

Regarding registration with Insitution, it used to be very inactive. Now it is getting stronger and the NWSC Board are enforcing a rule that has always been there. To register now you must prepare a paper. Why not investigate the treatment and distribution system? But I don't even have a pressure meter! There is also hte problem of being moved, we don't feel we are permanent, it has been a policy. Because of corruption? Every time they think you are gaining ground you are moved. Don't know why.

Considering fellowships, I would prefer to compare another authority to ours. Really would like to do this and see how they or we are better.

Sanitation is dangersouly overlooked. Pollution is an upcoming problem with legal aspects to be investigated. What about people at the lower level? If I can learn something new it would be easier to implement if that level is also trained. You ask them to generate information, and they don't know why you need it, so why should they bother, forcing it down their throats? I would like to attend a course with the accountant, otherwise I may fail to impress upon him the importances. If it was two days that would be OK, but we couldn't be away for a week, so that when we came back we all talk the same language.

Security plays a marginal role, do we really need them all? Only 15% here are security. That sort of decision has to be made at a different level.

'Water must run and revenue must come' - with that target we have the freedom to manage.

Expatriate Advisor I

I've seen worse systems, I've lived through them, I know the limitations. The key issue here is organisational. I don't believe he existing system is best. I don't understand it. The full impact of expatriate technical experts is not realised, they don't know whtatheir responsbilties are, what their boundaries are. Technical matters such as non-working flow meters can get tossed between TD, OM and even PIU.

The 'Acting' status is being used genuinely so as to assess performance, not to create insecurity.

The relationship between Finance and Audit is difficult, they are always opposing each other; it may be personal or it may be lack of clarity on responsibilities. The World Bank made the requirement for an Internal Auditor who was appointed from outside in 1991.

Technical, Finance, Audit, PIU, PAM, OM and Finance used to meet every two weeks, then OM decided it was not required as too troubling.

What can management training do? Job Descriptions are not clear, needs a definition of responsibilities as areas of responsibility are vague. Historical rather than reasoned. General confusion is allowed rather than encouraged. Also need to look into time management. There is a culture of wanting to do everything, meetings are interrupted constantly, so decision-making is by default. For too long managers haven't seen the need for discipline. Meetings are haphazard, there is no use of Agenda, last meeting's minutes are used as the Agenda.

Is planning ahead not cultural? Rather it is lacking discipline about what money is to be used for. Vouchers are passed from Head to Head. Conspiracy or ?? Personal interests are very strong, afecting everything else, delaying decisions.

Expatriate Advisor II

People are always looking after their own interests, not those of the Corporation.

People pay for their jobs, on appointment and some on a monthly basis. People pay 10 per cent to get tehir invoices paid and the cut goes upward. Ditto stores procurement etc.

There is a massive need for Middle Management Training

Not so much to do with top management, more of an attitudinal problem.

Nobody knows what they should be doing, what the limits of authority and responsibility are so everything gets pushed upwards and is then retained becasue of inertia, status etc

Everybody has their own private agenda.Staff manage their own affirs very effectively. It is an attitudinal problem at senior level, not really skills. Middle level training is needed. The young engineer graduates don't even know engineering, let alone how to manage.

Expatriate Advisor III

Terrible management, well perhaps very good management and skillful to manage objectives of social group, but not for water supply. There are mobile goalposts with referees who reinterpret the rules.

National Water is not independent, not autonomous, it is not being paid by other Ministries who are the major consumers and debtors by billions of shillings.

The whole enterprise is driven on projects. Any progress depends upon projects.

There is responsibility but no authority.

We have expatriates here to create the illusion of a water utility management system.

Deputy Head of Department

Have been on no management training courses and see no value in doing so. Manager is just a stooge with no authority even thogh the Job Description gives responsibility. The man above does not take responsibility for the post. The more management training we might get the more frustrated we would be. The target group for training should be at the very top first. If it doesn't start from there it will be ineffective.We have no recurrent budget for supporting routine activities.Procurement of necessary supplies takes over a year. Asked for a calculator, request went as far as the Financial manager after some time but passed back to Head who dsesn't take responsbility.

Junior manager

All Area Managers are 'Acting', not confirmed and then they push them around.

Frustrated? Yes, by the lack of resources, the impromptu decisions without consultation; for example, this morning we at last have two vehicles back, then MD sent it at no notice for a funeral 300km away. Partly a problem of no communication.

The institution needs polishing, it is disjointed, there is no cohesion, there is no flow of information.

Motivation? We have to ignore the lack of money so itrests on Personal Development, continuing training and interaction with others. Training is a long term need but NWSC runs by crisis management.

The technical outpu is done very well, the MD is a striaghtforward, good fellow. Some people in senior management are sabotaging to prevent the MD getting credit. MD not being fed properly. There is a great need for management consistency.

In addition to the interviews this researcher was invited to participate in the Middle Mangers and the Senior

Mangers regular meetings which coincided with the study period. The comments recorded are intended to give a

'flavour' of the types of issues being expressed and the opinions and frustrations of the people concerned.