REPORT TO THE WATER RESEARCH COMMISSION

WATER AND SANITATION IN URBAN AREAS: FINANCIAL AND INSTITUTIONAL REVIEW

JUNE 1994

REPORT 4

INTERNATIONAL PERSPECTIVES

SOME LESSONS FOR SOUTH AFRICA FROM ENGLAND, FRANCE, ITALY, BRAZIL AND BOTSWANA AND SOME INFORMATION ON EXTERNAL FUNDING AGENCIES

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PREFACE

BACKGROUND

The Water Research Commission (WRC) appointed Palmer Development Group to undertake an institutional and financial review of water supply and sanitation services in the urban areas of South Africa.

OBJECTIVE

The overall objective of this project is:

> *To present information and analysis that can help relevant community leaders and decision-makers:*
>
> - *to guide and promote the extension of services and the reshaping of organisations such as can enable all people living in the (urban) areas of South Africa to have adequate and appropriate water supply and sanitation, and*
>
> - *to facilitate the related processes of financial, institutional, (legislative) and other changes that the adoption and implementation of the above objective will require.*

The specific objectives of the project and working assumptions have been set out in the Draft Project Inception Document.

This report is written in fulfilment of Objective 5, namely: "Provide a brief outline of international experience and current policy trends to the institutional and financial issues facing South Africa".

This report was written by Rolfe Eberhard.

ACKNOWLEDGEMENTS

This report is a summary of more detailed working papers prepared for the project by David Kinnersley (United Kingdom, France and Italy), Ian Palmer (Botswana) and the author (Brazil). The section on general international trends is based largely on the work of Coopers and Lybrand (United Kingdom) (1993) and John Briscoe (World Bank, 1991, 1992 and 1993). Information on World Bank involvement in South Africa was obtained, in part, from John Kalbermatten and Ken Robson (consultants to the World Bank).

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1. INTRODUCTION

1.1 Scope

In many parts of the world, water is coming to be recognised and treated as an economic resource. This change, together with an increasing focus on water quality issues, is having an important influence on the way water and sanitation is being managed, both in developed and developing countries. There is much to learn from the experiences of other countries and it is possible for this to be a sizeable study in itself. The focus and resources of this project, however, require a more limited and strategic approach to gaining knowledge from international experience that is directly relevant to the South African context.

1.2 Objectives

The specific objectives of this report, as outlined in the Draft Project Inception Document, are as follows.

- To provide a brief description of three national systems in Britain, France and Italy.

  The purpose of this was not to offer a serious and detailed evaluation of each, but rather to expose the range of differences between them, the historical and contemporary reasons for these, and the impacts on the way in which the systems function.

- To provide a brief description of the experience of institutional development in Brazil.

  Brazil has fast growing urban areas, a large unserved urban population and a high income gap between the rich and poor, conditions which are also being experienced in South Africa.

  Brazil developed a comprehensive national water and sanitation plan (called Planasa) which was implemented in the period 1968 to 1986. South Africa has never developed a national plan and it was felt that useful lessons could be learnt from Brazil's experience.

  Brazil's water and sanitation sector is also organised in a markedly different way from that in South Africa. In Brazil, water and sanitation is provided predominantly by state-wide public companies which operate the full water and sanitation service.

- To provide an outline of the policy trends currently attracting attention among the multi-lateral and larger bi-lateral lending agencies, notably the World Bank.

- The gathering and presentation of such information as can be usefully gained in general terms (without commitment or negotiation) about which agencies might lend to the South African water and sanitation sector, on what scale and subject to what terms and conditions.

It was recommended at the inaugural steering committee of the project (March 1993) that the project team also investigate water and sanitation management arrangements in Botswana.

1.3 Sources

As part of the project, the following Working Papers were prepared:

13. "Institutional restructuring in the urban water and sanitation sector: a review of the current debate, and contribution of some further ideas."

14. "The management of water and sanitation in Brazil: some lessons for South Africa."

16. "The management of water and sanitation in Botswana: some lessons for South Africa."

17. "Differing patterns of water agencies in Britain, France and Italy."

Contained within Working Paper 13 is a section on international trends in institutional and policy development which has been incorporated into this report.

Only a summary of the lessons (as they apply to South Africa) from Working Papers 14 and 16 are included in this report. Descriptive accounts of water and sanitation management in Brazil and Botswana respectively can be found in the Working Papers.

Working Paper 17 provides an historical overview of institutional changes that have taken place in the United Kingdom, France and Italy (each having quite different institutional arrangements), exposing the range of differences between them, the historical and contemporary reasons for these, and the impacts on the way in which the systems function. Only lessons that can be drawn from the emerging themes are reported on here. Again, the reader should consult the Working Paper for more detail

2. INTERNATIONAL TRENDS IN INSTITUTIONAL DEVELOPMENT

2.1 Introduction

There is widespread evidence of changes in approaches to institutional development. Key trends that have been identified are summarised below.

These policy trends are currently attracting attention among the multi-lateral and larger bi-lateral lending agencies, notably the World Bank.

The discussion is taken from Working Paper 13 (Palmer Development Group, 1994b), which in turn is sourced largely from Coopers and Lybrand (1993).

2.2 Integrated water cycle management

National (and international) policies are increasingly being implemented at the river basin or aquifer level to ensure that decisions regarding different uses of water resources take full account of the trade-offs and that the potential for disputes and conflicts is reduced[1].

2.3 Separation of regulatory and operational responsibilities

This reduces the conflict of interest inherent in self-regulation and improves the clarity of objectives and responsibility.

The separation of economic regulation from quality and environmental regulation is also being undertaken to ensure a proper balance between quality standards and cost to the consumer.

