

Practical Paper

Global water access fund: a new idea to bridge operations and maintenance shortfalls for the poorest water utilities

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ABSTRACT

Reaching the sustainable development goal for water and sanitation access will require significant investments. For some utilities, the private sector or blended public–private investments offer opportunities to expand and improve services, but this is not an option for many utilities serving the poorest households. These utilities are often unable to cover their current operations and maintenance costs and have limited capacity to increase tariffs in order to do so. Yet supporting these utilities is crucial to expanding access to safe drinking water for the majority of citizens. We argue that a new solution is needed to provide utilities serving the poorest with sufficient subsidies to cover their operational costs, stabilize service, and make performance improvements to advance towards sustainable operation. This article presents a potential solution which blends funding from global philanthropy, solidarity levies, and local matching funds. Such a fund, if structured to reflect the principles of results-based funding, transparency, sustainability, and performance improvement, can make a meaningful impact on water access.

Key words | global fund, operations and maintenance, pro-poor, solidarity levies, sustainable funding, water utilities

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INTRODUCTION

The Sustainable Development Goals (SDGs) for drinking water, sanitation, and hygiene (WASH) are ambitious in their scope and coverage – aiming for universal coverage of safe and sustainable drinking water and sanitation services. Despite progress, 29% of people still lack access to safely managed water services according to the latest Joint Monitoring Programme, and significant inequities between and within countries persist (UNICEF and WHO 2019). The cost of meeting the WASH targets, per Hutton & Varughese (2016) is estimated at US\$1.7 trillion, which is ‘three times the amount historically invested in the sector’ (Kolker *et al.* 2016, 1). Thus, the aggregate financial needs in the sector far exceed what has historically been allocated or spent by donors and governments.

With shortfalls this large it is crucial that all sources of donor funding, private investments, and other revenue sources be considered.

However, not all dollars are the same, and it's important to distinguish between two main funding needs and the sources of funding supply for each. Capital expenditures (CapEx) are investments in building or expanding physical infrastructure to improve capacity (e.g. new pipes or treatment technology) while operations and maintenance expenditures (OpEx) support the management, operations, and maintenance of existing infrastructure and associated service delivery.

While external funding – *repayable investments* (equity or loans) from private sources, *grants or concessional*

lending from donors or philanthropies, or some blended combination – is often tapped to finance CapEx projects (with repayment tied to expected revenue increases), it is typically expected that providers should be able to cover their OpEx costs either through tariffs (usage fees) alone or a combination of tariffs and other local resources (e.g. taxes or government transfers).

Proponents of blended finance – defined as strategically using limited development finance to attract private and philanthropic investment (OECD 2018, p. 4) – in the sector have argued that risk-tolerant donor funds can be used to leverage significant private investment in order to cover the resource gap between what is currently spent and what is needed to meet the SDGs. Such risk-sharing lies at the heart of any blended finance project. Blended finance can also support other objectives including improving the financial stability of the sector and helping to develop domestic capital markets.

However, blended finance is only appropriate under certain conditions – for instance, capital investments made in stable utilities capable of offering a reasonable return – and makes less sense for utilities with insufficient revenue, struggling to cover their current operation and maintenance (O&M) costs. Many utilities, including ones critical to meeting the SDGs, fall into this category. Household tariff revenue – the primary source of O&M funding – is insufficient to cover O&M costs in more than half the countries surveyed in the 2017 GLAAS report from the World Health Organization (WHO 2017).

Moreover, for many of these utilities, raising tariffs to cover OpEx costs, much less making a profit or investing in CapEx improvements, may be politically or economically infeasible. According to a recent econometric analysis of how regulatory costs affect the availability and desirability of using private finance, the ‘tension between financial viability and inclusion, in the very places where the share of poor consumers to whom one would wish to extend the service is higher, is the first fundamental challenge of infrastructure finance in developing countries’ (Fay *et al.* 2018, p. 3). Without sufficient existing funding to meet basic operational needs, such utilities are poor candidates for private investment as they are unable to generate sufficient revenue to repay investors.

As such, attracting repayable, private investment – including through blended finance – to expand capacity and improve performance is likely not the right solution at this time for these utilities. This is not to say that there isn’t a role for private partners in helping improve utility performance or that private finance will never be appropriate for these providers. As Andrés *et al.* (2013) have argued, ‘both the government (as regulator and service provider) and the private sector (as service provider) can play active roles in improving sector performance.’ On funding, it’s about matching the right type of funding to the right needs and within the operating context and constraints of the utility.

