

SYNTHESIS REPORT



2015 NATIONAL SANITATION INDABA

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water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA





2015 NATIONAL SANITATION INDABA

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EXECUTIVE SUMMARY

The provision of sanitation is a key development intervention – without it, ill-health dominates a life without dignity. Despite its importance, achieving real gains in sanitation coverage has been slow. Many South African households are still at risk of service failure and/or are experiencing service delivery breakdowns. Add to this the far-too-large percentage of informal settlements that have no services at all, or the majority of households in informal settlements making use of interim services, and we have a serious sanitation provision challenge.

The full range of technical options for providing adequate basic sanitation is still not widely known nor are the characteristics of the different options well understood. In particular, there is little appreciation of the long-term financial, environmental and institutional implications of operating and maintaining the various sanitation systems. As a result, in many cases communities and local governments are choosing technical options that, in the long term, are unaffordable and/or unsustainable.

The responsibility now rests on the water and sanitation sector to provide demonstrated innovations and sanitation technologies that can have real impact on the ground. For this to be achieved, a dialogue between communities, technology developers, and decision-makers is needed, not only to assess the sanitation challenge in South Africa, but also to critically interrogate existing technologies for what they contribute to implementable solutions.

In this regard, the Honourable Nomvula Mokonyane, Minister of Water and Sanitation, convened a National Sanitation Indaba on 15 May 2015 at the Durban International Convention Centre.

The purpose of the Indaba was to:

- Showcase the practical demonstration of cutting-edge appropriate sanitation technologies that can be implemented in South Africa and Africa
- Provide an engagement space for communities on the feasibility of technology implementation as it pertains to their contexts
- Pool ideas and experiences to accelerate the adoption of world-class advanced technologies by both municipal and industrial water users
- Develop a roadmap for scaling up of technologies and solutions

The Indaba outlined key questions and issues in plenary and also comprised of parallel sessions which followed a working commission format. The interactive exhibition showcased several demonstrations that included: (a) proven technologies that work and can be immediately installed, (b) promising concepts that could work if further work is done, and (c) highly innovative



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'futuristic' projects that may not be implementable in the short-term but bring with them a change of thinking needed in the technology development space.

Priority issues discussed during the day's proceedings included:

1. Sanitation technology assessment & evaluation
2. Health, hygiene & education
3. Cooperative governance & regulatory frameworks

In addition to the Sanitation Indaba on 15 May, a sanitation-technologies site visit was also conducted on 14 May. A select few Sanitation Indaba delegates were invited to accompany Ms Nomvula Mokonyane, Minister of Water and Sanitation, and Ms Pamela Tshwete, Deputy Minister of Water and Sanitation, as well as other dignitaries, on a visit to several sanitation-technology demonstration sites in and around eThekweni Municipality. Co-hosted by eThekweni Municipality, this took delegates to three different sites: Besters Pit Emptying Project; Inanda Community Blocks; and Newlands/Mashu VUNA – Dewats & Agriculture Project. Invited guests were encouraged to participate in a dialogue with community representatives on the feasibility of the technologies demonstrated and their scaling-up potential.



Sanitation Indaba registration took place at the Durban ICC on 15th May 2015



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The following report provides an overview of the core components of the Sanitation Indaba and summarises its proceedings. It captures the highlights and key messages – most notably, the need for a sanitation revolution.



Sanitation Indaba registration



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BACKGROUND

Over the past few years a number of studies have been undertaken and reports produced indicating that access to dignified and appropriate sanitation services is a human rights challenge that the government continues to overcome. Sanitation service delivery is a responsibility shared amongst the three spheres of government, wherein national government is responsible for drafting policy, high-level planning, administration of the Bulk Infrastructure Grant and administering the National Sanitation Programme. Provincial government undertakes provincial-level planning and ensures the achievement of targets set for sanitation service delivery. Authorised district and local government institutions are responsible for providing the actual sanitation service. According to the 2012 report on the Status of Sanitation Services in South Africa, the sanitation service delivery challenge are a combination of the following:

- Service delivery backlogs (people who have never been served)
- Refurbishment backlogs (sanitation infrastructure that has deteriorated beyond regular maintenance requirements)
- Extension backlogs (existing infrastructure that needs to be extended to provide the service to new households in the communities)
- Upgrade needs (infrastructure that does not meet the minimum standards)
- Operation and maintenance (O&M) backlogs (infrastructure that has not been properly operated and maintained, but can be adequate if funds are allocated to ensure proper operation and maintenance)

The provision of new services required for 1.4 million households in formal settlements and approximately 585 000 households in informal settlements requires that appropriate innovative solutions be provided taking into consideration climate change, current and future water demand and availability, etc. In recent years there has been a flurry of new and innovative sanitation solutions entering the market. The technologies, mostly offering off-the-grid solutions, use a variety of new processes, such as drying, dessication, dehydrating, composting, digestion, etc. In addition, a number of new cutting-edge processes are also entering the market in the form of pyrolysis, carbonization, bulking, pressurizing, etc.

On a daily basis, public officials are challenged in assessing the functionality of these technologies. Crude marketing information and positions dominate against the lack of scientific data and information. The absence of a functionality assessment framework/tool is a glaring exclusion. The result is that decisions are made under severe pressure without understanding the consequences or outcomes. There exist nationally and internationally many sanitation decision support (DSS) tools which support the selection of sanitation technology type (dry, wet, onsite, offsite, etc). However, the gap remains since there is no formal testing protocol or evaluation of these



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technologies for their technical functioning and effectiveness. This has been identified as a key management decision support requirement to contribute to improve delivery of sanitation services.

A recent initiative, supported by the DWS undertook a desktop review/assessment by international sanitation experts of nearly 40 technologies, as part of the SANIC (Sanitation Innovation Challenge). A key finding and outcome from this exercise indicated the lack of a functionality assessment framework. Most of the experts are more knowledgeable as to the operational aspects of the technology. Based on the urgency and need for dignified sanitation services, it is therefore imperative to urgently develop a sanitation technology assessment and evaluation tool, to support both district and local municipality officials in selecting and deploying appropriate sanitation technologies, as well as on-situ evaluation of the technical functioning of existing systems. It will also assist innovators in understanding and developing their products to be more effective.

The responsibility now rests on the water and sanitation sector to provide demonstrated innovations that can have real impact on the ground. For this to be achieved, a dialogue between communities, technology developers, and decision-makers is needed, not only to assess the sanitation challenge in South Africa, but also to critically interrogate existing technologies for what they contribute to implementable solutions – hence the need for a Sanitation Indaba.



Excited delegates eager to participate



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SANITATION INDABA OBJECTIVES

The aim of the Summit was to engage with key stakeholders on the primary challenges facing sanitation in South Africa, and to interrogate innovative solutions for their appropriateness and feasibility in different contexts.

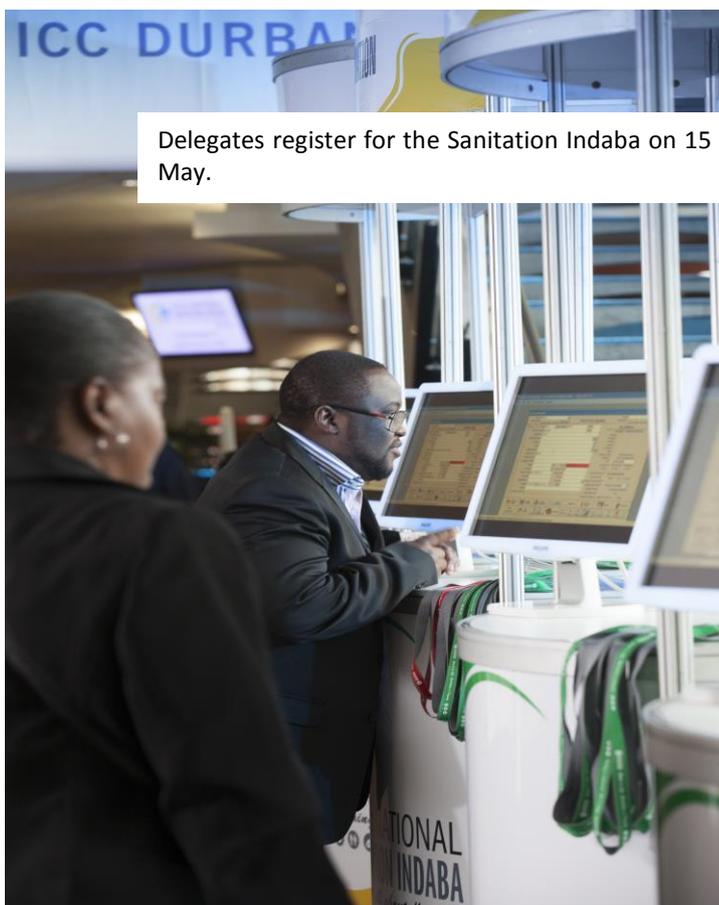
The purpose of the Indaba was to:

- Showcase the practical demonstration of cutting-edge appropriate sanitation technologies that can be implemented in South Africa and Africa
- Provide an engagement space for communities on the feasibility of technology implementation as it pertains to their contexts
- Pool ideas and experiences to accelerate the adoption of world-class advanced technologies by both municipal and industrial water users
- Develop a roadmap for scaling-up of technologies and solutions

ATTENDANCE

A total of 295 delegates registered to attend the Sanitation Indaba and 480 participants were in attendance on the day. A total of 250 delegates were expected and budgeted for. These included delegates from the following backgrounds:

- All three spheres of government
- Public entities and state-owned enterprises
- Civil society
- Private sector
- Strategic water users
- Representatives from research and academia
- Specialists and experts
- Representatives from labour
- Representatives from vulnerable groups, including women, youth and people with disabilities
- Professional associations in the water sector
- Business associations



Delegates register for the Sanitation Indaba on 15 May.



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- Donor and development organisations

Additionally, delegates were honoured by the attendance of Deputy President, Mr Cyril Ramaphosa, hosts, the Honourable Ms Nomvula Mokonyane, Minister of Water and Sanitation, and the Honourable Ms Pamela Tshwete, Deputy Minister of Water and Sanitation, the Premier of KwaZulu-Natal, several MECs, and the Executive Mayor of eThekweni.

The Sanitation Indaba was also attended by members of the Parliamentary Portfolio Committee on Water and Sanitation, members of the Portfolio Committee on Human Settlements, as well as members from the Select Committee on Social Services.

Further statistics on participants are provided below:

Total number of people registered to attend the Summit (See ANNEXURE 1: REGISTERED PARTICIPANTS)	295
Delegates who arrived on site	480
Number of institutions represented (See ANNEXURE 1: REGISTERED PARTICIPANTS)	176
Number of delegates from media (See ANNEXURE 1: REGISTERED PARTICIPANTS)	45
Number of technology demonstrators	58
Number of speakers (See ANNEXURE 1: REGISTERED PARTICIPANTS)	19





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STRUCTURE

The Sanitation Indaba was structured as follows:



Figure 1. Conceptual Framework

The Indaba outlined key questions and issues in plenary and also comprised of parallel sessions which followed a working commission format. The exhibition and 'technology market place' showcased several demonstrations that included: (a) proven technologies that work and can be immediately installed, (b) promising concepts that could work if further work is done and c). highly innovative 'futuristic' projects that may not be implementable in the short-term but bring with them a change of thinking needed in the technology development space.

Priority issues discussed during the commissions included:

1. Sanitation technology assessment & evaluation
2. Health, hygiene & education
3. Cooperative governance & regulatory frameworks

SANITATION TECHNOLOGIES SITE VISIT, 14 MAY

A sanitation-technologies site visit was also conducted on 14 May. A select few Sanitation Indaba delegates were invited to accompany Ms Nomvula Mokonyane, Minister of Water and Sanitation, and Ms Pamela Tshwete, Deputy Minister of Water and Sanitation, as well other dignitaries, on a visit to several sanitation technology demonstration sites in and around eThekweni Municipality. Co-hosted by eThekweni Municipality, this took delegates to three different sites: Besters Pit



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Emptying Project; Inanda Community Blocks; and Newlands/Mashu VUNA – Dewats & Agriculture Project. Invited guests were encouraged to participate in a dialogue with community representatives on the feasibility of the technologies demonstrated and their scaling-up potential.

For the programme see

VIP emptying specifications:

A six-person pit-emptying team empties two pits per day. Workers undergo stringent pre- and post-employment medical examinations. Strict health and safety protocols are enforced by an external auditor. The householder signs off for each emptying service. The location of all VIPs is registered on the municipal GIS system.



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ANNEXURE 2a: SANITATION TECHNOLOGIES PROGRAMME, 14 MAY.

Site 1: Ventilated Improved Pit Latrine Emptying: Besters Pit Emptying Project

DESCRIPTION: Ventilated improved pit latrines (VIPs) were provided in housing developments which were not served by a sewer. VIPs are considered as a basic sanitation system which is defined as infrastructure necessary to provide a sanitation service which is safe, reliable, private, protected from the weather, ventilated, keeps smells to the minimum, is easy to keep clean, minimises the risk of the spread of sanitation-related diseases by facilitating the appropriate control of disease-carrying flies and pests, and enables safe and appropriate treatment and/or removal of human waste and wastewater in an environmentally sound manner. VIPs have a solid top structure above a reinforced pit. In time (approximately 10 years) the pit fills and the contents need to be removed. After a number of pilot projects, the eThekweni Municipality emptied all 34 000 VIP pits over a three-year period. A range of suitable tools were developed. The preferences for disposing of the contents are (i) on-site disposal in a hole nearby the existing VIP if there is sufficient suitable ground adjacent to the pit; and (ii) transport to a specially developed process for the dehydration and pasteurisation of the pit contents (LaDePa – Latrine Dehydration and Pasteurisation).

Teams of entrepreneurs were established to undertake the emptying service. Local people were employed within each area being served.

