1998 Lecture
Water, Life, And Justice:
A Late 20th Century Reflection From The South

The 1998 Abel Wolman Distinguished Lecture

National Research Council
Water Science and Technology Board
The National Academy of Sciences, Washington D.C.
Thursday 21 May 1998 at 3:00 pm

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Ladies and gentlemen, distinguished guests:

It is a very great honour and indeed a pleasure for me to be invited here to present this lecture on a subject so close to my heart.

It is also an honour to tread in the footsteps of the distinguished Dr Abel Wolman. His feats in the development of engineering systems to provide clean, safe water to both urban and rural communities, and his development of new purification techniques for the treatment of water with chlorine, were seminal steps in the ongoing battle to provide potable water to the people of the world. It is true that in the developed world there may be moves away from the use of chlorine as a disinfectant for drinking water, but in the south it remains a crucial weapon in the war against water borne diseases, diarrhoea, and general ill-health.

But whether we come from the developed part of the world, or the as yet underdeveloped part, we are all approaching the end of a remarkable, in many ways tempestuous century. Across the world nations are girding themselves to step into the 21st century - indeed into the third millennium - and it is thus a most appropriate time to take stock of the past and consider how best to move into the future.

We can, we must, move into the future without illusion; we can move into the future with a clearer perspective of where we wish to go; we can, perhaps, leave behind much of that past which has been ugly, destructive and brutal.

The message which I bring to you is one of unashamed hope. It is one of idealism alongside hard slog, or what some of you here in America call "grunt work". It is encapsulated in a memorable remark by one of your post-war Presidents, that we should seek to be idealists without illusions. It is not a message of miracles, but a message of what can be achieved through dedicated human endeavour.

As we gaze back from our vantage of the late 20th century, standing on the cusp of the 21st, we can sadly see those times and places where the worst side of human nature has held sway: where, despite extraordinary technological triumphs and innovations, life has remained nasty, brutish and still too short. It is not a cause of pride to note that our century was marked by among the worst cases of extermination of people in human history, racial and other discrimination of staggering proportions - and it ends facing threatened epidemics that could eclipse the Black Death that swept Europe from the mid-14th century.

We can also identify, however, a remarkable series of events, from the very minor, to those that shook the world, where the human spirit has triumphed; triumphed over ignorance and disease; triumphed over stupidity; triumphed over hatred, prejudice and division.

Neither an audience in the North, nor a speaker from the South can ignore the one fundamental characteristic that defined this century: the division of the world according to the points of the compass: east versus west; south versus north. The playing out of those relationships has left deep imprints, and in many cases scars, on all of our societies. There is much rebuilding work to be done.
In South Africa, there can be no doubt that much of the structured violence and oppression that marked our last five decades was fomented, indeed made possible, by the simple calculus of advantage in what has often seemed to be a world without ethics, the world of international relations.

But throughout the past century there has been another determining feature of our times: the division of the world not in terms of powers but in terms of assets, resource, income and wealth.

I am not here to re-invent some latterday theory of the wealth of nations, but I would argue that, even beyond the balance of powers that characterised the twentieth century, the underlying and defining factor of our century was (and still is) the division of wealth and resources between and within our societies.

Indeed, this was recognised as we moved from a world polarised into two camps to one in which the third camp was obvious both by its inherent characteristics and by the way in which the other two made use of it in their churning and changing alliances. Thus was the Third World invented, each hoped, in its own image. But the Third World, with more deliberation, invented a non-aligned world, including the place where I come from; a place sometimes called the South which, while incorrect from the precise perspective of physical geography, does have a certain resonance when one sees the exaggerated size of Europe and North America dominating a Mercator projection of the world.

It does not need any great reflection to see that it is the struggles and conflicts over access to wealth and resources and the distribution of these between and within nations, the way that women and men of good or evil intent have sought to gain and apply power to achieve control over them, that have inexorably defined the way our societies have emerged. Thus it is now clear that the so-called first world and the third world are not two distinct worlds, but two faces of the same: the world of underdevelopment and the world of overdevelopment.

The question that must be addressed is how, in the divided and unequal world we find at the end of the century, we can locate our future actions in a moral and ethical framework that will lead us to a better world. This is not, as I hope to show later, an idealistic concern. In a country of gross inequality such as South Africa, even the wealthy are threatened by the poverty of those relegated by past apartheid to a life of deprivation. It is ultimately to our advantage that we in South Africa reach for a moral and ethical base to bring closer the elusive yet powerful ideal of justice.

Water can, to an extraordinary extent, be used to illuminate many of these issues which confront our world today, as well as the boxes into which our first world-third world, north-south, stereotypes have thrust us.

Take, for example, rivers. Rivers in Africa were the great freeways of the past, down which explorers from the north travelled on long and terrifying journeys through otherwise impenetrable jungles for endless hot and oppressive days. Joseph Conrad, in Heart of Darkness, described the feelings of disorientation induced by losing one's way amid uncharted channels, till you thought yourself bewitched and cut off from everything you had known once somewhere far away in another existence perhaps. The stillness of life did not in the least resemble peace. It was the stillness of an implacable force brooding over an inscrutable intention.

This may seem to be a diversion from the topic of my lecture. Yet I believe that Joseph Conrad is accurately reflecting a subconscious belief about Africa, a relic of colonial days, perhaps, but still a powerful influence in northern attitudes towards our southern continent. Such an attitude militates against good north-south relations. Africa, while on the one hand offering the appeal of the unknown, the wild, the mysterious Eldorado which tempts the explorer with the promise of gold and diamonds and mystery, is on the other seen as subject to irrational conflict and terrifying natural disasters. Yet America, too, has experienced devastating civil war, and is subject to floods and tornadoes, while parts of Europe are even today in the grip of vicious strife.

If we are somehow to escape from the boxes into which our pasts have pressed us, then water and our use of water is one means of doing so. Rivers, which provide the water so vital to our life and wellbeing, must
be returned to their function as channels of communication, life-giving channels which join us rather than divide us.