In the short to medium term, providers that are relatively weak but have the potential for improvement and turnaround need regular access to non-repayable funds while they invest in improving performance and progressively connect the poorest and unserved. Typically, such funds come from central government transfers but these are neither reliable nor are they tied to recognized performance benchmarks (e.g. the International Benchmarking Network’s benchmarking tool to evaluate utility performance). The result is that such providers are neither incentivized nor able to improve access to the poor or to make the required investments in maintenance. Absent regular funds for operations and maintenance, capital investments in improving and extending infrastructure are also put into jeopardy.

While safe water and sanitation services are essential to human health and safety, the sector has been unable to generate the same levels of support for routine service delivery, especially to the poorest, as sectors such as health and education. In this article, we propose a potential model to address the funding shortfalls on a regular and reliable basis, incentivizing providers to progressively improve coverage and connect the poorest, while establishing norms and conditions for more regular payment. Disaggregating sources of funding for expanding water infrastructure from those for sustaining service delivery is a necessary step in determining how to raise resources for the sector and this model combines domestic and international sources of funds that can be used specifically for service delivery.

METHODS

In recently published research (Nagpal *et al.* 2018) we argue that a new solution is needed to provide utilities serving the poorest with sufficient subsidies to cover their OpEx costs, stabilize service, and make performance improvements to advance towards sustainable operation. This is not a short-term challenge – for some utilities, advancing to sustainable operations may take many years – so a solution is needed with sufficient funding, capacity, and geographic scope to make long-term commitments, measure improvements, and diversify risk.

We carried out an extensive literature review of three sectors that deliver public goods with large externalities: health, education, and transport. We used defined search strings in databases including PubMed, JSTOR, CAB Direct, Global Health and ERIC, shortlisting and reviewing over 200 relevant publications for their analysis on funding structures for service delivery. Because each sector uses multiple sources of funding – philanthropic donations, domestic tax revenues, commercial financing raised by the state or private sector, and bilateral and multilateral windows – we further classified articles by source of funds.

Based on this review, we narrowed our focus to seven promising models. With adaptations to make them more relevant to the water sector, we presented them to a small group of sector experts and discussed them in one-on-one interviews with over a dozen investors, private operators, and staff from multi- and bi-lateral organizations and foundations. Based on feedback and further analysis, we chose three models that seemed most promising for a sustainable subsidy approach: philanthropy-led funds, solidarity levies, and land-value capture.

These models have the potential to raise significant international and domestic resources; fundamentally alter how donors and the private sector collaborate; and yield reliable, automatic contributions without yearly renewals. We also explored a number of additional models to pool funds ranging from non-repayable philanthropic donations to those which combine donations with private sector financing seeking a return. Lessons learned from the operation of these funds were incorporated into our final recommendations on the formation of a Global Water Access Fund.

RESULTS AND DISCUSSION

Philanthropy-led funds have been a prominent source of resources and innovation in the health sector. The Global Fund to Fight Aids, Tuberculosis and Malaria, and GAVI, the Vaccine Alliance, have been at the forefront of convening stakeholders, developing new funding modalities and raising large sums of additional money for providing ongoing health services and medications and vaccinations. They have also set standards for how to collaborate with the private sector and with local government agencies, incentivizing participation and ownership at the country level. In response to criticism that they were creating parallel delivery structures that were unsustainable in the long run, they have also taken on the responsibility of supporting the strengthening of domestic health systems. Health funds have been credited with increasing the overall level of funding for health (WHO 2009, p. 2147).

Performance or results-based financing has allowed global health funds to effectively communicate their successes and failures, and these funds have led the way in moving from input to output based monitoring (Global Fund n.d.). Global funds also offer the opportunity to ‘blend finance’ from more than one source, matching funds and donors for different types of projects and investments and attracting non-traditional donors to the sector. The International Finance Facility for Immunisation has been a pioneer in this regard – leveraging long-term donor pledges to issue vaccine bonds and *sukuks* (a financial certificate that complies with Islamic financing principles) in capital markets. This mechanism has allowed this facility to raise a large cash inflow for GAVI’s vaccination campaigns (IFFim n.d.).

A global fund for water might achieve similar benefits for the water sector. A Global Water Access Fund (GWAF) could serve as a vehicle for pooling funding from multiple sources and disbursing that funding (in local currencies) to utilities that provide access to clean, reliable water for poor households and communities in developing countries. This fund could bridge the funding gap between the demand for clean water and the ability for existing utilities to reliably serve that demand with clean water (Figure 1).

