



2023 Newsletter

A message from the Board of Directors:

We are very gratified (and a bit proud) to present this summary of the SAM Project's achievements in this past year of 2023. We continue to bring about significant and enduring change in Southern Africa through hard work, strategic collaborations, and the surgical application of resources.

The achievements you will read about in this report are very much the result of a team effort between our Zambian colleagues, North American staff and technical advisors, several universities, and our funding partners and donors.

Although it's considered regressive by some to talk about climate change "adaptation", there is no doubt that the population we serve has an existential need to adapt to an increasingly harsh environment. So even in this time of considerable global uncertainty, both climatic and political, we are excited about what we accomplished in 2023, and the future prospects of reaching a larger community, both by replicating our programs in other regions, and collaborating with other agencies.

This work is made possible by your support of our small, no-nonsense, no-frills organization. We are extremely grateful.

Best wishes to you and yours for the Holiday Season!

Colin Eves
On behalf of The SAM Project Board of Directors



Who we are, and what we do:

The SAM Project is a Canadian-registered charity implementing rural development programs in Southern Africa since 2007. We are focused on three fundamentals of human life: access to water, food security, and childhood nutrition.

Our priority is to develop local capacity: empowering communities through training, education and technologies to design and implement solutions to the challenges they have identified as most critical to their survival and future prosperity.

SAM's 2023 in Numbers:

6

New waterpoints at central schools, equipped with easy-to-maintain pumps, drilled to drought-resilient depths

7,459

People gained access to clean water who were previously walking kilometers to dig for water from unprotected sources

12

Community pump mechanics trained in mobile survey technology to collect data on water points to inform water development

