

KEY NOTE ADDRESS TO ON THE INAUGURATION OF THE 20TH WATERNET/WARFSA/GWP-SA SYMPOSIUM

BY DAVID MAHLOBO MP, DEPUTY MINISTER FOR WATER AND SANITATION

**INDABA HOTEL FOURWAYS, JOHANNESBURG
31 October 2019**

SADC Representatives;

WaterNet Board of Trustees Chair, Prof Hodson Makurira;

Water Research Commission CEO, Mr. Dhesigen Naidoo;

WaterNet Founding Members Present;

WaterNet Executive Manager, Prof Jean-Marie Kileshye Onema;

WaterNet Programmes Coordinator, DR. Krasposy Kujinga;

Global Water Partnership Executive Secretary, Mr. Alex Simalabwi;

IHE Rector, Prof Eddy Moor;

The Director of CapNet, Dr Themba Gumbo

The Executive Secretary of the Zambezi Watercourse Commission, Mr. Michael Mutale;

Stockholm Water Prize Laurette and Keynote Speaker Prof. Jacqueline King;

World Vision International, Vice President and Regional Leader Southern Africa, Mr. Mark Kelly;

AU/NEPAD African Networks of Water Centres of Excellence Programme Manager, Dr. Nico Elema;

The Director Ministry of Water Development Sanitation and Environmental Protection, Zambia, Mr. Tobias Musonda;

Country Director, World Wide Fund for Nature, Zambia, Ms. Nachilala Nkombo;

Government officials

Ladies and Gentlemen

INTRODUCTION

1. On behalf of HE President Ramaphosa and the Minister of Human Settlements, Water and Sanitation I would like to take this opportunity to convey our gratitude and thank the opportunity afforded to us as Government, representing the people our country to interact with you.
2. As we on the last day of the month of October, we pause and cherish the contribution by one of the finest leaders the African National Congress, South Africa and continent has ever produced, President Oliver Reginald Tambo affectionately known as O. R. would have turned 102 years old on the 27th October 2019.
3. As a true revolutionary President Oliver Tambo dedicated his entire life to working tireless and selfless in pursuit of our ideals as envisioned in the freedom charter in building a national democratic society.
4. His words correctly capture the essence of this society when he said "We seek to create a united Democratic and non-racial society. We have a vision of South Africa in which black and white shall live and work together as equals in conditions of peace and prosperity. Using the power you derive from the discovery of the truth about racism in South Africa, you will help us to remake our part of the world into a corner of the globe on which all -- of which all of humanity can be proud." - A quote from Oliver Tambo speaking at Georgetown University on January 27, 1987.
5. Over the last twenty five years we have made strides in building a truly united, nonracial, nonsexist, democratic and prosperous society but we are the first to admit that more still needs to be done.

Global Context of Integrated Water Resource Management

6. The global importance of water cannot be overstated; it is crucial for all life and important for human socio-economic wellbeing; hence its value is seen from the context as an environmental, social and economic good. The well-being of human society through the ages has been dependent on secure sources of water; conversely, its absence has seen the demise of often well-established societies.
7. Equally, where different societies depended on water from a common source, this would result in competition when water was limited or in times of scarcity, which could escalate into conflicts among the competing parties. However, there are also many recorded instances of cooperation between competing societies for common water resources with little evidence of armed conflict for water itself, including in our continent-Africa.
8. The World Economic Forum has tabled the global risk of water as a generally limiting resource in terms of its availability for social and economic well-being, a situation that continues to deteriorate because of the ever-increasing demands of modern society (population growth, urbanization and technology changes), further exacerbated by climate changes. The concomitant potential for conflict for water where its availability is limited therefore cannot be understated nor underestimated.
9. There are many challenges from the perspective of Water-Energy-Food-Ecosystem (WEFE) nexus that we need to confront head-on and find sustainable solutions as thought leaders and practitioners in the sector. Among others, these include: hydropower; reservoir multipurpose optimization and release management; rain-fed and irrigated agriculture development; the impact of land use and agricultural practices (including livestock and fisheries); the role of ecosystem services (natural parks, wetlands); pressures on resources due to population increase and rapid urbanization; and, climate variability/change and extreme events risks (drought and flooding).

