

**SPEECH FOR USE BY MR RONNIE KASRILS, MP, MINISTER OF WATER AFFAIRS
AND FORESTRY AT THE OPENING OF THE INTERNATIONAL CONFERENCE ON
ENVIRONMENTAL FLOWS FOR RIVER SYSTEMS IN CAPE TOWN ON 4 MARCH
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Mr Chancellor/Vice Chancellor; ladies and gentlemen, it gives me great pleasure to be here today in the company of the world's and South Africa's most renowned hydrologists, engineers and water scientists.

As you are all aware, this year is the year of the Summit – the World Summit on Sustainable Development, which will be held in Johannesburg in August. This event is of great significance to all environmentalists world wide as we meet to compare notes in terms of our effectiveness in meeting the goals of Agenda 21.

Environmental flow is particularly significant in this regard – and especially here in South Africa where we have embedded the environmental need for water as a *right in law*. This is truly a world first, and I hope that during your debates and deliberations in the next few days our local specialists and also my Department's officials will provide the evidence and examples of practical cases where this law has been operationalised.

Much has been learned in the road we have travelled – and much has still to be mastered as we struggle to bridge the divide between legal and scientific theory, and practical operational reality. The goal is to concretise the ideas and concepts into reality. Without this last, most critical step, all the most elegant of theories and methods remain in the realm of academia.

How far we have come?

One of the major steps forward in the last decade in South Africa is the recognition of the environment not as a competing user, but rather as a resource provider. Originally, the environment was viewed as just another water user such as agriculture, mining, industry and domestic use. While most of the other users had an economic contribution to make and thus were provided with water first, the environment did not. There was really no competition, and consequently the environment *and the poor* had no voice.

In the process of law reform, which was initiated in the mid 1990s, my Department recognised the need to take a more holistic approach to management of water systems. We recognised that river systems were the “resource” and that the water needs of the resource should be met first – or all other users would be placed at risk of failure when water resources deteriorate through uncontrolled impacts. We also recognised that the need for water was a basic human need – as expressed in the Constitution. This dual pronged approach – recognising the importance of the environment and the importance of basic human needs – forms the cornerstones of the new water legislation, which resulted in 1998.

The National Water Act of 1998

The National Water Act, Act 36 of 1998 has been acknowledged as one of the most far-reaching and forward-thinking water acts in the world. It is based upon the twin pillars of sustainability and equity in line with Agenda 21 and South Africa’s Constitution, and gives as a right in law the water for human needs and the water for the environment. The audience here today will appreciate the potential dilemma that we are faced with:

which is that the limited availability of water resources can and often does lead to competing requirements – and that the needs for human beings and the needs for the environment are not necessarily compatible. A third complicating factor is our recognition of water as an economic enabling mechanism. Access to water has tremendous commercial potential – ranging from big business, industry and mining right down to the small scale community based market-gardening and brick making operations we are seeing emerge in some of our rural areas. How we resolve the potentially conflicting requirements of human needs, economic development and the environment is a process my Department is rigorously addressing through the development of some innovative methods and we are seeing that this dilemma can in fact be resolved within the parameters of equity and sustainability.

The Act recognises water as a renewable natural resource. This implies sustainable development as a key basis for all our management actions.

There are two major implications. Firstly, we need to see a water resource not just as the commodity “water”, but as the whole ecosystem, of which water is one component. The ecological integrity, which gives a water resource its resilience, is an essential component of the value of the resource.

Secondly, we recognise and respect the limits to the degree of utilisation that can be sustained by a water resource. This depends on maintaining a basic level of ecological integrity and function. The Act recognises this basic level as *the Reserve*. The Reserve is intended to protect the resilience of water resources, to satisfy basic human needs by securing a basic water supply and to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the water resource. At the same time, the Reserve is not intended to protect the aquatic ecosystem at the expense of all

development. Water resource management goals in the National Water Act provide us with a balanced approach intended to ensure that there is development and use of water resources, but at levels that are sustainable in the long term. However, only once water has been allocated to the Reserve, can the remainder be allocated for economic activities. This gives the environment pride of place in the water allocation hierarchy along with basic human needs. In addition, aquatic ecosystems that are particularly fragile or important can receive additional protection. For this, the Act provides us with ecological categories in assessing the Reserve, a management classification system, and resource quality objectives.

