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Issue 2, Q2 2024

## CHAIRMAN'S WELCOME

Dear friends,

Welcome to the second issue of Water-Share Ireland Matters for 2024, which covers updates on our WASH (Water, Sanitation and Hygiene) projects in Eastern and Northern Uganda, Sierra Leone, Northwest Syria, and now Zimbabwe, and plans for progressing these projects. We also have the pleasure of sharing some other exciting updates. As always, your unwavering commitment has been crucial in driving these projects.



Our colleagues from Uisce Éireann have enhanced coordination across the programme as Water-Share Ireland volunteers and valued patrons have continued to provide crucial technical support. Ryan Hanley Consulting Engineers have contributed significantly with their work on structural design and hydraulic modelling. The challenges of upgrading the Freetown Faecal Management (FSM) Plant are being met with the technical support and guidance of Nicholas O'Dwyer and EPS Group. Ward & Burke's ongoing financial support for our Uganda projects has been invaluable, and we have

Since our last issue, we have launched our revised Strategic Plan 2023-2025, now available on the Water-Share Ireland site. This Strategy, shaped by your continued commitment, outlines our mission, vision, values, goals, restructured management and oversight framework. Your continued commitment is essential as we collectively shape the future of Water-Share Ireland.

Our March Annual Meeting was a tremendous success. We welcomed two new patrons, OutForm Consulting and Sia Partners, who are adding significant strength to our committee. Michel Davitt of Nicholas O'Dwyer shared insights from his recent trip to Sierra Leone, highlighting the effective work being done at the FSM plant. Presentations from other patrons highlighted the pragmatic efforts and plans under this significant programme.

Looking ahead, I am thrilled to announce that preparations for Water-Share Ireland's first Hackathon are well underway. Teams have already begun registering their interest, and later in this Issue, you will be invited to officially register your teams. We look forward to a diverse range of participants tackling real-world water challenges.

As always, please share this e-Zine widely to help spread the word about our shared vision and efforts.

Warm regards,



Jerry Grant  
**Chair, Water-Share Ireland**

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## **WATER-SHARE IRELAND HACKATHON – SAVE THE DATE & REGISTER YOUR TEAMS**

**Thursday, 26th, Sept - Friday, 27th Sept, 2024**

**GOAL, DCU, Uisce Éireann, and Water-Share Ireland are joining forces to run an exciting Hackathon across two days in September. Thank you to those who registered their interest in June. We now invite you to turn that interest into official registrations by signing up your teams.**



**WATER-SHARE**  
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# HACKATHON

## REGISTRATIONS NOW OPEN



**THURS 26TH SEPT, LUNCH @ 1 PM, KICK OFF, 2 PM -  
FRI 27TH SEPT, WRAP UP LUNCH @ 1 PM**



**DUBLIN CITY UNIVERSITY, COLLINS AVE EXT,  
WHITEHALL, DUBLIN 9**

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### What/Why?

A Hackathon is an event where a variety of subject matter experts come together for an intense, collaborative effort to solve specific challenges within a set timeframe, typically 24 hours. Hackathons are designed to foster innovation and rapid problem-solving. This Hackathon aims to raise awareness of the crucial work that Water-Share Ireland, a GOAL programme, is doing on projects in Eastern and Northern Uganda, Sierra Leone, Northwest Syria, and now Zimbabwe. Participants will be presented with real-life WASH (Water, Sanitation, and Hygiene) problem cases and work in teams to develop practical solutions that can be applied to our field projects.

### When?

The Hackathon will kick off at **1 p.m. on Thursday, September 26th, and will finish at 1 p.m. on Friday, September 27th.** An official programme will be shared closer to the event, but participants should ensure they are available for the duration of the hackathon. Lunch will be provided on both days.

### Where?

- The Hackathon will take place on campus at **Dublin City University, Collins Ave Ext, Whitehall, Dublin 9.**

### How to Sign Up?

- **Teams:** To register a team, please use the link below (one registration per team) and fill in the required information. Teams should comprise five to seven people and be as diverse as possible. We encourage participation from everyone, from graduates to retirees, to bring their unique experiences and innovative ideas.
- **Individuals:** If you would like to participate but do not have a team to join, please register as an individual using the link below, and the organising committee will assign you a team.

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## Hackathon Registration

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### WATER-SHARE IRELAND ROUND-UP

#### A) **NORTHERN and EASTERN UGANDA**

##### **Mulombi (Eastern Uganda) solar-powered water system.**

The Mulombi project is now fully operational, providing clean, safe water to up to 4,000 people who previously relied on polluted sources. The project's impact is evident in the local community. Since our new water supply was put in place, an extra 100 school pupils enrolled in the local school and are benefitting from this clean safe water. This project was made possible by major sponsorship from Ward & Burke.

