

A WATER PERSPECTIVE ON INVASIVE SPECIES

Ronnie Kasrils

Mr. Ronnie Kasrils is the South African Minister of Water Affairs and Forestry.

My fellow chairperson, Secretary Babbitt, dignitaries, Ladies and Gentlemen.

Tomorrow morning, the South African Minister of Finance, Mr Trevor Manuel, will present his budget to Parliament. It is expected that the 2000/1 allocation to the Working for Water programme will take the cumulative funding of this programme over the past five years to well over R1 billion. This, I am told, may make it the biggest conservation programme in Africa, and the biggest invasive species programme (relative to GDP) of any country in the world.

The focus of the Working for Water programme has been limited to terrestrial and (to a far lesser extent) to fresh-water invading alien plants. It is a multi-Departmental initiative that grew out of an ability to articulate the impact of these invading alien plants on six core areas:

- The ecological functioning of systems, including the conservation of biological diversity.
- The productive potential of land.
- The increase in the frequency of intense fires and floods.
- The scope a control programme offered for employment, training and empowerment.
- The impact on water security.

The success of the programme has been its ability to deliver on its promise. At its peak, Working for Water had over 42 000 workers in the field, drawn from the poorest-of-the-poor, primarily in rural areas. Fifty-four per cent of the beneficiaries have been women, 26% "youth" (16-25 years of age) and 1% people with disabilities. It pays particular attention to single-headed households. It has allocated 500 positions to integrating ex-offenders. It has endeavoured to provide child-care for the children of workers. It has committed programmes to deal with issues such as reproductive health and HIV/AIDS. These and other aspects make Working for Water special and particularly appropriate for our country. They will be dealt with in the course of this workshop.

This morning I shall briefly discuss the impact invading alien plants on South Africa's water resources, and the returns on investment that the Working for Water programme brings for water management in our dry, drought-prone country.

Our research has indicated that certain terrestrial invading alien plants use a far greater amount of water than does the indigenous vegetation that they replace. A primary reason for this is that our indigenous plants in certain systems - notably our Fynbos, grasslands and Karoo systems - have a far lower biomass than these invading alien plants. They have also evolved defence mechanisms against desiccation.

The worst alien offenders are pine trees from Europe and the USA, Prosopis from Central America, and a frightening proportion of Australia's mega-flora. As if it is not enough to have lost to the Australians in the semi-finals of the World Cup in both cricket and rugby, we have to contend with their biological pollution as well!! (For the benefit of our American colleagues, the cricket and rugby World Cup finals are similar to your World Series in baseball, except that other countries are invited to participate as well.)

[I wanted to get the subject of sport out of the way as early as possible in this workshop, so that the Australian delegates can focus on invasive species.]

Research funded by the Water Research Commission has provided us with a preliminary estimate. Invading alien plants are currently using an additional 3 300 million cubic meters of water, or 7% of South Africa's Mean annual runoff. These figures do not include the impacts on groundwater - a particularly precious commodity in the dry western parts of our country - and the impacts of fresh-water weeds such as water hyacinth.

Our water managers are most interested in the proportion of this wasted water that could be used to provide water for human needs and commercial application - the yield, as it's called. Our new National Water Act gives priority status to the water we need for the ecological functioning of aquatic and associated systems and for basic human needs. These add particular importance to the work of the Working for Water programme.

An aspect that is often overlooked is that invading alien plants actually do invade - they spread and grow, and the cost to clear them grows exponentially. For example, a lightly infested hectare of land might cost R100 to keep clear of invading alien plants. If it is allowed to become densely invaded (which can take as little as 15 years), it can cost forty times as much to clear.

Thus, my instruction to our water managers is that they must look to our future water yield - the sources that we may need to tap in future years - before dismissing the importance of keeping areas clear of water-consumptive invading alien plants.

I am interested in going further than this. We need better data on what invading alien plants are doing to groundwater reserves, and to water tables for the ecological functioning of systems, in keeping with our National Water Act.

We need to put a stronger emphasis on fresh-water weeds, where loss from clear-water evaporation can increase several-fold through the evapo-transpiration from such invasions. These fresh-water weeds also play havoc with water quality, and may also destroy water bodies as functioning ecosystems. They are high on my list of priorities for the New Year.

I want to know about other invasive species, and the secondary impacts that they might have on water yield and water quality. I do not think that we have given adequate thought to the impact that some crop-destroying invasive animal or disease might have on actual water yield and water quality. We have seen plantations of invasive species being abandoned after fire, and becoming an acute problem. I suspect that there are parallels with farmlands experiencing the problems of accelerated run-off, erosion, siltation and water quality.

Certainly we know that the chemical controls used to contend with invasive species can have significant cumulative impacts on water quality. One might also postulate that a greater deal of chemical (and other) control mechanisms have had dramatic impacts on the ability of natural systems to produce quality water through assimilation of pollutants and maximum retention and slow release of water.

We have faced an interesting debate here in Cape Town. We have challenged the local authorities to consider the following... If Table Mountain is allowed to become totally infested with invading alien plants, the water-tables in the suburbs adjacent to the mountain will become lower. People living in these suburbs are the biggest domestic water-users in Cape Town. Faced with this situation, these landowners will turn to using piped water from our storage dams in order to keep alive those plants that had been drawing from the previously higher groundwater table. To date, the scientists have not been able to come up with a solution.

The recent fires along the Table Mountain chain have brought this into sharp focus. Over 9 000 hectares burned as fire-fighters struggled to get it under control. And everywhere it burnt, invading alien plants were the catalysts for the destruction. Out of ashes of the fire we have now launched our most ambitious invasive species project yet: the Santam / Cape Argus Ukuvuka - Operation Firestop campaign. I shall talk about this campaign at the function tonight, but I do know that you have all received copies of the front page of the Cape Argus

after the launch of this campaign. I am extremely excited at the possibilities of this campaign, for I am sure that it will herald an important development in the efficacy of the work being done in clearing invasive species. Terrible and frightening though that fire was, it has shown us the way forward.

Through the Working for Water programme, we are looking for a comprehensive package to:

- prevent the introduction of new invasive species;
- control those invasive species that are here;
- educate our people (particularly land-owners, those who import or export, and children);
- formulate appropriate and practicable legislation to deal with invasive species.

I am confident that we can build on the solid foundation of the Working for Water programme, working towards a comprehensive set of partnerships to deal with invasive species. I must end by acknowledging that South Africa cannot do this on its own. Not only do we need the partnerships that we are building with the USA. Not only do we need to enhance our collaboration with leading countries in this field such as Australia and New Zealand. But we must develop a common vision and strategy with our fellow-African states. We are all in this together, for invasive species do not respect lines drawn on maps.

I therefore strongly welcome this workshop, and trust that your deliberations will help us to work together for political, economic and ecological stability. It's a tight schedule, and - given what we are up against - so it should be. I wish you every strength.