I must ask you to forgive me for taking a somewhat tangential approach. I am someone who has come to water management from the unlikely disciplines of law and human rights. I confess that Water Affairs was not a ministry to which I aspired before the 1994 elections. I had spent long years in exile in Ireland, which to my South African taste is a country with a damp climate and too much rain (though advantages in other fields!). Lack of water there is not a problem and the consequences of lack of water did not impinge greatly on my mind.

Indeed, if you read one of the great founding documents of our new constitutional order, the Freedom Charter, which was adopted by the African National Congress in 1955, lack of water is not mentioned there either though dams to provide water for peasant farmers do feature briefly. This was no doubt because the bulk of the ethnic cleansing - the removals of Africans from the urban areas to the so-called homelands had yet to take place.

Nonetheless, my career as a human rights lawyer, albeit an academic one, has provided me with essential insights into the links between justice and natural resources - in the case of South Africa, water. Expertise in engineering, management skills, scientific knowledge, vital as they are, are on their own inadequate in our modern world to ensure the peace and prosperity of people.

As I have often said in South African water policy debates, the experts must be on tap, not on top. We cannot abandon moral and political accountability under the comforting falsity that water management raises only "scientific" or value-free issues. Often, water management derives from the very heart of state and private power.

It is from this framework that today I am able to reflect on what lessons we may draw from the past, for the future, from our use and management of water.

Happily and I must say, somewhat unexpectedly, I find in the way we manage our water a paradigm for our approach to the way we govern our societies; the way we develop our water resources can illuminate the broader process of development and the way we build the societies of our future; the way we share our water, within and between our countries, is equally a paradigm for the way in which we conduct our broader relations within and across these human-made frontiers.

And perhaps part of my message to you here is that, as we leave the gleaming, exciting, sometimes ruined remains of the 20th century behind, we need to take with us the positive lessons that we have learnt as well as the negative. The vagaries of economics, the carnage of war, the devastation of AIDS, TB, malaria, are savage but important lessons for us in learning what it takes to build the kind of society of which we want to be part.

In this past century, scientists have, as never before, achieved a mastery of the mechanics of our lives. We have even, towards the end of the century, achieved some understanding of the greater complexity of the interactions between our mechanical civilisation and the broader natural environment within which we live.

And, hopefully, we have begun to understand our interdependence the one upon the other, citizen upon fellow citizen, nation upon nation. This is the wisdom that is captured in South Africa by the isiZulu idiom: izandla ziyagezana: one hand washes the other. It is a wisdom reflected in the African philosophy of ubuntu, the recognition that we only become a full person through our interaction with other people.

But this incipient understanding of our interdependence needs to be nurtured. It needs our support and our energy. We have to create arenas for co-operation; we have to create forums for further understanding; we have to promote true global communication.

In all of this, water, that most powerful of all the natural elements, can be a tremendous instrument for healing wounds, calming conflicts and nurturing the tender growth of our hopes. It is the way to life and
And because this is the approach that we are using in South Africa as we seek to find ways of bridging the awful divides that have been built between us, ways to heal the hatreds that have been inculcated, ways in which to build a society with rooms for all on new foundations, you will excuse me if I use our experience to illustrate my thesis. It is the only direct experience on which I can draw; and moreover the South African model is useful for it typifies much - but by no means all - of the experience of Third World countries of the South.

In this lecture, therefore, I hope to lay out for you the pedestrian realities of life today in South Africa, alongside the new and inspiring realities of our democratic constitution. I shall refer to the development of our laws from the old days of apartheid, where power and privilege rested with a small minority, to the new laws which we are enacting to promote a sharing of resources in a way which we hope will benefit the whole nation.

Let me start with a consideration of what we mean by development, illustrated, as I propose to do throughout, by the theme of water. This is important for me because when I first met the officials of the Department of Water Affairs, and told them that my concern was to establish equity in relation to water in the country, they were puzzled. There was no inequity in water distribution, they assured me, speaking, as was their mandate, about the distribution of and access to the basic resource.

Yet the movement of liberation, the African National Congress, in its pre-election surveys had found that, next to jobs, access to water was the highest priority of all for the rural people who comprise a full 50% of the population. This is hardly surprising in a country in which millions of people were forcibly removed from their land by an illegitimate past regime; where people were forced from land with access to water and moved to arid, barren areas; a country where women in the rural areas must walk sometimes for six hours a day to get water for their children - and this is what that hackneyed phrase - pedestrian reality - means in my country. Walking, kilometres each day, to bring back essential supplies of water. In those areas where even such long walks cannot meet the needs of infants, those children can die.

Health conditions like diarrhoea, bred of a shortage of water and sanitation, continue to claim infants at rates approaching 400 per thousand live births in the dry wastelands that apartheid manufactured as dumping grounds for blacks. One study [I] found that there was a 47 to 48-fold greater risk of dying from diarrhoeal disease among blacks than among whites, reflecting an appalling racial skewing in the provision of water and sanitation facilities. In 1989, nearly one in five South African youngsters died before reaching the age of five, with nine African children, two Asian children and five "coloured" or mixed race children dying for every white child.

An integral part of apartheid strategy was the forced absence of water. As my co-authors and I note in our recent book [II] summing up the apartheid past, there were systematic policies of forced removals which created waterless dumping grounds for human beings, foreseeably breeding disease and death.

Water was thus a weapon in the crime against humanity that was apartheid. The nature of the disease that proliferated in resettlement areas, even in urban townships, was itself the best indication of the shortage of clean water. It is common medical wisdom that the very proliferation of diseases such as cholera speaks for itself, in indicating a lack of water. The lack of water and sanitation also led directly to unnatural levels of disease and death due to typhoid, worm infestation, and gastro-enteritis.