LaDePa (Latrine Dehydration and Pasteurisation) is a machine that provides a containerised system for producing a nutrient-rich soil conditioner that is workable and improves sustainability on a number of fronts, by removing the detritus, and pasteurising and drying the sludge to beyond the sticky phase. Due to its use of low-input technology, LaDePa relates well to the social environment where pit latrines are usually encountered in developing world urban areas, as it provides both business and work opportunities for the poorly skilled.

LaDePa specifications:

- Capacity 2 500 kg/day at 70% solids (8 h/d)
- Services population of 62 000 (8 h/d, 365 d/yr)
- Diesel consumption 100 L/d
- i.e. 1 L diesel /25 kg dried sludge (70% solids)
- 0,6 L diesel/person/yr

The operation of the pilot LaDePa in Durban, and the eThekweni Municipality's pit-emptying project, together with tests done on the product from the machine, indicate that LaDePa should significantly shift the pit latrine sludge management paradigm towards sustainability.



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Closed VIP slab



Emptying contents



LaDePa machine



End product from
LaDePa

FURTHER INFORMATION:

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Site 2: Inanda Community Ablution Blocks

Background: Roughly 1 million people in eThekweni live in informal settlements. In spite of programmes to house people in formal houses the backlog is maintained due to inward migration. Community ablution blocks are provided in such areas and provide a shared facility for ablution, showering and laundry facilities. Waterborne sanitation is provided within the sewered area of the city. Further out, the facilities rely on dry on-site sanitation (VIP toilets). Pilot schemes are investigating associated child-care facilities, kiosks, different construction techniques, the installation of anaerobic baffled reactors and adjacent food gardens.

The interim services policy involves the rehousing of people from previous informal areas to formal housing. During the period between demolishing informal dwellings and the construction and hand-over of new houses, the householders are housed in transit camps which are also served with communal ablution blocks.

This model is currently being applied in other municipalities, but it requires good management and monitoring. The use of caretakers and the supply of consumables have resulted in a reduction in vandalism. It provides a safe sanitation solution as an interim service and reduces open defecation.



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Community ablution block specifications:

- A community ablution block consists of two modified converted shipping containers (one for males and one for females) each consisting of two showers, three toilet cubicles (males two + two urinals), two handwash basins and two external laundry troughs
- One facility serves 50 dwellings (average occupancy is 4 to 5 people per dwelling), or a radius of 200 m
- Free access / light mast
- Caretaker in attendance for 4 hours per day (paid by municipality)
- Toilet paper, facility cleaning materials and maintenance provided by the municipality



Refurbished shipping containers



Entrepreneurial activities



Laundry troughs



A community facility at a CAB

FURTHER INFORMATION:

Teddy Gounden (Teddy.gounden@durban.gov.za) and Chris Buckley (Buckley@ukzn.ac.za)



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Site 3: Newlands Mashu Research Facility

Description: The Newlands Mashu Research Facility was originally established by the NGO Newlands-Mashu Permaculture as an agri-hub and now continues as a site of permaculture demonstration and learning. Many volunteers work in the gardens to take produce home as well as distributing to social facilities in the area. It was viewed as an ideal site at which to establish a technical evaluation decentralised wastewater treatment system (DEWATS). Construction of the DEWATS plant was completed in 2010 and is a joint collaboration between BORDA (Bremen Overseas Research Development Agency), eThekweni Water and Sanitation (EWS) and the Pollution Research Group (PRG) at the University of KwaZulu-Natal. BORDA provided the technical design, EWS the land and PRG the

scientific support to monitor and evaluate the system. The DEWATS plant processes sewage from 84 adjacent homes by means of an anaerobic baffled reactor, anaerobic filters, a horizontal constructed wetland, a vertical-flow constructed wetland and a secure adjacent agricultural area where the treated wastewater is being evaluated for its safety and efficacy in fertilising crops. Field trials and growing tunnel trials are being undertaken. A fully equipped laboratory is also available on-site.

Specifications:

- BORDA DEWATS plant to process sewage from 84 households
- Agricultural tunnel and field trials
- UDT prototypes: processing of urine into fertiliser
- Laboratory facilities
- Weather station



The Research Facility is also home to the Eawag VUNA (nutrients from urine) project (funded by the Bill & Melinda Gates Foundation) which processes urine on site by one of two means: (i) struvite manufacture, and (ii) nitrification. These reactors are housed in the laboratory.

Various designs of urine-diversion toilets (UDTs) are being trialled at the Facility in order to assist in the optimisation of the toilets for application in the field.



From left: Prof Chris Buckley explains vertical-planted gravel filter to delegates



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DEWATS plant and growing tunnel



Agricultural field trials



Laboratory



Urine processing reactors

FURTHER INFORMATION:

Bjorn Pietruschka (Pietruschka@borda.de) and Lungi Zuma (Lungi.Zuma@durban.gov.za)

SANITATION TECHNOLOGIES SITE VISIT HIGHLIGHTS

The site visit highlighted the need to move to waterless sanitation technology options given the scarcity of water in many parts of South Africa. Additionally, it was evident that science is advancing technologies that are now available to be implemented. There is a need now to interrogate and strengthen the supporting frameworks needed, i.e., the kinds of fiscal instruments needed, to promote science. The site visit also illuminated the drive and passion of local government to support and care for its people. In these instances, ward councillors were praised



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for the work they are doing in sanitation provision. Finally, delegates also noted the evolution of solutions and therefore the evolution of science and technology – as science develops, so do our solutions. Delegates were reminded to always put people at the centre of our solutions.

PROGRAMME: 15 MAY

The programme on 15 May was divided into an opening plenary, a scene-setting plenary, three commission sessions, a technology market place, and a closing plenary. For the programme see ANNEXURE 2b: SANITATION INDABA PROGRAMME, 15 MAY.

Opening Plenary

The Opening Plenary was chaired by Deputy Minister, Ms Pamela Tshwete, and comprised of a welcome address by Cllr James Nxumalo, Executive Mayor of eThekweni Municipality, and provincial remarks by Mr Edward Senzo Mchunu, Premier of KwaZulu-Natal. Ms Nomvula Mokonyane, Minister of Water and Sanitation, introduced the guest speaker, Mr Cyril Ramaphosa, Deputy President of the Republic of South Africa, who then delivered the Presidential address.



Deputy Minister of Water and Sanitation, Ms Pamela Tshwete chairs the opening plenary

Delegates also viewed a video of an impactful community voice, Ms Pamella Tiso, caretaker of the Duncan Village facility. Pamella Tiso and Zolile Ngcawe started taking care of the sanitation ablution facilities in Duncan Village, Buffalo City, on 5 September 2012. They became involved in



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the facility through a community initiative to have sanitation facilities in their area. They were part of the delegation that was elected by the community to speak to their Councillor to arrange for the building of toilets in their area. Once the toilet/ablution facility was in place, the community gathered together to nominate people to take care of it, and Tiso and Ngcawe were chosen. According to them, more than a thousand people use their ablution facilities because they serve as public toilets. Even passers-by can relieve themselves. In addition, because the ablution facility that they are taking care of is the cleanest one, residents from other areas prefer to go there to relieve themselves, even though there are ablution facilities in their own areas. In summer they open the toilets at 05h00 to start cleaning and close at 21h00. In winter they open at 06h00 and close at 20h00. Delegates gave Ms Tiso a standing ovation for her tremendous efforts to serve her community.

Ms Pamela Tiso tells her story as Duncan Village Caretaker.



Welcome Address by Cllr James Nxumalo, Executive Mayor of eThekweni Municipality

Cllr James Nxumalo welcomed delegates to the City of eThekweni, an urban expanse in which 3.5 million people live, including those who live in poor, un-serviced areas without water and sanitation. Despite these challenges, eThekweni has made tremendous progress and was awarded the 2014 Stockholm Water Prize, for water and sanitation provision to 1.3 million people in eThekweni within a short space of time.



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He emphasised the fact that sanitation is critical for protecting water resources and also is an investment in people's lives.

Remarks by Mr Edward Senzo Mchunu, Premier of KwaZulu-Natal

Premier Mchunu commended the City of eThekweni for their world-renowned work in sanitation service delivery.

He also emphasised that many sanitation challenges are due to urban migration and a rapidly growing population. Sanitation technology development therefore needs to happen within a framework of strong adherence to health and safety standards.



Premier Senzo Mchunu shares his provincial remarks on water and sanitation

Premier Mchunu also emphasised the need for more innovation in waterless sanitation technologies and the eradication of the bucket system.

President Address by Mr Cyril Ramaphosa, Deputy President of the Republic of South Africa

The Deputy President commenced his address by reminding delegates of the National Development Plan's Vision 2030 and the elements constituting a decent and prosperous life: education, housing, health, employment, transport, safety, recreation, nutrition, sanitation, electricity and water.



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He also mentioned that South Africa has done well to achieve the Millennium Development Goal of halving the proportion of the population without basic sanitation well before the target of 2015. However, we still have a lot of work to do. The statistics show that our country has been increasing access to sanitation. But the pace of delivery remains a concern. According to the 2012 Report on the Status of Sanitation Services in South Africa, approximately 11% of South African households do not have adequate sanitation services. At least a quarter of households in formal areas have sanitation services that do not meet required standards. Some of the challenges in sanitation can be traced to urban migration and the proliferation of unplanned informal settlements.

Inadequate sanitation reflects the extent to which apartheid spatial geography, underdevelopment, poverty and inequality continue to affect the day-to-day lives of ordinary South Africans. The lack of sanitation obstructs the right to life and health as well as education.

In addition, the Deputy President also emphasised the following key sanitation issues:

- Schooling days are lost due to lack of sanitation, with schooling for girls becoming a particular challenge.
- Lack of sanitation hurts and kills.
- Sanitation cannot be achieved just through budget provisions, with passive recipients; it requires a deep sense of solidarity and partnerships.
- Sanitation solutions need to take into account local dynamics, as in the Duncan Village example that explored new sanitation delivery models in consultation with communities.
- The lack of adequate sanitation also encourages the transmission of many infectious diseases including cholera, typhoid, hepatitis, polio, cryptosporidiosis, and ascariasis. Diarrhoea – a disease directly related to poor sanitation – is said to kill one child every 20

Deputy President Cyril Ramaphosa delivers the presidential address





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seconds. This is more than 4 000 children everyday worldwide. This amounts to more deaths than AIDS, malaria and measles combined.



Deputy President Ramaphosa highlighted the national Sanitation Week slogan, “It is not all about flushing” and that if we continue to use the old flushing methods we are placing huge pressure on our scarce water resources and the environment into which we flush our waste. We need to generate new sanitation solutions that are sustainable and will meet our current and future needs.

He also pointed out that sanitation is not merely about engineering. It is also about psychology, culture and social expectations. Unless we address the human side of sanitation provision, we will struggle to implement even the most innovative of solutions.

He implored those attending to join hands and start a sanitation revolution by developing stronger partnerships to produce innovations that can have real impact on the ground. This partnership between communities, technology developers and decision-makers is necessary if we are to achieve a sanitation revolution. He referred to delegates as the country’s

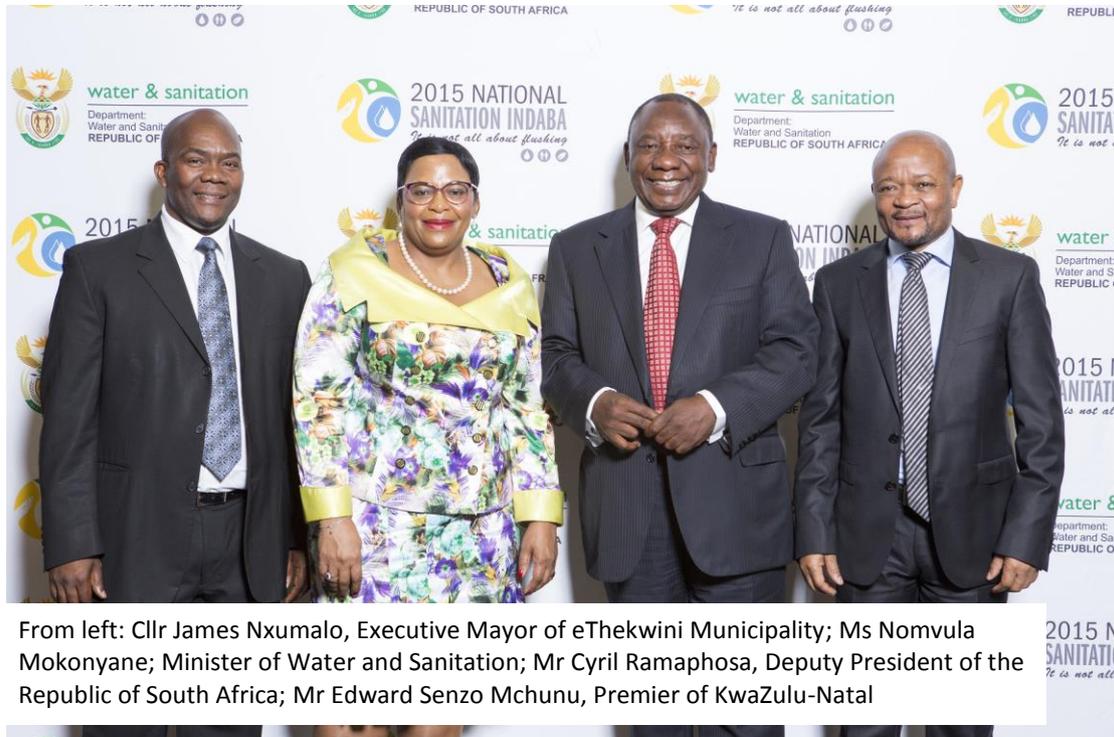
‘brain trust’ on whose shoulders the lives of South Africans rest.

