History of the water finance lab

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Environmental, Social and Governance (ESG) reporting has been normalized amongst businesses and governments. Nature data is rapidly evolving as the new focal area, with the establishment of the Taskforce on Nature related Financial Disclosures, among others, shaping this narrative.

Water, as a subset of nature data, can be described as a golden thread, measuring the impact of environmental changes and our human systems' ability to provide security and resilience in the face of climate change and biodiversity losses.

Quality data is a central theme that will provide the basis for analytics to support not only the policy maker in their role as a rule maker for the benefit of society, but also investors, who must be able to understand the risks, as well as monitor the outcomes and returns of their investment.

The Centre of Excellence in Financial Services (COEFS), established the Water Finance Lab (the Lab) to contribute to the improvement of water data. As a South African financial sector institution, it provides convening credibility across financial institutions, regulators, and government; technical expertise in financial risk frameworks and disclosure systems; and institutional sustainability beyond the initial programme period.

It aims to provide a structured approach to testing how standardized water data architecture can function, within the institutional complexity of regulated financial systems, and fragmented data environments, characteristic of emerging markets.

Fragmented data architecture creates friction points in the financial system, limiting investment opportunities. Water infrastructure investment gaps persist, and where water data isn’t standardised, it increases friction for regulated finance and credible disclosure.

South Africa illustrates the scale of the challenge: a 2023 study led by the Development Bank of Southern Africa estimates that R7.2 trillion is needed

between 2023 and 2050 to meet the country's water sector objectives as set out in the National Development Plan 2030. These objectives span national water security, water quality and ecological protection, asset management and efficiency, rural development and food security, and climate resilience and disaster risk reduction.

Even a modest reduction in due diligence cost and time, achievable through standardised project documentation, investor-grade data infrastructure, and faster regulatory approvals, would yield compounding gains against the R256 billion average annual water investment requirement: directly, through lower transaction costs on individual deals; and catalytically, by making currently unbankable projects viable, and expanding the total investable pipeline.

A fragmented water data architecture means investors cannot efficiently track how water projects perform after financing, cannot test how their portfolios would respond to drought scenarios, and cannot easily compare water-related risks across investments. Each constraint, operating simultaneously, suppresses market depth and liquidity.

South Africa, in common with most emerging markets, has yet to develop the water data and financial disclosure infrastructure that would allow capital markets to assess, price, and act on water-related risk with the same confidence they bring to credit or market risk.

The Lab will build financial disclosure data architecture for water. The Lab’s mandate is focused and structural: to establish the data architecture that allows water, as an asset class, a risk category, and a performance domain, to function within regulated financial systems.

The Water Finance Lab is not a regulator, nor is it facilitating discussions around solutioning for water issues. The focus is exclusively on water data and the various organisations and citizen scientists that collect data. By facilitating discussion on international standards and the potential impact for South Africa, we hope to shift the opacity of water data to a visible open source data set, that is comparable and verifiable, building trust in the data so that

risk can be understood and priced, performance can be compared, governance can be assessed and capital can flow.