2.4 Decentralisation of operations

Previously centralised operation of water supply to, and wastewater disposal/treatment from, households is being decentralised so that the integrated management of the water cycle is balanced with operations that are undertaken closer to the user and which are more

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[1] Briscoe (1993, p13) asserts that the challenge is to replace the administratively based and fragmented management of water resources with a system that recognises the unitary nature of the resource and its economic value and that relies heavily on prices and other incentives to encourage efficient usage of water.

responsive to their needs[2].

2.5 Greater public participation

User and consumer groups are beginning to have more input into the policy making process and having more influence on the way in which agencies operate. This increases accountability and responsiveness to local needs and also allows women, who are most affected by inadequate water and sanitation facilities, to have greater influence[3].

2.6 Increasing use of market-based mechanisms

Some countries are beginning to base their water supply and wastewater charges on economic costs to increase incentives for the efficient use of water resources, and to give clearer signals to management on priorities for investment[4].

Raw water abstraction costs are being implemented, recognising water as an economic resource and the opportunity cost of taking water away from natural systems. Effluent charges are being used to reflect costs of pollution on the environment and downstream uses of the water.

2.7 Commercialisation of management / elements within structure

Performance management techniques, management / employee incentives, commercial accounting practice, "ring-fencing" within local authority bodies[5], and transfer pricing[6] are

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[2] The "Dublin Statement", agreed to by 100 governments at the International Conference on Water and the Environment in early 1992, had as one of its fundamental principles that management should be at the lowest appropriate level. This principle is also strongly stated in "The New Delhi Statement" arising from the UNDP sponsored Global Consultation on Safe Water and Sanitation for the 1990s" (UNDP, 1990).

[3] Because water supplies and sanitation services are natural monopolies, consumers cannot force suppliers to be accountable by giving their business to a competitor. To give consumers a voice in the political process, consumers' associations and rate-payers' boards become vital.

[4] The "Dublin Statement", agreed to by 100 governments at the International Conference on Water and the Environment in early 1992, had as one of its fundamental principles that water should be treated as an economic resource.

[5] Creating operational areas which have a high degree of managerial autonomy, separate cost centres etc.

being used to improve accountability and budgetary control and improve institutional efficiency and performance.

2.8 Greater private sector involvement

An increase in private sector involvement is occurring in a number of ways:

- Contracting out of services
- Build - operate - transfer (BOT) operations
- Build - own - operate (BOO) operations
- Fixed term franchises, either management only, or management and assets[7]
- Outright sale of assets (full privatisation)[8]

2.9 Independence from undue political interference

An essential requirement for effective performance is that both the utility and the regulatory body, which is necessary for such natural monopolies, be free of undue political interference.

2.10 Conclusions

The trends identified above are by no means prescriptive in terms of the form of the institutional arrangements which would optimise services provision in a given context. This will be made obvious in the next section which outlines lessons emerging from water and sanitation services provision in England, France and Italy. All three have very different institutional arrangements, yet all (to a greater or lesser extent) have been forced to take into account the trends identified above.

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[6] "Transfer pricing is usually used to decentralise decision making amongst managers within an economic entity, which will also encourage, motivate, or 'coerce' the individual manager to make decisions that will achieve the economic entity's objectives. It is thus an attempt to secure the advantages of the market price mechanism in achieving an efficient allocation of resources within the economic entity without relinquishing the advantages of being one economic unit." (from The Penguin Management Handbook, Edited by Kempner, 1987.)

[7] The fixed term franchise "privatisation model", including both management and assets, is commonly used by local authorities in France.

[8] It should be noted that Kinnersley strongly cautioned against this option in the current South African context (See Palmer Development Group, 1993a).

3. ENGLAND, WALES AND SCOTLAND

3.1 Overview (England and Wales)

Since 1989, water utility services have been wholly provided by private sector companies under monopoly regulation and environmental control. However, water and sanitation management arrangements underwent a number of transformations prior to this which are briefly described below:

1945 - 1970

Local government controlled most of the **water** supply services, however, the number of local government water units reduced from about 1000 in the early 1950s to some 200 in 1970, through wholly voluntary mergers. Water supply was generally self-financing. Charging was largely by reference to property values through local government property taxation.

Wastewater collection and disposal remained in the hands of local councils throughout the period, with little change. However, an investigation in 1970 showed that the performance of wastewater treatment works was largely inadequate.

River Boards were formed in 1948 initially with limited functions. In 1963 water resources powers were added and their names were changed to **River Authorities.** There were 29 in all in England and Wales. A national Water Resources Board was responsible for planning regional strategies, but it did not have any executive powers and proved to be a disappointment.

In the 1970s, two trends emerged:

- a growing concern with water quality
- greater concern for the natural environment

1970 - 1985

A massive reshaping of local government, planned from the late 1960s to be implemented in 1974, provided a trigger for the following changes in the water sector:

- Bringing water and wastewater services closer together.

- Putting both services on a self-financing basis as water supply had long been.

- Creating ten regional all purpose water authorities in England and Wales to deal with river basin functions as well as water and sanitation utility functions across regions with water shed boundaries.

- Local authority nomination of the majority of the board members.

- Allowing local authorities to continue with an operational role in wastewater collection (but not treatment).

Kinnersley was of the strong opinion that it was a hazardous move to combine water utility functions with river basin functions in the 1970s, for two reasons:

- The system was vulnerable to being too dependent on complacent self-regulation, at a time when standards of environmental protection were being challenged and upgraded.

- There was a danger of utilities focusing on efficiency at the expense of river basin resource economics.

Both of these dangers were, in fact, realised. The regional authorities were even worse performers than the local authorities in the operation of treatment works (largely for financial reasons), and the stewardship of river basin interests tended to be overshadowed and became less effective and sharp than under the previous arrangements.

