

Keynote Address

Water-Resources Management, Policies and Reforms: A South African Perspective

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When I was invited to give this address, I accepted it immediately. On the eve of the World Summit for Sustainable Development in Johannesburg, the South African Government believes it is critical that the developing countries of the G-77 should address the challenges of world development in a united way and this event provides a wonderful opportunity to continue to build a unity of approach in the water sector.

But what, I asked myself, can we bring from Africa to the debates about water in Asia?

Africa is relatively arid and our major challenges tend to be about shortages and drought. Meanwhile, Asia is largely humid and your challenges tend to be about the problems of excess and floods.

The countries represented here have a long tradition of irrigated agriculture. In Africa, with a few honorable exceptions it is a relatively new terrain.

But there are also similarities. In our region, we have a mix of middle-income countries like South Africa, Algeria, Egypt and low-income countries like Mozambique, the Democratic Congo and Ethiopia reflecting in some degree the spread of countries represented at this event.

We have some great rivers, the Nile and the Congo, like your own basins of civilization on the Yangtse and Mekong. And in both regions, we have rivers that we have to share and manage together with our neighbors. But we also have, as in Indonesia, the Philippines and Sri Lanka, many countries like my own, largely dependent on a large number of relatively small river systems.

So I believe there is sufficient commonality between our diverse regions for me to explain what we are doing in South and southern Africa in a way that may be relevant to your deliberations here.

Political Context

What I believe will be of interest to you are the forces that drove our water reforms.

The first is that our democratic revolution in 1994 came at an opportune moment. South Africa uses a substantial proportion of its available water, nearly 30 percent, not including the 15 percent that had already been reserved for environmental purposes to sustain our estuaries and conservation areas. After three decades of major infrastructural development, culminating in the US\$2 billion joint Lesotho-Highland Water Project, which supplies water to the industrial heartland of the country, it was obvious that infrastructure alone would not meet our needs. A new approach to water management was required.

Second, the nature of our political revolution called into question some fundamental issues in water management. Because of the history of gross abuse of human rights and apartheid—the decades of discrimination, based on race—under colonial rule, we have built a strong human-rights culture. While recognizing that this is a controversial subject in many countries, this approach to both social and environmental rights has provided us with an important foundation for our water-law reform.

Third, our general reform of the structures of government in our country has created opportunities and made it easier to introduce water reforms that will create a sustainable development path for our country and region.

Key Issues

When, in 1994, we turned to review the policy and legislation governing our water, we immediately recognized that water, as it flows through the landscape, brings a number of benefits to a range of users whilst it must serve basic human needs. It waters the wide fields of commercial farmers; it nurtures the crops and stock of rural communities; it provides recreation for our children, our friends, our families; and it supports our power generation, our mines, our industry, and the plants and animals that make up ecosystems.

Water gives life. The amount and nature of the available water determine the extent and nature of that life. The amount and nature of water available also determine where development can take place. So we determined, as a first step, that South Africa's water belongs to its people. It is the task of the Government of South Africa to care for this water, to seek its fair distribution, and to facilitate its wise use for, amongst other things, social and economic development.

Development is crucial to ensure we can eradicate the scourge of poverty that stalks our land. Under apartheid, development benefited a small white minority, while black communities were under-resourced and underdeveloped and remain in the areas where poverty is most intense.

In 1994, the first democratically elected Government of South Africa put forward, as its manifesto, the Reconstruction and Development Programme. The program set out five key objectives: meeting basic needs; developing our human resources; democratizing the State and society; building the economy; and implementing the Reconstruction and Development Programme. Its implementation approach was that people who are affected by decisions should take part in making those decisions. Water is an essential ingredient of each of these programs.

The Constitution of the Republic of South Africa was passed in 1996. The Constitution contains both our Bill of Rights and the framework for the government in South Africa. Two provisions of the Bill of Rights are particularly relevant to the management of water resources. These are sections 27 and 24, which state that:

- Everyone has the right to have access to (among others) sufficient food and water, and that the State must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation (*sic*) of these rights.

- Everyone has the right to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation, and secure sustainable development and use of natural resources, while promoting justifiable economic and social development.

These two documents—the Reconstruction and Development Programme and the Constitution—provided the impetus for a complete review and revision of the policy and law that relate to water, and resulted in the development of the National Water Policy for South Africa (1997) and the National Water Act (1998).

