

**SPEECH BY MINISTER RONNIE KASRILS, MP  
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SECOND STATE-OF-RIVERS REPORT FOR THE LETABA & LUVUVHU RIVERS  
SYSTEMS**

**31 January 2002, Letaba Camp, Kruger National Park**

## **INTRODUCTION**

Good Morning, Ladies and Gentlemen,

It gives me great pleasure to be here today. The River Health Programme is truly a pioneering initiative that has broken ground in many different ways. And as we all know, pioneering work is always difficult – and requires perseverance, vision and commitment beyond the ordinary.

There are some individuals present amongst us who have demonstrated this commitment often in the face of adversity and resistance from certain quarters. It is a tribute to them that we have come this far and indeed are seeing a growing momentum and support for the River Health Programme with the forthcoming World Summit on Sustainable Development (WSSD) in August 2002. We are seeing the emergence of training courses at universities and technikons, as the academic world responds to the need for trained specialists in this field. We are seeing increased amounts of research funding diverted into this important area. We are seeing an emerging “industry” around aquatic ecology and the River Health Programme has been key to this process as it represents a vehicle for success.

Today I am proud to present to you the second State-of-Rivers Report for South Africa. This is a result of the converging hearts and minds of our aquatic scientists, policy makers, water resource managers and different tiers of government with one common objective: sustainable development of water resources. As a practical programme at operational level, the River Health Programme is unique in the world. Unlike so many well-intentioned projects and initiatives which die out after an enthusiastic beginning, this Programme is bearing fruit – and today we see the second in the series of State-of-Rivers Reports before us as tangible evidence of the Programme’s success.

I intend to showcase the River Health Programme as part of my Department’s Water Expo during the Summit later this year. We will place before the world the products of this Programme knowing it is of outstanding quality in its vision and practical implementation.

## **BACKGROUND**

During Water Week last year I had the privilege to launch the first State-of-Rivers Report at a ceremony in Pietermaritzburg, where I outlined our vision for a lasting and national Programme of measuring sustainability in our surface water resources.

The River Health Programme has done me proud by making good on my commitments last year – and continuing with their pioneering work towards measuring and reporting on sustainability within the context of the National Water Act, 1998. In terms of this new law, we are committed as a Department to ensure sustainable water resources for all our people. Gone are the days where water was exclusively owned and used by certain small groups. Sustainable river systems benefit the most vulnerable of our communities who are on the frontline of exposure to the elements – and the first to feel the effects of deterioration in status of water resources.

The cholera outbreaks that we have experienced recently has once again illustrated the importance of ensuring that the quality of water in our rivers must never be compromised.

Flooding, contamination, dying fish and unsanitary conditions associated with impacted water resources are directly experienced by the poor who live in the vicinity of rivers. Healthy river systems with naturally functioning fish populations and plant species are of direct benefit to poor communities who live on the banks of these rivers. Fish as a source of protein sustain many of our communities where economic activity is lacking. Reeds and other water plants are used in many ways for the traditional practises of rural communities. Medicinal plants in and around river systems are a valuable part of the cultural background of our people.

It is not necessary to preach to you on the virtues of sustaining our precious environment – all of us here today are active proponents of the sustainability imperative. And all of us can appreciate the value of the River Health Programme and its State-of-Rivers Reports as well as other products which are part of the Programme.

### **Origin and design of the RHP**

The origins of the South African River Health Programme (RHP) lie in some exploratory and innovative thinking that took place some 10 years ago. After the early discussions and with a growing excitement and vision among the aquatic science community, my Department initiated the design of the Programme in 1994.

The primary purpose of the Programme was to develop the capacity and information base to enable us to, in an objective and scientifically sound manner, report on the ecological state of our river systems. At the same time, this programme was intended to fulfil an important auditing function of management strategies and actions related to water resources. The information generated by the RHP would assist in identifying those areas where utilisation of river systems is sustainable as well as those areas where unacceptable ecological deterioration is taking place.

Several government departments and research institutions took part in the design of the RHP. Local expertise as well as international benchmarking was used to decide on the technical specifications for the programme. The programme was essentially based on assessing the condition of biological communities of rivers (such as fish,

aquatic invertebrates and riparian vegetation) as well as river habitats to provide an integrated measure of the integrity or health of river systems.

### **A collaborative venture**

The RHP was established as a collaborative venture, and the partnerships that have been established are viewed as a critical success factor of both the design and implementation phases. While the Department has always played the lead role, the Department of Environmental Affairs and Tourism (DEAT) and the Water Research Commission (WRC) are actively involved and support the programme as national partners.

These national partners are responsible for developing the tools and methods for enabling implementation of the programme. Such tools and methods include protocols for selecting monitoring sites, biological and habitat indices for measuring river health, and a national database for storage of river health data. They are also responsible for seeing that appropriate quality control takes place and that a minimum level of standardisation is adhered to. However, actual implementation takes place at more local levels.

Each province has a Provincial Champion and an implementation team. The composition of the implementation teams reflects the diversity of institutional capacities across South Africa, and a mixture of Departmental regional offices, Provincial government departments, universities, Parks Boards and private sector organisations take part in implementation initiatives.

### **The RHP in the context of the National Water Act**

The protection of aquatic ecosystems is recognised as essential in order to support their sustainable and optimal use. Therefore, for the first time and through the provision of an ecological Reserve, the water required to maintain aquatic ecosystem integrity is guaranteed.