The Deputy President’s full speech can be found at the following website:
<http://www.thepresidency.gov.za/pebble.asp?reliid=19717>



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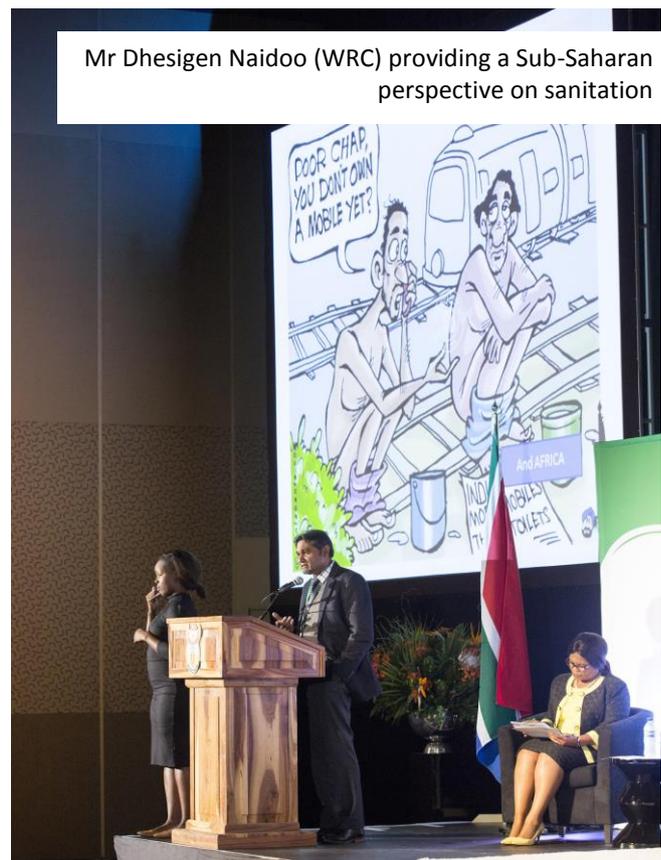


From left: Cllr James Nxumalo, Executive Mayor of eThekweni Municipality; Ms Nomvula Mokonyane; Minister of Water and Sanitation; Mr Cyril Ramaphosa, Deputy President of the Republic of South Africa; Mr Edward Senzo Mchunu, Premier of KwaZulu-Natal

Scene-setting Plenary

Sub-Saharan African perspective: Mr Dhesigen Naidoo, CEO Water Research Commission

Mr Dhesigen Naidoo provided a global and regional perspective on sanitation emphasising the need for a sanitation revolution and what that would entail. He also indicated that science has come up with many ways to address sanitation challenges, including waterless options. He also emphasised that technology should be a key driver for this change but that it has to be people-centred. This means that people should be presented with technology that offers convenience; people should be involved in the selection of technology; and technology should be sustainable, affordable and safe. Naidoo also indicated that there are a plethora of technologies becoming available, ranging from



Mr Dhesigen Naidoo (WRC) providing a Sub-Saharan perspective on sanitation



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“off-grid” solutions to water-saving technologies with the same convenience as full-flush toilets; and from technologies that treat waste at the source to low-sludge/no-sludge production. He also emphasised the need for beneficiation of waste streams that encourages local entrepreneurship.

New technology enables a pro-business approach that links entrepreneurs, households and new products and services. There is therefore a need to incorporate social enterprise with sanitation provision. New technology can add valuable products to the sanitation supply chain – and can be linked to O&M of toilets. There is also tremendous job creation and enterprise development across Africa in this domain, with possible income-generating activities through the sale of new technology by-products, for example, the WRC-funded social franchising project (For more information on this project, click on hyperlink: [Social franchising partnerships for operation and maintenance of water services: lessons and experiences from an Eastern Cape pilot.](#))

National perspective: Ms Margaret-Ann Diedricks, Director-General, Department of Water and Sanitation

Director-General of the Department of Water and Sanitation, Ms Margaret-Ann Diedricks, provided a national perspective of sanitation. She proudly acknowledged that South Africa met its Millennium Development Goal (MDG) on Sanitation in 2010, with 74% of the population having access to sanitation; however, she also pointed out that an estimated 2.2 million households are still using sanitation facilities below basic level. Notwithstanding the above, DG Diedricks emphasised that some 300 000 households are being served with sanitation annually by various spheres of government and funding streams, e.g. Urban Settlement Development Grant (USDG from Human Settlements) and two sanitation grants from DWS complementing sanitation provision; 72% of the MIG funding is allocated towards Water and Sanitation provision (R7.2 bn), of which R3 bn is for the provision of sanitation infrastructure (sanitation and related bulk infrastructure).

DG Diedricks also pointed out the lack of credible sanitation backlog statistics to identify hotspots or backlogs. However, it is safe to say, using the Census 2011 data, that there are significant sanitation backlogs in the Northern Cape, Free State, Eastern Cape, Limpopo and KwaZulu-Natal provinces, mostly in rural areas and old townships in urban/peri-urban areas. The Department of Water and Sanitation is now looking to develop appropriate legislative tools to address this challenge, including a review of sanitation policy, the development of water and sanitation regulations, and the revision of sanitation norms and standards.



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Ms Diedricks explained that critical success factors included the need to manage community aspirations while simultaneously delivering community-centred sanitation services, job creation and ensuring skills transfer. There is a critical need to build a culture of community ownership of



DG Margaret-Ann Diedricks (DWS) providing a national perspective on sanitation

implemented technologies, as was the case in Duncan Village and in Inanda Community. She also highlighted other factors that remain a challenge to effective sanitation provision – such as aging and deteriorating infrastructure; inadequate bulk infrastructure provision and supply, especially for wastewater treatment works; households without access to basic sanitation and incidences of open defecation (unserved communities); and vulnerable groups such as farm workers and communities living in informal settlements without sanitation services.

DG Diedricks also highlighted two sanitation grants:

1. Bucket Eradication Programme

- This programme set a target of eradicating 88 127 buckets in formal areas by December 2015.
- It also sought to find suitable solutions to approximately 140 000 households within the informal areas using the bucket toilets as a form of sanitation.
- She called out to delegates of the Sanitation Indaba to assist in the identification of suitable technologies to be piloted and rolled out in informal settlements.
- Bucket Eradication Programme progress is as follows – Free State (4056), Eastern Cape (2672); Northern Cape (2421); North West (398).

2. Rural Household Infrastructure Grant – 2014/15

- In the 27 priority district municipalities, the Department delivered 20 437 dry on-site sanitation solutions to rural communities in the following provinces –



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Free State (392); Eastern Cape (2334), North West (425), KwaZulu-Natal (3903), Limpopo (12933); Mpumalanga (450).

Through the launch of the Sanitation Innovation Challenge and the Sanitation Indaba the Department will explore and identify sustainable and appropriate technologies to respond to sanitation challenges. DG Diedricks concluded that technologies should:

- Be “green” inspired and sustainable to also look at issues of re-use of waste for fertilisers and the recycling of grey-water
- Be water-saving solutions
- Promote minimal operation and maintenance
- Promote water quality that meets minimum effluent standards
- Be cost-effective to government and the end user or household

There is therefore a need for continuous innovation in the provision of sanitation and not a “single solution being the only solution”. The standardisation of sanitation cost, with affordability being paramount, was also emphasised, as was the need to align and co-ordinate all Sanitation Infrastructure Projects (together with the Departments of Human Settlements; Water and Sanitation; Cooperative Governance and Traditional Affairs; Environment; and Health). Lastly, and more importantly, there is a need to ensure budgeting and capacity to attend to issues of operation and maintenance (O&M), as a lack thereof will compound sanitation backlogs.

Parallel Commissions

Following the plenary sessions, Sanitation Indaba participants were invited to move into three breakaway sessions, each of which comprised of a framing presentation, responses by panellists and open discussions. Each breakaway session had an invited chairperson who was responsible for guiding the discussions throughout the session.

The main findings of each session are summarised below.

Commission 1: Sanitation technology assessment and evaluation (See ANNEXURE 5a: COMMISSION 1: SANITATION TECHNOLOGY ASSESSMENT & EVALUATION)

Chaired by Ms Nonhlanhla Mkhize (DST), this session focused on the sanitation technology landscape in South Africa and the need for the development of a national sanitation technology assessment and evaluation tool. Mr Jay Bhagwan (WRC) provided the framing presentation and the respondents included Mr Neil Macleod (consultant and former head of eThekweni Water and Sanitation) and Ms Lindy Morrison (Mvula Trust). Mr Bhagwan highlighted that in recent years there has been a wide range of new and innovative sanitation solutions entering the South African



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market. These technologies use a variety of new processes such as drying, dessication, dehydrating, composting, digestion, etc. In addition, there have also been a number of cutting-edge processes entering the market in the form of pyrolysis, carbonization, bulking, pressurizing, etc. However, these technologies are often not scientifically tested and understanding is not well established. Additionally, there is no formal testing protocol or evaluation of these technologies for their technical functioning and effectiveness. As such, the appropriate cost of technology is unknown, and operation and design characteristics are not well presented and not aimed at user convenience. New technologies are also not dealing with waste water.

Bhagwan also highlighted the lack of evidence on performance of the technologies. As such, users have little understanding of the limitations to these technologies.

Mr Bhagwan proposed the development of appropriate regulations, norms and standards and robust enforcement.



Mr Jay Bhagwan (WRC) providing the framing presentation on sanitation technology assessment and evaluation

Also proposed and discussed in this session was the need for a functionality assessment tool to assist in regulating sanitation technology products and to set appropriate norms and standards. It would also contribute towards the provision of trusted and accredited sanitation solutions.

Key challenges:

- Limited or lack of technology functionality information
- Lack of standards, regulation and enforcement
- Lack of certification of technologies
- Lack of integrated planning and implementation
- Inadequate understanding of the full costs of technology solutions, e.g., solutions do not always include O&M requirements
- Lack of technical capacity: decision-makers



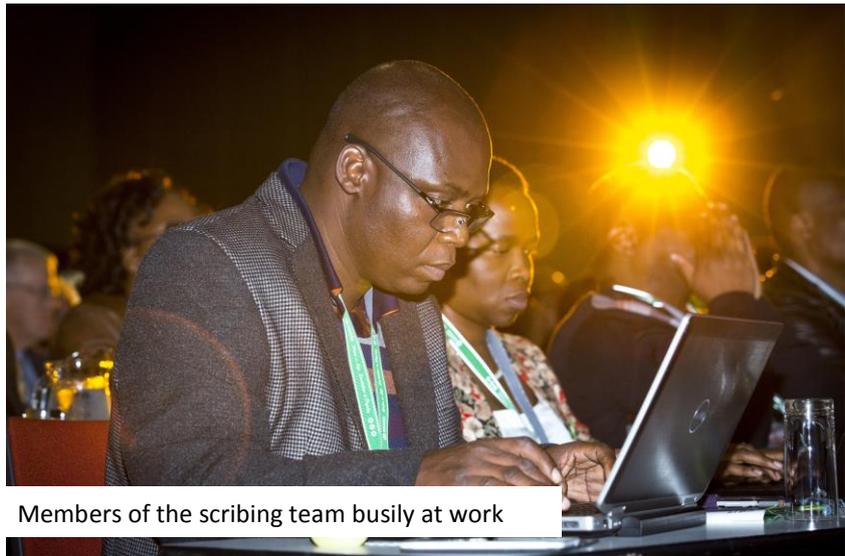
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Deficiencies in the enabling environment:

- Lack of standards, certification and licensing framework
- Lack of quality assurance
- Lack of regulation and enforcement
- Lack of technology assessment framework
- Lack of engagement with users and technology developers
- Lack of or inadequate scientific evidence on performance
- Inappropriate design for SA context



Members of the scribing team busily at work

Key enablers:

- Leadership from national government: regulation
- Enforcement by appropriate agencies
- Engagements with appropriate standards agencies, e.g., SABS
- Human resources: regulation and enforcement
- Appropriate technical capacity: technology assessment and evaluation capacity
- Market and pricing regulation

Solutions to challenges:

- Standards, certification and licensing
- Enforcement and regulation
- Market and pricing regulation
- Empowering the end users in terms of appropriate technology solutions
- Engagement with technology developers
- Building technical capacity: financial and O&M for decision-makers
- Technology assessment and evaluation tool: finalize and make it accessible to appropriate decision makers and end users
- Tool will be piloted towards the end of the year



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Commission 2: Health and hygiene education (See ANNEXURE 5b: COMMISSION 2: HEALTH AND HYGIENE EDUCATION)

Commission 2, titled Health and Hygiene Education, was chaired by Ms Lungi Zuma (EMWS) with the framing presentation done by Ms Belinda Makhafola (Department of Health). Respondents included Dr Sanjana Bharbwaj (UNICEF) and Prof Thor Axel Stenstrom (DUT).

Ms Makhafola pointed out that health and hygiene are integral parts of sanitation, and contribute towards the sustainability of sanitation projects. She also emphasised the need for better resource allocation for health and hygiene programmes as well as the need for health and hygiene education during the planning and implementation of sanitation projects.

Educating communities and children has been found to be a cost-effective way of ensuring sound hygiene practices. The need to change the handwashing education strategy so that it is a habit that is practised by everyone within the country was also emphasised.

Ms Makhafola also indicated that the department needs to target primary health care centres, as well as schools in both rural and urban areas.



Discussants advocated for an integrated approach that includes all relevant sector stakeholders. Another suggestion made was for the establishment of community health forums for monitoring purposes.

Key challenges:

- Myths about hygiene practices for behavioural change
- Measures of the impact (reduction of diseases)
- Resources (funding)



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- Failure to deliver behavioural change
- Education vs awareness vs promotion
- Schools sanitation (FUNCTIONALITY)

Deficiencies in the enabling environment:

- Functional sanitation facilities
- Insufficient in-country evidence on impact and approaches (what works and what doesn't)
- Political will translated to measurable action

Key enablers:

- Community
- Resource allocation to raise the profile
- Political will

Solutions to challenges:

- Hygiene practices at home (habits)
- Community engagement and participation
- Ongoing monitoring of impact
- Ongoing health and hygiene education
- Integrated approach as game changer
- Skilled personnel for user education



Commission 3: Cooperative governance and regulatory frameworks (See ANNEXURE 5c: COMMISSION 3: COOPERATIVE GOVERNANCE / REGULATORY FRAMEWORKS)

The third commission on Cooperative Governance and Regulatory Frameworks was chaired by Mr William Moraka (SALGA) and included a framing presentation by Dr Nozi Mjoli (Hlathi Development Services) as well as responses from Dr Patrick Hlabela (CSIR) and Mr Peter Thompson (Umgeni Water).