By providing medium-term financing (in local currency) coupled with technical assistance (e.g. to reduce inefficiencies or optimize tariff schedules) the fund would be

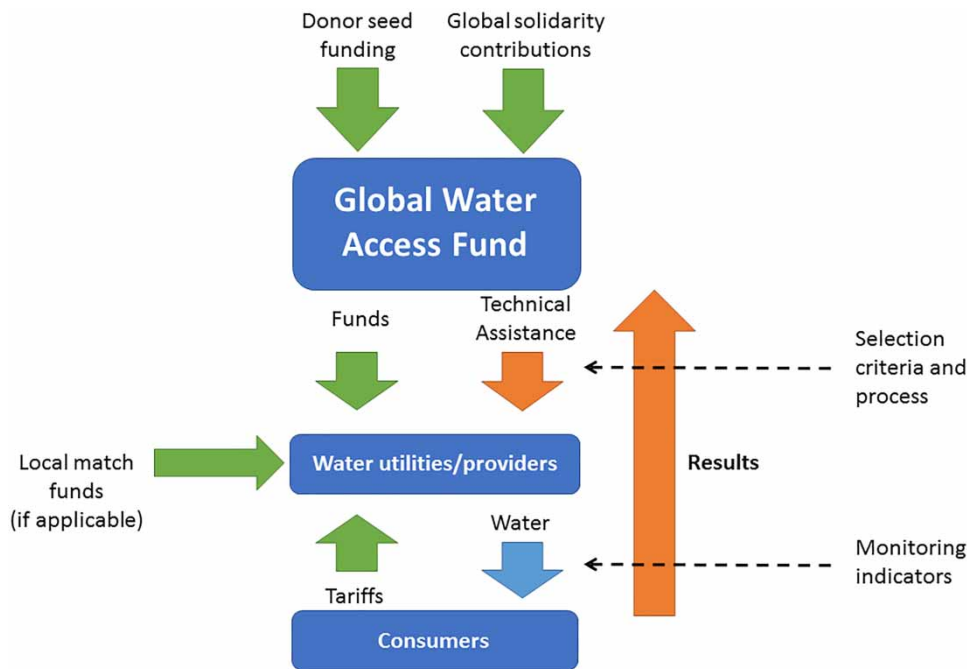


Figure 1 | Global Water Access Fund (GWAF) funding sources. *Note:* TA = technical assistance.

designed in a way that directly reinforces efforts to improve operational efficiencies and achieve financial sustainability, both critically important elements to achieving long-term equitable water access. Performance-based OpEx subsidies and technical assistance through GWAF could largely replace unreliable central transfers, encourage and reinforce steady improvements by reforming utilities, providing a ladder towards sustainability rather than creating dependence on subsidies. Although a number of factors (e.g. weather-related events, elections and political support) impact the success of utility reforms, a gradual approach, blending technical assistance and external funding, can prove successful, as with ONEA, the national water utility in Burkina Faso (Heymans et al. 2016), and Phnom Penh water in Cambodia (Das et al. 2010). Both examples benefited from strong leadership support, local consensus for reform, sufficient autonomy to implement reforms, and support from donors. GWAF could launch with seed funding from multilateral and bilateral donors which could then be supplemented with and, ultimately dwarfed by, two other sources of funding: global solidarity contributions and locally raised matched funds.

Global solidarity levies on individuals or businesses in wealthy countries could represent a sustainable contribution to GWAF without requiring yearly renewals and

reauthorizations, and reducing dependence on aid. A solidarity levy is typically a small tax on a specific industry or consumer item that is dedicated for a specific ‘unifying purpose’. For example, Germany imposed a solidarity tax on its citizens to support expenses related to reunification in 1991. Perhaps the most successful and relevant solidarity levy is the airline tax that has been used to fund Unitaid, an international facility created in 2006 to ‘accelerate access to high quality drugs and diagnostics for HIV/AIDs, tuberculosis, and malaria in high burden countries’ (Unitaid 2016, p. 4).