And although my talk must focus on water-resources management, I should emphasize that the political legitimacy and support for the reforms we have introduced did not come from this big vision of the role of water resources. Our people had more immediate needs in 1994 with 12 million of our rural people without access to basic water supplies and 18 million without sanitation. In rural areas, access to safe water was found to be the second highest priority after jobs. So my Department’s aggressive program to improve basic services—we have served over 7 million people in 8 years—earned us the political support to introduce relatively complex long-term reforms in the water-resources sector.

Objectives of Water Management

In South Africa, we have been through a remarkable process of revising our water law. This exercise was driven by two key factors: the demands and dreams of our people in a new democracy and the limited physical resources at our disposal.

Part of our process of reforming our water law was to ask ourselves what the purpose of water management is. One way of describing it was that “the core objective of water-resource management... is to ensure that water is available in sufficient quantity, quality and reliability for the development and well-being of the nation.”

But was that sufficient? We were unable to ignore, in the South African context, that we were two worlds within one country providing the contrast of great wealth and development with much poverty and underdevelopment. The ingenuity of our engineers over a century has already linked the Orange river mouth on the Atlantic with the freshwater lakes of Northern KwaZulu Natal on the Indian Ocean, more than 3,000 kilometers away. A tunnel of monumental proportions takes water from the westward flowing Orange river to our port and industrial complex of Port Elizabeth while a portion of its water diverted by the Lesotho-Highlands Water Project is discharged, after use, towards the Limpopo, thus linking our northern border with the southern coast. Despite these engineering feats, the reality is that we are facing an increasing imbalance between supply and demand.

After much discussion, we finally agreed that our vision was not to increase supply to meet demand. Rather, “the objective of managing the quantity, quality and reliability of the nation’s water resources is to achieve optimum long-term, environmentally sustainable, social and economic benefit for society from their use.

This understanding was, of course, strongly influenced by the international debate that preceded our work, from the United Nations Conference on Environment and Development in Rio in 1992, to the Dublin principles and the growing international understanding of the need for IWRM.

Our task is thus to manage the resources, to manage the tension between growing demand and finite supply, to ensure that what we have is used not just productively and beneficially, but optimally.

This is a simple, but far-reaching understanding and applies even in countries where water is plentiful, since the protection of the resources from the impacts of human activities also requires that we live within our means.

Our water legislation is premised on three fundamental principles: equity, efficiency and sustainability. Each of these principles is important for different reasons.

Equity

The previous water legislation of South Africa, the 1956 Water Act, was not in itself racist. It did not do what the 1913 Land Act did, to reserve the greater part of the land for one race group. However, since access to water for productive purposes was tied to land through the riparian system, access to water benefited mainly those across whose land it flowed, or under whose land it was found. Access to water was thus similarly determined by the color of the skin.

The challenge facing our water managers was thus to address the need for equity in the distribution of resources. Too many of our people are poor. The goals of sustainability and efficiency cannot be divorced from this fact. Neither can the responsibilities of all South Africans from sharing water and using it well.

We are now equipped with the legal mechanisms, which allow for reallocation of resources from those who have been favored by history to those who have been neglected. But we must also consider the complex linkages between society, the environment and the economy.

As a first step, our law determines that water for basic human needs is a first priority. This water is reserved over and above all other needs.

But water is the lifeblood of the country in many ways. Water is one obvious tool in the eradication of poverty—providing a way for the poorest to survive and make a living, a burden which so often rests upon women in society. But often, the water-procuring industry contributes far more value than would be achieved by allocations used by large commercial farmers and delivers more taxes per cubic meter of water than used by subsistence farmers.

It is the responsibility of the Department of Water Affairs and Forestry to guide the use of our water wisely in our search for social justice. The needs of industry, agriculture, the demands of cities and of ordinary people all need to be catered for, now and in the future. Water is helping us to promote unique partnerships between commercial farmers and poor rural communities in win-win relationships.

South Africa is moving slowly from a patriarchal society to one in which women are allowed, and encouraged, to take their rightful role as equals alongside men. So another important provision of the National Water Act requires the government to address the issues of gender inequity in water as much as it must address inequity arising from race or disability.