Dr Mjoli motivated for the development of a national framework for sanitation governance. She presented the findings of a WRC-funded project that analysed the symptoms of poor governance and the criteria for such analysis, i.e., capability, accountability and responsiveness.



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Dr Nozi Mjoli (Hlathi Development Services) providing a framing presentation on Cooperative Governance and Regulatory Frameworks



She illustrated the benefits of good sanitation governance such as a high payment rate for water and sanitation services; high levels of customer satisfaction; and improved trust between the municipality and its customers. With improved trust comes a higher degree of community engagement that can

also help the municipality to understand the sanitation priorities of local communities. Dr Mjoli also emphasized that no water and sanitation service delivery protests were experienced by the case-study municipalities within the two years prior to the governance assessment.

Dr Mjoli also recommended that municipalities provide dedicated resources to empower citizens; there is a need for the establishment of community radio stations as an effective communication channel, and also the appointment of a Municipal Services Ombudsman.

Key challenges:

- Slow progress in the eradication of backlog
- Distrust of local government by citizens
- Violent service delivery protests
- Weak governance – major obstacle to the eradication of backlog
- Do we have the right or ideal organizational structure to be

Discussions in commissions





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- recommended to the municipalities?
- Incorrect use of Sanitation Funds
- Lack of technical capacity in municipalities

Regulatory tool:

CAPABILITY	ACCOUNTABILITY	RESPONSIVENESS
<ul style="list-style-type: none"> • competent officials 	<ul style="list-style-type: none"> • public participation 	<ul style="list-style-type: none"> • Pro-poor sanitation policy
<ul style="list-style-type: none"> • leadership in place 	<ul style="list-style-type: none"> • Ward Committees 	<ul style="list-style-type: none"> • Prioritization of sanitation TO ALL
<ul style="list-style-type: none"> • Investment in human capital development 	<ul style="list-style-type: none"> • Representative Forums 	<ul style="list-style-type: none"> • Sanitation municipal by-laws in place
<ul style="list-style-type: none"> • Dedicated resources 	<ul style="list-style-type: none"> • Use of accountability tools 	<ul style="list-style-type: none"> •
<ul style="list-style-type: none"> • information management system 	<ul style="list-style-type: none"> • Community empowerment 	<ul style="list-style-type: none"> • complaints & service fault reporting system in place
<ul style="list-style-type: none"> • Sanitation policy & strategy 	<ul style="list-style-type: none"> • Communication • NGOs playing a role 	<ul style="list-style-type: none"> • Protection of the water environment from sanitation pollution

Key enablers:

- Business UNUSUAL
- As sanitation policies and legislation are being reviewed we must also include review of
 - Municipal Systems Act
 - Municipal Structures Act
 - MFMA/PFMA
 - DORA
- Reduce reliance on waterborne system – REUSE/RECYCLE – not only meant for poor – but must be looked at for all users – waste recovery
- Sanitation education
- People to be at core of service delivery and included in decision making
- Placement of National Treasury trained professionals in LG
- Get a true estimate of O&M cost and allocate appropriate funding
- Use best-practice from institutions such as eThekweni Municipality
- Re-engineer local government and review RBIG
- Review status of WSA's
- Attractive remuneration for rural municipalities



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Mr William Moraka (SALGA) chairs Commission 3: Cooperative Governance and Regulatory frameworks

Closing Plenary

Minister Mokonyane closed the Sanitation Indaba with a Ministerial address (For full speech see: ANNEXURE 3: MINISTERIAL ADDRESS BY THE MINISTER OF WATER AND SANITATION MS NOMVULA MOKONYANE, ON THE OCCASION OF THE NATIONAL SANITATION SUMMIT, DURBAN ICC, 15 MAY 2015).

Minister Mokonyane pointed out that water and sanitation are opposite sides of the same coin, thus the strategic decision by Government to establish the new Department of Water and Sanitation.

She also emphasized game-changers, such as the need for dignified and sustainable alternatives that should carry the message that “A dignified toilet is not all about flushing.”

As part of a process to consider sanitation solutions, Government needs to create a conducive legislative and fiscal framework that ensures political will and the introduction of a paradigm shift that challenges the old way of dealing with the sanitation challenges. What is becoming clearer now is the fact that for us to achieve the radical transformation in the sanitation sector we need a sanitation revolution. Nothing short of a revolution will achieve the universal access target in the country, let alone in Sub-Saharan Africa.



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She defined the sanitation revolution in terms of several dimensions, the first being a systems change as we move from highly centralized and expensive wastewater treatment dominance to one that has a combination of centralized and localized waste treatment.

The second component she highlighted was the movement from high-energy waste treatment technologies to low-energy use and the actual production of energy in waste treatment systems.

The next component of the revolution is water. We must move from highly wasteful waterborne sewage to low-water and no-water solutions. And where we continue to use water, it has to be a majority of grey-water. It is incredible that the majority of sanitation still uses drinking quality, very expensive water to flush a toilet.

Minister Mokonyane commended the Water Research Commission and Council for Scientific and Industrial Research (WRC/CSIR) social franchising model that was used in Eastern Cape schools. The School Toilet Refurbishing Programme, funded with assistance from both national and provincial government as well as the Government of Ireland, trained local players, and developed companies with local people who then went on to perform the refurbishment roll-out. This has been recognized by the African Development Bank, who is coming on board as the principal funder of the next phase of the project.

Minister Mokonyane also emphasized the need for an appropriate governance model. High levels of local community participation in governance are the key to ensure longevity, and ward committees must be core to this enterprise. In this connection, we need to empower ward councillors with



Minister Mokonyane speaking on the elements of the sanitation revolution in her closing address

information about our plans, programmes and offerings to deal with water and sanitation challenges on the ground. Collaboration between various government departments should also



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take place at the level of planning. She also reflected on the need for educational programmes to ensure a change in old habits and cultures of doing things.

OTHER HIGHLIGHTS

Sanitation Technology Market Place

The Sanitation Technology Market Place was a vibrant hub of activity throughout the day and formed a key aspect of the programme on 15 May. It was structured as a longer lunch and interactive plenary session, comprising of scientific innovations and demonstrations in various forms with an accompanying programme to allow for scientists/inventors to engage with venture capitalists, industry representatives,



Technology demonstrator describes his technology to delegates in the Technology Market Place



funders, community members and policy-makers.

The Technology Market Place exhibited sanitation technologies, prototypes, models and new concepts that the water research and development community in South Africa have been working on, with an emphasis on tangible



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products, i.e., videos, interactive software, toilets, biogas digesters, etc. A select few technology demonstrators were asked to make short presentations during the presentation session facilitated by 702 Radio's Aki Anastasiou.

List of Technology Demonstrators:

#	Technology	Description	Company	Contact	Contact number
1	Fibreglass pour flush	On-site low flush unit	Partners in Development	David Still: dave@pid.co.za	033 342 3012
2	EnviroSan Eaziflush	On-site low flush unit	EnviroSan	jacques@envirosan.co.za	031 700 1866/ 082 787 2112
3	Arumloo	Micro-flush toilet on less than 1 L water	Isidima	Johnny Harris: jonny@isidima.net	021 761 3474/ 079 691 4510
4	SavyLoo toilet	Dry toilet with l/s separation	Pennine Energy Innovation	Dr Dudley Jackson: dudley@tiscali.co.za	082 880 1800
5	SmartSan Digester	On-site low flush unit	Nano Water Technologies Africa	Jurgen Graupe: Jurgen@smartsan.co.za Grauper@mweb.co.za	082 453 6505
6	EcoSan toilet	Dry toilet	G-Trade International	Ernst Tiedt: gtrade@telkomsa.net	012 807 5002 082 5574979
7	Basic sanitation (dry / wet)	Various: Water tanks Waste water treatment	Calcamite	pieter@calcamitetanks.co.za	012 742 0900
8	EnviroLoo dry sanitation system	Waterless toilet system	EnviroLoo	Candice.williams@enviro-loo.com	011 244 5599
9	BioFil digester	Microflush linked to biofilm system	BioFil Technologies	egvampo@biofiltechnologies.com	087 098 0586
10	Nano biodigestion	UASB+AT+Filtration	Waste Intrique Services (WIS)	Tshego Mpete: tshego.mpete@wisgroup.co.za	083 881 0951 / 076 710 6531
11	Myfast 160	Attached growth reactor	Tupelovox	Nontobeko Ngcobo: nontobeko@tupelovox.co.za	011 849 6746 / 082 957 7214
12	New World Water Sanitation	Low footprint wastewater treatment works	Bubbler Pty / NWWS	Wessel Muller: wessel@nwws.co.za	060 526 6768
13	WHC leak-less valve	Leak-less valve	Water, Hygiene, Convenience	Paseka Lesolang: paseka@whcpty.com	012 844 0186
14	Various	Various sanitation	UKZN / eThekweni Municipality	Prof Chris Buckley: buckley@ukzn.ac.za	031 260 3131
15	Redivac vacuum	Vacuum sewer technology	Prolific Consulting	Tenda Ndlovu: tenda@prolific.co.bw	011 318 6217 / 079 250 9275
16	AFRISAN Waterless self-contained toilet	Dehydration and aerobic sanitation technology	AFRICAN SANITATION GROUP	Anna-Marie Botha anna.botha.66@gmail.com	083 266 5555



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Johnny Harris (Isidima) describes the Arumloo and how it allows for bigger trucks to go round the bend!



Paseka Lesolang (WHC) (far left) is happy to have met Minister Mokonyane and was also invited as her guest to the Water and Sanitation Budget Vote in Parliament on 21 May 2015



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MEDIA REPORT

A total of 19 members of the media registered to attend the Summit. A summary of media coverage is provided below.

Identified media included:

- SABC TV: news
- SABC Radio: news
- ENCA
- ANN 7
- The Witness
- The Mercury
- The Citizen
- Isolezwe
- Ilanga
- Daily News
- Gagasi FM
- P4
- East Coast Radio
- Vuma FM
- News 24
- The New Age



Aki Anastassiou (702 Radio) interviews Minister Mokonyane for Eye Witness News and tests the durability of one of the technologies demonstrated

A media advisory was issued to media on Tuesday, 12 May 2015, notifying them of the Indaba and inviting them to participate.

Representatives of the media were invited to both the site visit on 14 May as well as the Sanitation Indaba on 15 May, and as a result the Sanitation Indaba received widespread media coverage nationally and locally. Media interviews with Minister Mokonyane and other political leadership were also held by SABC Radio and SABC Television.

Additionally, a media partnership with Ukhozi Radio was confirmed with live broadcasting throughout the day on 15 May 2015.

Social media platforms also received extensive activity with a media advisory issued on 12 May, all-day updates on 14 and 15 May, as well as post-summit speech and presentation dissemination



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on 18 and 19 May. A post-Sanitation Indaba media statement was issued to media on Friday 15 May.

LIST OF SUB-CONTRACTORS

The following sub-contractors were hired to provide the required services.

Secretariat	Event Options
Venue	Durban ICC
Technical	Selby's
Printing	Minuteman Press
Transport	DHM Tours
Courier	BI Xpress
Decor	Functions and Decor
Travel	iGo Travel
Branding Production	Umlilo
MC / Speaker	USB Speakers
Translation	IEBE
Preferred hotels	Hilton
Videography	25 One
Conference Bags	Eyako – Bags
Note books and pens	Amrod
Lanyards	Amrod
Design	Event Options
RSVP	Event Options
Photography	Dean Demos Photography
Speaker Gifts	Amrod
Exhibition	Oasys



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CONCLUSION

On behalf of the Department of Water and Sanitation and the Water Research Commission (WRC), we wish to thank you for your participation and support in making the Sanitation Indaba a proud success.

We would especially like to thank the plenary and keynote speakers, panellists, chairpersons, rapporteurs and scribes for their hard work in ensuring lively, open and constructive dialogue. The feedback we have received to date has been positive with very good reviews were received regarding the organisation, content, food and venue. Most importantly, participants appreciated the honesty and transparency of discussions in commission – indeed a sanitation revolution has begun!

The quest for universal access must be in a new paradigm of low-water/no-water localised solutions. This is a technology leap-frogging that will have the ability to both save water and minimise energy use, the latter through lower energy consumption with the possibility of on-site energy production. Low-carbon, decentralised sanitation solutions will not only advance our adaptation to climate change, but have the opportunity to increase South Africa's global competitiveness rankings. This is achieved as we concomitantly satisfy our objective of expanding the boundaries of human dignity through good sanitation technologies, while also becoming a net supplier of sanitation solutions for Africa and the developing world.

Again, we thank you.