The RHP played an important role in the development of the water policy, and in many ways laid the basis for the drafting of environmental protection measures into the National Water Act. Through the work done on measuring indicators of impacts on aquatic ecosystems, we were able to confidently state that sustainability can be measured in terms of the environment. Methods for determining the requirements of the Reserve arose from developmental work done within the RHP, which had been tested and improved in the years prior to the law reform process. We were also fortunate to be able to write these concepts into law - and the NWA is consequently one of the few pieces of legislation that require utilisation of water resources at sustainable levels.

In addition to the Reserve, the RHP also was the developmental basis for identification of characteristics of habitat and biological components of aquatic ecosystems that need to be protected - as through the research we found the overall health of an ecosystem to extend beyond the simply elements of flow and water chemistry. These measures - termed the Resource Directed Measures - are further

mechanisms through which we give effect to sustainability, by including them as licence conditions when authorising water use.

Through the RHP, assessments can be made regarding the ecological state of an aquatic ecosystem in terms of:

- The present ecological state (where are we now);
- Ecological reference conditions (where could we potentially be);
- Setting of ecologically sound and feasible management objectives (where we aim to be).

## **The RHP and State of Environment reporting**

State of the Environment (SOE) reporting was promoted at the United Nations Conference on Environment & Development in Rio de Janeiro in 1992, in response to a call for improved environmental information for decision-making. As an outcome of that meeting, programmes that measure indicators of sustainability have become a key objective of the UN Commission for Sustainable Development (UNCSD). As a participating nation, South Africa can demonstrate a commitment to establishing methods and systems that measure sustainable utilisation of water resources, which include among others the RHP. Through our inputs to DEAT, we regularly report on the RHP as part of our annual country report to the UNCSD as a particularly successful example of this commitment. Given the impending UNCSD Rio + 10 Summit in 2002, the RHP will be a valuable mechanism to showcase our efforts in determining river health as an indicator of sustainable development.

In South Africa, the national Department of Environmental Affairs & Tourism initiated a programme of SOE reporting by producing the first national report, on the Internet, and city reports for Cape Town, Durban, Johannesburg and Pretoria.

## **Agenda 21**

Agenda 21 is a blueprint for sustainable development, and outlines a plan of action that addresses a broad range of economic, social and environmental issues. The Department of Water Affairs and Forestry is responsible for water resources – which in the context of Agenda 21 incorporates the economic, social and environmental issues pertaining to water resources management and development.

Water resource monitoring and assessment, with particular attention to measuring indicators of sustainability, is a feature of Chapter 18 of Agenda 21: Protection of the quality and supply of freshwater resources. The River Health Programme is an example of a programme that measures sustainability of aquatic ecosystems through a comprehensive set of methods and techniques, ranging from measuring the range and biodiversity of aquatic organisms as well as water chemistry, instream habitat, river bed and bank status as a substrate for supporting ecosystem dynamics, riparian vegetation, morphological characteristics etc.

The measures of river health are compared against reference sites within ecologically homogeneous units, and the deviation from the reference site shows the impacts on the environment. Once the ecosystem is adjudged to be in a poor class, it is regarded as no longer sustainable. This class occurs where indigenous species

have become extinct, alien species have invaded the ecosystem, population dynamics have been destroyed (for example where biota can no longer breed) species present are diseased etc.

Clearly, as we report on the RHP findings, we are also reporting on our success in giving effect to Agenda 21 in terms of water resources utilisation and protection.

### **State of Rivers (SoR) reporting**

A key objective of the RHP is to “package” and disseminate information on river health in such a way as to (a) serve ecologically sound management of rivers in South Africa, and (b) inform and educate the people of South Africa regarding the health of our rivers.

During the past two years, and in collaboration with DEAT, WRC and the CSIR’s Environmentek, a new and sophisticated template has been developed for river health reporting. This template was designed to complement the protection measures under the National Water Act as well as the specifications for national state-of-the-environment reporting. Specific objectives of this reporting format are to:

- Provide information to Government and agencies for improved decision-making in river management;
- Compare environmental performances of different areas;
- Increase public awareness of environment and development issues;
- Empower people and organisations to improve their environment and quality of life for themselves and future generations.

The reporting template essentially makes use of a “Pressure-State-Response” framework. For each ecological region of the mentioned rivers, the pressures on the rivers, the present state and trends in river conditions, and the policies and management actions in place to manage the rivers, are described.

### **Context of SoRs reporting**

The Letaba & Luvuvhu River Systems SoR Report that we have before us today is based on the findings of river surveys that were conducted as part of the implementation of the RHP in the Northern Province. True to the style of most RHP activities, the compilation of this report was a collaborative effort with the main participants being the Department, Kruger National Park, DEAT, the Water Research Commission, CSIR Environmentek, Northern Province Environmental Affairs, University of the North and the University of Venda for Science and Technology.

We acknowledge that in our endeavour to ensure that the shared benefits from our rivers are equitable, efficient and sustainable, we will need to manage our rivers in a decentralised and cooperative manner and spirit. The River Health Programme has shown to be a leader in the formation of working partnerships, paving the way for cooperative stewardship and management of our rivers.

## **State-Of-Rivers Series**

The River Health Programme intends to initiate studies on key rivers in every Province – with a view to publishing a State-of-Rivers report for these rivers within the next few years. This will also build upon the good relations already established with all Provincial administrations, and create the opportunity for further capacity building at local level. Ideally, participation in the RHP will become increasingly taken up at Provincial level as it provides a valuable tool to guide management decisions in a practical and specific manner. It can also be used to demonstrate successes and challenges in optimal water resource utilisation.

It is foreseen that this work will continue and eventually cover all major river systems of South Africa.

I thank you for your attendance.