In South Africa, 12 to 14 million people still lack adequate access to clean water despite the provision of water to well over two million people in the last four years. And, according to the South African Health Review 1997, while 98% of our urban health clinics have a piped water supply, 22% of the health clinics in rural areas of South Africa are completely without piped water. Moreover, of those clinics which have a pipe, only 70% have taps that are always working. For many rural people, the long walk to a waterless health clinic can mean exposure to new health risks, rather than access to lifesaving medical attention. But we are changing this.
Apartheid's systematic policies of forced removals and resettlement created waterless dumping grounds for human beings, foreseeably breeding disease and death. The bureaucrats who decided where to site these camps cynically used the sheer uninhabitable qualities of the chosen terrain and the calculated lack of essential facilities to subjugate the people placed there. People without ready access to water rapidly have their spirit broken.

Clearly water management and allocation is an arena of what has been called hydropolitics, rather than merely an apolitical technical pursuit. In South Africa the hydropolitics were based on deliberate acts of discrimination against the black majority by a white minority. It is not without significance that apartheid's most crudely racist Prime Minister, J G Strijdom, was the minister responsible for water, namely irrigation, when the basis for the quiet genocide of black infant mortality was laid in the early 1950s.

Differential life expectancy - the difference in how soon people die in the North, compared to the South; or among the poor, compared to the rich -- has long been acknowledged as a basic measure of the equity of a society, or of a world order. The lack of adequate water and sanitation has enormous impact on this key variable of human well being. Water shortages kill. The lack of clean water combined with historical injustice make for a deadly cocktail, not only in South Africa but elsewhere in the world.

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It is consciousness of our condition that raises us, as humans, above the ordinary animal. As Hazlitt noted, we laugh and cry for we know the difference between what is and what should be. It is a moral consciousness that raises us, as humans, above the cruder elements of our own nature. If we are indeed sentient and moral beings rather than a rugged and predetermined expression of our genetic individualism, it is towards the objective of something greater than our own, immediate personal advantage that we must strive, if only to leave a helpful mark on the ever changing canvas of history.

So how do we do that?

We must give freedom a human face; abstract moral and political ideals must become the living texture of how we see each other and the world. In addressing subjects like "Water, Life and Justice", we must take the life part seriously. Otherwise profound flashes of insight may remain ineffective for decades, not because they have failed to win their share of academic recognition, but because they fail to ignite the collective imagination. They are therefore easily displaced by dominant interests that would be threatened by them. The bias towards purely technical solutions to water management issues reinforces inherited patterns of power and prestige. It reinforces the status quo.

In reaching out to supply over two million people with clean water since 1994, the new democratic Government in South Africa has placed major emphasis on ensuring that the newly served communities experience a real sense of ownership of the infrastructure that is transforming their lives. We have made a special effort to uncover what some development theorists call the cultural software of Africa, the equivalent of the black box in the crashed aeroplane which, unless we decode its contents, will fail to prevent future disasters and will lead imported welfare strategies to flounder in cultural mishaps.

But equally important, unlocking access to water for people whose history had taught them that this was a deliberate instrument of oppression and domination has had vital consequences. It has opened up the way to address some of the larger problems that confront us as a society.

In macro terms, to the resource planners, the problem of access for the women of a poor community to the water necessary to meet their basic needs may appear minor; in global terms, it requires not much more than one percent of our resources. But in political terms, it has conferred on us the legitimacy to look further at how water and development interact in our society.

Many in South Africa see redistribution of land as a vital step towards redressing the injustices of the past, and certainly land reform is a moral and political imperative that is being pursued with vigour. But South Africa has, in economic terms, long outgrown its agrarian roots. However strong the affinity may be and however acute and deep the pain of deprivation may cut, simple restitution of the land will not fundamentally change the economic status of the deprived. Land without water, in a water-scarce country
such as South Africa, will fail to uplift those who till it.

So when, in the process of rewriting the water legislation of South Africa, we turned to the question of equity in the allocation of water between communities we quickly came face to face with the myth that the management of water had somehow escaped the political realities of the past - something that was hardly likely in a country where water, rather than land, is the limiting resource for development.

Indeed, it was by something of a sleight of hand that access to water was made, like everything else in apartheid South Africa, to depend on race: the law was interpreted in such a way that access to water became subject to access to land adjacent to the resource. Since land was the terrain of struggle and deprivation, it was not just that 87% of the land was by statute alienated in favour of the privileged, white, 13% of the population - it was, crucially, that much of the land alienated was that with the best access to water.

The appalling inequities of apartheid are forcing us radically to rethink the water policies of the past. In the old days, riparian rights to water were an aspect of race-driven property rights. If you lived along the river bank, you had full rights to the water - and whites lived along the river banks while many blacks were thrown off their land and dumped in barren areas. The ownership of land carried with it extraordinary rights, regardless of the injury this caused to others. (Indeed, one can still see the legacy of this principle in operation today, when a white farmer is accused in court of shooting at black children walking across his land, in the process killing a baby and severely injuring an 11-year old girl. In the old days he might have done so with impunity; today he faces a charge of murder.)

Apartheid determined all aspects of life in South Africa, access to water among them. However, it is not so easy to reverse the process. When we started to tackle this issue, we had to ask ourselves the fundamental question as to just what equity in water means.

In the run-up to the 1994 elections one party advocated that the land should be divided among the people in such a way that no one person should own more than 40 hectares. If this were equity, then it would follow that we should ensure that our annual supply of available fresh water is divided equally between our 37 million citizens. That, we have to admit, is a naïve and simplistic answer to a far more complex problem. Its implementation would violate the path of reconciliation on which South Africa was launched in 1994; but it would also vitiate our efforts to achieve optimum long-term environmentally sustainable use of water.

Of course we must address the needs of those who were deliberately deprived of water in the past, and this indeed is a major priority of my department today. But true equity implies a concept of fairness which allows for different practices in the management of water in response to different social, economic, and environmental needs. It is important to identify the policies, institutions and practices that will support the principle of equity and equitable access.