In 1983 local authority nomination of regional authority board members was ended on the grounds of efficiency. Local authorities thus lost their stake in the water sector, although they continued to manage wastewater services under sub-contracts to the regional utilities.

Concealment of the performance of the water sector from the public was also ended in 1985.

1986 - 1993

As ideas on privatisation unfolded, it was realised that river basin functions and water utility functions had to be separated because it was desirable for the former to remain under community control through public accountability to elected Ministers.

Hence the following institutional arrangements took shape:

- Private water utilities which focused on water supply and wastewater services only.
- A new independent National Rivers authority for the river basin functions (water resources management and pollution control).
- A new independent economic regulator of private water utilities (OFWAT).
- An independent water quality monitoring agency (Drinking Water inspectorate).

3.2 Emerging themes and lessons

- As a result of the restructuring of the water sector, England and Wales have a system with strong tendencies to centralisation, with almost no direct local accountability.
- Privatisation was not the inevitable result of the (primarily investment finance motivated) restructuring in the water sector in England and France. This was politically motivated by the Thatcher government, which was not prepared to make the large public investments in the sector which were required at the time.
- It was a mistake to combine the river basin functions (water resource management and pollution control) with water utility functions (water supply and wastewater treatment) in the 1970s and this had to be undone at a later stage.
- Local authorities still act as sub-contractors to the private utilities for management of wastewater collection (but not treatment). This seems to be the wrong way round: intuitively it should be the local authority which owns the assets and has responsibility for management and financing of the wastewater services. If another agency can provide these services more efficiently, then the local council could contract these services out (say, to a private utility)[9]. However, at present in the United Kingdom and Wales, the private company owns the assets and has responsibility for management, yet contracts the service out to local government because they can do it more efficiently. Thus the efficiency rationale for privatization (at least of wastewater collection) is turned on its head in this case!

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[9] This is, of course, the "French model" which is discussed in the following section of the report.

- Despite water services being the responsibility of local government, and later regional authorities with boards nominated by local authorities, the performance of the agencies (especially with regard to wastewater treatment) was to a large extent concealed from the public. The ending of concealment was inevitable at privatisation, but it was beginning to occur before that and was a significant change in its own right. The insensitivity of both central and local government to public opinion was quite remarkable.

- Fundamental local government restructuring was a catalyst for change in the water sector in the early 1970s, showing that it was possible to reorganise the water sector concurrently with a transformation of local government.

- It was the need to raise large sums of investment finance, rather than efficiency arguments, that led the Thatcher government to push for further restructuring of the water sector and privatisation.

- The experience in **Scotland** has been somewhat different[10] where local government has retained its operational role in the water sector for much longer. Current local government restructuring is providing a catalyst for a move towards larger publicly managed water utility units. However, it is likely that local community control over the sector will be retained[11].

- It is possible, even in a relatively small country such as the United Kingdom, for a national government to accept regional differences in the management and financing of the water sector[12].

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[10] See Working Paper 17 for more detail.

[11] There is widespread opposition to privatisation in Scotland.

[12] This is not the case in the energy sector, whose network of supply and distribution is much more integrated.

4. FRANCE

4.1 Overview

In France, the municipality continues to be of great importance in the management of water and wastewater services, despite there being some 34 000 units of local government. This makes for a very decentralised system, with central government playing a supporting role through the structure of prefects and départments.

Although local government retains responsibility for services management, most do not operate or manage their water and wastewater services, but contract these out to private companies. This system is well established, with a long and stable history, and currently about 75% of water supply services and 40% to 50% of wastewater services are contracted out.

Contracts may be for operation and maintenance only, or may include asset renewals and investment. The former contracts are usually carried out on a fixed fee basis and are relatively short term (less than 10 to 12 years). The latter contracts (including provision for financing capital replacement) usually have a longer contract period (usually 20 to 25 years) to allow the company time to recuperate the investment through the tariff. The assets always revert to the ownership and control of the municipality at the end of the contract.

Because of the long term nature of these contracts, flexibility is important. The success of the system depends on two crucial factors:

- Mutual trust and cooperation between the parties. The parties need to work together to negotiate a contract that is fair to both parties, and which retains flexibility for changed circumstances.

- A competitive tendering environment, in which the private companies need to prove their worth to the municipality lest their contract not be renewed in the future and other possible future contracts be jeopardised.

Two mechanisms are available to a small local authority which fears being taken advantage of by a large private company:

- The prefect can arrange support for the local authority in its negotiations, if this is requested.

- Small local authorities can join together to create a larger franchise and negotiate it together.

Three large companies hold most of the contracts. This ensures that local authorities are offered the benefits of widespread experience, and extensive technical and management support backup, at the same time as providing scope for competition between the companies. The local authority can, moreover, elect to manage its own services if it wishes.

More detail on the nature of a typical "French model" contract is given in Working Paper 7.

The French also have river basin agencies. These are described in Working Paper 17. A major functional difference compared to the British National Rivers Authority is the practice of levying charges on effluent discharges.

4.2 Emerging themes and lessons

- Under the right conditions, the French system appears to operate exceedingly well, attaining the dual goals of accountability and efficiency through combining local government and business interests within a competitive framework.

- To the outsider, the extent of competition in the system may appear to be muted as changes of contractor are usually infrequent. However, Kinnersley, through discussions with those involved, is of the opinion that this competition is very real. He remarks that the competitive maturity of the system is admirable.

- However, it is not clear how one would start a French style system in a foreign context where there is no previous experience of it. It requires an appropriate attitude among civic leaders as well as in the companies concerned.

- There could be dangers of monopoly or of corruption if the constructive relationships built up in France were not reliably achieved.