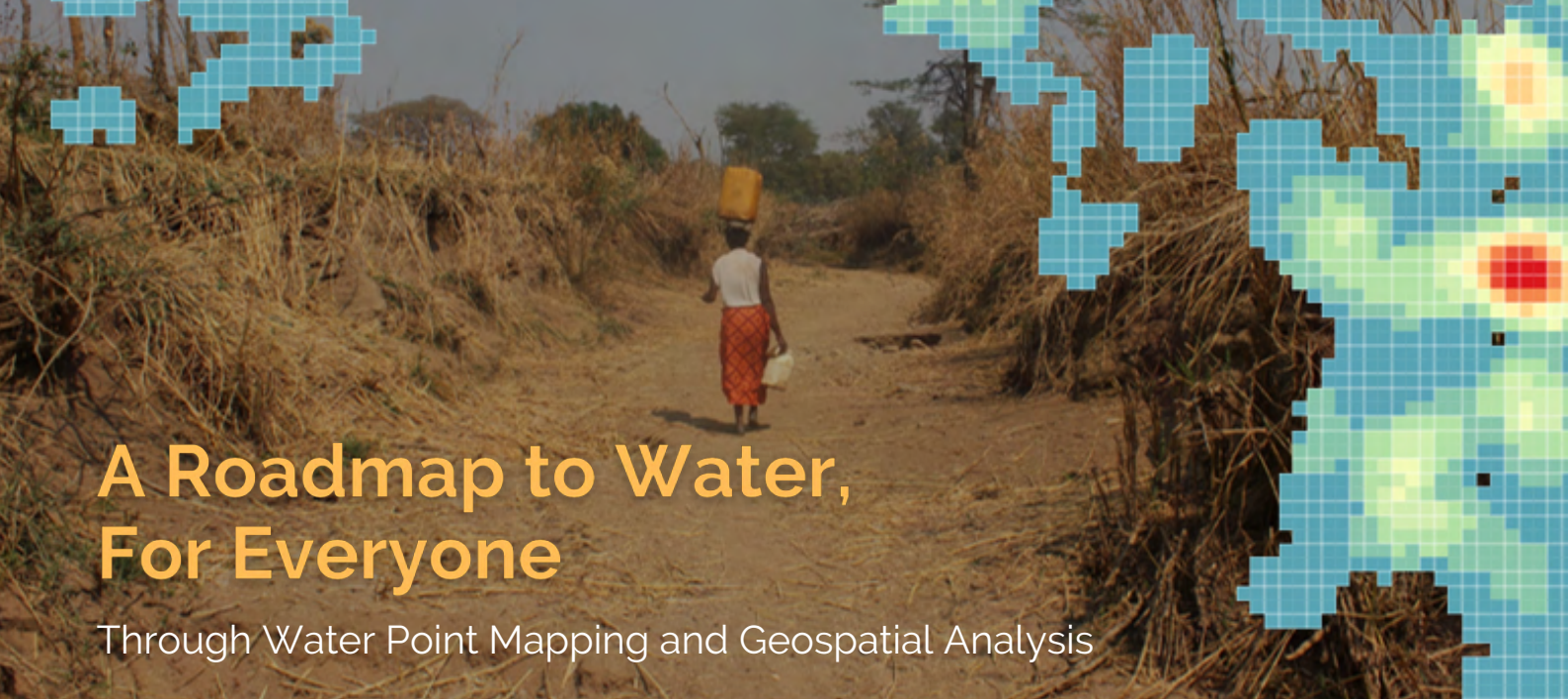
318

Waterpoints mapped to build a roadmap towards 100% access to water in Zimba District

5

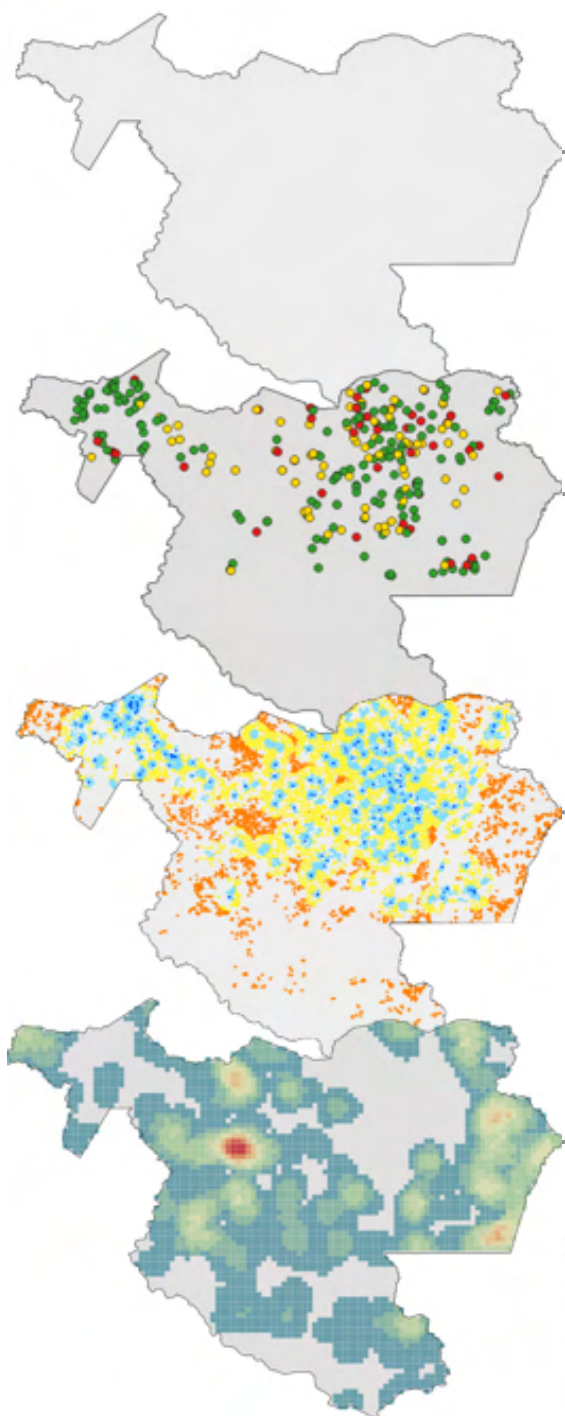
Zambian water professionals supported to further their careers through tuition support, international training, and work opportunities





A Roadmap to Water, For Everyone

Through Water Point Mapping and Geospatial Analysis



The Problem

Imagine being faced with the decision of where to allocate a waterpoint on this blank map. Without data on which communities have water and which ones don't, decision-makers are vulnerable to redundant, scattered development that makes little impact on the most severe water scarcity.