There are, in fact, three aspects to the question of equity which should be looked at. These are equity in access to water services, equity in access to water resources, and equity in access to benefits from the use of water resources.

One of the loudest cries in South Africa is still for safe, clean and accessible drinking water and sanitation services. Access to water at its source is, in fact, only a small element of access to water services; for these, infrastructure, technical and management skills, and adequate funds are usually the critical elements.

The most important contribution to achieving equitable access to water services is the provision of funds and the regulation and direction of the institutions whose task it is to provide the services. Access can be improved by changing the rules about access to water resources, but this will not in itself meet the needs and desires of people for whom piped water is still a dream.

We therefore need to look at the question of equitable, direct access to water, for the productive purposes of irrigating crops and watering cattle. South African history is a long story of removals, expropriation, theft and occupation which has deprived people of their land, and because of the restrictive development of the
law in relation to water that I referred to above, access to water for use in agriculture is even more racially skewed than access to land.

Even water for irrigated agriculture, which accounts for nearly half of all water use in South Africa, is not widely distributed. Fewer than half of the 60,000 commercial farmers in South Africa have irrigation as the major component of their business. But of course farmers are not the only consumers of water. Water is the lifeblood of the economy. It is a vital necessity for our industry, our power stations, and for the life of our cities.

We therefore have to look at equity in access to benefits from water resource use. We have to balance the use of our water resources so that we bring maximum benefit to our people, whether directly or indirectly. This must become the focus for water policy.

Access to water alone, while it contributes considerably to the quality of life of the individual, is not enough to break the poverty trap in which nearly 40% of our population live. What we require is to be able to mobilise water as a force for economic development; for equitable development which benefits, in particular, the poor, the hungry, and the weak. And we must remember that in South Africa, as in many parts of the world, the poorest of the poor are women and those living in women-headed households.

There may be some who believe that somehow development is an absolute rather than a social construct. Development is not a static, objectively measured condition. It is socially determined and that definition will differ between communities and within communities over time.

I do not view questions of water, life and justice as hermetically different and exotic in the South, as compared to the North. On the contrary, in South Africa our own water reform efforts have benefited from and drawn widely on experiences elsewhere, including in the United States. The issues familiar to natural resource economists, engineers, practising lawyers and legal theorists in the United States are issues that recur in South Africa and throughout the South, wherever water reform is happening.

Like you, we have faced questions about the proper balance between central (or federal) and provincial (or state) governments in water resource management. Like you, we are wrestling with the proper balance between public interests and private expectations in water use. Like you, we must reconcile environmental priorities with imperatives of economic development and job creation, in ways that do not pit the one against the other. The most important differences between us are ones of degree, not kind.

One can illustrate both the affinities and the differences of North-South water management problems by reference to the issue of water scarcity. According to hydrologists, a water scarce area is one possessing fewer than 1,000 cubic metres per person per year, placing constraints on food production, environmental integrity and economic development. A study published in 1992 [III] demonstrates that 26 countries with 232 million people belong to this group. This includes not only countries in Africa and the Middle East, but also certain countries in Europe, such as the Netherlands, Belgium and Hungary. So water scarcity can be said to be a shared problem, one that straddles the North-South divide.

On the other hand, the manifestations of this problem can be fundamentally different because of the disparities in material wealth between North and South. The water scarcity problem in Europe is more an environmental issue than a problem of absolute water shortage or insufficiency for human needs.

By contrast, in parts of Africa, for example, water scarcity increasingly means that there are absolute insufficiencies of water to meet the needs of people, agriculture and industry, insufficiencies exacerbated by inequity in access to the infrastructure which is needed to get limited water resources to the people who need them.

Moreover, in a perverse twist, water scarcity in the North and South can also arise in circumstances where a plenitude of water is physically available, but where adequate financial, economic and social capital is lacking, so that the resource remains undeveloped. These institutional, financial and management failings often mean that, in the South, it is a case of "Water, water everywhere and not a drop to drink".
Thus for example in the province of KwaZulu-Natal on the eastern seaboard where I was born, and which is one of the major providers of water to the water-scarce industrial region of Gauteng where Johannesburg is situated, there are hundreds of communities perched on the hills which have no access to water except on foot to the stream or river at the bottom of the hill. There is no way in which, left to themselves, market forces will provide water to these communities.

Government here must play an interventionist role. The differences in infrastructural development between North and South mean that our governments also have differing roles. In the highly developed North, the market may be left to its own resources far more than in the face of the underdevelopment of the South where the market does not cater for the needs of impoverished communities; where the market does not provide the reticulation required to provide water for those who cannot afford to pay the real costs of getting that water to them.

Perhaps one of the major differences between North and South is that of the role of government. In South Africa, to achieve equity, to achieve justice, the national government has a crucial role to play. We need major government intervention; we need strong government; we need big government, in the best sense of the word.

The starting point of our new approach to water management, and governance generally, in South Africa, is the awareness that the state itself is a delicate and precious collective asset, scarce, besieged and under threat throughout Africa. This may seem like an odd starting point for those schooled in the political and institutional assumptions and instincts of the North where "big government" tends to be suspect. In the North, the state is often seen as an overweening and well-resourced threat to the liberties of private individuals. The call to "roll back the frontiers of the state," while always controversial, can command a certain instinctive response in the political culture of the North.

But in Africa the real threat is often not the risk of an overweening state but the chaos of statelessness, the actual or imminent collapse of the state. Under siege, the state loses the institutional capacity, let alone the vision, to concern itself with integrated water management.

In South Africa, then, we see rational water management as an aspect of governance - it is one front in the battle against the denudation of the state; a battle which, if lost, will have severe ramifications for the vulnerable and the poor.