- French (and British) companies offer to work in this way in overseas deveoping countries, but this appears open to disadvantages compared to a country not reliant on external finance or business know-how.

- It is often suggested that franchising (in France) tends to increase in periods when needs for capital investment become more marked, and to decline when financial problems are less pressing.

  This would seem to indicate that the French model provides an excellent model for mobilising private capital to finance investment in water and sanitation.

5. ITALY

5.1 Overview

In Italy, water services are largely managed by local government. The finances of the water sector are in a poor state, with many local authorities making losses on water and wastewater services. This is largely the result of a rigid system of control over price increases. Consequently, local government is unable to raise the finance necessary for pressing new investment requirements, and is largely reliant on central government grants. However, central grants have been insufficient in recent years, resulting in an infrastructure which is not coping with increases in demand and the consequent pollution of rivers and beaches.

5.2 Emerging themes and lessons

- In a country with the prosperity of Italy, there should be no need for the central government to give capital grants for essential facilities on which industries and households depend.

- Local government only can be effective in longer-term management of water and sanitation services in settings where it is not frustrated by breakdowns in central government or its own financing.

6. BRAZIL

6.1 Overview

Brazil provides useful insights and lessons for South Africa in the field of water and sanitation management in urban areas. Although a much larger country than South Africa, with an urban population of some 150 million, and with widely varying urban topography and climate (often quite different to that in South Africa), many similarities exist. Amongst these are a comparable per capita income level (around US$ 2 500 per annum) and rapidly growing, and largely unserved, poor populations in and on the outskirts of the cities. The differences that exist provide good points of departure for a comparative analysis of water and sanitation arrangements. These include the implementation of a comprehensive national water and sanitation plan over a 16 year period, and the adoption of a largely centralised institutional delivery model with one state water and sanitation company per state (22 states in the federation) providing source to tap services for both water supply and sanitation.

6.2 Lessons for South Africa

The lessons set out in Working Paper 14 are summarised below. It is important to note that the application of these lessons to the South African context is open to interpretation and that the intention of presenting them is to stimulate discussion and debate.

Constitutional and legislative context

1. Allocating the responsibility for water and sanitation services at the local authority level is the best way of ensuring the democratic accountability of service agencies to the local population.

2. In metropolitan areas, financial resources, investment planning and bulk service provision should be coordinated at the metropolitan level.

Macro-economic policy

3. An investment programme should be affordable to the country and should not create macro-economic imbalances, for example: excessive inflation, balance of payment problems, large external debt burdens and dependence on foreign aid.

A national water and sanitation plan

4. A comprehensive (though not authoritarian) national water and sanitation plan setting out service goals, time-tables, investment requirements, methods of funding and cost-recovery, tariff policy, materials requirements, training programmes and minimum service standards is undoubtedly an important tool in mobilising the water and sanitation sector to improve service coverage and quality, and should be developed as a matter of priority in South Africa.

5. There are important pitfalls in developing a national water and sanitation plan which need to be guarded against. Amongst these are centralisation of decision making and control, and development of policies which are too rigid and prescriptive and which discourage innovative and appropriate solutions to local challenges.

Urban planning

6. From a technical and cost perspective, it is better to plan and provide services on unoccupied land before it is settled rather than afterwards.

Institutional arrangements

7. Brazil's one company per state (province) model is not appropriate nor desirable for South Africa.

8. A simple model of municipal control over water and sanitation services is equally not appropriate for South Africa.

9. The small technical support agency, which provided technical support to municipalities requesting such assistance, and also operated and managed systems on behalf of the municipalities (under contract) on request without assuming control or ownership of the assets, and which operated in Brazil prior to and in parallel with the implementation of Planasa, provides a good role model which could be translated into the South African context with good effect, especially for remote small towns.

10. Special institutional arrangements are required in metropolitan areas to ensure adequate coordination of investment planning, bulk service provision and the pooling of financial resources between local authorities.

11. Competent and effective technical monitoring agencies (responsible for one or more provinces) are vital to ensure that wise investment decisions are made and that projects and services are properly, effectively and efficiently implemented and managed.

12. There are three important factors which can help to ensure that agencies are responsive to the needs of the poor:

- a favourable political and policy context
- inter-agency competition
- community mobilisation

Finance and tariff policy

13. The use of loan funds is an appropriate means of funding a large investment programme in water and sanitation.

14. The development of revolving credit funds can be done in such a way as to ensure the long-term sustainability of the water and sanitation sector without the need for recourse to additional outside sources of funding for future investment needs.

15. Care should be taken when using foreign loans for investment in water and sanitation, and, in general, these loans should only form a small proportion (say less than 10%) of the total loan funding required.

16. South Africa should examine the possibility of using contractual savings as a source of loan finance for investment in water and sanitation.

17. Cross-subsidisation between wealthy and poor communities, and between industry / commerce and residential consumers, can be implemented in a way which ensures the affordability of services to the poor and is sustainable in the long term.

18. However, cross-subsidisation over a wide geographic area between cities and towns, or between urban areas and rural areas, other than through the central or regional fiscus (taxes) is not recommended.

19. The implementation of life-line and progressive block rising rate tariffs is practically possible and can achieve the dual objectives of ensuring affordability of services for

the poor and raising sufficient income for the viability of the water and sanitation service agencies.

Management

20. Political interference in the day to day management of water and sanitation services and in project investment decisions is highly detrimental to the effective and efficient operation of water and sanitation agencies; and this should be strongly guarded against in South Africa.

21. Adequate monitoring and control should be exercised over water and sanitation agencies. The two best ways of achieving this are:

- Ensuring direct democratic accountability to the local community.
- The creation of small competent monitoring agencies (see point 11 above).