Dhesigen Naidoo
CEO, Water Research Commission





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ANNEXURE 1: REGISTERED PARTICIPANTS

Title	Name	Surname	Organisation	Registration Status
	Folasade Esther	Adeyemo	Durban University of Technology	DELEGATE
	Nick	Alcock	Khanyisa Projects	DELEGATE
	Isaac Dennis	Amoah	Durban University of Technology: Institute for Water and Wastewater Technology	EXHIBITOR
Mr	Aki	Anastasiou	702 Radio	DELEGATE
	Preyan	Aramugan	University of KwaZulu-Natal	DELEGATE
	Julian	Arran	Durban University of Technology	EXHIBITOR
	B.F.	Ashe		DELEGATE
	Andiswa	Badela	Institute for Water and Wastewater Technology	DELEGATE
	Kgomotso	Baisitse	WHC	EXHIBITOR
Mr	Nkhensani	Baloyi	Dept: Basic Education	DELEGATE
	Thembeke	Bengu	Dept: Water and Sanitation	DELEGATE
Mr	Jay	Bhagwan	Water Research Commission	SPEAKER
Dr	Sanjana	Bharbwaj	UNICEF	SPEAKER
	Gugu	Bhengu	Uthukela district municipality	DELEGATE
	Nonsikelelo	Bhengu	ZMTE	DELEGATE
Mr	Steve	Bhengu		MEDIA
	Ana	Bigara		DELEGATE
	Zanele	Bingwa	Mhlathuze Water	DELEGATE
	Pravesh	Boodhoo	Umgeni Water	DELEGATE
Ms	Anna-Marie	Botha	African Sanitation	EXHIBITOR
	Barry	Brib	Aurecon	
Prof	Chris	Buckley		DELEGATE
Ms	Amanda	Burdett	Envirosan	DELEGATE
	Scott	Burmeister	EldoFox	DELEGATE
	Mroza	Buthelezi	Ukhozi FM	MEDIA
	Nomusa V	Buthelezi	eThekwini Municipality	DELEGATE
	Sibongile	Buthelezi		DELEGATE
	Sthembiso	Buthelezi	Grezet	
	Faizal	Bux	Durban University of Technology	DELEGATE
	Kevin	Campbell	Resoloo	EXHIBITOR
	Mark	Cawood	Enviro Loo	EXHIBITOR
Ms	Aneliswa	Cele	National Department of Health	DELEGATE
	Lungile	Cele	Ugu District Municipality	DELEGATE
	Sbonelo	Cele	Umlazi User Platform	DELEGATE
	Thando	Cele	uThungulu Municipality	
	Aloious	Chaminuka	Lepelle Northern Water	DELEGATE



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Title	Name	Surname	Organisation	Registration Status
	S.	Chanke	Presidency	DELEGATE
Mr	Manuel	Chidziva	DBSA	DELEGATE
	Mondli	Chiliza	Ugu District Municipality	DELEGATE
	Tumelo	Chulu	Enviro loo	EXHIBITOR
	Mike	Church	Municipal Infrastructure Support Agent (MISA)	DELEGATE
	Nelson	Cindi	TCTA	DELEGATE
	Thobela	Conco	Durban University of Technology	DELEGATE
	Deborah	Cousins		DELEGATE
	Bruce	Crystal	Inclendon	DELEGATE
	Claud	Cupido	NWWS	DELEGATE
	Christopher	Damen	Millchem Biotech (PTY) Ltd	DELEGATE
	Waasief	Dawood	Amka	EXHIBITOR
	Priya	Dayal	Vaal Sanitary Ware	DELEGATE
	Andrea	de Ujfalussy	City of Cape Town	DELEGATE
	Yogin	Devan	Meropa	MEDIA
	Brendon	Devaraj	Grohe	EXHIBITOR
	Modisaaka rakwe	Diakanyo	Protector	
	Lorato	Dibakwane	Dr Ruth S Mompoti District Municipality	DELEGATE
Ms	Margaret- Ann	Diedricks		SPEAKER
	MD	Dikoko	Sedibeng Water	
	Aphiwe	Dinga	National Department of Health	DELEGATE
Sgt	D Q	Dlamini	PROTECTOR	
	Mboniseni	Dlamini	Magalies Water Board	DELEGATE
	Ntando	Dlamini	Clermont Concervarcy Group	DELEGATE
	Patrick	Dlamini	DBSA	
	Xolani	Dlamini	Sustento Development Services	DELEGATE
	Nandi	Dlamini L	Harry Gwala District Municipality	DELEGATE
	Desmond	Dlokweni	Alfred Nzo District Municipality	DELEGATE
	Teezani	Dlungwane	Office of Premier (KZN)	DELEGATE
	Zaid	Docrat	Sedtrade	DELEGATE
	Vicki	Doesebs	InterAct	DELEGATE
	Thandeka	Duma	BORDA	DELEGATE
	Kholisa	Dyani	uyakhazimla production	MEDIA
	Andre	Evetts	Dept: Cooperative Governance	
Ms	Landu	Faith	Dept: Water and Sanitation	DELEGATE
	Nomfundo	Fakudze	Public Investment Corporation	DELEGATE
	Adekunle	Faley	Institute of Water and Wastewater,DUT.	DELEGATE
	Wendy	Forse	Coastwatch	DELEGATE
	Hlalanathi	Fundzo	Dept: Water & Sanitation	DELEGATE



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Title	Name	Surname	Organisation	Registration Status
	Vuyani	Gaga	Siyenza	DELEGATE
Mr	Cyril	Gamede	Umgeni Water	DELEGATE
	Derek	Garton	ACT toilets	EXHIBITOR
	Siyiabulela	Genu	Amathole District Municipality	
Mr	Steve	Gillham	Umgeni Water	DELEGATE
Mr	Teddy	Gounden	Ethekwini Water & Sanitation	DELEGATE
Mr	Jurgen	Graupe	Nano Water Technologies Africa (Pty) Ltd	EXHIBITOR
	Mike	Greatwood	Msunduzi	DELEGATE
	Fikile	Guma	Dept: Water and Sanitation	
	Mthokozisi	Gumede	Clyroline Pty Ltd	DELEGATE
	Khulekani	Gwala	Emaphephetheni Rural Forum	DELEGATE
	Paulous	Gwala	Inanda Dam Forum	DELEGATE
	Evelyn	Gyampo	Biofil Tech.	EXHIBITOR
	Ngubane	Hadebe	Velani Unlimited	
	Shami	Harichunder	Umgeni Water	DELEGATE
	Jonathan Toby	Harris		EXHIBITOR
	John	Harrison	eThekwini Water and Sanitation	DELEGATE
	Graham	Hartlett	wec projects	DELEGATE
	Anthony	Hazell	Dept: Human Settlements	DELEGATE
	Alfie	Heeger	African Sanitation	EXHIBITOR
	Renee	Heine	SABC TV News	MEDIA
	Werner	Heydenreich	COGTA	SPEAKER
	Patrick	Hlabela	CSIR	SPEAKER
	Mpho	Hlahla	Magalies Water Board	DELEGATE
	Mfana	Hlongwa	Focus Group for the Disabled	DELEGATE
	Bongani	Hlophe	eThekwini Water & Sanitation	DELEGATE
	Sifiso	Hlubi	Inclledon	DELEGATE
Mr	Richard	Holden	Trans-Caledon Tunnel Authority	DELEGATE
	diana	Hoorzuk		DELEGATE
	Bongile	Hudla	Cobra Watertech	EXHIBITOR
	Johan	Human	Aurecon	
	Thys	Human	NWWS	EXHIBITOR
	Dudley	Jackson	Pennine Energy Innovation	EXHIBITOR
Dr	Inga	Jacobs	Water Research Commission	
Mr	Medwyn	Jacobs	New & Master Technologies	DELEGATE
	Aavi	Jadoo		DELEGATE
	Lance	Joel	Enviro loo	DELEGATE
	Lulu	Johnson	Parliament	
	Ed	Jowitt		DELEGATE



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Title	Name	Surname	Organisation	Registration Status
	Lovemore	Kathivhu	Siyenza	DELEGATE
	Bruce	Kelbe	University of Zululand	DELEGATE
Mr	Mokutu	Kgwale	Bloem Water	DELEGATE
Ms	Nomvula	Khalo	Dept: Water and Sanitation	PROTOCOL
	Nhlanhla	Khanyile	Chesterville Focus Group	DELEGATE
	Akhona	Khawula	Malwande	DELEGATE
	DUdu	Khoza		MEDIA
	Maliyakhe	Khoza	Dept: Water and Sanitation	PROTOCOL
	Thulisile	Khuboni	Harry Gwala District Municipality	DELEGATE
	Nombuso	Khuluse	Dept: Water and Sanitation	DELEGATE
	Bheki	Khumalo	Sakhisizwe Youth Development	
	Buhle	Khumalo	SABC	MEDIA
	Dudu	Khumalo	UMzinyathi	DELEGATE
	Sibusiso	Khumalo	Teem concept	MEDIA
	Sthandwa	Khumalo	Laquinz Comm.	DELEGATE
	Vukani	Khumalo	UKZN	DELEGATE
	Moses	Kilozo	DUCT	DELEGATE
	Ilana	Koegelenberg	Plumbing Africa	MEDIA
	Timothy	Krause	Envirosan	DELEGATE
	Patrick	Kunene	Minister Protector	
	Xolisa	Kupiso	Prolific Consulting	EXHIBITOR
	Pippa	La Cock	Environmental Solutions	DELEGATE
	Andre	Labuschagne	Rocla	DELEGATE
	Hendrike	Lange	Sizana Solutions	
	Les	Lange	Sizana Solutions	DELEGATE
	Pieter	Lemmer	Calcamite Sanitary Services (PTY) Ltd	EXHIBITOR
Mr	Paseka	Lesolang	WHC	EXHIBITOR
Mr	Brian	Lewis	Envirosan CC	EXHIBITOR
	Dries	Liebenberg	SABC	MEDIA
	Ayanda	Lipheyana	DUCT	DELEGATE
	Bobbie	Louton	PID	EXHIBITOR
	Muntu	Lukhozi	Office of the Premier (KZN)	PROTOCOL
	Armstrong	Luthuli	Tabloid Media	MEDIA
	Lihle	Luthuli	GCIS	
	Thandani	Luvuno	DUCT	DELEGATE
	Vish	Mabeer	Ethekwini Water & Sanitation	DELEGATE
	T	Mabhaudhi		DELEGATE
	Peggy	Mabuza	Dept: Water and Sanitation	DELEGATE
	Lorna	MacArthur	Cobra Watertech	DELEGATE



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Title	Name	Surname	Organisation	Registration Status
	Christine	Mackay-Stevens	Biofil Tech.	EXHIBITOR
Mr	Neil	Macleod		SPEAKER
	Bonginkosi	Madikizela	Western Cape MEC	
	Sbusiso	Madonsela	Umgeni Water	DELEGATE
	Lucia	Mafanti	Enviro loo	DELEGATE
	Solly	Mafoko	Basic Education	DELEGATE
	Fikile	Maggie	The Mvula Trust	DELEGATE
	Sbu	Magwaza	Office of the premier	
	Mbalenhle	Mahaye	Dept: Water and Sanitation	DELEGATE
	Lawrance	Mahlaela	Minister Protector	
	Kekezi Victor	Mahlangu	Turn Around Projects (Pty) Ltd	DELEGATE
	Mlando Joe	Mahlangu	Puno Global Wastec	DELEGATE
	Frank	Maisela	SAPS	
	Mboniseni	Majola	Mhlathuze Water	DELEGATE
	Mshiyeni	Majola	Umlazi User Plarform	DELEGATE
Ms	Belinda	Makhafola	National department of Health	EXHIBITOR
	Portia	Makhanya	Dept: Water and Sanitation	DELEGATE
	S.	Makhanya	Presidency	PROTOCOL
	Sibusiso	Makhanya	Mhlathuze Water	DELEGATE
	Sandile	Makhubela	ENCA	MEDIA
	Makoma Grace	Makhurupetj e	Premier of Limpopo	DELEGATE
	Gcina	Makoba	Centre for Civil Society(UKZN)	DELEGATE
	Bheki	Makwakwa	Harry Gwala District Municipality	DELEGATE
	Edwin	Malale	SAPS	
	Vivian	Maleba	UKZN	
	Monica	Malunga	Umgeni Water	DELEGATE
	Sabata	Malunga	Clermont User Platform	DELEGATE
	R	Mamoepa	Presidency	MEDIA
	Nkosinathi	Manana	Dept: Water and Sanitation	MEDIA
	Margeret	Maphophe	Ukhozi FM	MEDIA
	Greg	Martin	Unilever	
	Qalo	Masango	DWS	
	Maduvha	Maseda	Dept: Water and Sanitation	MEDIA
	Lindi	Maseko	Unilever	EXHIBITOR
	Phumzile	Maseko	Unilever	EXHIBITOR
	Sibusiso	Masilela	Vuka Africa	
	Thembi	Masilela		DELEGATE
	Sne	Masuku	Citizen	
	Zandile	Mathe	Dept: Water and Sanitation	DELEGATE



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Title	Name	Surname	Organisation	Registration Status
	Richard	Mathebula		EXHIBITOR
	Mbuyiseni	Mathonsi	Office of the Premier	PROTOCOL
	Iris	Mathye	Dept: Water and Sanitation	DELEGATE
	Mildred	Matlou	Dept: Water and Sanitation	MEDIA
	Malehlabathe	Matsoso	Dept: Water and Sanitation	ORGANISING COMMITTEE
	Ronald	Matukane	Dept: Water and Sanitation	DELEGATE
	Sihle	Mavuso	The New Age	
	Bahle	Mazeka	CORC	DELEGATE
	Cyprian	Mazubane	Dept: Water and Sanitation	
	Zalisile	Mbali	Dept: Human Settlements	
	Hlanganani	Mbele	Dept: Water and Sanitation	DELEGATE
	Gugu	Mbense	Uthukela District Municipality	DELEGATE
	Lubabalo	Mbulawa	Flux Development Scientists	DELEGATE
	Gugu	Mbuyisa	EThekweni Water & Sanitation Unit, EThekweni Municipality	DELEGATE
	Edward Senzo	Mchunu		SPEAKER
	Frank	Mchunu	Mpophomeni Tourism	EXHIBITOR
	Musa	Mchunu	Environmental Health Services Manager	
	Nompilo	Mchunu	GCIS	MEDIA
	Thabani	Mchunu	PID	EXHIBITOR
	Sarah	Mcphail	National Treasury	DELEGATE
	Phumzile	Mdakane	Dept: Water and Sanitation	DELEGATE
	Simo	Mdima	Siyathuthuka fm	MEDIA
	Hazel	Mdletshe	Umlazi User Platform	DELEGATE
	Siya	Mdletshe	Office of the Premier (KZN)	PROTOCOL
	KB	Meier		DELEGATE
	Susan	Mercer	University of KwaZulu-Natal	EXHIBITOR
	Andisiwe	Mfazwe	A.N Gadi Property Investments	
	Ben	Mfazwe	A.N Gadi Property Investments	
	Nothende	Mfazwe	A.N Gadi Property Investments	
	Lusanda	Mfenqa	Water and Sanitation	DELEGATE
	Sandile	Mgadi	VN Niak School for the Deaf	
	Thando	Mguli	WC Dept: Human Settlement	DELEGATE
	Clive	Mhlane	Dept: Water and Sanitation	DELEGATE
	Farai	Mhlanga	Mangosuthu University of Technology	EXHIBITOR
	Chucheka	Mhlongo	DBSA	DELEGATE
	Patricia	Mhlongo	Northern Areas User Platform	DELEGATE
	Samkelo	Mhlongo	Umlazi User Platform	DELEGATE
	Smanga	Mhlongo	Lamontville Foundation	
	Marina	Milstein	Dept: Water and Sanitation	DELEGATE