In Africa alone, by the year 2000, which is now only months away, 300 million people, one third of the continent's projected population, will live under conditions of water scarcity [IV], yet the distribution of that scarcity does not necessarily mirror the brute physical availability of water. Politics intervenes. Water scarcity is not only a physical concept; it also has financial, sociological and ideological aspects. For example: Botswana and Egypt alike receive 95% of their usable water from incoming rivers, rather than from endogenous rainfall. Yet the Nile, running through the most densely populated part of Egypt, has fostered enormous sociological and economic activity. By contrast, the water arriving in Botswana via the Limpopo, Okavango and Zambesi rivers is relatively unavailable for a number of reasons: because of prior depletion by a neighbouring country (the Limpopo), environmental sensitivity (the Okavango) and the competing demands of six other states (the Zambesi).

Thus Egypt feels itself to be a relatively well served water economy while Botswana sees itself as a country of chronic water scarcity, even though, in purely literal physical terms, the two countries are basically similar [V]. The two countries are also similar in the fact that, like many countries throughout the world, their water resources are shared with neighbouring countries.

Probably the single most important theme in water resource management everywhere is the recognition that comprehensive and integrated approaches are vital. Yet they have often proved elusive. The quest for a comprehensive approach to water management in your own country has, as you know, a long and chequered history, as it does elsewhere. For many years, water management in the United States was a misnomer for the first-come-first-served cowboy mentality that accompanied the westward expansion at the
expense of indigenous peoples, whom one might have thought had rather good first-come-first-served claims to water and other resources.

As early as 1901, Senator France Newlands of Nevada argued in favour of national water policies, a theme taken up even by President Theodore Roosevelt in 1908, when he emphasized the need for integrated development of waterways under strong federal government leadership. Yet by 1965 the wonderfully named Senate Committee of Interior and Insular Affairs lamented that the nation had for 55 years unsuccessfully sought a formula for comprehensive river basin planning. Throughout the century, many approaches have been attempted, yet no general planning mechanism has been adopted.

Your Water Resources Planning Act of 1965 might seem to have met the need for integrated planning, but by 1981 the political winds had changed. The then President dissolved the River Basin Commissions and basically shut down the entire institutional apparatus of integrated water resource management. Underlying this move was the argument that states could each manage their "own" water resources, despite the inevitably interstate nature and impact of most water resources.

The interstate or international nature of most water resources is central to our understanding of integrated water management. The bitter colonial legacy of divide-and-rule, of fragmentation in Africa, often obscured the shared destiny of Africans in water management. The very language that we, in Africa and elsewhere, use to describe those rivers and river systems that sprawl across more than one country needs to change. At present, we habitually refer to transboundary water courses and transboundary courts, when what we really mean (or ought to mean) is shared water resources.

What we need to develop is not just, as we have introduced in South Africa, the concept of the government as custodian of the nation's water resources, but an international approach to the custodianship of our global water resources.

I argued earlier that the so-called third and first world are merely two facets of the same process of development; first and third world are the negative and the print of the same photograph. In the same way, the various countries that share water from one resource are inextricably linked together like Siamese twins, joined by an artery of water.

We are also, all of us, linked by the need to eradicate poverty, and to build a world in which all people can live in dignity and reach their full human potential; we need to build a world based on justice. In South Africa, water is a fundamental and crucial resource whose distribution has had to be completely reconsidered in the new South Africa. In the course of this consideration, and the consultation process and discussions on which I as Minister embarked, we have learnt many lessons which we are now integrating into our new water legislation in South Africa. It has also become clear that some of these lessons have international application, that carry over our borders with the rest of southern Africa.

Namibia and Botswana, for example, find themselves facing a future where their lack of water will increasingly make itself felt. Here, South Africa is pioneering an approach which is not just based on the available international treaties such as the Southern African Development Community Treaty, or on the Helsinki rules, but which goes much further by legally prioritising water for basin countries. It is particularly important in southern Africa to work to eliminate the lingering fears of South African domination which stem from my country's greater strength and economic power and also of course from the declared aggressive intentions of the previous regime. But it is also vital, if this part of Africa is to flourish and make full use of its resources, that we work together to harness these resources for the common good.

The assurance of basic human needs in South Africa reflects not only our constitutional imperative that people must not die for lack of water as they did in the past, but also the simple humane values that everyone, everywhere must surely share. The lesson of social justice is one which must underpin all our international interactions, one which must override our personal, our often xenophobic interest.

But this concern for social justice in meeting basic human needs and the sharing of water resources is not
simply wishy-washy sentimentality. It is in our view an essential contribution to the stability and
development of people within our country, and of countries along our borders. It is, we believe, crucial to
the renaissance of Africa of which our Deputy President has spoken so eloquently. The new Africa will be
stillborn if we cannot put an end to current conflicts, and avert potential future conflict such as might arise
in our region over water resources.

South African water policies are an important ingredient of our overall diplomacy. They inspire confidence
in the countries with which we share rivers that South Africa has no intention of using its might,
economically or otherwise, to deprive them of access to water resources.

This is not just an idealistic policy. It is, in the circumstances in which we find ourselves, the only practical
policy to adopt. In the same way, the protection of the environment, not in the mere ratifying of
international agreements, but in concrete action, must underpin our actions. One of the important themes of
legal and institutional reform in the South African water sector is the effort to take environmental priorities
out of the ghetto of rhetoric, philanthropy and good deeds. We recognise that the environment is our golden
goose, which will not go on producing unless we protect its welfare, so that it can enhance our own. As one
observer put it, "the deterioration of the earth’s biological systems is not a peripheral issue of concern only
to environmentalists. The global economy depends on these biological systems. Anything that threatens
their viability threatens the global economy. Any deterioration in these systems represents a deterioration in
the human prospect.[VI]

Environmental issues cannot sensibly be treated as "soft" issues while we elevate engineering and financial
issues to the lofty heights that we sometimes call the "hard" issues. Environmental blindness can nullify our
other efforts. Izandla ziyagezana - one hand washes the other - and if it does not do so, if we do not pay
attention to the environmental issues, we shall fail in our efforts to solve problems with purely engineering
solutions.