22. Operating and monitoring agencies should preferably be separate from each other.

23. Good quality management is crucial to the effective and efficient operation of water and sanitation agencies, and the importance of this should not be under-estimated.

7. BOTSWANA

7.1 Overview

Botswana is a large, sparsely populated country with a rapidly growing economy. In terms of GNP per capita its economy is similar to that of South Africa. However, it has a faster growing economy and currently has a stronger government revenue base.

An autonomous water utility is responsible for source to tap water supply to the majority of urban areas in Botswana. Sanitation services are the responsibility of local government.

7.2 Lessons for South Africa

The lessons set out in Working Paper 16 are summarised below. It is important to note that the application of these lessons to the South African context is open to interpretation and that the intention of presenting them is to stimulate discussion and debate.

Macro-economic context

Although South Africa and Botswana are of comparable wealth, on an average per capita basis (US$ 2 500 and US$ 2 000 per annum respectively), the revenue bases of the central governments in the two countries are quite different. In South Africa, central government's share of Gross National Product accounts for 31%, compared to Botswana's 61%. This has implications for the ability of the state to finance water and sanitation services. In Botswana, the central government directly finances some 60% of local authority expenditure, whereas in South Africa this figure is much less.

1. The high degree of subsidisation of sanitation services in Botswana is not replicable in South Africa and therefore should not be taken as a role model to follow.

A national water and sanitation plan

Planning with respect to water resources development and water supply is well developed in Botswana, which is not surprising given the general aridity of the country. Institutional arrangements are such that there is full geographical coverage and institutions have clearly defined roles.

South Africa, likewise, generally has well developed water institutions, although the striking

omissions are the lack of policy and coordination in the area of rural water supply[13] and provision of services to (previously designated) black local authority areas in the cities[14].

Until recently, sanitation in Botswana has not had the same policy and institutional attention. However, this has now been rectified with the commencement of the "Self-help environmental sanitation programme".

South Africa has never had a national sanitation programme, although this is also likely to be established soon, with the installation of a democratic government after April 1994[15].

2. Botswana's rural sanitation programme should be studied more closely, with a view to determining what aspects of this programme could be usefully incorporated into the soon to be established national sanitation plan.

Institutional arrangements

Autonomous water supply utility

Botswana has a markedly different model for **urban water supply** from that currently practised and envisaged for South Africa. Botswana's experience shows that an autonomous water utility can be an effective and efficient supplier of water services to populations in one or more urban areas in a developing country context[16].

3. The institutional option of autonomous public water utilities that are not too large (see lesson 1) should not be discarded out of hand and deserves serious consideration for possible application in South Africa, with appropriate adaption (for example, more emphasis on local democratic accountability).

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[13] This has its roots in the apartheid era, during which time the Department of Water Affairs had no jurisdiction in the homelands. This weakness is in the process of being addressed and a rural water supply directorate with full geographic coverage across the 1910 South African borders is being established.

[14] Unification of the local authority councils in the urban areas will go a long way to addresses this discrepancy, although the challenge of service provision will require greater change in the way of providing services than is suggested by unification.

[15] The ANC's National Reconstruction and Development Programme provides some pointers towards a likely new policy and programme for sanitation (and water supply).

[16] Botswana's Water Utility Corporation has been praised for its efficiency in international literature, and held up as an example to be emulated. See, for example, Briscoe (1993, p35). Briscoe (ibid) suggests that the reason for its success is the good public service tradition in Botswana.

Sanitation managed by local government

Although water is supplied by an autonomous sector agency, **urban sanitation services** have been kept firmly within the local authority domain in Botswana. The logic for this, in Botswana's context, is sound. Water is treated as a trading service, and the Water Utility Corporation operates on a sound financial basis[17] (water supplied through standpipes to low-income households is directly paid for by local government); and sanitation services are regarded as a social service, heavily subsidised by central government. This same logic is not necessarily appropriately translatable to the South African context because of the different macro-economic contexts (see point 1). If sanitation is treated (at least partially[18]) as a trading service in South Africa (and there are strong arguments for this[19]) then it would be more logical for the management of sanitation services to be linked more directly with water supply services. One compelling reason for this is that it is much easier for an agency providing both water and sanitation services to encourage payment through cutting water supply, than it is for an agency running only non-trading services[20].

4. Botswana's institutional arrangements for sanitation supply in urban areas, namely local government responsibility, should not necessarily be viewed as a good role model for South Africa to follow, especially if independent water supply utilities are established.

Block rising rate tariff

5. A block rising rate tariff which caters for affordability at low consumption levels is practically implementable in a developing country context and can be structured in such a way so as to (1) ensure affordability, (2) raise sufficient income to maintain financial viability of the water utility, and (3) discourage excessive consumption through premium tariffs for high usage.

While the actual tariff settings and delimitation of the consumption blocks are obviously

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[17] Tariffs are set to raise sufficient revenue to fully cover operating expenses (including capital charges on past capital expenditure) and generate a surplus to cater for capital replacement and future investment.

[18] Partial in the sense that at least the full operating and maintenance costs are fully recovered from the consumers.

[19] See, for example, Working Paper 13 "Some ideas to inform the current tariff policy debate for urban water and sanitation services." (Palmer Development Group, 1994).

[20] The experience of Botswana bears this out. Payment for services to local government amongst low-income households is almost non-existent, whereas the record of payment to the Water Utilities Corporation is excellent. The significant difference is not income levels, but rather the WUC's strict policy of "no payment, no water supply".

highly sensitive to the consumer and demand profile, as well as the water supply costs, it is notable that the Water Utilities Corporation has been able to provide a low tariff (87 c/kl[21]) for a relatively large initial block (15 kl per month per household) in Gaborone. In contrast, the tariff for the high consumption block (more than 40 kl/month) is significantly higher than typical average tariffs in South Africa (465 c/kl, compared to of the order of 200 c/kl in the major metropolitan areas in South Africa).