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Title	Name	Surname	Organisation	Registration Status
	Vusumzi	Mini		DELEGATE
	Sphelele	Mjadu	Unilever	
	Nozi	Mjoli	Hlathi Development Services	SPEAKER
	Mqobi	Mkhize	Iliso Consulting	DELEGATE
	Nomusa	Mkhize		MEDIA
	Nonhlanhla	Mkhize		SPEAKER
	Nosipho	Mkhize	EThekweni Water and Sanitation	DELEGATE
	Ntuthuko	Mkhize	Dept of Finance	DELEGATE
	Patricia	Mkhize	Dept: Water and Sanitation	DELEGATE
Mrs	S	Mkhize	Office of Premier (KZN)	
	Sandile	Mkhize	Magalies Water	DELEGATE
	Simamisa	Mkhize	OSS Northern Region	DELEGATE
	Siyabonga	Mkhize	Mosheni communication	MEDIA
	Thembe	Mkhize	TTM world productions	MEDIA
	Mbali	Mkhwanazi	Dept: Water and Sanitation	MEDIA
	Siyabulela	Mlandu	Office of the Premier (KZN)	PROTOCOL
	Qap's	Mngadi	Isolezwe and Artmate	MEDIA
	Sibusiso	Mnguni		DELEGATE
	Mr Thulani	Mnyandu	Umzinyathi District Municipality	DELEGATE
	Deborah	Mochotlhi	Dept: Water and Sanitation	DELEGATE
	Walter	Moekoena	Minister's Guest	DELEGATE
Dr	Thele	Moema	Dept: Water and Sanitation	PROTOCOL
	Queen	Mohale	Afrilink water & sanitation	DELEGATE
	Tlou	Mojela	Dept: Water and Sanitation	PROTOCOL
	Molefe	Mokgatle	Afrilink water & sanitation	DELEGATE
	Alex	Mokoena	Parliamentary Constituency Office	DELEGATE
	Veli	Mokoena	Ninathi Investment Holdings Pty Ltd	DELEGATE
	Walter	Mokoena	Complete Environmental	
Minister	Nomvula	Mokonyane		SPEAKER
	Benny	Monama	SDM	
	B	Moodley	University of KwaZulu-Natal	DELEGATE
	Camara	Moodley	Rising Sun	MEDIA
Dr	Limakatso	Moorosi	Bloem Water	
Mr	William	Moraka	South African Local Government Association (SALGA National)	SPEAKER
	Lindy	Morrison	The Mvula Trust	SPEAKER
	Sesi	Moselekwa	Dept: Water and Sanitation	DELEGATE
	Matsobane	Mothiba	Sysman	
Ms	Matlakala	Motloung	Dept: Water and Sanitation	PROTOCOL
	Isaac	Motsamai	Sedibeng Water	DELEGATE



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Title	Name	Surname	Organisation	Registration Status
	Musa	Mpanza	Imbokodo 96.8fm	
	Lentswe	Mpete	Waste Intrique Services (Pty) Ltd	EXHIBITOR
	Tshego	Mpete	Waste-Intrique Services (Pty) Ltd	EXHIBITOR
	Simphiwe	Mpinga	Jongikhaya Construction	DELEGATE
	Brenda	Mpitsang	Dept: Water and Sanitation	
	Sthembiso	Mpungose	Public Investment Corporation	DELEGATE
	Nkonzwenhle	Mqadi	Emaqadini Communications	
	Sli	Mqwebu	Ukhozi FM	MEDIA
	Menzi	Msane	Multilayer Industry Solutions	DELEGATE
	Sanele	Msibi	Iliso Consulting	DELEGATE
Ms	Zanele	Msomi	The Mvula Trust	DELEGATE
	Celiwe	Msweli	Dept: Water and Sanitation	DELEGATE
	Ednick	Msweli	eThekwini Water & Sanitation	DELEGATE
	Ayanda	Mthembu	Office of Premier (KZN)	
	Nozipho	Mthembu	Mhlathuze Water	DELEGATE
	Babheke	Mthethwa		MEDIA
	Nomaswazi	Mtshali	GCIS	
	Siduduzo	Mtshali	eThekwini Water & Sanitation	DELEGATE
	Trevor	Mulaudzi	University of Limpopo	
	W	Muller	NWWS	EXHIBITOR
	Wessel	Muller		EXHIBITOR
	Nelisha	Murugan	University of KwaZulu-Natal	
	William	Musazura	University of KwaZulu-Natal	DELEGATE
	Dodo	Mushwana	SYS Sanitation	DELEGATE
	Jeremiah	Mutamba	TCTA (SIP18)	DELEGATE
	Richard	Mutshekwane	Pennine Energy Innovation	EXHIBITOR
	Maxwell	Mvuyo	ISN	DELEGATE
	SN	Mxobo	CORC	DELEGATE
	Simo	Myeza	Impande Consulting Engineers	DELEGATE
	Dan	Naidoo	Umgeni Water	DELEGATE
	Danica	Naidoo	University of KwaZulu-Natal	DELEGATE
Mr	Dhesigen	Naidoo	Water Research Commission	SPEAKER
Dr	Melvin	Naidu	AMKA	EXHIBITOR
	Siyabonga	Nala	Office of the Mayor (Durban)	
	Teboho	Nchamo	Ilaliloo	DELEGATE
	Bongumusa	Nciki	eThekwini Water & Sanitation Unit, eThekwini Municipality	DELEGATE
	Dora	Ndaba		DELEGATE
	Mlimandlela	Ndamase	Dept: Water and Sanitation	MEDIA



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Title	Name	Surname	Organisation	Registration Status
	Bruce	Ndlovu		DELEGATE
	Fanile	Ndlovu	Dept: Health	
Dr	Fikile	Ndlovu	Office of Premier (KZN)	
	Siboniso	Ndlovu	Dept: Water and Sanitation	DELEGATE
	Tenda	Ndlovu	Prolific Consulting	EXHIBITOR
	Welcome	Ndlovu	uThungulu Municipality	
	Thobelani	Nduli	Inanda FM	
	Patrick	Ndungu	University of Johannesburg	EXHIBITOR
	Tshilidzi	Nelwamondo	Dept: Cooperative Governance	
	Thembi	Nembula	Office of the Premier (KZN)	
	Nkosinathi	Nene	Teachers and interpreters	
	Ahuiwi	Netshidaulu	Lepelle Northern Water	DELEGATE
	Busani	Ngcaweni	Presidency	DELEGATE
	Ben	Ngcobo	Imvula Engineers	
	Bhekokuzayo	Ngcobo	Northern Areas User Platform	DELEGATE
	Eugne Sihle	Ngcobo	Tupelovox Pty Ltd	EXHIBITOR
	Nobuhle	Ngcobo	Teachers and Interpreters	
	Nonjabulo	Ngcobo	NCRF KZN	MEDIA
	Thabani	Ngcobo	Tupelovox Pty Ltd	EXHIBITOR
	Busani	Ngcqweni	Presidency	DELEGATE
	Nompumelo	Ngema	Mhlathuze Water	DELEGATE
	Lawrence	Ngubane	Khanyisa Projects	DELEGATE
	Sindy	Ngubane	Vilane Unlimited	
	Caiphus	Ngubo	Department of Environmental Affairs- KZN Province	DELEGATE
	Mashadi	Ngwenya	SAPS	
	Pamela	Ngwenya	Umgeni Water	
	Thami	Ngwenya	Office of the Premier	MEDIA
	NN	Nhlabatsi	South African Weather Service	DELEGATE
	Matshidiso	Nhlanhla	Dept: Water and Sanitation	DELEGATE
	M.	Nkosi	Presidency	DELEGATE
	Nhlanhla	Nkosi	DWS	DELEGATE
	Nomsa	Nkwinika	Magalies Water Board	DELEGATE
	Sifiso	Nobani	ISN	DELEGATE
	Simphiwe	Nojiyeza	University of Johannesburg	DELEGATE
	Paddy	Norman	Coast Watch	DELEGATE
Ms	Thoko	Norushe	Deputy Ministry	DELEGATE
	Sabelo	Nsele	Taxi Indaba	MEDIA
Mr	Patrick	Ntabeni	Dept: Water and Sanitation	DELEGATE
	Sihle	Ntaka	Umgeni	DELEGATE



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Title	Name	Surname	Organisation	Registration Status
	Muzikayise	Ntanzi	Civil Community	DELEGATE
	Dr Tseliso	Ntili	Dept: Water and Sanitation	DELEGATE
	Xola	Ntobongwana	The Mvula Trust	DELEGATE
	Thato	Ntsekhe	Calcamite Sanitary Services (PTY) Ltd	DELEGATE
	Buyiswa	Ntshungulwana	Johanna Road Informa Settlement	DELEGATE
	Tshepo	Ntsimane	DBSA	DELEGATE
	Tebogo	Ntswane	Envirosan	EXHIBITOR
	Eugene	Ntuli	Dept: Water and Sanitation	ORGANISING COMMITTEE
	Cllr James	Nxumalo	tbc	SPEAKER
	Zenzo	Nxumalo	Tupelovox	EXHIBITOR
	Msawakhe	Nyadi	Government Communications(GCIS)	DELEGATE
	Nontobeko	Nzimande	VN Niak School for the Deaf	SIGN LANGUAGE
	Alfred O.	Odindo	University of KwaZulu-Natal	DELEGATE
	Grant	Olivier	Custom Components	EXHIBITOR
	Mark	Olivier	ACT toilets	EXHIBITOR
	Dawid	Oosthuizen	CSIR	DELEGATE
	Shola	Oyawoye	UKZN	DELEGATE
	Rajiv	Paladh	PDG	DELEGATE
	Arnotte	Payne	CORC	DELEGATE
Ms	Lydia	Peter	Dept: Water and Sanitation	DELEGATE
	Mosotho	Petlane	Magalies Water	DELEGATE
	Buthlezi	Phakamani	BREEDE-GOURITS	DELEGATE
	Hobongwana	Phakamisa	Dept: Water and Sanitation	MEDIA
	Ephraim	Phalafala	Dept: Science and Technology	DELEGATE
	Kerry	Philp	University of KwaZulu-Natal	
	Zola	Phoswa	Rising Sun Newspaper	MEDIA
	Dr.	Physician	Presidency	PROTOCOL
	Bjoern	Pietruschka	BORDA	DELEGATE
	Ganasen	Pillay	The Mvula Trust	DELEGATE
	Kamcilla	Pillay	Independent Newspapers (Daily News)	MEDIA
	Kaverajen	Pillay	Ethekwini Municipality	DELEGATE
	Collin	Pitso	Dept: Water and Sanitation	DELEGATE
	Robbie	Prior	Conrite Walls Pty Ltd	EXHIBITOR
	Robert James	Prior	Conrite Walls Pty Ltd	DELEGATE
	Siyabulela (Billy)	Qiqimana	Envirosan	EXHIBITOR



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Title	Name	Surname	Organisation	Registration Status
	Nombuso	Radebe	PID	EXHIBITOR
	Rachi	Rajagopaul		DELEGATE
	Trevor	Rajnarain	The Mvula Trust	DELEGATE
	Thuso	Ramaema	Office of the Premier: Free State	
DP	Cyril	Ramaphosa		SPEAKER
	Jeshika	Ramchund	ILISO Consulting (KZN)	DELEGATE
	Luis Guillermo	Ramirez Villanueva	DEPT OF WATER AND SANITATION	DELEGATE
	N	Rantau	Presidency	MEDIA
	Sputnik	Ratau	Dept: Water and Sanitation	DELEGATE
	Jayandran Gopal	Reddy	Dept: Water and Sanitation	DELEGATE
	Mr	Reinherd	Office of the Premier	MEDIA
	Nicola	Rodda	UKZN	DELEGATE
	Monama	Rodgers	Chief of Staff- Limpopo	
	Henry	Roman	Dept: Science and Technology	DELEGATE
	Jacques	Rust	Envirosan	DELEGATE
	Bongekile	Sabela	Unilever	EXHIBITOR
	Zagry	Scholtz	Water Research Commission	EXHIBITOR
	M	Scott		DELEGATE
	Supreme	Sebata		
	Nazir	Seedat	AMKA	DELEGATE
	Manase Neo	Sefatlhe	Dept: Water and Sanitation	ORGANISING COMMITTEE
	Doris	Segoale	Dept: Water and Sanitation	ORGANISING COMMITTEE
	Khetha	Seja	PID	EXHIBITOR
Dr	Norbert	Seyfert	J&C Engineering	DELEGATE
	Robert	Shangase	University of Limpopo	
	Siphindile	Shange	uMgungundlovu District Municipality	DELEGATE
	Zandile	Shange	Office of the Premier	MEDIA
	Mandisa	Shelembe	Office of the Premier	MEDIA
	Sibonisa	Shibe	The New Age	
	Herman	Shokane	Dept: Water and Sanitation	DELEGATE
	Chuma	Shweni	J&C Engineering	DELEGATE
	Lucky	Sibiya	eThekweni Water & Sanitation	DELEGATE
	M.	Sibiya	Presidency	DELEGATE
	Ntokozo	Sibiya	Teachers and Interpreters	
	Zwelizukile	Sikukukazi	BlueStream	
	Nozuko	Silolo	Dept: Water and Sanitation	EXHIBITOR
	DR. N.	Simelela	Presidency	DELEGATE
	Innocent	Sindane	Office of Premier (KZN)	MEDIA
	Nonceba	Sineke	Dept: Water and Sanitation	ORGANISING