Sustainability

We have increasingly understood, over the past few decades, the interdependence between humankind and ecosystems and our obligation to protect the natural environment. Even as we promote development we must meet the needs not only of current generations but also of future generations.

Our National Water Act recognizes this and again reserves a certain amount of water to maintain the environment, a reserve which takes precedence over all uses other than those for basic human needs.

We recognize that we need new approaches to water management that pay at least as much attention to the software of water management, to instruments such as conservation and demand management, as to the hardware. I believe that we will continue to need to store water, not least because of the increased variability and uncertainty caused by climatic change.

As we face the challenges of climatic change, I am struck by how poorly Africa is developed to cope with it. According to the World Bank, the United States stores 6,150 cubic meters of water per year in dams and reservoirs for every American; in South Africa, we store only 746 cubic meters per person; in the rest of Africa, it is only one-tenth of that, on average 40 cubic meters per person in Ethiopia and just 4 cubic meters per person in Kenya.

Our uncertain climate requires more, not less, storage. Despite this self-evident fact, we still have anti-dam lobbyists opposing storage projects. We will continue to build the storage we need but we have taken note of the guidelines of the recent World Commission on Dams. We believe that our current practice in relation to addressing the needs of people affected by dams and considering alternative management approaches already largely reflects those guidelines and in some cases, exceeds them.

Efficiency

As a water-scarce country with an average annual rainfall little more than half of the world average, much of South Africa is semiarid. Potential evaporation is higher than rainfall across most of the country. Our land is vulnerable to floods and droughts. All of us have shared the horror of flood waters sweeping away people, houses and roads. All of us have shared, with our farmers and our rural communities, the bitter longing for rains that never seem to come. Our water resources are limited, and we must use them efficiently, and in the best interests of all our people.

IWRM

The three principles of equity, sustainability and efficiency come together in the field of water-resources management to result in IWRM that, as enshrined in the National Water Act, is intended to enable us to meet the needs of our people for water, jobs, and economic growth in a manner that also enables us to protect and, where necessary, rehabilitate our aquatic ecosystems. Above all, IWRM will enable us to grapple with the overwhelming need to use our precious water to assist in the battle to eradicate poverty and to remove inequity.

International Rivers

But we have to recognize that we do not face the challenges alone. For many years, the democratic forces of South Africa were supported by our neighboring countries, often at great cost to themselves. So we have a particular duty and responsibility to our neighbors who are, in most cases, less well-off than we are.

It is also vital to our own interests that our entire region must develop if we are to eradicate poverty and enable our people to live with dignity. They potentially face many of the same challenges although at present, our neighbors are using a far smaller proportion of their resources than we do. Countries such as Namibia and Botswana, perceived as arid (although because of their smaller populations, they have more water per capita than South Africa) are using only 5 to 10 percent of their usable water compared with South Africa's use which is approaching 30+ percent.

Rivers do not respect political boundaries so an important step is therefore to develop cooperative relationships on what we, in the Southern African Development Community (SADC) call "shared rivers." South Africa shares four major river systems with neighboring countries:

- The Orange-Senqu system is shared with Lesotho (trans-boundary) and Namibia (contiguous).
- The Limpopo river is shared with Botswana, Zimbabwe and Mozambique (contiguous for the first two and trans-boundary with Mozambique).
- The Inkomati system is shared with Swaziland and Mozambique (trans-boundary for both).
- The Usutu/Pongola-Maputo system is shared with Mozambique and Swaziland (trans-boundary).

The SADC Protocol on Shared River Courses provides the framework for the management of these rivers, whilst the National Water Act gives international requirements a priority that is superceded only by the reserve for basic human needs and ecological requirements.

The Role of Governments and Effective Development

Unfortunately, as all of us know, it is one thing to be clear about an objective, and another to achieve it. The state is not a fashionable agent in this so-called postindustrial world in which we all live. More and more emphasis is placed on the role of the private sector. Yet the developed part of the world, which is pushing this position, is characterized by high levels of infrastructural investment that, in most cases, would not have occurred were it dependent on the whims of the market.

There is a danger in accepting the same view of the state in the very different circumstances of nations, which have not yet achieved an acceptably comfortable level of equilibrium. For example, on the eastern seaboard of South Africa, the Komati basin could support much more economic activity (and even development, were we to manage it right) in

Swaziland, Mozambique and South Africa. But the figures show that it could take around 45 years to reap a return on the initial investments needed to tap that water.

