



UniWater Education Limited

2022 Annual Report

Letter from Executive Director

This annual report is a summary of activities that UniWater undertook during the year 2022. We continue to work on several fronts:

1. We continue to expand our network of partnering African universities to get MSc/BSc programs in Hydrogeology and Water Resources Management started, or to augment existing programs;
2. We are also working with Dr John Cherry of the Groundwater Project to get self supply of water wells promoted in Africa, as a means of reaching the rural poor, disseminated people with safe water;
3. We attempted sponsor a local Tanzania man to get the practical skills that would be useful for him to pass along to others enrolled in the SUA MSc program; and,
4. Funding is still non-existent. We have reduced costs to a bare minimum, with donations by Laurra and Peter Olmsted occurring occasionally to cover operating costs. There is a plan to change this in 2023.

Details of these activities are provided in the attached report.

Best regards

Laurra Olmsted
Executive Director



Introduction

UniWater Education Limited is a small non-profit organization based in Calgary, Alberta, Canada. It was founded in November 2011 and incorporated in Alberta on January 25, 2012. It was registered as a charity February 21, 2014. Currently it is managed by an Executive Director with oversight from a Board of Directors. There are no paid staff members.

Our Vision

To get more water professionals trained in Africa to ensure availability and sustainable management of water for use by all people.

Our Mission

We partner with African universities to train Africans in-country to solve African water challenges. We work to get applied MSc/BSc programs in Hydrogeology and Water Resources Management started, or augmented, at established universities.

Management Personnel

Executive Director: Laurra Olmsted (lolmsted@uniwatered.org)

Board of Directors:

Robert McCullagh – Financial specialist

Peter Olmsted - Engineer

Bridget Scanlon – GW Researcher, University of Texas Austin

Mandana Meriano – Assistant Professor, University of Toronto Scarborough

Laurra Olmsted – retired consulting hydrogeologist

Achievements

Note: communications aren't always perfect due to firewalls at universities that prevent incoming messages from getting to the intended person.

1. **Sokoine University of Agriculture** in Tanzania began their first classes in their MSc in Hydrogeology and Water Resources Management in December 2020. They held a Field School



using opportunities in the area (like drilling a water well) as training exercises. The university drilled a large diameter production well on campus to serve as a water supply for the university, but unfortunately, the water quality was not good enough for this purpose. Efforts to raise \$15,000 for a pump have not proved sufficient. An idea might be to drill a smaller diameter well nearby so that a small diameter pump could be purchased (\$500?) and the production well used as a monitoring well.

In December 2020, the first cohort of students began classes, consisting of 4 students.

In December 2021, the second cohort of students were enrolled in the MSc program. There were 7 students enrolled in the program. The field school continues to be a series of field visits by the students (as opposed to a stand alone dedicated field school)

In November 2022, the third cohort of students were enrolled in the program with 10 students. The university is hopeful to secure funding from the World Bank that would enable them to buy a drill rig and geophysical equipment. They are still in need of visiting professors to help teach classes.

They will accept the remaining funds owed by Mubarak Abdully (see below) to go towards a partial scholarship.

2. **The University of Livingstonia** in Malawi is a private school affiliated with the Church of Scotland. The university began in 2003 and currently has 3 campuses and 5 faculties. They currently teach all the basic sciences, humanities, public health and nutrition, environmental management, etc. They offer one MSc in Global Sanitation. Their plan is to initially offer our program as an MSc, augmented with a module in the Geology of Malawi, beginning in March 2022. They are planning to expand their undergrad programs to include a BSc in Geology that would feed into the MSc in Hydrogeology. Currently they have students who have u/g from other universities wishing to take the hydrogeology program. They have a site selected for the Field School. We have signed a five year agreement to help support them with visiting professors. Malawi has been hit by the cyclone Gabrielle resulting in devastating floods.
3. The University of Malawi currently (existing prior to UniWater contact) has an undergraduate program that leads into the postgraduate program. Their field school operates on an 'as opportunities arise' basis. In the postgraduate program, they have two cohorts, one with 4 students, 2 students in the other cohort. Covid has hit them hard on many fronts. Their plan is to review the curriculum during the summer 2023 to see how they can incorporate some of the



UniWater curriculum. The joint field school with other Malawian universities needs a structure and funding mechanism to make it functional. Funding for public universities is greatly lacking.