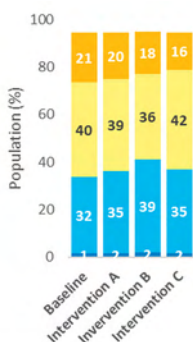
Mapping Waterpoints

The first step towards informed water investments is understanding where waterpoints are. SAM worked with Rebecca Tembo (Department of Rural Water Supply and Sanitation) to train pump mechanics to collect data on 318 pumps. Not only location data is collected, but data on maintenance needs to inform community capacity-strengthening programs as well.

Evaluating Water Services

Through the use of satellite-derived population maps, it is possible to estimate which communities have access to water, and which ones don't. The distance between settlements and waterpoints is used as a proxy for possible "water service levels", allowing for the monitoring and evaluation of water supply access in the District.

Strategic Actions towards 100% Access



Further analysis enables water developers to prioritize water investments that will have the largest impact. A new waterpoint has the potential to benefit 0 people (because they already have access to water) or over 1000 people who are experiencing water crisis. This analysis allows for water developers to strategically choose investments that will bring water to the most people, in the most need.



Kujana ("to find"):

Improving well drilling success rates in poorly weathered bedrock terrains

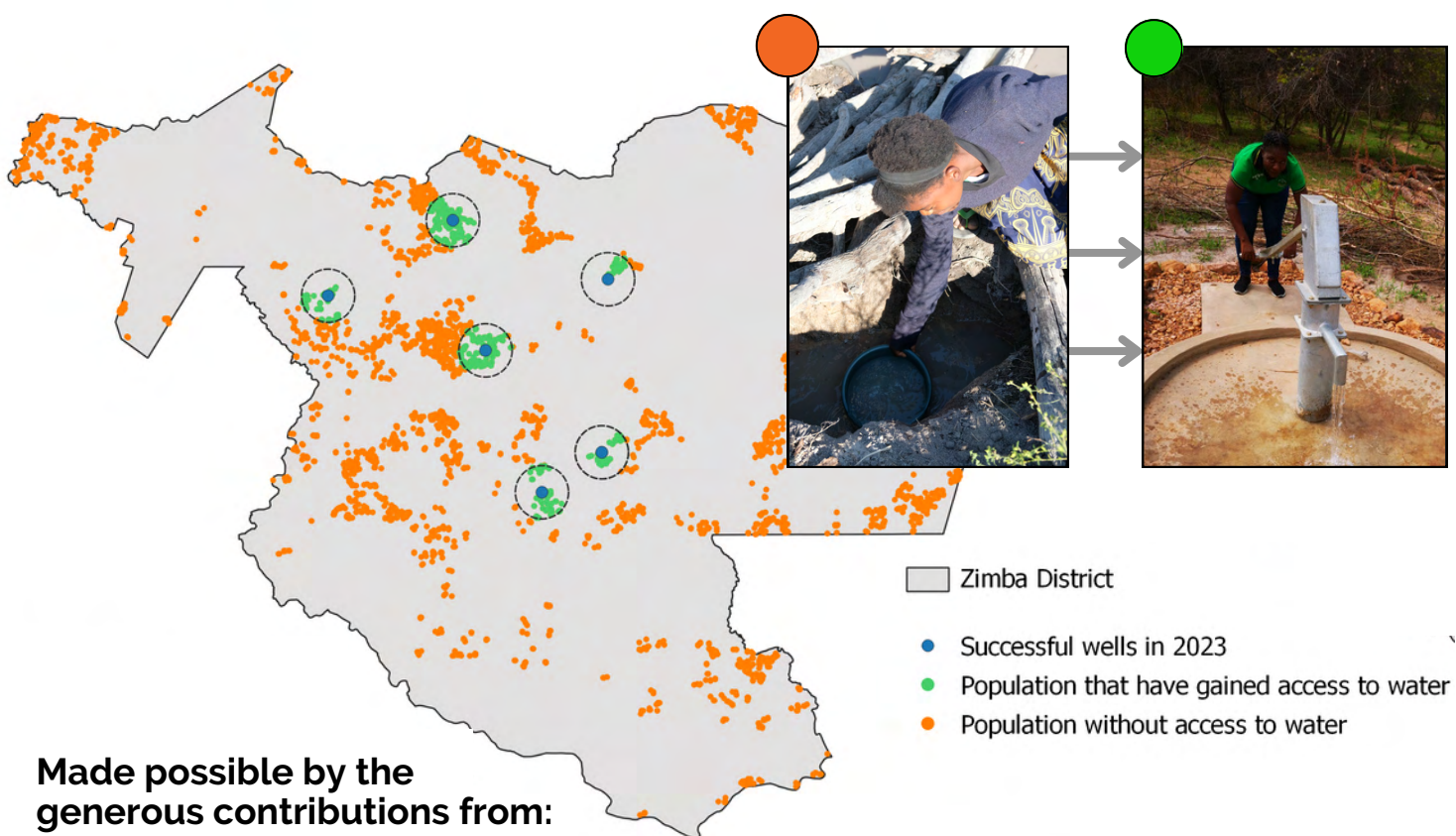
Project Goals:

