



Beyond water infrastructure: upgrading the management of water resources

Adding to East Africa's scarce resources is not enough; the real multiplier effect occurs when development organisations trigger a change in the management of these resources. This is what The Pharo Foundation has set out to achieve. It has established a significant amount of water infrastructure in Ethiopia and Somaliland, yet to take full advantage of this infrastructure, its water resources staff can reach the next level with training in the latest innovations in hydraulics/hydrology/hydraulic works design.

The Foundation has set up a partnership with the [UNESCO Centre for Integrated and Multidisciplinary Water Resources Management at the Aristotle University of Thessaloniki](#), which started last week an 80-hour online training programme of 17 water engineers from The Pharo Foundation across Ethiopia and Somaliland. The programme will be recorded and the Foundation will share its content with community stakeholders for added multiplier effect. It is the combination of intensive training and community engagement with the existing network of the Foundation's fixed assets that can trigger large-scale change.

The Foundation's fixed asset network is particularly extensive in Somaliland, where the Foundation has embarked on large-scale water infrastructure projects involving the building, and rehabilitation of reservoirs, berkedes, and large dams which will ensure water access. The Foundation is working on the Illinta Hafir dam and Ijaara Hafir dam in Gabilay (see our 2nd article below on its innovative construction), the Wadamakahiil Hafir dam in Farawayne, and a subsurface dam in Geedeeble in Hargeisa.

Illinta Hafir Dam was designed for 249 households and their livestock but due to the dry season and water scarcity, other villages, nomadic migrants and their livestock have been using the dam since November 2022, some travelling as far as 30km to reach the nearest available water source. The dam has a 17,000 cubic meters storage capacity.

Ijaara Hafir dam (132mX92mx6m) has a storage capacity of 57,863 cubic meters. The project is a fully integrated dam with geo-membrane installation, an elevated reinforced concrete tank, animal water troughs, kiosks for drinking water, a concrete inlet and concrete spillway, a security room, a pump room, solar panels, a fence and sanitation facilities. The project is 70% completed and expected to be fully completed by May 2023. The project will provide access to clean water for 465 households.

Wadamakahiil Hafir dam (132mX92mx6m) is a fully integrated dam with storage capacity of 57,863 cubic meters, with a geo-membrane installation, an elevated reinforced concrete tank, animal water troughs, kiosks for drinking water, a concrete inlet and concrete spillway, a security room, a pump room, solar panels, a fence and sanitation facilities. The project is 70% completed and expected to be fully finished by May 2023. The project will provide access to clean water for 2543 households. Finally, the Foundation is constructing a subsurface dam (155mX5m) at Geedeeble, Hargeisa to recharge the groundwater table.



When Social Enterprise Meets Innovation



Pharo Ventures Somaliland is changing the landscape of construction in Somaliland, as a social enterprise with an innovative mindset. In a key innovation, Pharo Ventures Somaliland pioneered the methodology of 'battered excavation' for dam construction in Somaliland through its construction of the Pharo Foundation's Ijaara dam, which is mentioned above. Where space allows, battering the excavation sides to a safe angle of repose makes the excavation safer because the likelihood of a trench collapse is reduced. While competitors tended to dig dams down to 6 metres of depth, Pharo Ventures Somaliland only went 2 metres deep in its Ijaara dam, which improved health and safety.

Equally innovative is its Ready-Mix Concrete (RMC) business. Its RMC is a high-quality concrete mix which uses the latest technology to produce 15/20/25/30/35MPA types of concrete that avoid leaks. The business fulfils the dual purpose which is central to Pharo Ventures, as a for-profit business with a social purpose. Indeed, from a commercial perspective, Pharo RMC has produced more than 2,100 cubic metres of ready-mixed concrete over the past six months, standing out from competitors on the basis of its high quality, although its concrete is also a few dollars cheaper than the competition. It has increased monthly sales by more than 40% over the past two months.

Yet Pharo RMC also addresses community needs. Its flagship project, which is the refurbishment of the Waaheen market that experienced a major fire in 2022, highlights the degree of trust it now receives from the community. In this area of Hargeisa which was a central focus of the local economy before the fire, Pharo RMC plays a key role in reconstructing the economy and livelihoods which it sustains. It has secured a number of contracts to provide 115 cubic metres of concrete per day whilst refurbishing a key pillar of the community. Finally, while the RMC currently employs 40 staff, there is scope for it to become a more significant direct and indirect employer, in the context of a booming construction sector in Hargeisa and upcoming prospects in Berbera. What is more, given that there is a low level of regulation in the Somaliland construction industry when it comes to health, safety, environmental and social aspects, the RMC will stand out as an employer of choice on the grounds of its preoccupation with high standards in these areas.

All of the above embodies the concept of Pharo Ventures as a key fifth pillar supporting The Pharo Foundation's overall vision of an economically vibrant Africa, and above all, one that is sustainable overtime.

Please look out for the next issue of the 'Simplifying IT' newsletter on 3 March. It will be on the subject of Teams.