

MEET THE MEMBER - PAUL KATO

Area of Expertise: Hydrogeologist

Years' Experience: 8 years

Nationality: Ugandan

GWR Joining Date: September 2020

Number of GWR projects complete: 5

GWR Projects: groundwater exploration (using 2D ERT) at 5 refugee Camps in Chad; borehole siting (1D geophysics) for a health centre in Bambari, Central African Republic; digitization of borehole records from Cox Bazar, Bangladesh.



Collecting 2D ERT geophysical measurements in Chad, December 2023

PROFESSIONAL BACKGROUND

An introduction to your background in groundwater...

I hold a degree in Geosciences, which provided a solid foundation in groundwater through various course units, including Geophysics, Petrology, Sedimentology, Structural Geology, Remote Sensing, Drilling Methods, etc. These course units equipped me with a comprehensive understanding of the principles and techniques essential for a career in hydrogeology and geophysics. After completing my studies, I was eager to apply my knowledge in a practical setting. I began my professional journey in March 2017 as a graduate trainee at WE Consult and I have over the years worked on diverse projects in Uganda, Rwanda, DRC, Central African Republic, South Sudan, and Chad, focusing on water supply and groundwater management. My experience has encompassed borehole siting, drilling supervision, and managing groundwater resources, among other projects. I've had the privilege of collaborating with talented professionals and contributing to impactful projects, further enhancing my skills and expertise in groundwater.

A brief overview of your day job outside of GWR... my role is very dynamic. I might be conducting fieldwork, collecting geophysical data, and drilling boreholes one day, and collaborating with stakeholders to design and implement groundwater management plans, monitor water quality, and provide expert advice on water supply development and resource management the next. What I enjoy most about my job is the diversity of tasks and the opportunity to work on projects that have a tangible impact on communities. I find it fulfilling to see how my expertise contributes to providing clean water, managing groundwater resources effectively, and making a positive difference in people's lives.

Your inspiration in pursuing a career in groundwater...

I was fortunate enough to secure a graduate traineeship at WE Consult, a Ugandan company specializing in water and environmental consulting, immediately after graduation. It was during my time at this company that I was introduced to the practical aspects of groundwater exploration and production. My fascination with geophysics, combined with the experience of seeing the positive impact of our work on communities, particularly a project where we provided boreholes for schools, solidified my desire to pursue a career in groundwater. Witnessing the gratitude and smiles on the teachers' faces, knowing that students no longer had to risk their safety to access water, was truly fulfilling. It reinforced my passion for this field, as I realized that my work could contribute to improving the quality of life for others. This experience has been a driving force behind my pursuit of a career in groundwater, and I continue to find motivation in the knowledge that my actions can make a meaningful difference.

INSIGHTS AND EXPERIENCES

A particularly challenging groundwater issue you've encountered and how you addressed it... this has to be the misconception that groundwater is universally present beneath the subsurface. This often leads to communities limiting the areas where hydrogeologists can survey, making it difficult to identify potential water sources. To address this, I've developed a community-focused approach, educating stakeholders on the principles of groundwater occurrence, flow, and recharge. By sharing my expertise and explaining the scientific basis for our survey methods, I've been able to build trust and collaboration with communities, ultimately identifying effective solutions for their water needs.

What you believe to be the most pressing challenges related to groundwater and water supply today.. the knowledge gap and lack of mentorship between senior hydrogeologists and early to mid-career hydrogeologists. The widening experience gap and inadequate knowledge transfer can lead to mistakes and mismanagement of groundwater resources, ultimately threatening the sustainability of our water supplies. If left unaddressed, this brain drain may have long-term consequences. It's essential we prioritize mentorship, training, and knowledge sharing to ensure the next generation of hydrogeologists is equipped to manage our precious groundwater resources effectively.



1D geophysics in Iganga Uganda, 2021.

The best piece of advice you have ever received... As a hydrogeologist, I've been fortunate enough to align my career with my passion for providing clean water and improving communities.. The best piece of advice I've received is from Steve Jobs' commencement speech at Stanford, where he said, 'Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do.' This advice has been a driving force in my career, reminding me that my work is not just a job, but a calling to make a meaningful difference in people's lives. Whether it's conducting fieldwork, collaborating with stakeholders, or educating communities about groundwater, I'm reminded that my efforts are making a tangible impact on people's lives. This passion and purpose drive me to continue striving for excellence in my work.

The alternative career path you would have chosen if you weren't a hydrogeologist... If I weren't a hydrogeologist, I would likely have pursued a career as a geophysicist in the oil and gas industry. My fascination with the Earth's subsurface and my passion for problem-solving would have led me to explore the field of geophysics, applying seismic and other techniques to understand the subsurface structure and identify potential resources. I believe my skills and interests would have translated well to a career in geophysics, and I would have enjoyed the challenges and opportunities that come with it.