There are few private investors willing to wait for that sort of term to get a return. So we must depend on the states of the region to take the steps needed to harness unexploited water resources. We will have to depend on the wisdom of governments to ensure that we build useful social and economic infrastructure.

In short, we find that in our region where there is still so much to be done we cannot accept institutional prescriptions appropriate to developed countries where the role of the state in achieving a mature infrastructure as in the developed world has been played out. We have come to the conclusion, concerning water-resources issues, that our challenge is to reinvent government, not to abandon it.

Nonetheless, we have moved away from the old notion of the apartheid South Africa of a central, all-knowing, all-powerful state. In water-resources management, we are in the process of establishing Catchment Management Agencies. These are statutory bodies that will perform water-resources-management functions in 19 water-management areas throughout the country.

These agencies will enable us to manage water according to watershed boundaries, rather than according to provincial political boundaries. They are also designed to ensure that stakeholders can play a key role in decisions around water management that directly affect them. We hope to establish the first of these agencies in my country this year, and the rest will follow over the next 8 to 10 years. Already, however, my department is thinking, planning and managing according to these watershed boundaries, these water-management areas, and not according to the old political boundaries within the country.

Our National Water Act is premised on wide consultation with the people of South Africa about how we should manage water. In the middle of this year, for the first time ever, we will be publishing a draft National Water Resources Strategy, for comment and input from the people of South Africa. The National Water Resources Strategy sets out the ways in which we aim to achieve IWRM in South Africa. It describes the policies, strategies, plans and procedures by which this will be done. It is a remarkable document, the first of its kind in South Africa. It is a living and interactive document, that will continue to grow and change as the needs, capacity and understanding of our people change and grow.

Under the new water law of South Africa the national government is defined as the custodian of the nation's water resources. But it is recognized that many of these resources serve others in addition to the people of South Africa.

In relation to our neighbors, the law reinforces the approach we have already begun. On a bilateral basis, we are committed, actively, to cooperation, and a number of joint developments and studies are underway. At the regional level we have ratified the protocol on shared river basins and we are keen to see the management of water given high priority within the regional framework provided by the Southern African Development Community.

Internally, we continue to face a number of challenges. As I have mentioned, much of our water has already been allocated and is used in terms of an earlier riparian system which, because of the racist legislation of the country under apartheid, allocated water primarily to whites. We are now trying to demolish the foundations inherited from the past before we can build our future.

Historically, the bulk of South Africa's water has been linked to land. Most of the land (87%), particularly the productive land, was in the hands of a very small proportion of the

population, the white farmers. But through a transparent, consultative approach we have managed to win over a large number of these farmers to understanding that the new system of water management is not a camouflaged attack on them but a genuine response to a national concern. In many cases, they are responding with positive initiatives both to help us manage water more effectively and to do so in a way that opens opportunities for those previously excluded to benefit from it.

In the end though, the best assurance we can give all our citizens is that we are guided by our Constitution, which affirms the rights of all South Africans to dignity and equality before the law.

Conclusion

Let me conclude by addressing those matters that I believe are important for us all at the coming Johannesburg Earth Summit.

First, I believe that we must keep the focus on the needs of the poor for basic water—and for adequate sanitation because it is about the protection of water quality as well as the recognition of human dignity.

Second, we should encourage all countries to adopt an integrated approach to water management as has long been advocated at the United Nations. Measures designed to help us, as governments, to do this should be supported.

Third, we must raise the impact of climatic change on water management. It is increasing our water-management costs and our vulnerability to floods and droughts, yet there are no mechanisms to fund mitigation measures to this threat, which has largely been imposed on us by external forces.

Finally, I would commend to you the approach of SADC on shared rivers. We seek to work together to share the benefits from water use rather than squabble amongst ourselves over who can take how much water. We believe that an approach to sharing benefits rather than just sharing water makes water a source of cooperation and not one of conflict. In this year of the World Summit on Sustainable Development, water and our management of it constitute an appropriate metaphor for our development and our relations with one another.

In Southern Africa, we are trying hard to ensure that our management of water resources is a source of peace and development, internally and with our neighbors, just as we would hope to see sustainable development leading to peace and democracy throughout the world.