10. This session should earnestly pull together and spare no effort to live up to these challenges of our times for the sake of more just and humane world. A significant challenge in how to address them individually and collectively at various scales within the watercourse. Left unattended, these issues would be a potential source of conflict. Conversely, well formulated and proactive interventions to address issues, in a manner which benefits affected parties, can also become a good basis for mutual cooperation among the various role-players.
11. In the current increasingly modern and globalized environment, with its attendant complexities and higher magnitude competing national and sectorial demands, local management approaches, while still relevant, have become inadequate for water resources management (WRM) at the larger, particularly national and basin-level geographic scales.
12. Cooperation and governance systems therefore become imperative and are critical success factors in addressing water resources and associated issues and challenges
13. The precursors of conflict may, in many cases, not be water itself and may relate to land rights, access to water for domestic or commercial purposes, interruptions to or shortages of supply among others.
14. There are political legacies that still remain, some more difficult than others but as you are aware, our respective governments are dealing with this as a matter of priority.
15. What you may not hear, but behind the scenes there is a lot of work being done to finalize our key issues relating to land, water and agricultural development and transformation.
16. While land, water and agricultural development issues are not unique to our country, our complication is our history. But our solutions to the challenge will be ours.

17. Economic growth leads to high water demand all sectors—agricultural, industrial, and domestic. The percentage share of use is different in different countries, depending on their economic development.
18. The lack of infrastructure, including poor management of the water supply system, leads to food shortages, and finally food instability due to insufficient water supply.
19. The way we operate our national water infrastructure already takes account of the big, year-to-year variabilities in climate and the slower process of climate change.
20. Every year, we look at how much water we have, how much is going to be used, and our hydrologists calculate whether we need to introduce restrictions or not.
21. We also try to help other water managers to do the same thing. Unfortunately, they don't always listen. Often small towns keep pumping water despite the fact that they are warned that, once dam levels fall to a particular point – and we tell them what it is – they will get into trouble. Then, when the dam is dry they run to us and say there is a crisis! It is a crisis that they made! Even Cape Town, before its big crisis, was warned that they needed new infrastructure. They said no, they were saving water, using it more efficiently. Then the drought came and they were in crisis.
22. So we must always plan for drought. If we do that properly, we are also planning for climate change. And this is one of the reasons why we cannot just give out water licenses for more water than we can be sure we can provide.
23. At the same time, the challenges posed by climate change, water, nutrients and energy are converging. About 12 million hectares of land becomes degraded each year. Droughts and floods are becoming more frequent and larger. For a host of reasons Africa is at the eye of this storm.

24. Some reasons include the fact that southern Africa has already lost 25% of its soil fertility. And some countries on the continent have some of the highest population growth rates globally.
25. All these issues must be tackled. And good water management is among the most crucial factors if Africa is to navigate an uncertain future. Water is essential for our prosperity. Every drop we once someone in the world is looking for it. African countries must, as a matter of urgency, develop coherent and strategic policies around water, land and agriculture.
26. South Africa is facing a water crisis caused by insufficient water infrastructure maintenance and investment, recurrent droughts driven by climatic variation, inequities in access to water and sanitation, deteriorating water quality, and a lack of skilled water engineers. This crisis is already having significant impacts on economic growth and on the well-being of everyone in South
27. Water is a fundamental enabler in growing the South African economy whereby, 75% of GDP contributions are dependent on the national ability to manage our water resources and water services (water supply and sanitation) infrastructure.

4th Industrial Revolution and IWRM

28. Climate change and water scarcity due to drought, declining rainfall and/or an over demand for water, is the key driver for the uptake of technology.
29. For South Africans to take full advantage of the fourth industrial revolution, focus will be on skilling and reskilling, especially with regard to ICT.
30. Related to this is the process of reducing the cost of data, which was viewed as urgent and critical.

