

# WOMEN IN SANITATION

## Celebrating South Africa's women in sanitation – working hard to provide dignity to all

*A recently held virtual seminar, hosted jointly by the Water Research Commission (WRC), the South African Sanitation Technology Enterprise Programme (SASTEP), and the University of KwaZulu-Natal (UZKN), focused on the experiences of women in the sanitation innovation field. Matthew Hattingh reports.*

Worldwide, big cities traditionally rely on centralised wastewater works and labyrinthine sewers to meet their citizens' toilet-time needs. This big-ticket infrastructure provides for flush-toilets, long prized as the 'gold standard' in sanitation. The trouble is that cities are growing and the pipes cannot keep pace. More to the point, municipalities often lack the cash and the capacity to put them in or to keep them maintained.

In the case of Durban, city finances have been stretched by a COVID-induced economic downturn, last year's July riots and the floods earlier this year (which also swamped treatment plants). To this catalogue of woe must be added water scarcity and the likelihood that climate change will make matters worse.

Prof Cathy Sutherland, an urban geographer at the University of KwaZulu-Natal, suggests: if the city is to honour citizens' constitutional right to basic sanitation, it must start to do things differently.

Sutherland was leading a workshop, hosted by the WRC, on 'Changing the Sanitation Landscape: Narratives of Women in Sanitation Innovation'. And as she and other speakers told the online gathering, 'differently' will require a lot more off-grid or non-sewered sanitation solutions. It should also involve women much more in decision-making, give them a fairer deal in the sanitation workplace, and provide services mindful of their needs.

Drawing on work, field-testing new technology through the university's Water, Sanitation & Hygiene (WASH) R&D Centre, and her research on social transformation, Sutherland presented the webinar with a way of "conceptualising city-wide inclusive sanitation".

The delegates, who all link in what she calls the "sanitation innovation chain", included researchers, engineers, a businesswoman, a municipal official, a community worker, and

the WRC's CEO. These women share a professional or personal interest in making toilets safe, clean and dignified for others.

The workshop explored their work, detailing difficulties and opportunities they face. The delegates grappled with "gendered relations" between men and women, access to power and workplace dynamics. They shared personal stories and revealed home truths about sanitation in South Africa.



Prof Cathy Sutherland

## REFILWE LESUFI



As a child, Refilwe Lesufi vividly remembers going to the toilet at her grandmother's place in rural Limpopo. "You were expected to use a small room which makes you feel claustrophobic and you feel like there might be snakes and other things hiding there."

Those were fretful visits for Lesufi, "privileged" to have grown up in a township home with a flushing toilet. "I realised then there were significant differences in levels of service," she says. Now, many years later, with children of her own and a career as a civil engineer (including leadership roles in her profession), Lesufi recalls that moment of understanding as the start of her "story with sanitation".

Encouraged by her parents and teachers, she did higher-grade maths and science at school, which opened the doors to the University of the Witwatersrand. An Eskom bursary paid her way, with the parastatal also providing her first job. Other jobs followed over the years, including a spell with a firm of consulting engineers, working on the design of municipal water and sewerage infrastructure.

In 2011 she started her own firm, Prana Consulting. It was an opportunity to get into business while realising a passion for "providing services for communities that were unserved and underserved".

Prana did work for the Accelerated and Shared Growth Initiative for SA (AsgiSA) programme. It took Bryanston-based Lesufi to the Eastern Cape, Limpopo and KwaZulu-Natal where she assessed school infrastructure. "I realised there was a dire need for proper, basic level infrastructure, sanitation being one of them," she says. "It was so sad. The pit latrines we were seeing were not properly designed. It was as if they were an after-thought that the schools themselves had to put in. There was no engineering... which made them unsafe."

A 2018 visit to the Reinvented Toilet Expo in Beijing, introduced Lesufi to alternative toilet technology. Here were lavatories that worked without connections to municipal sewers. It was a "lightbulb moment" seeing solutions to the problems she had encountered at the AsgiSA schools.