The move to integrated management of water resources, on an ecosystem basis, required us to introduce a new set of tools for resource management. Tools that were flexible, protective and could take account of extreme differences within South Africa, both in socio-economic conditions, and in natural variability of aquatic ecosystems - thus, the birth of “resource directed measures” in South Africa.

Along with this new way of thinking came other terms, such as “ecohydraulics”. For resource directed measures to be successful there was a need for a multi-disciplinary approach to water resources management. It was no longer acceptable for engineers, ecologists and social scientists to go their own routes. Integration of ideas and methodologies from an array of disciplines, and integrating these with socio-economic imperatives, has led to a paradigm shift in water management. I believe that the array of disciplines here today substantiates this.

Our challenge - putting policy into practice

Several challenges face us as we put policy into practice:

- Reserve determination is a complex process that requires high resource input. Reserve determinations are not just about the quantity of water required, but also the quality of the water and the timing of releases, as well as habitats and biota. These parameters complicate an already complex task.
- The Reserve will be expressed as a range of values rather than specific values or points on a curve. It will be fixed within that range depending on the balance between prevailing ecological circumstances, social needs, and economic needs and opportunities. The minimum value will be related to the minimum ecological state necessary to support a stable ecological system. To use a sporting analogy, the Reserve defines the playing field and the players may play within the touchlines of the pitch. The Department is the referee who ensures fair play and equity among players. The stakeholders are the players.
- Although the methodologies for determining the Reserve have been well researched and developed, with sterling input from some of South Africa's water scientists in the audience today, we are still in the process of refining them. Their refinement will continue during implementation. A challenging task for all involved.
- Most of our ecological Reserve determinations so far have been undertaken by experts in ecological flows. To be financially viable and readily implementable, this role will have to be undertaken by the catchment management agencies, which are in the

process of being established for each of South Africa's 19 water management areas. Capacity building and training are vital to the successful implementation of resource directed measures.

Despite these challenges, I believe that we are heading forward on the road to sustainability in terms of water resources. The dramatic changes that we have seen over the last ten years bode well for our future progress.

To demonstrate our commitment to sustainability, environmental flow requirements will be a central part of South Africa's National Water Resource Strategy. The Strategy is currently in preparation and will be published and made widely available for public comment in July this year, after which a comprehensive consultation process will be initiated with all stakeholders and other interested parties. The Strategy outlines the framework for water resources management as required by the National Water Act, 1998 and describes, among many other things, how we intend to put our water resources protection measures into practice. These measures are already being implemented and refined in the operational environment, and include the determination of ecological flow requirements - the Reserve - for aquatic ecosystems, as a standard prerequisite before authorising any other water use.

It is good to see so many people today with an interest in environmental flows, and from such a variety of organisations and professions. I hope that the exchange of information and discussions during the Conference will build on the knowledge that we have on the topic and expand the views of, not only the South African participants, but also our overseas visitors.

As Minister of Water Affairs in South Africa today, my challenge to you in the water research and engineering sciences is to find ways to bridge the gap between research and practise more effectively – more rapidly. Only with ways of operationally implementing concepts can the benefits be truly felt on the ground by water users at all levels and particularly in poor communities without access to the advantages of high technology solutions. This partnership between theory/research and governance is how we make a difference in the lives of people who have been historically excluded from the benefits of sound water management. To do this, we need the understanding, tools and methods developed on a sound technical basis that can be translated into actions by my Department and other agencies operating at the frontline of water resources management.

Please carry this challenge with you in the days that follow.

Thank you.