**NEWS ARTICLE**

AECOM women scientists pave the way for community upliftment

**Sustainable Legacies champions collaboration with clients and stakeholders to leave a positive, lasting impact on people and the planet**

**10 February 2023:** In celebration of the [International Day of Women and Girls in Science](https://www.un.org/en/observances/women-and-girls-in-science-day) on 11 February, we talk to three women forging a path at globally trusted infrastructure firm [AECOM](http://www.aecom.com) and the role that science plays to promote development and empower local communities. This is an important part of AECOM’s Sustainable Legacies approach, which sees it collaborating with its clients and stakeholders to leave a positive, lasting impact on people and the planet.

**Elisabeth Nortje, Associate Director – Environment, Africa, AECOM**

Elisabeth manages the African environmental team. She has a BSc and Honours in Geology and a postgraduate qualification in environmental science. “I never set out to study science,” she says. Rather she wanted to study something she was interested in pursuing as a lifelong career. Her path to environmental science opened up while at university, prior to which she contemplated medical school.

“I never as a child walked around and said to everybody that I am going to be a scientist,” says Elisabeth. However, she did receive a lot of support from her parents, grandparents and long-term friends. As for career highlights at AECOM, she points proudly to her team, which is largely women. “Working with my team and getting to know them has certainly been a highlight.” Also noteworthy has been the exposure to different cultures and perspectives afforded by working on major international projects, including Saudi Arabia.

“The role of science is to see the bigger picture and how the world functions as a system.”

Commenting on the role that science plays in society, Elisabeth highlights **Leonardo da Vinci** as an exemplar of the profession. “He was not interested in just one aspect of science, he looked at art, engineering, literature and drawing as a science. The role of science, whether it is physical or natural or social, is to see the bigger picture and how the world functions as a system, with all parts interconnected.”

Elisabeth adds that the common perception of science is biology or physics, without realising that the social sciences are critical to the scientific debate. “For me it is about listening to the information coming through from the social sciences about what is required and from our leaders about the development imperatives, and then responding by coming up with solutions that are appropriate in the context that they are required.”

While academic and research pursuits do play a role, “it does not help if you design a pipeline and then get into the field only to discover you have not taken a host of other factors into account. Science is about an appropriate response to a specific problem. You listen, understand, and come up with the best scientific design or solution. If we approached it in that way there will probably be a lot of problems that we can resolve.”

Elisabeth’s message to young girls contemplating a scientific career is simple: “Just do it. Do not let anybody tell you that you cannot or are incapable of doing it. At the same time, do not let them try to tell you that you must do it. I think it is important for young girls to be given the opportunity of choice, to choose what they want to do with their lives. If that is science, then pursue it with everything you have. There should be no obstacles and the playing field must be level in terms of access, encouragement and opportunities for funding.”

**Mieke Barry, Technical Director – Environment, AECOM**

Mieke says she did not know what she wanted to do when she grew up. “I would flit between wanting to be a pilot and working for UNICEF or being an archaeologist. Not once did my family say no, you should not do that. That made me brave enough to go out and try different things. So, when I went to university, I decided that I would study subjects I enjoyed. I ended up majoring in History and Geography for my undergraduate, which fell under the Arts Faculty. In my third year I discovered Environmental Geography and went on to do my Honours and Masters in Environmental Studies. All my scientific training, therefore, was gained on the job.”

For Mieke, one of the highlights working for AECOM (and previously one of AECOM’s legacy firms, URS in the UK) has been working on projects all over the world such as Azerbaijan, the UK, The Gambia, Mozambique and South Africa. Working for such a global company has resulted in meeting people from different cultures, with diverse points of view, all coming together to solve difficult problems. “The more complex a project and the more frustrating, the more I thrive,” says Mieke. “That is something I really enjoy, and AECOM affords you the opportunity to work on complex projects.”

As for the role of science, the crux of sustainable development and uplifting communities is talking to the affected people to comprehend their actual needs and struggles and what the community understands about the intentions behind projects. “If you do not consider the context of the people living there and their needs, your project will likely fail. The community’s buy-in is pivotal to the success of any project,” warns Mieke. “Even though we are scientists, we do need to understand the social aspects, and approach projects holistically.”

She stresses: “If we want to uplift communities, we must be there for the full lifecycle of the project, right from the beginning to the very end, with monitoring and compliance in place to ensure projects commit to the promises and deliverables made to communities.”

“Sustainable development should not always only focus on green and clean spaces.”

Mieke adds: “Sustainable development should not always only focus on green and clean spaces. It needs to embrace the so called ‘dirty industries’ such as mining as well. You cannot just ignore such industries as they are not going to suddenly disappear. You need to approach those clients and ask how we can help them become more sustainable. Sticking your head in the sand by ignoring dirty industries will not assist to achieve sustainable development.”

Her message to young girls is to always be open to opportunities. “You may have a set path and say this is what I am going to achieve in two and five years’ time, but be open to opportunities that present themselves to you. It may take you in a different direction and sometimes may not even work. But out of these experiences you will always learn and gain some useful insights and add to your capabilities.”

**Namso Nyamela, Junior Environmental Scientist, AECOM**

As a junior member of Elisabeth’s team, Namso admits she has a lot to learn, but an exciting road lies ahead of her. She is armed with a BSc (a triple major in chemistry, geography and environmental science), Honours in Environmental Water Management and an MSc in Geography. “Key people showed me support and always pushed me to do something extra,” says Namso.

She pays tribute to the Moshal Scholarship Programme, which largely funded her studies. “What I gained was not just an education, but a lot of soft skills development as well.” This ranged from stress management to how to write a CV and prepare for an interview. “We met with industry experts and had career interviews with a panel. I have gone through the system and am myself now on the panel, usually as the only environmental scientist,” Namso says proudly.

“We play a role to achieve development and environmental protection for local communities.”

She contemplates a future career of uplifting local communities. “I believe we play a role in achieving development and environmental protection for local communities, holding developers accountable to what they commit to, in tandem with achieving their business goals and giving back to the community. We give communities a voice through public participation and stakeholder engagement. We empower them to use that voice, so the developer can understand their needs, and for the community to understand what is happening around them.”

Namso believes that the process invariably concludes with opportunities for employment, training and local development. It opens the world to children in the community, making them aware of opportunities. It also informs as to how vulnerable groups are perceived, as well as resource sensitivities, so that scientists can find solutions to build resilience. “It takes collaboration by different experts and integration of knowledge, to look at these issues holistically, to come up with workable, transdisciplinary solutions. As scientists, we also play a critical role in evaluating whether we are achieving what we set out to do and ensuring we pursue every opportunity to do so.”

Namso’s message to young girls is to keep an open mind. “I changed industries and embarked on an environmental career path, which made me grow and identify what really speaks to me. Also in an economy with almost half the youth unemployed, it is important not to fixate on one particular career path. You are spoilt for choice, as environmental science is wide and there is a lot to tap into. You have to keep an open mind due to the economic situation and the difficulty of making a start in any career.”

Namso concludes: “Do not wait for someone else to do it for you. You must get your hands dirty. You cannot hope someone else will open the door for you. You need to engage with people and opportunities and ensure you get things done.”

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**Notes to the editor**

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