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Title	Name	Surname	Organisation	Registration Status
				COMMITTEE
	Ayanda	Sithebe	Durban University of Technology: IWWT	DELEGATE
	Nkosinathi Nathi	Sithole	Dept: Water and Sanitation	DELEGATE
	Amanda	Sizani	Dept: Water and Sanitation	DELEGATE
	Stewart	Smetherham	Envirosan	DELEGATE
	David	Smith	The Guardian	MEDIA
	Edwin	Sodi	Blackhead Consulting	
	S.	Speed	Presidency	DELEGATE
	Chris	Speirs	Conrite Walls	DELEGATE
	Ashley	Starkey	Dept: Water and Sanitation	DELEGATE
	Thor Axel	Stenstrom	Durban University of Technology	SPEAKER
	Dan	Swan	Strips Ahead	
	Peter	Swan	Strips Ahead	DELEGATE
	Faith	Swarts	Deputy Ministry	DELEGATE
	Adriaan	Taljaard		ORGANISING COMMITTEE
	Jessica	Taylor	International Budget Partnership	DELEGATE
	Jim	Taylor	WESSA	DELEGATE
	Zwakele	Thabede	Dept: Water and Sanitation	MEDIA
Mr	Derrick	Thabethe	ACT toilets	EXHIBITOR
Mr	Peter	Thompson		SPEAKER
	HLOPHE	Thulani	Umgeni Water	DELEGATE
Mr	Joseph	Thupae	Dept: Water and Sanitation	
Ms	Annemarie	Tiedt		EXHIBITOR
Mr	Ernst	Tiedt		EXHIBITOR
Ms	Pamella	Tiso	Duncan Village	SPEAKER
	Carley	Truyens	BORDA	DELEGATE
	BERNARD	TRYON	Protector	
	Vukani	Tshabalala	Dept: Water and Sanitation	DELEGATE
	Mdibanisi	Tsheke	Rand Water Foundation	DELEGATE
Ms	Pamela	Tshwete	Deputy Minister	
	Mikganet	Tsotetsi	EKWAT	
	Warren	Turner		EXHIBITOR
Mr	Andre	Van der walt	Dept: Water and Sanitation	DELEGATE
	Keith	van Wyk	SABC	MEDIA
Mr	Fred	van Zyl	Dept: Water and Sanitation	DELEGATE
	Konstantina	Velkushanova	University of KwaZulu-Natal	EXHIBITOR
	Thandeka	Vilakazi	Harry Gwala District Municipality	DELEGATE
	Thubelihle	Vilane	ENCA	MEDIA



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Title	Name	Surname	Organisation	Registration Status
Mr	Dave	Wilson	eThekwini Water & Sanitation	DELEGATE
Mr	Peter Andrew	Wilson	Plumblink	
Mr	Stuart	Woolley	Water Research Commission	DELEGATE
	Gugu	Ximba	Chesterville Focus Group	DELEGATE
	Makasi	Xolelwa	Dept: Water and Sanitation	DELEGATE
	Scelo	Xulu	eThekwini Municipality	DELEGATE
	Simphiwe	Xulu	Mhlathuze Water	DELEGATE
	Stanley	Xulu	eThekwini Municipality	
	Sonwabile	Yale	Umlazi User Platform	DELEGATE
		Zimu	Harry Gwala Municipality	DELEGATE
	Bheka	Zondi	Dept: Water and Sanitation	DELEGATE
	Nokuphiw a	Zondi	Harry Gwala District Municipality	DELEGATE
	Nontokozo	Zondi	Umgeni Water	DELEGATE
	Ntombi	Zondi	Umlazi User Platform	DELEGATE
	Alzinah	Zulu	People with Disabilities Focus Group	DELEGATE
	Fundi	Zulu	Office of the Premier (KZN)	PROTOCOL
	Linda	Zulu	Itheke 89.0 FM	MEDIA
	Lungi	Zuma	eThekwini Water & Sanitation	DELEGATE
	Thandiwe	Zuma	uMgungundlovu District Municipality	DELEGATE
	Simphiwe	Zungu	Johanna Road Informal Settlement	DELEGATE
	Caliphs	Zvinowanda	Tshwane University of Technology	DELEGATE



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ANNEXURE 2a: SANITATION TECHNOLOGIES PROGRAMME, 14 MAY



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NATIONAL SANITATION INDABA
Durban, International Convention Centre
14 May 2015

Water Technologies Site Visit to Ethekwini Water Services Projects

Time	Activity	Place	Person Responsible
12:00 – 17:00	SANITATION TECHNOLOGIES SITE VISIT		
11:00	Pick-up at the Durban ICC at 11:00 and procession to 3 sanitation technology demonstration sites	Durban ICC	Dr Inga Jacobs-Mata (WRC)
12:00 – 12:30	Besters Pit Emptying Project	Inanda / Bester's Camp : Area 3 House 388 Imbokodo road / Street no : 108533 Ward 54	Dave Wilson
13:30 – 14:00	Inanda Community Blocks	93 Inanda Main Road turn left opposite African Congregational Church: Africa Land Release area behind Igugulethu Crèche: Ward 55	Lucky Sibiya
15:00 – 15:30	Newlands/Mashu VUNA – Dewats & Agriculture	71 John Dorry Road Newlands East area	Professor Chris Buckley and Lungi Zuma
15:30 – 16:30	Depart for Moses Mabhida Stadium Media representatives depart for Durban ICC	Moses Mabhida Stadium / Durban ICC	
17:00 – 18:00	Light meal	Moses Mabhida Stadium President's Suit	Invited guests
18:00 – 19:00	MINISTERIAL DIALOGUE: Moses Mabhida Stadium, Presidential Suite with key stakeholders Chair: Dhesigen Naidoo (CEO, WRC)		
	Sanitation Technology Assessment & Evaluation	Moses Mabhida Stadium President's Suit	Mr Jay Bhagwan (WRC)
	Health, Hygiene, Education - School Sanitation		Mr Cyprian Mazubane (DWS) / Mr Teddy Gounden (eThekweni Municipality)
	Cooperative Governance / Regulatory Frameworks		Mr Andre Van der Walt (DWS)
19:00	Bus departs for Durban ICC		



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ANNEXURE 2b: SANITATION INDABA PROGRAMME, 15 MAY



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NATIONAL SANITATION INDABA Durban, International Convention Centre 15 May 2015

12:00 – 18:00	Pre-registration and accreditation available on the 14 May in Durban ICC Foyer		
07:00 – 15:00	Registration and Tea/ coffee in Foyer		
08:30 – 09:00	<i>Briefing Session for Speakers in Hall 3C / Briefing Session for Demonstrators in Exhibition Area</i>		
09:00 – 10:15	OPENING PLENARY Chair: Ms Pamela Tshwete, Deputy Minister of Water and Sanitation Room: Hall 3C Standing for National Anthem and African Union Anthem Welcome: Cllr James Nxumalo, Executive Mayor of eThekweni Video of an impactful community voice Remarks by Mr Edward Senzo Mchunu, Premier of KwaZulu-Natal Scene-setting by Ms Nomvula Mokonyane, Minister of Water and Sanitation Presidential Address by Mr Cyril Ramaphosa, Deputy President of the Republic of South Africa		
10:15 – 10:45	TEA/COFFEE BREAK		
10:45 – 11:30	SANITATION PERSPECTIVES PLENARY Chair: Ms Pamela Tshwete, Deputy Minister of Water and Sanitation Room: Hall 3C Sub-Saharan African perspective: Mr Dhesigen Naidoo, CEO Water Research Commission National perspective: Ms Margaret-Ann Diedericks, Director-General, Department of Water and Sanitation Reflections from community experiences: Ms Pamela Tiso, Caretaker of the Duncan Village facility		
11:30 – 13:00	Commission 1: Sanitation Technology Assessment & Evaluation Chairperson: Nonhlanhla Mkhize, DST Room: Hall 3C	Commission 2: Health and Hygiene Education Chairperson: Lungi Zuma, EMWS Room: 12 AB	Commission 3: Cooperative Governance / Regulatory Frameworks Chairperson: Mr William Moraka, SALGA Room: 12 CD
11:30 – 11:45	Framing presentation: Mr Jay Bhagwan, WRC	Framing presentation: Ms Belinda Makhafola, Department of Health	Framing presentation: Dr Nozi Mjoli, Hlathi Development Services
11:45 – 12:30	Respondents: Mr Neil Macleod, Consultant and former head of eThekweni Water and Sanitation Lindy Morrison, Mvula Trust	Respondents: Dr Sanjana Bharbwaj, UNICEF Mr Thor Axel Stenstrom, DUT	Respondents: Patrick Hlabela, CSIR Peter Thompson, Umgeni Water



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12:30 – 13:00	DISCUSSION	DISCUSSION	DISCUSSION
13:00 – 15:00	LUNCH AND INTERACTIVE TECHNOLOGIES MARKET PLACE Facilitator: Aki Anastasiou, 702 Radio		
15:00 – 16:30	CLOSING PLENARY Chair: Ms Margaret-Ann Diedricks, Director-General, DWS Room: Hall 3C		
15:00 – 16:00	Commission Feedback Panel		
16:00 – 16:30	Closing Ministerial Address: Ms Nomvula Mokonyane, Minister of Water and Sanitation		
16:30 – 17:30	NETWORKING COCKTAIL		



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ANNEXURE 3: MINISTERIAL ADDRESS BY THE MINISTER OF WATER AND SANITATION MS NOMVULA MOKONYANE, ON THE OCCASION OF THE NATIONAL SANITATION SUMMIT, DURBAN ICC, 15 MAY 2015



KEY MESSAGES:

Programme Director,

Water and sanitation are the two opposite sides of the same coin, thus the strategic decision by government to establish the new Department of Water and Sanitation.

Whilst South Africa met its Millennium Development Goals (MDG's) of ensuring access to sanitation in 2010 – Statistics SA suggests that South Africans enjoy 74% access to sanitation. Despite the many strides we made over the last twenty years, we cannot rest until we have universal coverage to dignified sanitation in South Africa.

What then become the Game Changers that can turn the situation around to ensure that we bring about effective and efficient alternative technology to our predominantly water-borne sanitation system?

At the outset, what we need are dignified and sustainable alternatives that should carry the message that “A dignified toilet is not all about flushing.”

Sadly, we have to deal with the sanitation reality that not everyone can get a flushing toilet.

As part of a process to consider sanitation solutions, government needs to create a conducive legislative and fiscal framework that ensure political will and the introduction of a paradigm-shift that challenges the old way of dealing with the sanitation challenges. What is becoming clearer now is the fact that for us to achieve the radical transformation in the sanitation sector we need a sanitation



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revolution. Nothing short of a revolution will achieve the universal access target in the country, let alone Sub-Saharan Africa.

To us the sanitation revolution should become a vehicle through which the objectives of the National Development Programme (NDP 2030) can be achieved in a more organic and integrated manner to realize a people-centric radical strategic socio-economic transformation.

The question that begs an answer is - understanding that South Africa is a water-stressed country - how do we develop a sanitation infrastructure that is effective and demonstrates less dependent on water, yet promotes water re-use and harvesting?

At the centre of this approach, as the deliberations here at the Indaba have pointed out, is the effort at introducing the use of innovative and technological advances that brings about benefits at every step of the sanitation value chain.

Obviously, there can never be a one-size-fits-all technology, and therefore, as we move forward with the sanitation revolution we have to be alive to some factors, such as the climate change as well as geographical and environmental conditions that may impact on the applicability of specific technologies.

This revolution has many dimensions. The first is the systems change as we move from highly centralized, expensive wastewater treatment dominance to one that has a combination of centralized and localized waste treatment.

The second component here is the movement from high-energy waste treatment technologies to low-energy using and actually energy producing waste treatment systems.

The next component of the revolution is water. We must move from highly wasteful water-borne sewerage to low-water and no-water solutions. And where we continue to use water, it has to be majority grey-water. It is incredible that the majority of sanitation still uses drinking quality, very expensive water to flush a toilet.

Flowing from the above framework, we then need to have a sophisticated roll-out model that empowers local communities. The principle of nothing about us without us should serve as a constant reminder that whatever we do, we should not do it for self-gratification, but for the restoration of the dignity of our people.



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The Water Research Commission and Council for Scientific and Industrial Research (WRC/CSIR) social franchising model that was used in Eastern Cape schools is highly encouraging. The School Toilet refurbishing program funded with assistance from both national and provincial government as well as the Government of Ireland trained local players, developed companies with local people who then went on to perform the refurbishment roll-out. This has been recognized by the African Development Bank who are coming on board as the principal funder of the next phase of the project.

The final component is the Governance Model. High-levels of local community participation in governance is the key to ensure longevity, and ward committees must be core to this enterprise. In this connection, we need to empower ward councilors with information about our plans, programmes and offerings to deal with water and sanitation challenges on the ground.

Furthermore, community social mobilization should be at the centre of every programme we intend implementing. What we have seen in the past is that with the best of intentions, without the community involvement and engagement, projects have fallen flat and collapsed.

The issue of constant education cannot be over-emphasized. Educational programmes, both from the hygienic and the technophobia point of view should be put in place to ensure a change in the old habits and culture of doing things.

Importantly also, this sanitation revolution needs a strong social compact and partnerships that straddles across the various stakeholders, both in the public and the private sectors as well as community structures. Collaboration between various the government departments should also take place at the level of planning.

Lastly, it is upon all of us to agitate for this sanitation revolution; however, it is important to prepare our people for such a revolution; lest we become a group of sanitation rebels. We need a common message with many voices.

Indeed, the sanitation evolution has taken us thus far in the last twenty years of our democracy, now is the time for the sanitation revolution to take us to the future.

Dankie.
Ngiyabonga.



