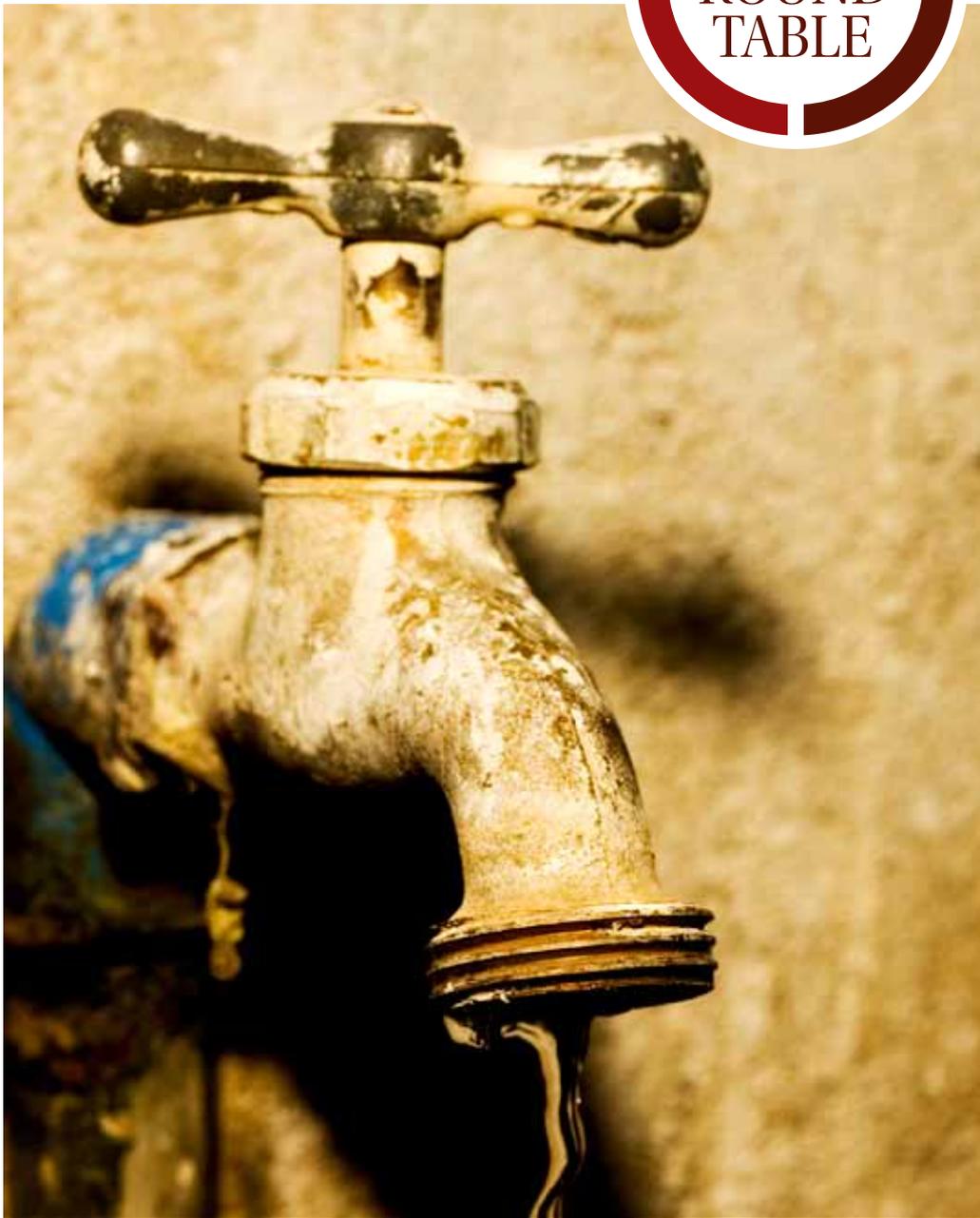


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WATER: A LOOMING CRISIS ?

This is an executive summary of CDE Round Table no 14, *Water: A Looming Crisis ?* (April 2010). The full-length publication is available from CDE, and can also be downloaded from www.cde.org.za.