1. Identify and promote suitable geophysical methods for areas with difficult well drilling conditions
2. Provide a field school opportunity to Zambian students and equip them with employable skills in the rural water development sector
3. Improve access to clean water through the installation and repair of borehole wells at schools and clinics experiencing the worst water scarcity in Zimba District

Project Outcomes:

1. The methods tested improved drilling success rates from ~10% to 75%
2. A total of 13 Zambian undergraduates and recent graduates were included in 3 field schools teaching the entirety of the rural water development project cycle.
3. Successful new waterpoints were installed in 5 schools and 1 clinic, and 4 repairs were supported.

SAM successfully delivered on the promised outcomes of our Kujana water project. Kujana, a multi-agency effort designed and managed by SAM, led by Kate Chadwick, funded by GeoScientists Without Borders, with geophysics delivered from BGC Engineering. In 2023, the final phase of the well-drilling component of Kujana resulted in the establishment of 6 successful wells, finding water in places that other organizations had given up on, one with 11 previous failed drilling attempts.



Made possible by the generous contributions from:





Kujana Highlight Christopher Kanteene From Intern, to Drilling Supervisor

Christopher Kanteene is a recent graduate from the Copperbelt University in Zambia where he obtained a Bachelor of Science in Mining and Exploration Geology.

Chris joined SAM in 2022 as an intern supporting our groundwater exploration program with geologic mapping, traditional knowledge mapping, geophysical surveying, and drilling. Chris excelled in this technical work but also made fast connections with community partners through a shared language and his natural compassion.

We approached Chris to support us with geological components of our 2023 drilling program. Due to unexpected circumstances, he additionally rose to the challenge of supervising the drilling program along side long-time SAM partner, Rebecca Tembo, with ease.

Chris and Rebecca successfully managed the drilling program supported by United Drilling towards a successful borehole in 6 out of 8 of the communities we drilled at this year.

SAM is grateful to all the invaluable contributions from local champions and we are thrilled to take part in the growth and mentorship of young professionals such as Chris.

Twalumba kapati, Chris!

Our Goals for 2024

1. **Establish and train waterpoint committees** at the waterpoints installed this year, ensuring they continue to produce water for years to come.
2. **Disseminate findings from waterpoint mapping to other water developers**, coordinating efforts towards 100% access to clean water in Zimba.
3. **Support communities to repair broken down waterpoints**, focusing on waterpoints mapped as serving large populations.
4. **Phase out of currently active grants (Kujana and DiWaSSAA)** and seek funding to extend and deepen programs.



We're a small organization, and we could sure use your help!

Being a small organization has many advantages: a direct connection to communities, an absence of bureaucratic bottlenecks, and an ability to pivot and adapt to changing needs. The disadvantage of being small is that, due to financial constraints, we constantly have to turn down communities looking to partner.

In 2024, we are funding-limited in the following areas:

Initiative	Benefit	Cost
Additional protected well installations and pump repairs / committee trainings	Directly improved access to water	\$1,000 / waterpoint

Every donation, no matter how small, helps us bolster and expand our partnerships with Zambians.

[**Click Here to Donate**](#)

All donations over \$20 are eligible for tax receipts.

As always, we ensure that your money will be spent responsibly, effectively, and efficiently.

the SAM project

SUSTAINABILITY THROUGH
AGRICULTURE AND
MICRO-ENTERPRISES

We would also like to thank the following organizations for their financial support, in-kind contributions, and implementation collaboration:



And last but not least:

**From all of us here at SAM,
on behalf of the communities
and individuals we partner
with, thank you for your
interest and support.**

Twalumba Kapati!