



Insurance for Climate Resilient Rural Water Supply

THE CHALLENGE

Cyclones and floods in Malawi have intensified since 2019. Cyclone Freddy (March 2023) was among the worst, claiming over 1,200 lives, displacing 650,000 people, and causing damages worth hundreds of millions of dollars. Rural water systems were hit hard, leaving thousands without safe drinking water.

With support from the Conrad N. Hilton Foundation, BASEflow redesigned the traditional handpump by elevating its concrete platform above the flood line, reducing damage and contamination (also referred to as, *flood-proofing*). Ten of these systems now serve around 10,000 people in flood-prone Mulanje.

Yet even a stronger design cannot withstand the most severe cyclones. Repeated disasters still destroy infrastructure, trapping communities in a costly build-rebuild cycle. To truly break it, we must go beyond flood-proofing.

THE SOLUTION: BOREHOLE INSURANCE

BASEflow's Borehole Insurance Model, the first of its kind in Malawi, links flood-proofing with an endowment-backed insurance mechanism. An endowment fund, managed by a licensed investment firm, earns annual returns used to pay insurance premiums that cover future repairs or reconstruction.

At the initial approach, most insurance companies were hesitant, citing (1) rural boreholes as high-risk assets and (2) the idea itself, untested. Only NICO General Insurance Plc agreed to pilot the model, for three reasons:

- The flood-proof engineering reduces the likelihood of frequent damage.
- The endowment fund, managed by NICO Asset Managers, ensures a steady flow of revenue for premium payments.
- The initiative aligns with NICO's corporate social responsibility to support communities.

With technical support from NICO Asset Managers, a Net Present Value analysis showed that investing USD 1,100 per site at 26% annual returns generates enough income to cover USD 3,400 in yearly reconstruction costs, eliminating the need for new external funding.

In July 2025, BASEflow and NICO General Insurance Plc launched a pilot across ten flood-proofed boreholes in Njema Traditional Authority, with full community consent.



THE INSURANCE MODEL



THE WAY FORWARD

A collaborative oversight group, including community representatives, the District Water Office, and the Department of Disaster Management Affairs, now manages the fund and ensures transparency. BASEflow is also engaging the Mulanje District Council to integrate the endowment fund into the district's financial management system, institutionalising accountability, and ensuring the fund remains fully auditable.

If the pilot proves successful, BASEflow plans to scale the model to other flood-prone sites, giving governments and development partners a replicable way to insure rural water systems against climate-related losses.

RESOURCES

- **Video:** *Insuring Boreholes? Wait, What?* (<https://www.youtube.com/watch?v=QCTyak8efs4>)
- **Blog:** *Breaking the Build-Rebuild Cycle: How Borehole Insurance Can Protect Rural Water Systems* (<https://www.baseflowmw.org/story/first-of-its-kind-how-nico-general-took-a-chance-on-borehole-insurance>)



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