4. The Malawi University of Business and Applied Sciences has been running an MSc in Water Resources Management for 9 years. It includes a module on Integrated Water Resources Management, which includes hydrogeology and modelling. They revised the curriculum in Aug 2022 using aspects of our program, and the next cohort (beginning Sept 2023) will be taught with this revised curriculum. The field school remains a problem due to the way the classes are structured. They could use visiting professors, but do not have funds for this.
5. Mzuzu University has previously been connected with the SMART Centre training facility, but communications broke down and the SMART centre moved to another location (they are known for their training of manual drilling and WASH technologies – not university focused theoretical knowledge transfer).
6. Malawi University of Science and Technology - they have been busy initiating other new programs: two MSc and one PhD program in health. Next step is to present this program to the whole school (currently it has been accepted by Head of Departments and the Director).
7. Ladoke Akintola University of Technology in Nigeria is hosting an MSc program. We have a 'man on the ground' in Nigeria who is helping to promote these programs. Strikes at universities in Nigeria has ground progress to a halt. It has been suggested that UniWater host online classes to address the void in technical knowledge of people practicing hydrogeology but who are unable to afford to attend university.
8. The University of Zimbabwe was selected as the location to host the national program in hydrogeology, with four-year funding from UNESCO and the Zimbabwean government. They are establishing a Centre of Excellence in Groundwater Research and Training, using the UniWater program for their MSc in Hydrogeology (they've been teaching Water Resource Management for the last 14 yrs). They expect to begin classes in the new MSc (Hydrogeology) in August 2023. Their field school will be run as a 3 week module. They are relying on visiting professors to help with the initial classes. Our request of \$12,000USD was approved but has not been received. Our contact person has been on sabbatical (ending in March 2023) and has not been able to push her agenda as a result. This will change once she returns to the university.



9. We have started to collaborate with the exec director of a registered charity in Uganda – the Union of Community Development Volunteers. He is willing to represent our interests in promoting our programs in Uganda.
10. A new initiative by John Cherry on Self Supply (the drilling of small wells to meet the needs of several households, or a small farm) is a way to spur economic growth and provide water to the underserved rural populations in Africa. Together, we have been researching manual drills and pumps.
11. Laurra Olmsted is currently writing curriculum for a module on Self Supply for inclusion into the program. It is expected to be completed by the end of March 2023.
12. Our contact at the African Ministers Council on Water (AMCOW) is very busy and this initiative does not seem to be important at this time as no action has been done, even with prodding from this end. We are working towards a formal agreement where we would work on two initiatives: to get more MSc programs in Hydrogeology initiated or augmented with a Field School (short term initiative); and, to address how hydrogeology is taught (see GW-Project below; long term initiative).

Financial Matters

During 2022, we received a total of \$146 in donations :

1. Cash for SUA's field school: \$1480 (approx.) - \$480 was donated in 2021, \$1000 approx is being held at UTSC as it was collected on behalf of WaterHogs. These funds will be distributed when an item/activity is identified that needs direct funding. We have identified to SUA that we have this money, but they do not have anything in that price range that would provide a benefit to them at this time.
2. Cash collected on behalf of Mubarak Abdully, a young man in Tanzania. He was to attend, and got a scholarship for half of the tuition from the organizers, a month-long field school in Uganda, hosted by Groundwater Relief. This was postponed due to Covid. He also would like to take the MSc at SUA, and a donor contributed to this, but not in enough time for him to register for this



year. The total collected is \$3,044. He asked if he could register for a class in Kenya on low tech manual drilling (what is typical in the Self Supply industry). This amount was transferred to him to cover the cost of the course, flights, surface travel and accommodation. Unfortunately, Mubarack Abdully discovered that he could take a government training program in Tanzania that would not just train him but also provide him with a job afterwards. He only identified this when queried about the self supply training several months later (he had promised to provide a short summary for the website). By then, he had spent part of the money, but promised to repay it in full. We have received \$925.15 back from him, with the intent to repay the remainder over the next 10 months (total \$2,058). We have arranged with SUA in Tanzania to accept these funds that would be put towards a scholarship for a student in the next cohort.

3. A new laptop computer was purchased for \$755.97 in January 2022.
4. Remaining funds in the bank account at the end of 2022 is \$1,623.

Recommended Actions for 2023

1. Continue to work with universities in Tanzania, Malawi, Zimbabwe, Nigeria to get agreements signed and assistance provided as requested. Look for opportunities in Uganda to expand our partnerships.
2. Monitor the repayment of funds from Mubarack Abdully to SUA, in accordance with the UniWater charity regulations.
3. Continue to work with AMCOW, and the GW-Project on collaboration on short and long term initiatives.
4. Continue to work to find visiting professors for SUA and U of Zimbabwe.
5. Search for a church in Alberta who would be willing to transport all the books that we have in storage to Tanzania....Mzuzu U would like many of them, so we will transport them all in one go. They have contacts in Dar es Salaam and Nairobi who would be able to transport the books to Malawi.