AS SERVICE DELIVERY protests, health scares, and shortages attest, the South African water sector is beset by a widening array of challenges. The quality of water in many parts of the country, along with physical shortages in particular localities, is a growing problem, giving rise to serious concerns about water security. Is South Africa facing a water crisis – and if so, how urgent, and how severe?

Against this background, Business Leadership South Africa and the Centre for Development and Enterprise convened a Round Table discussion on 2 November 2009 to examine the state of the water sector in South Africa, probe the reasons for its problems, and explore some solutions. Participants included government officials, representatives of business and civil society, academics, consultants, and other experts.

Mounting problems

Though not yet as visible a crisis as electricity provision, The Round Table made it clear that mounting problems with South Africa's water supply could impede our social and economic development, and indeed are already doing so in some localities. On current trends, South Africans may one day have to make do with significantly less water per capita. For a country already using almost all its available water resources, this would be a dramatic change, with far-reaching implications for households, businesses, communities and government.

One reason why we are in this position is that South Africa is a very dry country – as dry, on some measures, as the desert state of Oman. Another is that, unlike most other countries, our largest economic centres are not situated near our major sources of water. Yet another is that what water we have is being managed badly.

At the time of the transition to democracy, South Africa had a well-functioning system for managing bulk water and providing water and sanitation services, albeit mainly to a minority of people. The new government introduced a comprehensive new policy framework which focused on providing the entire population with potable water. Its new approach was widely praised; however, its new policies and associated institutional frameworks were designed without considering their feasibility, and without considering what other factors – notably investment in managerial and technological skills, and in establishing effective, accountable and transparent governance – would be needed to realise this vision.

Institutional disarray

Moreover, government allowed its technical capacity to decline at precisely the same time as it launched its drive to extend access to potable water and devolve the provision of water services to local authorities, which largely lacked the capacity to do so. As a result, water supply has come under growing strain; indeed, it has become clear that the deterioration in water management is largely due to a failure of government at all levels.

Given the conflicting interests of different users – including agriculture, mining, industry, and



urban and rural communities – water management is not easy, and requires effective institutions on a number of levels. South Africa's are in disarray.

Serious problems exist across the system. None of the 19 catchment management agencies established under the National Water Act is operational. Some 90 municipalities do not have a single professional water engineer; and very few have written sets of standard operating procedures. Equally revealing is the rapid deterioration in water quality in many parts of the country. This is the result of the cumulative and continuing incidence of acid mine drainage in the Witwatersrand goldfields and increasingly in the Mpumalanga and KZN coalfields; the long-standing problems of industrial and agricultural pollution; the recent deterioration of water distribution systems and waste water treatment plants; and the inability of government to enforce its own regulations.

Institutional weaknesses as severe and extensive as these usually have their roots in poorly conceived policies and systems. This is certainly true of water management, where an ambitious programme of institution-building and reform has been attempted with very little grasp of the vital importance of skills and experience in managing water. In the process, the desire to meet targets of demographic representivity, along with the all too frequent practice of securing jobs for friends and political allies, has trumped almost all other priorities in the process of staffing both existing and newly established entities.

Investment and maintenance backlogs

These institutional problems are serious enough on their own; however, they have emerged in the same period that the government has sought to extend access to water and sanitation to people and communities who have long been neglected and are often far away from existing infrastructure. Though this initiative was and remains justified on moral grounds, it has resulted in a massive backlog in investment and maintenance throughout the country. Given this, and the illegal use of water (notably in the upper Vaal system), some 30 per cent of our usable water is being wasted.

On current trends, then, the country is headed for a crisis of water security and quality that will hamper our socio-economic development, both directly and indirectly. One example of this arises in relation to South Africa's spatial development. It is usually easier and cheaper to supply water to urban centres than to low-density communities in remote rural areas. This means that, despite its political popularity, any ambition to extend services to all South Africans would raise input costs, increase wastage, and reduce efficiency. Obviously, not all schemes beyond urban areas are unaffordable or undesirable. However, the increasing scarcity of water means that its availability and quality has to be factored into decisions about public and private investment and resource allocation, including those about the balance between urbanisation and rural development.