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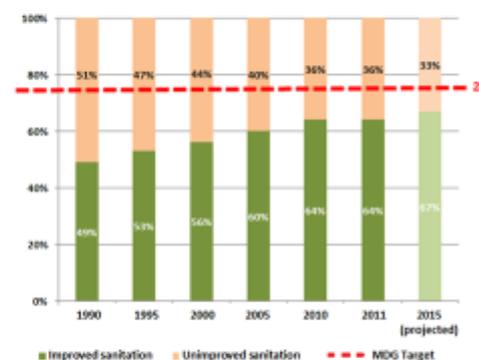
ANNEXURE 4a: SCENE-SETTING PLENARY: SUB-SAHARAN AFRICAN PERSPECTIVE: MR DHESIGEN NAIDOO, CEO WATER RESEARCH COMMISSION



Sanitation: Global Stats¹

- ❑ 1990: 51% of global population with unimproved situation (simple pits, hanging latrines, buckets)
- ❑ 2010: 37% of global population with unimproved sanitation
- ▢ Sanitation coverage in 2011: 64%
- ❑ MDG target: 75% coverage
- ▢ The global target will not be met with current trends – target missed by half billion people
- ❑ Sub-Saharan Africa is much worse with 70% not having access to improved sanitation in 2012

If current trends continue, the world will not meet the MDG sanitation target



¹ WHO / UNICEF Joint Monitoring Programme (2015). Improved and Unimproved Sanitation Facilities. (Online). Available from: http://data.who.int/emis/titles/10100_sanitation.html [Date Accessed: 11 November 2015].



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Sub-Saharan Africa: Stats¹

		Use of sanitation facilities (%)											
		Urban				Rural				Total			
		Improved	Unimproved			Improved	Unimproved			Improved	Unimproved		
		Shared	Other unimproved	Open defecation		Shared	Other unimproved	Open defecation		Shared	Other unimproved	Open defecation	
Sub-Saharan Africa	1990	41	29	20	10	18	8	28	46	24	14	25	50
	2000	41	30	19	10	19	9	29	48	28	16	26	52
	2012	41	35	17	5	23	10	33	54	30	15	26	53

- 1990: 72% Sub-Saharan using unimproved sanitation
- 2012: 70% Sub-Saharan using unimproved sanitation
- Open defaecation and non-shared unimproved sanitation = 50%
- Little attention afforded to O&M of existing sanitation technologies, specifically faecal sludge management (FSM)
- Most households use pit toilets. *What happens when the pit is full? Who empties it? Where do you dispose of it?*

¹ WHO / UNICEF Joint Monitoring Programme (2015). Improved and Unimproved Sanitation Facilities. (Online). Available from: https://www.unicef.org/wash/index_statistics.html [Date Accessed: 11 November 2015].





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A multi-perspective Approach





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Technology As Drivers for Change

- Present **people** with technology that offers convenience
- People** involved in the selection of technology
- Sustainable, affordable and safe**
- Plethora of technologies becoming available:
 - "Off-grid" solutions
 - Water saving technologies with same convenience as full flush toilet
 - Treat waste at the source
 - Low sludge / no sludge production
 - Beneficiation of waste streams that encourages local entrepreneurship (coal & soil substitutes)

Toilets that offer more...

Sanitation provision is expected to cost South Africa around R50 billion (infrastructure and associated costs only)" Report on the Status of Sanitation in South Africa (2012).

- **New technology** enables a **pro-business** approach that links entrepreneurs, households and new products and services.
- Incorporate **social enterprise** with sanitation provision.
- New technology can add valuable products to sanitation supply chain – can be linked to O&M of toilets.
- **Job creation and Enterprize development across Africa.** Possible income generating activities through sale of new technology by-products .
- Example: WRC-funded social franchising project.



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Examples from SRFA Project (Gates/WRC/DST/DWS)



WHAT IF THE SERVICING OF THE NON-SERVED 20% WAS THE THEATRE TO CHANGE THE SANITATION PRACTICE OF THE OTHER 80% ?



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ANNEXURE 4b: SCENE-SETTING PLENARY: NATIONAL PERSPECTIVE: MS MARGARET-ANN DIEDRICKS, DIRECTOR-GENERAL, DEPARTMENT OF WATER AND SANITATION



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National Perspective to Sanitation Provision in South Africa

Ms Margaret Diedricks
Director General



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Introduction

- On 25th of May 2014, the President of the Republic of South Africa announced a new Executive and with this a new department of Water and Sanitation (DWS);
- This process was not only an operational necessity in as far as integration of two complimentary functions – water and sanitation – but a strategic shift to bring about a co-ordinated approach to sanitation delivery within the Sector and South Africa.



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Sanitation Context in SA

- SA met its Millennium Development Goals (MGD's) on Sanitation in 2010 with 74% of the population having access to sanitation;
- An estimated 2,2 million households are still using sanitation facilities below basic level;
- Notwithstanding the above, some 300 000 households are being served with sanitation annually by various spheres of government and funding streams
 - E.g Urban Settlement Development Grant (USDG from Human Settlements) and **2 sanitation grants from DWS complimenting sanitation provision;**
 - 72% of the MIG funding allocated towards Water and Sanitation provision (R7,2bn) of which R3bn to the provision of sanitation infrastructure (sanitation and related bulk infrastructure)



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Sanitation Context in SA

- Lack of credible sanitation backlog statistics to identify hotspots or backlogs safe to say for the Census 2011;
- Acutely aware of rapid urbanisation and migration to urban centres place additional pressure on infrastructure but also the need for services;
- Significant sanitation backlogs in NC, FS, EC, LP and KZN and mostly in rural areas and old townships in urban / peri-urban areas, therefore we need appropriate solutions for different locations;



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A new Water and Sanitation Legislative Framework

- Review of the 2011 Sanitation Policy coupled with the merging of the Water Services Act of 108 of 1997 and National Water Act No 36 of 1998 into a single Water and Sanitation Act;
- Thereafter;
 - Develop Water and Sanitation Regulations;
 - Revise Sanitation Norms and Standards within the following areas i.e Acceptable Sanitation Solutions, the provision thereof and cost of the services;



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Critical Success factors

- Managing community aspirations to access a higher level of service i.e Water borne despite the difficult terrain, bulk infrastructure and water availability to support this level of service;
- Sanitation to be community centred and driven in as far as Job Creation and Skills transfer;
- Build a culture of community ownership;
- Mainstream Health and Hygiene and User education in all Water and Sanitation programmes;



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Key issues that remain a challenge to the provision of sanitation

- Aging and deteriorating infrastructure to support sanitation provision;
- Inadequate bulk infrastructure provision and supply especially on Waste Water Treatment Works;
- Households without access to basic sanitation and incidences of open defecation (unserved communities);
- Vulnerable groups such as Farm workers and communities living in informal settlements without sanitation services;



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SANITATION PROGRESS - MTEF

Two Sanitation Grants

1. Bucket Eradication Programme

- Set a target of eradicating 88 127 buckets in formal areas by December 2015;
- To find suitable solutions to approximately 140 000 households within the informal areas using the bucket toilets as a form sanitation;
- The Sanitation Indaba must assist in the identification of suitable technologies to be piloted and rolled out in informal settlements;
- Bucket Eradication Progress as follows - Free State (4056), Eastern Cape (2672); Northern Cape (2421); North West (398).



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SANITATION PROGRESS - MTEF

Two Sanitation Grants

2. Rural Household Infrastructure Grant – 2014/15

- In the 27 priority district municipalities, the Department delivered **20 437 dry-on site sanitation** solutions to rural communities in the following provinces - Free State (392); Eastern Cape (2334), North West (425), Kwa-Zulu Natal (3903), Limpopo (12933); Mpumalanga (450);



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MOVING FORWARD

- Through the launch of the Sanitation Innovation Challenge and the Sanitation Indaba the Department will explore and identify sustainable and appropriate technologies to respond to sanitation challenges;
 - Technologies should
 - “Green” inspired and sustainable to also look at issues of re-use waste for fertilisers and recycle grey water;
 - Water saving solutions;
 - Promote minimal Operation and Maintenance
 - It should promote water quality that meets minimum effluent standards;
 - More importantly, cost effective to government and the end user or household;



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MOVING FORWARD

- Need for continues innovation in the provision of sanitation and not a “single solution being the only solution”;
- Standardisation of sanitation cost with affordability being paramount;
- Align and co-ordinate all Sanitation Infrastructure Projects (together with the Departments of Human Settlements; Water and Sanitation; COGTA; Environment and Health)
- Lastly and more importantly, ensure budgeting and capacity to attend to issues of Operation and Maintenance (O&M) as a lack thereof will compound sanitation backlogs;



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THANK YOU

WATER IS LIFE – SANITATION IS DIGNITY



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ANNEXURE 5a: COMMISSION 1: SANITATION TECHNOLOGY ASSESSMENT & EVALUATION



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Commission Reportback

Commission #1: Sanitation Technology Assessment and Evaluation
Chairperson: Ms Nonhlanhla Mkhize



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Key challenges

- Limited or lack of technology functionality information
- Lack of standards, regulation and enforcement
- Lack of certification of technologies
- Lack of integrated planning and implementation
- Inadequate understanding of the full costs of technology solutions eg. solutions do not always include O&M requirements
- Lack of technical capacity: decision-makers



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Deficiencies in the enabling environment

- Lack of standards, certification and licensing framework
- Lack of quality assurance
- Lack of regulation and enforcement
- Lack of technology assessment framework
- Engagement with users and technology developers
- Lack or inadequate scientific evidence on performance
- Inappropriate design for SA context



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Key enablers

- Leadership from national government: regulation
- Enforcement by appropriate agencies
- Engagements with appropriate standards agencies eg. SABS
- Human resources: regulation and enforcement
- Appropriate technical capacity: technology assessment and evaluation capacity
- Market and pricing regulation



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Solutions to challenges



- Standards, certification and licensing
 - Enforcement and regulation
 - Market and pricing regulation
 - Empowering the end users in terms of appropriate technology solutions
 - Engagement with technology developers
 - Building technical capacity: financial and O&M for decision-makers
 - Technology assessment and evaluation tool: finalize and make it accessible to appropriate decision makers and end users
- Tool will be piloted towards the end of the year*



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ANNEXURE 5b: COMMISSION 2: HEALTH AND HYGIENE EDUCATION



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Commission Reportback

Commission 2: HEALTH AND HYGIENE EDUCATION
Chairperson: LUNGI ZUMA



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Key challenges

- Myths about hygiene practices for behavioral change
- Measures of the impact (reduction of diseases)
- Resources (funding)
- Failure to deliver behavioral change
- Education vs awareness vs promotion
- Schools sanitation (FUNCTIONALITY)



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Deficiencies in the enabling environment

- Functional sanitation facilities
- Insufficient in-country evidence on impact and approaches (what works and what doesn't)
- Political will translated to measurable action



Key enablers

- Community
- Resource allocation to raise the profile
- Political will





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Solutions to challenges

- Hygiene practices at home (habits)
- Community engagement and participation
- Ongoing monitoring of impact
- Ongoing health and hygiene education
- Integrated approach as game changer
- Skilled personnel for user education



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ANNEXURE 5c: COMMISSION 3: COOPERATIVE GOVERNANCE / REGULATORY FRAMEWORKS



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Commission 3

Commission #: COOPERATIVE GOVERNANCE / REGULATORY FRAMEWORKS
Chairperson: MR WILLIAM MORAKA



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THE TRAJECTORY



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KEY CHALLENGES

- Slow progress in the eradication of backlog
- Distrust of local government by citizens
- Violent service delivery protests
- Weak governance - major obstacle to the eradication OF backlog
- Do we have right or ideal organizational structure to be recommended to the municipalities
- Incorrect use of Sanitation Funds
- Lack of Technical Capacity in municipalities



REGULATORY TOOL

CAPABILITY	ACCOUNTABILITY	RESPONSIVENESS
<ul style="list-style-type: none"> • competent officials • leadership in place 	<ul style="list-style-type: none"> • public participation • Ward Committees 	<ul style="list-style-type: none"> • Pro-poor sanitation policy • Prioritization of sanitation TO ALL
<ul style="list-style-type: none"> • Investment in human capital development • Dedicated resources 	<ul style="list-style-type: none"> • Representative Forums • Use of accountability tools 	<ul style="list-style-type: none"> • Sanitation municipal by-laws in place •
<ul style="list-style-type: none"> • information management system • Sanitation policy & strategy 	<ul style="list-style-type: none"> • Community empowerment • Communication • NGOs playing a role 	<ul style="list-style-type: none"> • complaints & service fault reporting system in place • Protection of the water environment from sanitation pollution



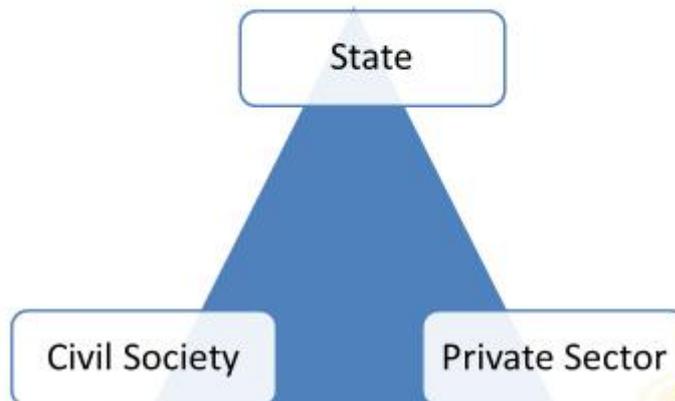


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Co-operative Governance



Main Enablers

- Business UNUSUAL
- As Sanitation Policies and Legislation are being reviewed we must also include review of
 - Municipal Systems Act
 - Municipal Structures Act
 - MFMA/PFMA
 - DORA
- Reduce reliance on water borne system - REUSE/RECYCLE – not only meant for poor – but must be looked at for all users – Waste Recovery
- Sanitation Education
- People to be at core of service delivery & Included in Decision Making
- Placement of National Treasury Trained professionals in LG
- Get a true estimate of O&M cost and allocate appropriate funding
- Use best practice from institutions such as Ethekewini Municipality
- Re-engineer Local Govt and review RBIG
- Review status of WSA's
- Attractive Remuneration for Rural Municipalities