The GOAL team is now working to transfer operations to the local Umbrella Group. A key challenge remains in fully implementing and adopting the 'user pays' system, which is crucial for sustainable operation. Malcolm Edger has been instrumental in overseeing this project.

There is potential to expand the Mulombi water scheme eastward by 1.1 km and westward by 2.2 km. However, water availability for the projected populations in these areas is uncertain. We are actively developing options, including estimating the populations to be served, assessing current water usage, and determining the necessary works. The extension will be phased, starting with an initial expansion this year using spare capacity. This will be followed by further borehole development to meet the significant local needs of adjoining villages. This ongoing effort is supported by Ward & Burke, with Dermot Phelan (Uisce Éireann) now joining Malcolm in this important work.

##### **Buwoya (Central Uganda) piped water scheme.**

Water-Share Ireland has completed significant work on a major regional water scheme in Buwoya. With an investment of approximately €1 million, this project aims to provide a reliable water supply to a catchment area serving up to 80,000 people. Existing water sources in this region are often compromised by pollution or natural salt concentrations, making them unsuitable for consumption.

The design of this scheme was primarily undertaken by Ryan Hanley's hydraulic modelling team, with Malcolm Edger providing essential support. Moving forward, GOAL will continue to seek donor support for this initiative, working closely with both national and regional Ugandan authorities.

##### **Kaabong (Northern Uganda) piped water scheme.**

In Kaabong, Water-Share Ireland has been actively drilling for a suitable borehole to support a piped water scheme. Initially, there was a setback as the first location failed to yield a suitable water source. With hydrogeological support from Gerry Baker of Arup, we have identified a new drilling site and commenced operations.

This community has been targeted for a water scheme funded by the O'Toole Funds, generously donated last year. The primary focus is securing a reliable source of good-quality water to initiate the project.



## B) FREETOWN, SIERRA LEONE

The Faecal Sludge Management (FSM) plant in Freetown remains operational, though challenges persist in finalising an exit strategy and ensuring sustainable practices. In early 2024, Michel Davitt from Nicholas O'Dwyer conducted a site visit, and his comprehensive report, combined with guidance from the GOAL team, forms the foundation for a phased improvement plan. The goal is to establish a robust plant and transfer operations to the Freetown City Council or a permanent private operator.

Now, in the first stage, we are collaborating with EPS Group to design and procure equipment that will significantly enhance the plant's reliability. Water-Share Ireland is in the process of appointing a dedicated project manager to oversee these improvements, develop operation and maintenance manuals, and train staff.

Looking forward, we are seeking additional donor support for a second-stage expansion that would nearly double the plant's capacity and enhance its environmental performance, including the addition of more Geobag bays. Additionally, we plan to explore the recovery of sludge bricks through pyrolysis, leveraging the anaerobic digestion of sludge and landfill vegetation. Early trials suggest this innovative approach could replace charcoal for cooking, offering environmental benefits such as reduced carbon emissions.

With ongoing support from Nicholas O'Dwyer, we aim to advance these initiatives through controlled pilot trials to potentially qualify for carbon credits, ensuring sustainable long-term funding. Another proposal under consideration is a business case for a second FSM facility in western Freetown, aiming to broaden coverage and enhance environmental and public health standards in a city comparable in size to Dublin. Aisling Buckley from Uisce Éireann coordinates these projects, collaborating closely with Michel Davitt of Nicholas O'Dwyer and Alan Reade from GOAL.



### C) IDLIB PROVINCE, NORTHWEST SYRIA

As donor funding for the region continues to decline, GOAL is exploring ways to enhance efficiencies and build evidence on strategic issues to achieve more with fewer resources. In this effort, GOAL Syria is working with Water-Share Ireland members Arup to address falling groundwater levels and with RPS Group to quantify leakage rates within the city of Salqin, Idlib province.

As reported in the last e-zine issue, the initial research phases of these two projects have been completed. Extensive abstracts from each project were submitted to the upcoming 43rd WEDC International Conference (Loughborough University; Water Engineering and Development Centre) under the theme "Water and Climate Resilience."

We are pleased to announce that the application was accepted. Arup and RPS Group are collaborating with the GOAL Syria team to produce a joint presentation, which will be pre-recorded for the conference in September 2024.

This collaboration and presentation will help spotlight the innovative approaches and critical work being done in Idlib to address water challenges, aiming to inspire further support and partnership in the region.