From 2020 Lesufi has been involved in testing non-sewered flushing toilet technology. It treats wastewater on site, using it

for flushing or irrigation. With the technology proven suitable for local conditions, attention turned to local manufacture, the aim being to drive down costs and make it more affordable, while creating jobs.

Turning to sanitation and gender, Lesufi says women have in the past been excluded from the industry. Men design and construct sanitation products and infrastructure, yet "cannot fully understand the nuances of a woman's needs".

A lack of financial investment by the state and corporates makes the sector a tough place to do business for women, but they need to be there. "As women we bring different values to the table and if we are allowed the opportunity to participate in decision-making it would take the sanitation sector far," she says.

## RUTH COTTINGHAM



Ruth Cottingham's glass is neither half empty nor half full. Instead, it contains a small cake of dried and treated faeces. We are referring to a picture she shared with the webinar of herself, smiling as she lifts a wine glass.

"When I meet someone for the first time and they ask me what I do for a living," she says, "I have to decide how to answer that question. Sometimes I will just say I am an engineer, or I am involved in water and sanitation. But if the person looks particularly brave or interested I tell them the whole truth, which is that I go to work every day... and I test toilets. I love my work." An associate with Durban-based Khanyisa Projects, she tests technologies that aim to offer off-grid alternatives as acceptable to users as any conventional system.

Cottingham grew up in a number of places, notably southern Spain, and life in this drought-prone region gave her an early appreciation of water scarcity. An interest in toilets came later. She studied chemical engineering in Britain and went into the water sector, joining a large consulting firm, working on the design and construction of a number of large, centralised wastewater treatment plants.

Cottingham realised she wanted to deal more directly with environmental issues. Her young life had given her a taste for cultural diversity. Which brings her (by way of a stint in Mozambique) to South Africa – home for the past 10 years.

She is inspired by the “huge variety” of people she works with, especially the users of the toilets themselves, people she had no direct dealings with earlier in her career. “Diversity of perspective makes us do better work,” she says.

Cottingham finds her employers supportive and flexible – something she really valued when her son was little. It’s crucial that women be given space to balance the demands of work and family, so that they aren’t lost from the sector, she says. Like the other speakers, Cottingham touched on the hardships women face with sanitation, especially in informal settlements, adding to the burden of caring for children, the elderly and disabled. “When you need a toilet, it’s not always available.”

She sees the provision of decent sanitation as a social justice issue, crucial to giving people a better chance in life. On solving the global sanitation crisis, she says that alongside developing new technologies, focus is needed on keeping systems running. At many schools in South Africa, she notes, newly installed toilets quickly fall into a state of disrepair. “We need to find better ways of managing operation and maintenance of communal sanitation facilities. Developing good off-grid solutions is only half the challenge.”

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### LUNGI ZUMA

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Chemical engineer Lungi Zuma is delighted more women are entering the sanitation sector. This, and increasing diversity in age and race are contributing to innovation. It’s also creating opportunities in the market for businesswomen, says Zuma, a chemical engineer with the eThekweni municipality’s water and sanitation unit.

“I would love to see women taking more of that space and making money from the sector and not being shy about that,” she says, “we need many more Refilwe’s in this sector.” Zuma is responsible for coordinating eThekweni’s sanitation research work with partners including the WRC, the University of KwaZulu-Natal and the Bill and Melinda Gates Foundation. She tells of the satisfaction the work gives her, “making a positive impact in people’s daily life and bringing about dignity”.

Since 2014, when she began work as a water and sanitation engineer, Zuma has witnessed a shift in the profession from an overwhelming focus on “numbers and technical solutions”,

to “appreciating and recognising there is a social part to the provision of sanitation”. Here she credits the team at WASH. In the development of her own career, Zuma paid tribute to a previous boss, Teddy Gounden. Not only was Gounden supportive, putting her name forward for projects and events, but watching him at work taught Zuma a thing or two about how to “implement innovations within a very rigid and bureaucratic institution like a municipality.”