31. There are emerging investment opportunities in: remote sensing technologies for precision agriculture applications (driven specifically to improve water efficiency and climate adaption); undercover farming (UF), which includes low-tech infrastructure such as shade netting and higher-tech controlled environment agriculture systems; and well-established investment opportunities in renewable energy (RE) and conservation agriculture. I put the challenge to you as to how you can also embrace these opportunities as part of integrated water resource management and explore sanitation technologies. We can be up there among the best in the world with our African technologies for our own problems.
32. Technology is also playing an increasingly important role in water management. Modeling tools such as hydrological and water management models have emerged as an essential component of water management
33. Other technological improvements include the development of smart plants that are more drought tolerant thanks to genetic modification and genome editing. Some plants can also be engineered to use more efficient photosynthetic pathways that fully use the sun's available energy. This development holds promise for the hot climates of Africa.
34. Irrigation management is now using remote sensing data. Much of these data is freely available and covers the entire planet. For instance, remote sensing is used to pinpoint areas of wet and dry zones in cultivated fields. This allows for variable irrigation management and remote sensing estimates of crop water requirements. A South African technology is using remote sensing to help farmers in the Western Cape save water
35. Mobile apps are currently being piloted in Rwanda to help farmers. These will provide information on weather, rainfall and soil humidity to allow better farm management and productivity, as well as information on markets.
36. These are positive, but small, steps. It's clear that the African continent has a lot of catching up to do if it's to tackle its water management issues.

CLIMATE CHANGE AND SECURITY

37. Climate change has serious implications for international security. By redrawing the maps of water availability, food security, disease prevalence and coastal boundaries could lead to increase forced migration, raise tensions and trigger new conflicts. The security threat posed by climate change has caught the world's political imagination and in the last UNGA driven by children who are calling us into action, this has shifted our conversations in a profound ways

38. Its impact can be magnified or moderated by underlying conditions of governance, poverty and resource management as well as the nature of climate impacts at local levels. Adaptation policies and measures are required to avert the crisis.

Water Quality and Pollution

39. According to the World Economic Forum's Global Risk Report water has been ranked as one of the top global risks for the past 10 years. Two thirds of the world's population already lives in areas that experience water scarcity for at least one month a year. If no changes are made in how water is managed, global water demand is forecasted to outpace the water availability in 2030 by 40%. This assessment mirrors our concern in South Africa.

40. According to the United Nations World Water Development Report (2017), the availability of water resources is intrinsically linked to water quality, as the pollution of water sources makes it unsuitable for use and damages ecosystems. Discharges of untreated sewage combined with polluted agricultural runoff, inadequately treated domestic, industrial and mining wastewater around the world are increasing.

41. Here in South Africa we face similar challenges, the latest and most significant is the discharge of untreated effluent into the Vaal River. Communities are calling for government to enforce measures to ensure accountability of polluters and corporate governance is calling for environmental reporting and ethical practices.
42. While we need efficient and resilient water and sanitation infrastructure, there is pressure from the fiscus that we obtain value for money in all investments while avoiding pollution and providing for the needs of the environment. Scientific investigations, rigorous debates are required to produce policies that are informed by evidence. Policies help us to decide our resource allocation priorities and guide our implementation

Conclusion

43. I hope that deliberations at this symposium will improve understanding of current and future challenges and also add to the body of possible solutions.
44. We need to develop governance tools to transform the water and sanitation economy to achieve equal access to resources and quality of services. This means we need to improve our understanding of the water value chain and address the following issues:
- pace of and quality implementation
 - stakeholder involvement, build trust and reduce cost of services
 - new approaches to project delivery, operation and maintenance
 - smart water management and the 4IR
 - new institutional frameworks and partnership models
45. Addressing these complexities requires collaboration on human capacity development. We need to continuously obtain new knowledge, develop new skills and tools for the changing conditions. We need to investigate opportunities to leapfrog to alternative pathways for delivering and managing water and sanitation services recognizing that the need to direct our limited resources to methods or approaches that enable us to generate economic benefits over and over again: nothing should be wasted.

46. Lastly, we need to create many new business opportunities and jobs throughout the water and sanitation value chains.

47. We can and must build on these small developments. The path is clear. But we all need to work together and walk together to get to the destination we seek.

48. Our hopes, dreams and aspirations lie in your hands. You are unsung heroes and heroines who keep the light in our mother continent who keep the light in our mother continent.

49. God Bless Africa her sons and daughters

50. I thank you