How to plug the gap in water investments

The World Bank estimates that around US$114 billion per year is required globally to reach the Sustainable Development Goals related to water and sanitation, yet the sector is currently only raising about a third of that figure. Nick Michell looks at what is needed to create more bankable projects and examines whether water bonds could be viable instruments in meeting the industry’s needs.

By 2030, the global spend on repairing and expanding water infrastructure will be an estimated US$10 trillion. Dams and treatment plants are ageing, water demand is surging, and more frequent extreme weather events threaten water security—each driving up water management costs.

There is an enormous demand for drinking water and wastewater treatment infrastructure in developing countries. But governments in these countries often do not have the financial means required for such long-term investment and the level of investment required far surpasses the resources available through public funding. But while it is essential therefore to attract and grow private sector investment, the number of bankable projects within the water sector has not been growing, and private investment has stalled.

“World Bank data shows that private investment in water in low- and middle-income countries has been on a downward path,” says Elena Bourganskaia, Global Head of Water & Municipal Infrastructure at the International Finance Corporation. “I think a key obstacle for investors is political—getting the affordability-cost balance right. The first step forward is putting a price on water. Then it is a question of who pays—individual consumers? Governments? But someone has to pay so that water utilities can recover their costs, including the cost of capital. Unless there are companies
that are financially healthy, have good governance, and deliver a high-quality service that customers value and are willing to pay for, investors do not have viable opportunities.”

Why the lack of private investment?
The challenges are as much on the side of projects as on supply of capital. There are simply not enough viable projects out there. Governments often fail to develop long-term plans, and as a result, infrastructure needs are unknown. Secondly, even when there are long-term plans, the pipeline may not be well communicated. When it is not clear how many projects will take place in a specific geography, it is difficult for investors to justify investing in diligence and credit-evaluation expertise or investing in local staff and partnerships.

Many infrastructure projects are also not ‘bankable’ meaning they do not appear to be likely to deliver high enough risk-adjusted returns to attract private-sector equity or debt. Or costs and risks may not appear to be allocated appropriately.

Middle- and low-income countries face additional challenges. Not only do they often lack project-development resources, but their governments also may not be able to afford the funding commitments required or cannot offer sufficient guarantees to mitigate the perceived risk of the project.

“Risk and creditworthiness for fixed income assets are a much larger concern in the developing world, although this is also where needs are greatest,” says Betsy Otto, Global Director of the Water Program at the World Resources Institute (WRI). “Depending on the investor, they may already be investing in equities that have major exposure to water market growth or directly in PPPs like new desalination plants, or fixed income, such as bonds issued by public water utilities. As an overall asset class, however, infrastructure is a relatively new component for many institutional investment strategies.”

Many private investors claim that they have trouble finding adequate deal pipelines, and that despite the need for more water investment, many projects in the sector are too small to attract private capital. The huge number of independent water service providers make the sector very fragmented for investors. These kinds of pipeline problems make it more costly for investors to raise funds and invest in water infrastructure.

Hidden water
When people consider water investments they probably think of public and private utilities providing water treatment and supply, or perhaps newer technologies such as desalination. But it is important to encourage investors to recognise that water is often hidden. Water runs through national economies, through investments in almost all forms of energy and agriculture, through much of the transport sector, healthcare projects, and manufacturing. The energy sector is the largest water consumer in many countries, such as the US and France, for example, and in both cases it is thermal energy generation that consumes most of that water—thats is coal-backed in the US, and nuclear in France. Most investors would not necessarily understand that a nuclear, solar, or biofuels investment is intrinsically an investment in water.

It is necessary for investors to see that water-related investments require water resources management knowledge to be successful. Water is not just an element; water is a medium of commerce, ecosystems, governance, and, not least, of climate change impacts. As such, the plasticity of the water cycle and the complexity of managing water across stakeholders, sectors, and political boundaries requires a higher level of awareness. The level of awareness about the special problems for sustainability for water investments should in most cases be especially important given that most of these projects normally last decades.

“I am often very concerned when issuers or investors appear unaware that they are making an investment in water that requires effective water knowledge, and I fear that many well-intended investments may actually have unintended consequences in terms of economic and ecological impacts if water knowledge is not included,” says John Matthews, Secretariat Coordinator at the Alliance for Global Water Adaptation. “An agricultural development or sanitation project, for instance, may actually foster conflict or result in increased vulnerability for surrounding communities if the embedded water consumption is not considered at the scale of a hydrological basin, or if additional water commitments are not considered in light of other upstream/downstream stakeholders and in light of emerging climate change trends. We have a very significant risk in making the developing world
less developed, more indebted, and more conflict prone if we don’t work to manage water wisely, through flexible institutions, and for multiple decades.”

Water has often been seen as an isolated factor, and not as the cross-cutting issue it is. However many countries are beginning to understand how changes across many aspects of the full water cycle—from mountaintop snowpack to coastal estuaries, and from droughts and floods to tropical cyclones and seasonal monsoons—can impact fundamental aspects of economies. A lack of snowpack in Nepal, for example, can turn off the lights for hundreds of millions in India.

The water sector in developing countries experiences a catch-22 situation in that the lack of investment appetite means creating a bankable project is very difficult for developers and their inability to deliver good projects means investor appetite remains low.

**Solutions**

One stimulus to encouraging private investment in water has come from the fashion for green bonds. Water-related projects are a growing subset of the green bonds market that encourages investments for a low-carbon and climate-resilient economy. As a result, the Climate Bonds Initiative and consortium partners, Alliance for Global Water Adaptation (AGWA), Ceres, World Resources Institute and CDP, have released the world’s first standard for low-carbon and climate-resilient water bonds.