Attending the conference is free, and we encourage all members to sign up and tune into the presentation. You can register using the link below:

**Register for the WEDC International Conference**

### D) Zimbabwe

Water-Share Ireland is looking into possibly expanding our remit into Zimbabwe. We are currently in discussions with provincial Water Officers in Matabeleland South regarding groundwater challenges and the potential output from sand dams. Alan Reade from GOAL will liaise with Michel Davitt, who has contacts in Zimbabwe, on this investigative work and will report to the Water-Share Ireland Committee in the coming week.



## SPOTLIGHT: RONAN WATERS, HEAD STRUCTURAL ENGINEER, RYAN HANLEY

*With 30 years of experience in the civil engineering sector in Ireland, Ronan Waters, Head Structural Engineer at Ryan Hanley, has been a cornerstone of the firm for the past 25 years. His journey began during his engineering degree when he discovered his passion for structures, leading to a career dedicated to structural design. Ronan's expertise is built on a solid foundation, having pursued a research master's in concrete durability while working part-time as a structural engineer.*



His extensive experience includes managing construction contracts, during which time he developed a deep respect for the efforts of construction staff, which he sees as crucial in delivering high-quality infrastructure.

As a father of three, Ronan is acutely aware of the impact of good infrastructure on improving people's standard of living.

Witnessing the dramatic improvement in Ireland's standard of living over his lifetime has fueled Ronan's desire to support developing countries in gaining the same enhancements to their lives through quality civil engineering infrastructure. He saw the intense activity in Ireland's roads sector in the 2000s, followed by significant investment in water services, and is a pragmatic advocate for the same investment in developing nations.

He emphasises the importance of local engineers and tradespeople while highlighting the necessity of high-level design oversight to ensure safety and efficacy.

Ronan is committed to leveraging his structural engineering expertise to support GOAL through the

Over the past four years, Ronan and his colleagues have contributed to various water supply schemes for Water-Share Ireland, including:

- Deogratias Bukasa Ilunga and Niall McDonagh – structural design comments on a water tower at Dowhe Central in Namayingo District, Uganda.
- Sanket Balikai – contribution to a study on the water supply for Buwoya Parish of Banda Sub-County, Uganda.
- Tim Macdonald – structural design comments on a water tower at Busolo in Bugiri District, Uganda.

Through Ryan Hanely, Ronan's dedication to improving global water infrastructure exemplifies the impactful work being done by Water-Share Ireland and its partners, ensuring better living standards through engineering excellence.

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## **WATER- SHARE IRELAND STRATEGY- Updated**

As presented at our Annual Meeting in March, the Water-Share Ireland Strategy 2023-2025 has been recently updated, thanks to the invaluable support of Yvonne Harris and Róisín Bradford in Uisce Éireann. This Strategy focuses on strong management, resilient funding, innovative research, and strong partnerships.

We encourage all patrons to read, download, and share this important document within your organisation or on your company website. Your involvement helps to amplify our impact and drive our mission forward. Access the Strategy using the link below.

[Download Strategy](#)

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## **WATER-SHARE IRELAND FUNDING & SUPPORT**

We are incredibly grateful for our dedicated supporters and patrons. Your commitment enables us to deliver essential WASH (Water, Sanitation, and Hygiene) programmes to vulnerable communities. We also deeply appreciate the invaluable in-kind support and expertise from our partners.





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**NICHOLAS O'DWYER**  
an RSK company

**RYAN HANLEY**

**RPS**

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## SUPPORT WATER-SHARE IRELAND APPEAL

Water-Share Ireland's work would not be possible without you, so once again, we would like to sincerely thank you for enabling us to implement life-changing WASH projects and, in turn, advance the all-important Sustainable Development Goals (SDGs).



In 2024, we will jointly contribute to delivering impactful projects where vulnerable communities and families desperately need improved access to safe water and sanitation.

We warmly welcome new members, Sia Partners and OutForm Consulting, who have joined the group at an exciting time. We look forward to collaborating with you on future developments.

As a friendly reminder, the annual subscription for Patrons is €5,000, which allows your organisation to support this special group's initiatives directly and the prospect of joining our esteemed steering committee. This is an excellent chance to influence project delivery and help transform lives.

An annual contribution of €1,000 also allows your colleagues to participate in project delivery and, in turn, develop a sense of purpose and engagement with Water-Share Ireland's mission.

There is also tremendous value placed upon your technical expertise and pro bono support, so please get in touch if you think you can help in this way. You can contact me on 01-2809779 or drop me a note to [watershare@goal.ie](mailto:watershare@goal.ie)

**Thank you once again for sharing our vision.** Your wisdom, dedication, and skills are essential in shaping Water-Share Ireland's programmes.

Courtenay Pollard

**Partnerships Manager, GOAL**

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