'Bridging that gap between scientists and ordinary folks': How storytelling combats anti-GMO advocacy



any Africans still don't understand scientists, or what they do. Scientists are widely seen as aloof and detached — a misperception has negatively impacted societal attitudes toward scientific innovations on the continent.

Now <u>Science Stories Africa</u> is bridging that gap between scientists and ordinary folks. By giving scientists the chance to come out their labs and into theaters to share the stories of their personal lives and research experiences, the initiative is gradually changing societal views of scientists and their research innovations.

"Stories are about people and science is done by people," said Patricia Nanteza, associate director for Science Stories Africa and <u>associate director of training</u> for the Cornell Alliance for Science. "When scientists tell their stories of what motivates them to do what they do, the reasons behind what they do, and the challenges and setbacks they go through before coming up with groundbreaking innovations, then society can relate to them and start looking at them and their research differently."



Science communicator Patricia Nanteza.

In other words, Science Stories Africa is about people — their struggles, joys and triumphs as they navigate the world of scientific research.

Nanteza and her program train scientists to talk about their lives and research/findings in simplified story forms that can easily be understood and appreciated by non-scientists. They are then encouraged to share their experiences with the public in a theatre or video presentation.

"The program is providing a platform for African scientists to tell the story of how technology offers solutions to African challenges," said Isaac Ongu, executive director for the Science Foundation for Livelihoods and Development.

How it started

"As a science communicator, I struggled with the question of behavioral change," Nanteza said. "Why is it

that there are many life-changing innovations in Africa by Africans but adoption and appreciation is low? This is especially true in the GMO conversation, where people say they don't want GMOs but when you explain the concept to them, they realize they have no problem with genetic engineering and its products. It then dawned on me that we need more awareness, but in a way that makes science both fun and accessible, which is storytelling."

So, Nanteza engaged specific scientists she knew at Uganda's National Agricultural Research Laboratories (NARL) and Makerere University, pitching to them the concept of storytelling and how it could improve public perception of science in the country and continent.

The scientists were receptive of her idea, which meant she then had to translate it from a concept into reality.

She organized the <u>first Science Stories Africa live engagement</u> at the National Theatre in Kampala in June 2019. Reknowned scientists, including Dr. Priver Namanya, a NARL biotechnologist, and Alphonse Candia, an engineer with the Ministry of Agriculture's Mechanization Resource Center in Namalere, told stories about their "ups and downs" in research.

"It was a big success," Nanteza said. "More than 200 people were inside the theater. listening attentively to the scientists. It was gratifying, the whole experience."

Nanteza knew then that she had to train more scientists in how to tell their stories in simple, engaging ways that the general public can understand. She began organizing subsequent editions to change public perceptions about scientists and their research.

But then the COVID-9 pandemic hit, causing Nanteza to cancel an event she had planned to stage in Nigeria in early 2020. As the pandemic continued, she moved to an online format late last year.

Among those participating in the online event were Dr. Misaki Wayengera, who chronicled his "successes and failures and successes" when developing a diagnostic kit for Ebola he developed in 2017.

"One of the most devastating moments for a scientist is when your experiments don't work like you expected," Wayengera explained. "Every time you want to go to sleep, you can't. You keep thinking about what could have gone wrong... why your tests won't work."

On the other hand, scientists find it particularly gratifying when their experiments work out as they expected.

"It's very difficult to explain the emotions to other people, but it is such a fulfilling thing — especially when you have been trying for long," Wayengera said.

He called on African governments to "invest in science."

"Infectious diseases remain a big challenge in Africa and the region," Wayengera said. "We have to invest in science and these [genetic engineering] technologies to find solutions to our challenges."

Leena Tripathi, principal scientist in plant biotechnology at the International Institute of Tropical Agriculture (IITA) in Kenya, told a passionate tale of how in 2004 she embarked on research to give farmers a banana variety that is free from bacterial wilt. But 16 years later, farmers still cannot access these improved varieties "because we don't have a law that governs the use of genetic engineering here."

"Some people are hesitant when you talk about these improved varieties," Tripathi continued. "But these varieties are safe. Genome editing allows scientists to make specific changes in the DNA of a particular organism. We used CRISPR Cas9 to deactivate the banana wilt. The [improved bananas] are just the same, except they don't have banana wilt."

Pamela Paparu narrated how she was encouraged to start her research to give smallholder farmers better bean varieties that are resistant to root disease after she saw common bean gardens dying.

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"These stories show us that scientists are human," Nanteza said. "Listening to their stories makes us appreciate science and what it can do to transform our societies."

Moving Science Stories Africa online created a different experience for Nanteza and the scientists.

"We had to train scientists to tell their stories in an empty theater but still act as though there was an audience," she said. "We missed that contact interaction" with the audience.

But it paid off by allowing them to reach more people — 750. Now Nanteza is planning a second online event.

"We are celebrating African science," she said.

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