The Water Climate Bonds Standard is intended to provide investors with verifiable, science-based criteria for evaluating water-related bonds, and to assist issuers in the global corporate, municipal, sovereign and supra-sovereign markets in differentiating their green bond offerings. It will allow investors to prioritise projects that are seriously considering their climate impacts and climate resilience.

“For issuers and investors this means that those projects, and hence the bonds that support them, become more identifiable in the market place,” says Sean Kidney, CEO at the Climate Bonds Initiative.

“Investors wishing to place capital in water projects with adaptation and mitigation considerations have more information at hand. This standard can be used to evaluate projects as diverse as industrial water efficiency, reuse, catchment or watershed restoration and large-scale water supply infrastructure development.”

This is the first effort to set meaningful standards for both issuers and buyers of climate-related green bonds for water. As a next step, the consortium wants to develop guidelines for a broader suite of green water projects, such as stormwater management approaches that integrate green infrastructure (rain gardens and green roofs) with conventional engineered infrastructure (pipes and pumps).

These standards could be integral to enabling development of the green bond market for water projects because they help investors identify green investments in a rapid, certifiable, and cost-effective manner. The market will only work at scale if investors are able to identify green offerings within the time frame within which they make their bond purchase decisions. Some investors may wish to invest in extensive due diligence, but many will prefer to rely on a trusted and reliable tool in the market.

“The new standards set clear guidelines for what should be considered by issuers and buyers if they want to achieve a green bond standard,” says Betsey Otto. “Without this, even bad projects, such as groundwater mining and transfer projects, might be considered green though they undermine local water supplies and resilience and add to greenhouse gas emissions from groundwater pumping. Given the length of infrastructure investments, poorly designed projects can lock in exposure to impacts and risks for decades.”

In terms of using plain vanilla bonds to finance water infrastructure, these have been successful in the United States, though even there trading has been hit hard by the four-year Californian drought and investors have begun steering clear of the bonds from California and other hard-hit areas of the US west, amid concerns that restrictions on water use would drive down water-authority revenue.

Beyond the US, few countries particularly those in the developing world have any experience with bond issuance for water sector investments, either through municipal or corporate bonds.

“A variety of issues impact the potential of bonds in the water sector, particularly in developing
countries,” says Joel Kolker, Lead Water and Sanitation Specialist, World Bank Group. “The lack of creditworthiness, poor commercial viability, management issues and implicit subsidies all inhibit private investment in the sector. So does the underdevelopment of capital markets, lack of knowledge of the water sector amongst domestic investors, and limited number of investors looking for long term assets in many markets.”

To tackle these issues, the Global Innovation Lab, a public-private think tank of development finance experts, announced in January that it will be piloting a proposal of The Dutch Ministry of Foreign Affairs for a Water Financing Facility where water bonds would be issued and technical assistance offered to raise funds for investments in, and the set-up of, bankable water projects particularly in developing countries. There would be a fixed return on the bonds for private investors, and they would be available through a pooled fund, which would spread the risk. Private finance is expected to come from venture capital, private equity, banks and institutional investors.

“The Water Financing Facility is based on pooling the loans [made] to different water companies in a country,” says a spokesman from the Dutch Ministry of Foreign Affairs. “The infrastructure loans of the Financing Facility could be aggregated into pools and bonds could be issued and sold in the local capital market to local institutional investors, based on the credit of the pool. Additionally, the Financing Facility can provide a guarantee for part of the commercial loans, depending on the additional support that can be attracted. This way, the water companies will be able to acquire the loans needed for the building and repair of water infrastructure.”

Water Financing Facilities in emerging markets and developing countries are a realistic option, but not in every country. The concept has been proven to be successful in countries like the US, Canada, India, Philippines and Colombia. A country needs creditworthy utilities, sound underlying investment projects with revenue streams that can be used for servicing the debt, and a well-functioning domestic capital market with institutional investors that are interested in investing in the water sector. A good example is Kenya, where the Dutch Ministry of Foreign Affairs is now in the process of establishing a Water Financing Facility and is assisting the water utilities in preparing bankable project plans.

**Future**

Developing the water bond market quickly is one part of what’s required to shift existing capital in short periods of time. That means having demonstration investments from government and development banks, building transparency and disclosure frameworks and creating a deeper, more liquid debt financing market that recycles capital to where it’s needed.

The first issue is to ensure that upgrades and new water infrastructure have resilience and adaptive features designed and incorporated into the project to take into account both the long operating life of water infrastructure and the climate and sustainability risks of the future.

The second issue is for the state and institutional investors to build models that deliver the required climate resilient water infrastructure with appropriate financial risk/return allocation between the public and private sphere.

Other potential sources of funding for water projects, such as pension funds, crowdfunding, diaspora remittances or carbon finance have been repeatedly mentioned with occasional pilot projects, but have yet to be scaled up.

“Many investors will say there are regulatory hurdles, and that many water utilities’ needs are too small to finance at scale,” says Monika Freyman, Director of the Water Program at Ceres, a non-profit organisation advocating for sustainability leadership. “This is something Ceres and our INCR investor working group, the Investor Water Hub, hope to look at in the future. What does the water investing landscape look like now and how can bottlenecks linking financial flows to projects be broadened and how can investing be scaled up?”

With the 2030 projection that US$10 trillion of investment will be needed in water, we need urgent action to unlock those flows so that the replacement of ageing, non-resilient infrastructure can be procured through local private investors, the very entities which will rely on such infrastructure for their own development.”