Water scarcity should also be taken into account in other areas. Government support for the expansion of some industries and the development of some geographical areas may need to be



critically reviewed. Taking a very long view, water availability and price may well lead to a shift in the country's settlement pattern, with coastal areas being favoured because of the advent of economic desalination. Similarly, the promotion of some water-intensive agricultural crops, such as sugar, may be unsustainable, and other countries in the region such as Zambia with higher and more consistent rainfall than South Africa, may become more important producers of crops such as maize. Moreover, plans for developing a biofuels sector may need to be reviewed.

Our current and projected trajectory with respect to water also raises important questions about health, rural development and land reform, mining, industrial development, and a variety of other sectors. Sooner than many policy-makers anticipate, emerging water supply problems will impact on the whole spectrum of South Africa's development challenges.

Seven vital steps

If we are to reverse these trends, we need to focus on addressing those factors over which we have a degree of control.

- *Political leadership is vital:* A necessary first step is for Cabinet and the Presidency to recognise the gravity of the current situation. Moving forward will require a recognition that many aspects of the looming crisis are the direct consequence of the overambitious policy and institutional goals formulated in the 1990s. While they were and remain laudable in principle, the harsh truth is that they have proved impossible to implement effectively. Only leadership from the highest reaches of the state can produce the kind of action needed in the face of the serious threats to water security and quality.
- *Water management institutions must be improved:* Their governance should be transparent, accountable, and understandable by all parties. The Round Table clearly exposed the confusion surrounding public water institutions, and their resultant dysfunctionalities. Water management and delivery systems should be properly staffed with skilled and experienced people.
- *Existing infrastructure must be properly maintained.* It is much more expensive to replace infrastructure than to maintain it, but this principle has been neglected. As a result, water infrastructure has not been sufficiently expanded to cope with growing populations, nor adequately maintained.
- *The legacy and continuing problem of acid mine drainage must be urgently addressed.* The state must recognise that it needs to take the lead in dealing with this issue. Some of the reasons are that underground water systems are interconnected; some of the offending mines have been closed, and the companies no longer exist; and the state's currently liberal granting of coal mining licences, especially in Mpumalanga, is gravely exacerbating the problem. Solutions are available, but are very expensive, and the resources needed to address them can probably only be mobilised via public-private partnerships.
- *Prices must reflect costs and scarcity:* A central lesson from past and present policy experience is that the underpricing of water will eventually undermine both security and quality. Set-



ting prices too low means that institutions don't receive the revenues they need, water is used inefficiently, wastage occurs with little consequence, and polluters (private and public, individual and institutional) are permitted to do serious damage (public health, the environment) and impose clean-up costs on others. Getting prices 'right' is not a simple matter – central government, for instance, has no authority over prices set by local government, and in a country with such large income disparities, consideration has to be given to the capacity to pay on the part of a large section of the population.

- *We need to focus on the long term:* Our current water policies privilege short-term gains over long-term sustainability. This needs to change. We need to ensure that systems are in place to secure water supplies, deliver water services, and recover monies owed so that cash flow problems do not undermine maintenance and other operational processes. Above all, prices paid for water must reflect the reality that water is scarce and difficult to manage, rather than the short-term preferences of politicians and various interest groups.
- *We need to minimise waste:* We cannot afford to waste any water. Government at all levels needs to ensure that we reduce the volume of water lost through leaking pipes, broken valves, and outright theft. At the same time, all water users need to use water more efficiently. Businesses should be encouraged to assess their own water footprints, and reduce both their use of water as well as the pollution they release. Households and communities must be encouraged to use water more economically. Again, appropriate pricing as well as persuasive and committed national leadership are vital.

Urgent action required

Water security and water quality are vital for everyone. The present problems, though related to the dryness of the country, and the history of unequal access, have also arisen because a highly ambitious policy agenda has been pursued with scant regard for the vital role of skills and experience in water management, and the opportunity costs when they are lacking (most evident in the mounting maintenance backlog).

If we continue on our present course, water will undermine South Africa's national development. To improve the country's outlook, urgent attention must be paid to putting in place the appropriate policies and institutional capabilities to deliver water services today without undermining the ability to do so tomorrow.



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