Differentiated tariffs by water scheme

Although different water schemes are managed by one agency (the Water Utilities Corporation) in Botswana, a uniform tariff policy across schemes is not applied, and users supplied by one scheme, pay, as a whole, for the full costs of that scheme. There is therefore no cross-subsidisation between different water schemes / urban areas. This economically sound principle works well in practice in Botswana.

6. South Africa should not consider implementing a uniform water tariff across different urban areas which experience different costs of water supply.

Payment for services: who pays and how?

In Botswana, notwithstanding the official policy, the vast majority of households with a basic level of service do not, in practice, pay for their services. Water provided through communal standpipes is considered a social service, and the urban council pays the Water Utilities Corporation for the water consumed. The urban council also pays for the maintenance of the VIP latrines.

Households with a higher level of service (on-site metered water connection and flush toilet) pay the full costs of the water supply (to the WUC), but only a small portion of the operation and maintenance costs of the wastewater system (through property tax to the urban council).

The urban councils experience a large financial deficit, partly as the result of the short-fall in revenue from the above services, which is made up through central government transfers. Despite the strength of the government's revenue base, this practice is proving unsustainable and the Botswana government is making every effort to substantially reduce the dependence of local government on central government transfers.

7. If water is treated as a trading service, then the responsible agency should be responsible for revenue collection from all groups of water consumers within a tariff policy which

[21] 65 Thebe. (100 Thebe = 133 South African cents)

takes into account affordability and the financial viability of the water supply agency.

8. The lack of payment for sanitation services in Botswana is proving unsustainable, despite the strength of central government revenue base. It needs to be accepted in South Africa that sanitation services need to be paid for, and that households will have to, as a minimum, meet the full operating and maintenance costs of the system.

For further discussion on both of these points, see Working Paper 11.

Raising capital finance

The Water Utilities Corporation has experienced no problems raising capital finance for future investment in water supply. This is because of the Corporation's excellent financial management rating and credit record.

On the other hand, urban councils are unable to raise capital finance for investments in sanitation because of their indebtedness, and must rely on central government raised finance.

9. Financially autonomous service agencies are able to raise their own capital finance and thus relieve central or local government of this responsibility. On the other hand, local governments dependent on central government transfers to meet recurrent expenditure are unable to raise their own finance and hence make their own decisions pertaining to investment priorities, levels of service etc. Thus, if local government autonomy is an important value, then services should be structured in such a way such that recurrent expenditure is met from local revenues as far as is possible.

Political interference in management

10. Managerial autonomy free from undue political interference is crucial to the effective operation of a water utility agency. Botswana's Water Utility Corporation demonstrates that such autonomy is possible whilst still operating within an overall political mandate of affordable service provision to the poor.

8. EXTERNAL FUNDING AGENCIES

8.1 Introduction

External sources of capital have provided about one-third of total investment in the water and sanitation sector in developing countries in the last decade, and about 85% of this has come from bilateral and multilateral funding institutions (McCullough, 1992, p9). The World Bank is the single largest source of this funding.

External Funding Agencies may have significant influence over water and sanitation sector policies and institutional and financial arrangements, and hence are discussed in this report. The focus of the discussion is on the World Bank. Bi-lateral funding from other sources is also reviewed briefly.

8.2 The World Bank

a) Extent of lending activities

The World Bank approved water and sanitation projects to the value of US$1.1 billion, with a further US$ 2 billion[22] committed to urban development[23], in the Fiscal Year 1993.

Cumulative lending in the water supply and wastewater sector amounted to US$ 10.5 billion, of which US$ 1.2 billion was loaned to Africa. Cumulative lending in urban development amounted to 11.6 billion, of which US$ 0.9 billion was loaned to Africa.

Bank lending for water supply and sanitation averaged 4.8% of total lending over the period 1967 to 1989, peaking at 9.2% in 1979, and with a trough in 1988 of 2.8%.

As at June 1990, the Bank had approved 268 loans and credits for water supply and sanitation projects.

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[22] Sources from World Bank Annual Report 1993.

[23] It should be noted that not all lending for water supply and sanitation has been addressed by the Bank through free-standing projects in the sector. Urban development projects typically have provided funding for water supply and sanitation components to municipalities or to specialised development agencies (World Bank, 1992, p1).

b) Broad lending objectives

The World Bank's four stated objectives for lending in the water supply and sanitation sector are as follows[24]:

- To help governments achieve least-cost solutions to infrastructure needs, particularly to avoid costly investment mistakes in this heavily capital intensive sector.

- To foster institution building, including the ability to plan and implement national or regional programmes, mobilising through adequate pricing policies the funds necessary for sector development, and staff training.

- To help institutions achieve financial viability, through attracting increasing amounts of finance from other domestic and foreign sources so as to eventually contribute to financial viability.

- Providing access to water supply and sanitation to a larger proportion of the population, particularly lower income groups, with emphasis on the provision of a basic minimum supply of convenient, safe water and adequate sanitation for all people in a community.

World Bank policy and lending in the sector was influenced by the UN Development Decade 1970 - 1980, and the International Drinking Water Supply and Sanitation Decade 1980 - 1990. The Bank actively engaged in the establishment of these objectives, including participation in the 1980 - 1990 Decade Committee (World Bank, 1992, p2).

c) Project lending policy

World Bank policy and practice with respect to specific project lending in water and sanitation is outlined below[25].

- **lending within a defined sector strategy**

  The Operational Manual Statement (3.72) urges that lending must be considered in the context of sensible sector policies and programmes.