Taking basic water quality measurements in Metche, Chad, 2023.

Where you find the most enjoyment working in groundwater... the sense of purpose and fulfilment that comes with discovering a successful well. Knowing that my efforts will directly improve the quality of life for communities, providing clean water and reducing the burden of long-distance water collection, is incredibly rewarding. In some cases, it's even more meaningful, as access to nearby water sources has been shown to reduce instances of gender-based violence, such as rape, by eliminating the need for women and girls to travel far from their homes to collect water. The positive impact on communities, combined with the thrill of exploration and discovery, makes my work in groundwater truly fulfilling.



Measuring water level from a manual drilled well in Metche, Chad, 2023.

GWR INVOLVEMENT AND ADVICE

What motivated you to join GWR's membership...

Firstly, I've always been driven to make a positive impact on communities and contribute to humanitarian efforts. GWR's mission to bridge the gap between experts and organizations resonated deeply with me, and I saw membership as an opportunity to tangibly make a difference. By joining GWR, I felt I was taking a crucial step in aligning my professional skills with my passion for humanitarian work.

Secondly, I was attracted to the prospect of being part of a community of like-minded professionals who share my enthusiasm for groundwater and its role in improving lives. I believed that GWR's platform would offer me the chance to collaborate, learn from, and share knowledge with experts in the field, ultimately enriching my understanding and enabling me to make more meaningful contributions. The sense of belonging to a community that values knowledge sharing, collaboration, and collective impact was a significant motivator for me to join GWR's membership.

The most rewarding project you have worked on with GWR...

While every project with GWR has been unique and fulfilling, one that stands out for its emotional impact was working with refugees from Sudan now living in settlements in Chad. Hearing their heart-wrenching stories of displacement, loss, and resilience in the face of adversity was deeply moving. The harsh reality of their daily struggles, including accessing only 4-5 litres of water per person in a region with extreme temperatures, was a stark reminder of the importance of our work. Being part of the team that helped a humanitarian organization (MSF) identify areas to drill more wells, with the goal of increasing access to clean water for these vulnerable communities, was incredibly rewarding. Knowing that our efforts led to successful wells and a subsequent increase in the daily water supply for each person was a testament to the impact of our collaboration. This project served as a poignant reminder of the power of collective action and the difference we can make in the lives of others. It's experiences like these that fuel my passion for continuing this critical work with GWR.

A memorable experience from your work with GWR...

One memorable experience that stands out from my work with GWR is the sight of countless camels, donkeys and horses in Chad. Coming from Uganda, where sighting camels is a miracle and horse rides are a luxury reserved for adventurous Ugandans, I was fascinated to see these magnificent creatures (camels and donkeys) being used as a primary mode of transportation by the local population. It was a striking cultural contrast that left a lasting impression on me. While I didn't get the chance to ride a camel during my visit, it's an experience I look forward to having in the future. The image of those camels, donkeys and horses, carrying people and goods across the desert landscape, has become an enduring symbol of my time in Chad and a reminder of the unique experiences that come with working in diverse cultural contexts.



Advice you would give to someone aspiring to get involved at GWR... my advice would be to embrace the opportunity with an open mind and a willingness to learn. Be prepared to collaborate with individuals from diverse cultural backgrounds and beliefs, united by a shared goal. This journey will not only broaden your cultural understanding but also challenge your assumptions and expertise. Embrace the chance to learn from a talented pool of professionals and be open to constructive feedback. Stay humble, curious, and flexible and you will thrive in the GWR community. Remember, the collective expertise and passion of the team are the driving forces behind the organization's impact, so be ready to contribute your skills and experience to the collective effort.

How being an active member of GWR has benefitted you professionally and personally... Being a member of the GWR community has been a transformative experience, both professionally and personally. Professionally, I've gained invaluable insights and knowledge from collaborating with a diverse group of experts, each bringing their unique perspectives and experiences to the table. I've learned to approach challenges with a more nuanced understanding of cultural and technical considerations.

On a personal level, I've formed lasting connections with individuals from around the world, fostering a sense of global citizenship and community. These friendships have enriched my life, and I continue to draw upon their wisdom, guidance and support.

Hopes for contributing to the GWR community in the future... I aim to support young professionals by offering technical guidance and mentorship, sharing my expertise and experience to help them navigate complex challenges. I believe in empowering the next generation of water resources professionals by providing constructive feedback, encouragement, and support. My goal is to help them build confidence in their technical skills, develop their problem-solving abilities, and foster a commitment to excellence in their work. By doing so, I hope to contribute to the growth and development of the GWR community, ensuring that our collective knowledge and expertise continue to drive positive impact in the world.