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### NOKUTHULA KUBHEKA

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When Pietermaritzburg civil engineering technologist Nokuthula Kubheka first started travelling widely for work, it was the novelty of new places that energised her. These days, helping other women in sanitation provides the biggest satisfaction.

Employed by consultancy Partners in Development, Kubheka’s work includes coordinating and leading field teams on sanitation research projects and training school janitors. “The majority of people doing this job are women and no-one recognises or supports them,” she says. Understanding the difficulties women like this face and including them in decision-making is vital to motivating them and for the success of projects.

She appreciates her boss David Still’s no-nonsense approach. “He is a leader and he gets his hands dirty. Gender seems not to exist for him. Male or female, we all get our hands dirty and he makes us jump from ridiculous heights, after him of course.”

Kubheka, who cut a natty figure at the webinar, points out to delegates a glamorous picture of herself in her opening slide – peroxide hair-do, bright lipstick and a floaty top, sitting at a trendy street café – and contrasts it with another pic, this time she’s wearing blue overalls and operating a Pitvaq pit latrine emptying machine.

“I do get my hands dirty,” she says, speaking of her pride in her work. But she acknowledges that on bad days she questions her career choices. Sanitations, she says, is a male-dominated field. But she is resolute and points out that women are slowly finding their voice and “challenging men in addressing sanitation and social issues in their communities”.

**NOMANDLA NQANULA**



That progress is being made to provide safe and dignified sanitation is apparent from Nomandla Nqanula's presentation. Equally clear is the mountain of work ahead if the lives of millions are to improve, particularly women living on the margins of our cities.

Nqanula is an "Enviro-Champ". A resident of Durban's Quarry Road West informal settlement, she has been trained to keep tabs on leaky taps and to report sanitation problems, uncollected waste and other faults to the municipality. She is also part of efforts to improve the condition of community ablution blocks (CABs) in her area.

Quarry Road West, sandwiched between the M19 highway and the banks of Palmiet River (a tributary of the Umgeni), was hard hit by the April floods. "Since the floods, we cannot clean up the waste in the riverbed in Quarry Road. As there are no functioning toilets, people are using the riverbed to go to the toilet," she says, "This makes our work very difficult as the sewage is mixed with the solid waste."

The municipality's introduction of CABs some years ago has been widely welcomed. But keeping a total of 1200 CABs in a fit state is a stretch. They may be called "restrooms", says Nqanula, but for the women who use them the experience is anything but restful.

"The CABs do not always work so we have to share the working CABs with men. You feel very uncomfortable while you are inside with them." Men frequently fail to knock – "so you have to watch out for yourself" – while others smoke inside.

She says women risk diarrhoea as well as urinary tract infections from long waits in toilet queues.

Sometimes there are no bins for sanitary pads at the CABs. This "leaves you with no confidence and everyone likes to look at you when you come out of the toilet, especially men". Desperate for privacy, some wait till after dark, but doing so brings its own troubles. "A woman we know went to the CAB at night and she was attacked. Luckily she screamed and fought back." Nevertheless, Nqanula sees opportunities for change and welcomes the support of engaging in innovative sanitation projects.

**JENNIFER MOLWANTWA**



Jennifer Molwantwa, as of April the first black woman chief executive officer in the WRC's 50-year history, spoke about the role others have played in fostering her career. She called on women to identify and nurture talent in others.

"Be intentional about it. Don't just hope it's going to happen. That is the main challenge for our country. We are hoping there will be a pool of excellent women leaders coming from somewhere when we are not doing the work," she says.

The country faced a "leadership challenge" in achieving gender parity in the boardroom and workplace and action was needed. The WRC, she says, is stepping up – making it a point to increase the number of women in research.

Women leaders have a role to make space for others, she says. "History will judge us if we don't make sure women are nurtured and taken onto the centre stage."

*"Women are slowly finding their voice and challenging men in addressing sanitation and social issues in their communities."*