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[24] From Operational Manual Statement 3.72 (1978), quoted in World Bank (1992, p2)

[25] Sourced from an evaluation of 120 projects undertaken in the years 1967 - 1989 (World Bank, 1992).

The need is stressed for a systematic review of sectoral planning, including services access, pricing policy, anticipated institutional problems, training requirements and the costs and benefits of alternative sector-development strategies. "Guidelines for Economic Evaluation of Public Utilities Projects (GAS 10)" outlines the methodology to be used in the economic evaluation of projects, demand forecasting, the use of marginal cost pricing and the method of selecting the least-cost method of meeting the predicted rate of consumption. The difficulties of assessing and quantifying the benefits of public utility, particularly water and sanitation, projects are discussed.

- **clear guidelines for project preparation and appraisal**

The Operational Manual Statement (2.28) provides staff with clear advice on the steps necessary to ensure consistent and adequate project preparation and appraisal and minimise delays in project implementation.

- **financial performance**

Utilities should[26]:

- Recover costs by selling their products and services.

- Earn a reasonable return on investment capital and make a reasonable contribution to expansion after meeting their operating costs and debt service obligations.

The guidelines further state that the standards prescribed should be realistic and acceptable to the Bank, and, that if there is substantial doubt about the ability or willingness of other parties to achieve the standards, it would be preferable not to make the loan.

The Bank enters into a financial covenant with the borrower. It is intended that this is a mutual agreement between the borrower and the bank which encourages optimum efficiency and to safe-guard the borrower's investments. Financial covenants which have been used are:

- Rate of return on investment.
- Self-financing ratio.
- Debt service obligations.

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[26] OD 2.22 Financial Performance Covenants for Revenue-Earning Entities and OD 3.72 Energy, Water Supply and Sanitation and Telecommunications.

It should be noted that, in practice, these covenants have often been subject to misunderstandings and misuse, thus defeating their original purpose.

- **tariffs and charges**

Bank policy is that tariffs should achieve cost recovery while addressing affordability, efficient resource allocation and equitable distribution of limited supplies.

While the Bank provides extensive guidance on cost recovery, "it has been vague, at best, on how to include the other objectives of tariff design" especially in connection with marginal costing. (World Bank, 1992, p48).

- **long-run marginal cost analysis and pricing**

The Bank encourages long-run marginal cost pricing "which, in effect, shifts responsibility for the benefit-cost calculation on the use of water and sanitation to the consumers themselves"[27].

The World Bank project evaluation states that "the Bank's lack of success in promoting economically efficient pricing is blatant in many countries" (ibid, p51).

- **economic rates of return**

The Bank defines the internal economic rate of return (ERR) of a project as the discount rate at which the present value of capital and operating costs, excluding duties and taxes, is equal to the present value of benefits attributable to the investments over the economic life of the project.

The Bank policy is that a project should have an ERR of at least 10%.

In the case of water supply and sanitation projects, the Bank admits that too little is known about the value of water and wastewater services to consumers and therefore accepts the use of revenues of the project as a proxy for its benefits.

It is important to note that this method of calculating the ERR does not allow for inter-sectoral comparison of projects, except where prices reflect real economic costs (which is almost universally not the case).

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[27] World Bank Staff Working Paper No 259 - "Alternative Concepts of Marginal Cost for Public Utility Pricing: Problems of application in the Water Supply Sector." in World Bank (1992, p51).

Most projects in the water and sanitation sector, to which the Bank loaned sums of money, had ERRs of less than 10%.

The evaluation concluded that, in future, Bank policies for water resource management should stress the importance of demand-side and cross-sectoral factors in project optimisation and justification.

d) Project lending performance

The 1992 internal review of the World Bank's performance in project lending in terms of its own objectives and lending policy (World Bank, 1992) has been summarised in Working Paper 12 and is not repeated here. The overall theme emerging from the evaluation was the general divergence between lending policy and practice.

Rogers (1992) noted a further difficulty: while he acknowledged that previous approaches were adequate at the time (at least in principle if not in practice), he noted that the increased competition for water has made most of the project-by-project planning methods inadequate.

e) Recent changes in World Bank water and sanitation policy

The World Bank has responded to these criticisms in a number of ways which are outlined below.

The Bank initiated a Comprehensive Water Resources Management Policy Study to investigate how best to resolve the "enormously complex and difficult" issues of integrated water management (Rogers, 1992). Salient points from the policy paper, prepared in 1993, are summarised below: (World Bank, 1993)

- A comprehensive analytical framework for water-resources management - suitable for a country's needs, resources and capabilities - **that treats water as an economic good** should be adopted.

- Management and delivery structures should be decentralised.

- Reforms should be made to the institutional and regulatory systems to reflect the above, improve efficiency and ensure effectiveness of regulation.

- There should be greater reliance on incentives for efficiency and financial discipline.

- There should be fuller participation by stakeholders in influencing policy formulation, design alternatives, investment choices, and management decisions affecting communities.

These policy direction changes are discussed in broad terms in Section 2 of the report. They are consistent with those put forward in the Dublin statement (United Nations, 1992), and are echoed in the following references: Rogers (1992), World Bank (1992) and Briscoe (1993).

8.3 Other External Funding Agencies

a) The UNDP-World Bank Water and Sanitation Programme

The UNDP - World Bank Water and Sanitation programme is a collaborative initiative emerging from the International Drinking Water Supply and Sanitation Decade of the 1980s. The programme concentrates on focus projects in a dozen countries, but is involved in operational projects in more than thirty other developing countries. The programme serves to strengthen national and local efforts aimed at improving the access of poor people to safe water and sanitation.