This is particularly relevant to the issue of dam-building (which I do not intend to discuss in any detail
here) where in the past technical solutions to water shortages produced other terrible environmental
problems which now have to be solved.

Overall, it is South Africa's intention to revive the lost role of government as public trustee of South
Africa's water resources, a concept that will be familiar to many of you. This concept requires the
alignment of private interests and public goals in the water management sphere. It avoids the situation
wherein private rights can trump public interests in water. It acknowledges that water is an inherently
public resource, and it acknowledges the needs of the environment.

The revival of the public trust in water resources is linked to the more general constitutional goals of water
law reform. Our new constitution is a marvellous document but if it is to achieve what it sets out to do, all
branches of government must work hard to implement it. So water law reform is an integral part of
vindicating our Constitution.

Consistent with the view that we must strengthen the state and the well being of citizens alike, the South
African Constitution is not merely a charter of constraints on state power (although obviously it contains
such constraints). It goes further, regulating relationships not only vertically between citizens and the state,
but also horizontally among citizens themselves. And our Bill of Rights contains not only civil and political
guarantees (such as freedom from arbitrary state action), but also a range of social and economic rights,
such as the right to housing, nutrition and access to sufficient water.

Few constitutions today refer specifically to the need for access to water, though many professionals in the
water field and many activists in the relevant NGOs are lobbying governments to add such a provision.
South Africa is fortunate in already including it. This is not simply the result of our awareness of the
necessity to remedy the racial imbalance of water supplies in the past, though that was an important factor.
More than that, though, it stems from our focus on affirming people as human beings and therefore
inherently entitled to their freedom and dignity.
The jurisprudence of the Indian Supreme Court is an example of an integrated approach to the interpretation of human rights. The court has infused the fundamental rights in Part III of the Constitution with a meaning based on the values of social justice and substantive equality as embodied in the (non-enforceable) directive principles of state policy in Part IV of the Constitution. The right to life has been interpreted to incorporate a right to livelihood. The court has undertaken to restrain government conduct which unreasonably deprives people of their bases of livelihood. The court has also on occasion required positive conduct on the part of state agencies in order to preserve life and the means of livelihood.

The apartheid regime, in its last days while negotiations to end it were in progress, prated of "standards" and even "Christian values" as if it could not see that apartheid negated such values and forgot or destroyed the living standards of most of the population. Our Government, on the contrary, believes that human rights and certain minimum standards must be extended to all the people of the country; and those minimum standards much include access to water.

Additionally, the Bill of Rights explicitly confers the right to a healthy environment, protected for the benefit of present and future generations. This is the context within which we have embarked on water law reform, the restoration of government as public trustee of the nation's water resources.

The fact that our Government is to become the public trustee of water resources is a fundamental principle of the new South African Water Bill, and a similar principle appears in the natural resources law of many jurisdictions. Variants can be found in Roman law, the law of medieval continental Europe, English law and the laws of almost every state in the United States [VII]. The principle was also to be found in past South African law and indeed Roman Dutch legal principles held that natural resources are things held in common, for the benefit of all [VIII].

The riparian rules that came into being under apartheid that I have described were essentially a rule of capture, a blunt instrument, a sinister form of property ownership in a system where land ownership itself was deliberately racially skewed. Yet earlier other rules prevailed, for instance the Roman Dutch legal principle that natural resources are to be held in common, for the benefit of all. The inclusion of the public trust doctrine in the new law is therefore a kind of modest legal renewal, a rebirth and expansion of longstanding principles that were ignored in the previous political system, to the detriment of people and the environment alike.

Joseph Sax, an eminent law professor whose writing since 1970 has been at the forefront of the international revival of public trust doctrine, says that the public trust combines three basic insights. First, that "certain interests are so intrinsically important to every citizen that their free availability tends to mark the society as one of citizens rather than serfs". Second, that certain interests are more national treasures than mere amenities, so that they ought to be reserved for the entire populace. This was the basis, in England for instance, of so-called "rambling rights" -- public access to open countryside. And third, that certain uses have a peculiarly public nature, so that their unrestrained adaptation to private use is inappropriate.

Sax specifically gives the example of water law. He points out that one does not own a property right in water in the same way one owns a watch or shoes. Rather, one owns only a usufruct - "an interest that incorporates the needs of others". Government must therefore regulate water use for the general benefit of the community, "thereby taking account of the public nature and interdependency" of water resources [IX].

It will be evident that developing the government's role as public trustee of water is not an overnight achievement nor one that can ever be said, at a specific point in time, to have become a finished accomplishment. Rather, government must wake every day determined to ensure that the public trust is maintained, on an ongoing basis, as society itself changes. There is no rest allowed, no luxury of saying "been there, done that". If one has to sum up the public trust in one sentence, one might call it the legal concept through which a system of water law commits itself to evolve along with, rather than ignore, changes in the water economy and the evolving needs of society.

Writing in 1993, my United States counterpart, Secretary for the Interior, Bruce Babbit, summarised the
history of U.S. water politics as the "unthinking divestment of the water resources to the states and from them to users, with federal government a co-conspirator in the process that accelerated this divestment." To him, the public trust is "part of an effort to recapture the public interest in the water resources".

In South Africa, the history of water politics is a history of deliberate divestment and transfer of water resources (viewed as an adjunct to land rights) from blacks to whites, with the apartheid government as chief co-conspirator in a process of state-sponsored looting, within a system that the United Nations Security Council in 1984 acknowledged was a crime against humanity. In South Africa, the public trust is part of an effort to undo this legacy: to replace the inequity and inefficiency of apartheid with the efficiency and equity of rational water management.

While in many jurisdictions the public trust is judge-made law, a product of the evolution of the common law, the new South African National Water Bill, now before Parliament, has placed the doctrine on a statutory footing. Legislative enactment of a public trust concept is not unprecedented. It has been done, in varying degrees, in jurisdictions such as Florida, Virginia, South Carolina, Wisconsin and Massachusetts.