Hosted by WHO, Unitaid’s main donors include the governments of France, the United Kingdom, Norway, Brazil, Spain, South Korea and Chile, and the Bill & Melinda Gates Foundation. In 2015, the airline tax accounted for ‘approximately 61% of total Unitaid resources and generated \$1.48 billion’ (Gartner 2015, p. 503–4). While solidarity levies are meant to be non-distortionary and non-punitive to the industry being taxed, they have also been used to change consumption behavior or to pay for a negative externality associated with consumption. For example, a new tax imposed on sugary drinks in the UK aims to reduce the consumption of such beverages and raise resources for WHO campaigns for better nutrition. In the US, cities have raised revenues by taxing consumers for each bottle of water

purchased or taxing companies for each bottle produced. Other practitioners have also noticed the potential of a levy on bottled water to raise significant resources. For example, the Rockefeller Foundation and Lion's Head Global Partners proposed a Global Investment Fund for Water which would be funded in part by imposing a levy on bottled water producers (Lions Head Global Partners 2017, p. 32).

Local matched funds would enable contributions from national and even subnational governments in countries with utilities receiving GWAF funding, helping balance GWAF's revenues and creating local buy-in. Not every country will have capacity to provide a local contribution but for those who can, this revenue could be generated through an extractive resource tax, a levy akin to a solidarity levy on luxury goods or consumption, redistribution of resources from wealthier utilities, or be tied to land-value capture.

Land-value capture (LVC) raises funds locally through a market-based approach that exploits increases in land values as a result of public investments. Most LVC investments have been used to fund transport infrastructure; as land prices rise following transportation system investments, governments impose an additional tax on the owners of those lands to fund further extensions or improvements in the infrastructure (Page *et al.* 2016). In recent years, cities as diverse as Kansas City, USA and Casablanca, Morocco have used LVC to fund improvements in water and sewerage infrastructure – in both cases, local governments had to organize exceptionally well-functioning cross-jurisdictional or inter-agency coordination mechanisms (OECD 2017). There are several challenges to implementing LVC in countries where local city authorities may not have administrative autonomy to raise taxes or make large infrastructure investments, or where land ownership is unclear and land prices are not determined by the market. As these issues are progressively resolved, especially in primary cities, LVC has the potential to be used for upgrading neighborhoods with transport and water investments that together raise property values (Collier *et al.* 2018).

REFLECTIONS ON OPERATIONALIZATION

Implementing a global fund for water presents significant challenges for policymakers in developed and developing

countries. First, our proposed GWAF is not the first idea for a global fund explicitly focused on helping achieve the SDG for water and sanitation. Notably, Water Unite (originally proposed in 2017 as the Global Investment Fund for Water) emphasizes the ability of risk-tolerant capital (the fund itself) to bridge the gap between pilot and scale for business model innovation in the WASH sector (Lion's Head Global Partners 2017). By contrast, while also risk tolerant, GWAF would serve a different type of client and provide different financing for a different purpose. There is a potential need for both types of funds but duplication of certain activities is a valid concern.

Additionally, despite the development and success of global funds in the education and health sectors, donors remain wary of additional global bodies that require ceding some degree of control even if they offer economies of scale and leverage in return.

Perhaps the most significant challenge is the need to secure reliable, sustainable funding for GWAF, most likely through solidarity levies in developed countries. Making a persuasive argument for the need for GWAF and demonstrating GWAF's value, accountability, and impact consistently is as important as it is challenging in an era of strained public budgets. There will likely be significant social and political opposition to a global levy unless a clear and compelling argument is made for its rationale and it is structured to be accountable to results. The nature of GWAF, providing a recurring OpEx subsidy to reforming utilities, in contrast with other interventions that offer direct linkages from investments to outcomes (e.g. vaccination to disease prevention), also makes the job of arguing for GWAF funding all the more challenging.

Our research has shown that, for utilities unable to cover their operations and maintenance costs, a different type of flexible funding is required. This funding should be longer-term, risk tolerant, and provided on a grant basis, albeit with accountability, transparency, and adhering to principles of results-based financing. A disbursement and monitoring framework based on these principles would tie support renewal to verified improvements in service and business practices (e.g. reduction in non-revenue water or verified household access to safe water). These efforts would be informed by emerging lessons on results-based financing in the water sector which suggest careful consideration of context and operational

needs in designing appropriate mechanisms, incentives, and approaches (Rodriguez et al. 2014). GWAF would also support implementation of smart tariffing and provide operational technical assistance, drawing lessons from capacity building efforts like the utility partnerships launched by a coalition of Dutch water operators (Dutch VEI Partners, n.d.).

Despite the challenges of creating such a fund, its potential, helping stabilize and incentivize improved performance in utilities serving millions of the poorest households, is tremendous and can make a meaningful contribution to the SDG for water and sanitation.

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