The programme's funding sources are summarised in the table below:

Table 1: UNDP - Sources of Finance (FY1991)

Source	US $ million	% share
UNDP	10.62	69
Bi-lateral aid	4.20	27
World Bank (IBRD)	0.64	4
Total	15.46	100

The activities of the programme are reported on in its Annual Reports (World Bank - UNDP, 1992).

b) Bi-lateral funding agencies

A summary of the activities of bi-lateral sponsors of the UNDP programme is outlined below. This gives an indication of foreign countries who may consider grant aid in the water and sanitation sectors in South Africa.

(Note: amount quoted is the total contribution, as at the end of fiscal year 1991).

- Canada — Through the Canadian Development Agency (CIDA). US$ 3.3 million.
- Denmark — Through the Danish International Development Agency (DANDIDA). US$ 1.4 million.
- Finland — Through the Finnish International Development Agency (FINNIDA). US$ 1 million.
- Germany — Through the Deutsche Gesellschaft fur Technische Zusammenarbeit (GTZ). US$ 2.5 million.
- The Netherlands — US$ 8.4 million.
- Norway — From the Department of Multi-lateral cooperation. US$ 8.1 million.
- Sweden — Through the Swedish International Development Agency (SIDA).
- Switzerland — Through the Swiss Development Cooperation (SDC). US$ 5.3 million.
- United Kingdom — Through the Overseas Development Administration (ODA). US$ 1 million.

c) Likely grant financing for South Africa

Current indications are that a significant amount of grant finance will become available to South Africa for social and economic development. Recent estimates (April 1994) indicate that not less than R1.5 billion will be made available in grant finance to South Africa for the 1994/95 financial year[28]. The major contributors are the United States of America and the European Commission Special Programme. Other countries include Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, Norway, Sweden and the United Kingdom. A recent Overseas Development Institute report (released on 19 April 1994) noted however:

[28] Development Bank of Southern Africa, pers comm, 1994.

> *"All the major OECD donor countries will want to mark their support for a new government (...) but there are unlikely to be additional flows on a scale which will make a significant difference."*[29]

It is furthermore unlikely that the **urban** water and sanitation sector can count on a significant portion of this grant finance, nevertheless, a future national investment programme in water and sanitation actively should seek foreign sources of grant finance and take these into account in investment planning.

[29] As quoted in Business Day, 20 April 1993.

9. CONCLUSIONS

It is somewhat dangerous to make specific conclusions for South Africa from such cursory studies of institutional and financial management arrangements in other countries. What follows therefore, are some general remarks, made on the basis of a number of the themes that have emerged from the country overviews.

Ability to adapt

- A fundamental point to be drawn from these experiences in other countries is that, while each country must have a system suited to its political and national traditions, it must also be ready to adapt if the circumstances change in major ways.

The importance of capital finance arrangements

- The difficulty experienced by existing institutional arrangements in raising finance for major new capital investment often has been a significant factor influencing structural change in the sector. Thus the effect of institutional arrangements on their ability to raise capital finance is an important factor which should be taken into consideration when designing new institutional arrangements[30].

Local government responsibility for water and sanitation services

- Local governments can manage water and sanitation services effectively, provided that:

  - they can give water and sanitation services the special attention they deserve;

  - they can secure adequate finance to meet capital investment needs;

  - they retain flexibility so as to be able to adapt to changing circumstances.

  In metropolitan areas, it would seem to be important that investment decisions and tariff policy is coordinated at the metropolitan level.

- Allocating the responsibility for water and sanitation services to the local authority level is the best way of ensuring democratic accountability of service agencies to the local population.

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[30] See Working Paper 12 for further discussion.

Reliance on central government grants

- It is probably unwise for the water and sanitation sector to rely on grant financing from central government to finance water and sanitation services in the medium and longer term.

  The reliance on central government grants has proven ineffective in Britain and Italy. French local government, notably, does not rely on central grants but largely on private capital. Brazil made use extensively of loan funding, with only limited use of targeted grant finance. Botswana's urban water sector is completely self-financing, however the sanitation services rely to a large degree on central government subsidies which is proving to be unsustainable.

The use of loan funds

Loan funding may be an appropriate mechanism for raising capital for investment in water and sanitation services[31].

Water as an economic resource

- South Africa will have to, in the medium and longer term, come to terms with the fact that increasingly water will need to be treated as an economic resource.

  In Europe, as well as elsewhere, water is slowly coming to be recognised more clearly as an economic resource. Good water is getting scarcer even where physical resources appear sufficient. This greatly increases the need for:

  - river basin authorities independent of bulk supply boards and utilities to allocate access to raw water withdrawals and effluent disposal capacity between all interests having a claim on it;

  - a move towards charging for withdrawals and effluent disposal.

  It is likely that there will be general resistance to this, as it necessarily implies increased charges. Local governments responsible for water services may be particularly resistant to this idea.

[31] For more detailed discussion, see Working Paper 12 (Palmer Development Group, 1994b).

Transparency of operation

- Public accountability can only be guaranteed if the operations and performance of the water and sanitation agencies are open to public scrutiny. Local government responsibility does not, in itself, guarantee openness, as is evident from England's experience.

External Funding Agencies

- Multi-lateral funding agencies most certainly will be willing and interested in lending money to the urban water and sanitation sectors in South Africa. South Africa should examine carefully the policies and practices of these agencies, and the implications of foreign lending on the sector, and more broadly the South Africa economy, before committing itself to borrowing significant sums of money from external funding agencies.

- Where grant finance is available, care should be taken to ensure that there are not constraining conditions attached to the grants which may negatively impact future development prospects. Recent estimates (April 1994) indicate that not less that R1.5 billion will be made available in grant finance to South Africa for the 1994/95 financial year, although it is unlikely that much of this will be available for investment in the urban water and sanitation sector.

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