The choice of the legislative -- as opposed to common law -- route to a public trust doctrine meets the objections of those who say that it is an unstable product of judicial activism. Since we are all legal realists by now, we know that all judges almost inevitably make law in the process of applying it. This applies to statutory interpretation no less than common law interpretation. The real issue is one of degree. In passing the new National Water Bill, the South African legislature will give the courts an unambiguous statutory mandate to reassert the public interest in water law, in a carefully structured way.

In his own work, Joseph Sax advocated "liberating the public trust doctrine from its historical shackles" [X]. By this he meant to extend the protection of the public trust from its American origins as protection of public access to navigable watercourses. Sax successfully argued for the extension of public trust protection to a range of environmental values, which he describes as "core values" in the American political culture. In South Africa, though, the history of the struggle against apartheid has instilled in us further core values, notably of respect for human dignity and non-racialism, which were so absent from our recent past.

In South Africa therefore we have not only liberated the public trust from its narrow historical origins, but we have also extended the relatively limited range of core values that it protects under American law. The core values of the new South African constitution explicitly include a range of socio-economic rights, fundamental notions of human dignity, a specific right of access to water - as well as a right to have the environment protected for present and future generations. So I must state very emphatically that we have not merely imported the public trust concept uncritically from elsewhere. We have fundamentally reshaped it into a distinctly South African mould, just as the American doctrine, while originally imported from Europe, was modified for American indigenous circumstances and continues to evolve, in America, over time.

For instance, some have criticized the US public trust doctrine for expressing core values that are unnecessarily narrow and static. They say that in America the public trust narrowly expresses the values of middle class environmentalism, that it does little more than make the world safe for yuppie canoeists, hikers and windsurfers; that its starting point is the adequacy of the way things are, so that it provides little impetus for fundamental change. Whatever the merits of these criticisms, the South African public trust doctrine will go much further than this, reflecting the broad range of fundamental rights protected in the constitution.

The state's ability, as public trustee, to shift water to uses that create the greatest good for all brings us back to the observation that one does not own water in the same way that one owns a watch or a pair of shoes. Rather, one holds a usufructuary interest, an interest that incorporates the needs of others. Those others include those living on the other side of the river; those living further downstream the river.

Basic resources like water must be seen "not only as ordinary property subject to the rules and assumptions of the private property system, but also as elements of the community's capital stock, the use and protection of which could affect the fate of the whole community" [XI]. If we ignore this principle in favour of a
religious reverence for all manner of alleged and inflexible water rights claims, we will end up, in the words of one commentator, with a system not of water rights but of water wrongs [XII].

As the head of our Constitutional Court, Judge Chaskalson, stated last year,

"We live in a society in which there are great disparities in wealth. Millions of people are living in deplorable conditions and great poverty. There is a high level of unemployment, inadequate social security, and many do not have access to clean water or to adequate health services. These conditions already existed when the Constitution was adopted and a commitment to address them, and to transform our society into one in which there will be human dignity, freedom and equality, lies at the heart of our new constitutional order. For as long as these conditions continue to exist that aspiration will have a hollow ring. This commitment is also reflected in the various provisions of the Bill of Rights and in particular in sections 26 and 27 which deal with housing, health care, food, water and social security."[XIII]

Our Constitution, therefore, binds us to put human rights into practice and, in the case of my own ministry, to endeavour to ensure that, ultimately, everyone will have access to clean water. That positive duty is one which the Constitution lays on us, and must, in all reasonable ways, be discharged.

It has taken us four years to bring our new Water Bill to the point where we can confidently introduce it in Parliament. We have had to ensure that it conforms to the terms of the property clause contained in section 25 of our Constitution. This was a controversial clause, which at the time aroused much well-meaning opposition. Many wanted to omit the clause altogether, fearing that it would paralyse anti-apartheid reforms in a flood of compensation claims. However, the agreed clause states firmly that "no provision of [this property clause] may impede the state from taking legislative and other measures to achieve land, water, and related reform, in order to redress the results of past racial discrimination", provided that the measures are in accordance with the Limitation of Rights clause, ie "reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom."

The clause clearly distinguishes between expropriation and deprivation. If government action merely deprives a person of property, compensation is unnecessary. But in the case of expropriation, compensation must be made. In the National Water Bill, a decision to deprive a farmer of his or her water allocation requires compensation only if this "constitutes destruction or severe prejudice to the economic viability" of an undertaking in which "the water was or could have been beneficially used". There is no compensation necessary to provide for the environmental reserve, to rectify over-allocation of water from a particular resource, or to rectify an unfair or disproportionate use.

In practical terms, this means that water will be available for efficient and equitable use, and the taxpayer will no longer bear the cost of shifting water away from the inefficient and inequitable uses of the past, where farmers were subsidised to build private dams, sometimes for the irrigation of totally inappropriate crops for that particular region. The new water tariffs that we are encouraging local authorities to introduce will also, we hope, have a strong influence in bringing about a more rational use of water through the imposition of a scale of tariffs which will stretch out a life-line to the very poor, as well as favour the economical user.

These objectives will only be reached in the South African context if that state's role as public trustee of water resources is full restored and unambiguously recognised.

In our journey tonight through the intersecting themes of life, water and justice, through questions of water management, institutional structure and constitutionalism, of relations between countries and world peace, we have touched on many varied issues. There is little that water leaves untouched.

And yet we often treat water issues as narrow technical matters; the sole province of engineers and technocrats. Such a reductionist approach leaves little room for appreciating, let alone addressing, fundamental human rights, such as access to adequate and clean water. Technology alone will not bring justice to this world. New processes for desalination may make more water available, renewable energy sources may make the pumping of water cheaper and more sustainable; but only a deep commitment to
human dignity for all people will bring justice to this world. Only a deep commitment to the fundamental rights of all people will bring justice, life and water to all people, regardless of race, colour or gender; regardless of whether they live in New York, Rwanda or Johannesburg.

