**NEWS ARTICLE**

Shire River flood risk management project sets a benchmark in Malawi

**3 October 2022:** The implementation of locally relevant solutions and a national guideline for community-based flood risk management (FRM), aimed at communities and NGOs in the Lower Shire Valley in Malawi, is one of the first of its kind to be developed globally, as acknowledged by the [Water ChangeMaker Awards](https://www.gwp.org/en/waterchangemakers/). Leading consulting engineering and infrastructure advisory firm [Zutari](http://www.zutari.com) undertook the project in association with BRLi of France and a local Malawi-based engineering firm.

The Zutari Water team has close on 90 years’ experience as a group of Water ChangeMakers in Africa. “Being from Africa, we have developed a unique understanding that combines global expertise with local insight. Added to this is an appreciation of the value of ecosystem services and integrating ecological infrastructure into a traditional engineering approach to long-term sustainable solutions in support of climate change adaptation in Africa,” highlights **James Cullis**, Expertise Leader for Sustainability at Zutari.

The Lower Shire Valley in Malawi is faced with extreme development challenges due to a highly variable climate, including regular floods and drought resulting in poverty and food insecurity. For several years, floods and droughts have been consistently identified in the World Economic Forum's top five global risks by impact. There have also been increasing numbers of disasters linked to the impacts of climate change, globally and particularly in Africa.

Recognising the severe humanitarian and economic impacts of flooding, the government aimed to develop and implement national guidelines. Zutari had previously also assisted in the development of guidelines for Integrated Catchment Management and Sustainable Rural Infrastructure Development in Malawi.

Prior to the Shire River flood risk management project, no guidelines for FRM planning, design and implementation existed at district, traditional authority or group village head level in Malawi. The project aimed to address this by developing approaches for FRM planning, costing appropriate approaches to address flooding, implementing these in selected villages and capturing these experiences in national guidelines for the Malawian Department of Disaster Management Affairs and the Department of Irrigation and Water Development.

Through intensive and sustained community and stakeholder consultations in the valley, the project identified the communities regularly affected by floods (230 000 people), conceptualised and prioritised interventions for the worst-affected communities (187 000 people) and used hydrodynamic modelling to design 34 large-scale civil works and 41 labour-intensive community-based interventions that will reduce the flood risk of 86 000 and 10 000 people respectively.

Zutari also oversaw the construction of ten interventions (protection for 45 000 people) and implemented an appropriate flood warning system across the valley operated by the communities themselves.

The designs maximised the use of local labour and materials, are low maintenance in character and where constructed have already provided protection during two tropical cyclones. Once the national guidelines were completed, training commenced across the valley. This focused on building a basic understanding of floods, FRM and planning for floods at a community level. The training was undertaken through innovative means including theatre and advertisements on local radio stations.

Apart from its work in Malawi, Zutari’s Water ChangeMaker journey has included several significant other engineering and water related projects, with a key focus on enhancing the value of ecological infrastructure and community engagement and integrating this with an engineering approach to address water challenges in Africa.

Examples include engineering support for Working for Wetlands, determining the benefits of clearing invasive alien plants for improved water security for the City of Cape Town, operating rules for dams to implement environmental flows and compiling water resources development plans in several countries across Africa, most recently in Kenya and Uganda.

In addition, Zutari is responsible for the design and implementation of innovative engineering solutions to water security challenges that support resilience and sustainability. These solutions embrace innovative approaches to the co-discovery of solutions with stakeholders to identify not only sustainable water resource development projects, but also the importance of incorporating environmental flows and ecosystem services. They co-create an engineered impact.

For more information about the Shire River project in Malawi, visit <https://www.zutari.com/project/shire-river-basin-programme/>.

For more information on Zutari’s relevant experience in the water sector, visit

[Water market | Consulting engineering and advisory | Zutari](https://www.zutari.com/market/water/)

**Pull quote**

“Being from Africa, we have developed a unique understanding that combines global expertise with local insight.” – **James Cullis**, Technical Director, Zutari

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**Notes to the Editor**To download hi-res images for this news article, please visit <http://media.ngage.co.za> and click the Zutari link to view the company’s press office.

**About Zutari**

As an engineering and advisory firm, we believe infrastructure has unparalleled potential to create enduring impact. Never more relevant, this potential can be realised only if we plan, design, deliver and manage infrastructure in ways that maximise its value. Our work in water, transport, energy, resources, and built-environment infrastructure does just this – helping to nurture thriving communities, growing economies, and healthy environments.

At Zutari we understand that radical impact doesn’t just happen; it requires more of us to connect differently, work smarter, and stay rooted.

**We connect differently**. Our broad collective of in-house experts connects across traditional disciplines to provide integrated results. We collaborate with clients, partners, and end-users, leaning into diverse perspectives to create superior solutions - together.

**We work smarter**. Our people lead the industry. We draw from deep technical skills, accrued over decades, and embrace the transformative power of digital technology to find simpler, better, and more innovative ways to deliver value.

**We stay rooted**. Few can rival our local capacity and understanding. Building on solid foundations, now 90 years in the making, we are trusted to shape locally relevant solutions through our extensive footprint in Africa and the Middle East.

At Zutari our people connect differently, work smarter, and stay rooted. Working in this way, we reliably deliver impact through infrastructure, making the world a better place – one project at a time.

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