My appeal tonight is for a new and multidisciplinary set of professional ideals in water management internationally. Your 1965 Water Resources Planning Act established a national assessment programme, meant to advance understanding of the nation's evolving water needs and the adequacy of water supplies. Yet throughout its two decades of existence (before it was dissolved in the political vagaries of the eighties) the assessment process was generally understood in a narrow, technical sense. It was taken to relate only to the technical supply side of the hydrologic system, not, more broadly, to the social and institutional contexts of water resource use.

This narrow approach prevailed, in practice, in both the 1968 and 1978 assessments, despite the fact that leading policymakers (including President Lyndon Johnson himself in 1968), recognized in principle the need for a broader basis of assessment. But, as is so often the case with reform efforts, laudable principle failed to find its way into practice. The Water Resources Council itself, under whose own auspices the assessments were carried out, noted with evident exasperation in 1968 that "no assessment of the national water situation is complete without some discussion of the institutional processes by or through which water management functions. . . No attempt is made to portray the all-important human dimension of the system. In addition to hydrologic, technical, and economic factors, the factor of human beings working through human institutions is also determinative in the water equation" [xiv].

The challenge for us, as water policymakers, administrators and technocrats, is to find ways to humanise water resource administration; to take it away from the macho John Wayne mentality of the past, and infuse it with ideas of nurture and human well-being. Large parts of water management practice and engineering culture internationally have evolved in geographical areas that were or seemed water-rich, so that the challenge was merely to perform impressive feats of engineering that would subdue plentiful water resources in a state fit for us to use. Water management became "water-blind": water was assumed to be infinitely available.

Developers and water managers were unaware of the notion that water is an inherently scarce and fragile resource.

The alternative idea - of water as the cradle of humanity, even of life itself, more than merely a commodity - has sometimes been called the "feminisation of water". Water management indeed needs to become more life-giving than cold and mechanical, which has been its history to date. Let us, then, join in changing that. If we succeed, we will in the end abolish the distinction between home and abroad, between North and South. We will realise, as literary scholar George Steiner has said, that while trees have roots, people have legs, and we are always both hosts and guests to each other.

As we seek out this common global home, the very language that we use when we talk about water reflects both the enormity of the task and the hope for its success. An institution as sober and restrained as the World Bank has warned that the wars of the next century may be over water. This claim will continue to be debated. I personally think that tensions over water often reflect broader tensions and, if those are resolved, water itself will not occasion warfare.

But whatever the future course of such debates, it is clear that in the English language, the vocabulary of water is a lexicon of conflict. Violence is strewn like the detritus of history across the ways we talk about water. The word rivals itself originates as a description of those who share the same river, the same stream. When societies are deeply divided, we say that they are riven. As we describe the structure of our river basins we speak of main streams and secondary tributaries. This echoes the inequity of feudalism, in which the vassal paid tribute to the lord. In so many ways, our language itself, far beyond the strict sphere of water management, reflects atavistic tensions over water. Language itself has drunk deep from the wellsprings that link water with power, bringing forth both war and civilization.

Civilisation? The immersion of our water lexicon in the imagery of conflict is a warning sign that we may
be getting something wrong. When Mahatma Gandhi visited London during his efforts in behalf of Indian independence, a reporter asked him what he thought of Western civilisation. "It would be a good idea", he responded.

It has been the thesis of this paper that the preservation of life, the attainment of peace and stability in our world, are dependent on achieving a just balance. We cannot reach these goals if we allow the inequities so prevalent today, within or between countries, to continue. This is a thesis which appears obvious, even trite, in the South African context, where the long anti-apartheid struggle caught the imagination of the world and horrified people everywhere by the blatant injustice and cruelty of the system. But it is a thesis which has much wider application, as I have tried to show. There is a philosophy of sharing in South Africa, of a recognition of our common humanity, of ubuntu, which has much to offer the world.

Under apartheid, water, or rather the lack of water, was an instrument of subjugation for the majority. But water, life-giving water, is today an instrument of reconciliation through which we are bringing renewed life and hope to communities throughout the country. It is the means by which we are promoting good relations with our neighbours.

It is in such a spirit that we need to build our relations in the world of the future, the world of the coming 21st century and the unfolding third millenium. I believe that North and South, developed and developing, however you like to term them, have more in common than not, and that a joint effort, a mutual washing of hands, is vital if we are to solve our problems. Joseph Conrad's mysterious and therefore frightening rivers will prove real channels of communication if we can examine them, and Africa, soberly and not through a glass distorted by the prejudices of the guilty former coloniser or slave trader.

I would like to end my lecture in a traditional way, with an African greeting to you in the North from us in the South. Where I come from, words for water and rivers, in our rich variety of languages, tend not to be reminiscent of division and conflict, but warm, all-embracing, happy and uniting in tone and meaning. The word for rain in the Sotho language, pula, is also a form of greeting - greeting between friends or greeting between strangers. Pula evokes our common needs, our common bonds. It is a celebratory term, evoking an imagery of flourishing, of good harvests and bountifulness.

Pula encapsulates my theme today, in which I have endeavoured to show how the sharing of our natural resources can be of benefit to all.

Pula!

This is my message, from the South.

NOTES


X. Joseph Sax, "Liberating the Public Trust Doctrine from its Historical Shackles", 14 University of California (Davis) Law Review 185, 1980.


XII See, "Restatement (Second) of Torts" ss 841-58, 1979; David Getches, "From Askahabad, To Wellton-Mohawk, to Los Angeles: The Drought in Water Policy," 64 University of Colorado Law Review, 523, 545, 1993 (noting that nineteenth century developments in the water economy subordinated "the inherently public character of water" to "the dominant purpose of expanding mining, farming and cities" but "that is changing now").

XIII. Per Chaskalson J in Soobramoney v Minister of Health, Kwazulu-Natal 1997 (12) BCLR 1696 (CC) at paras 8 and 9.