A TYPOLOGY OF WATER INFRASTRUCTURE INVESTORS

WORLD WATER COUNCIL WHITE PAPER

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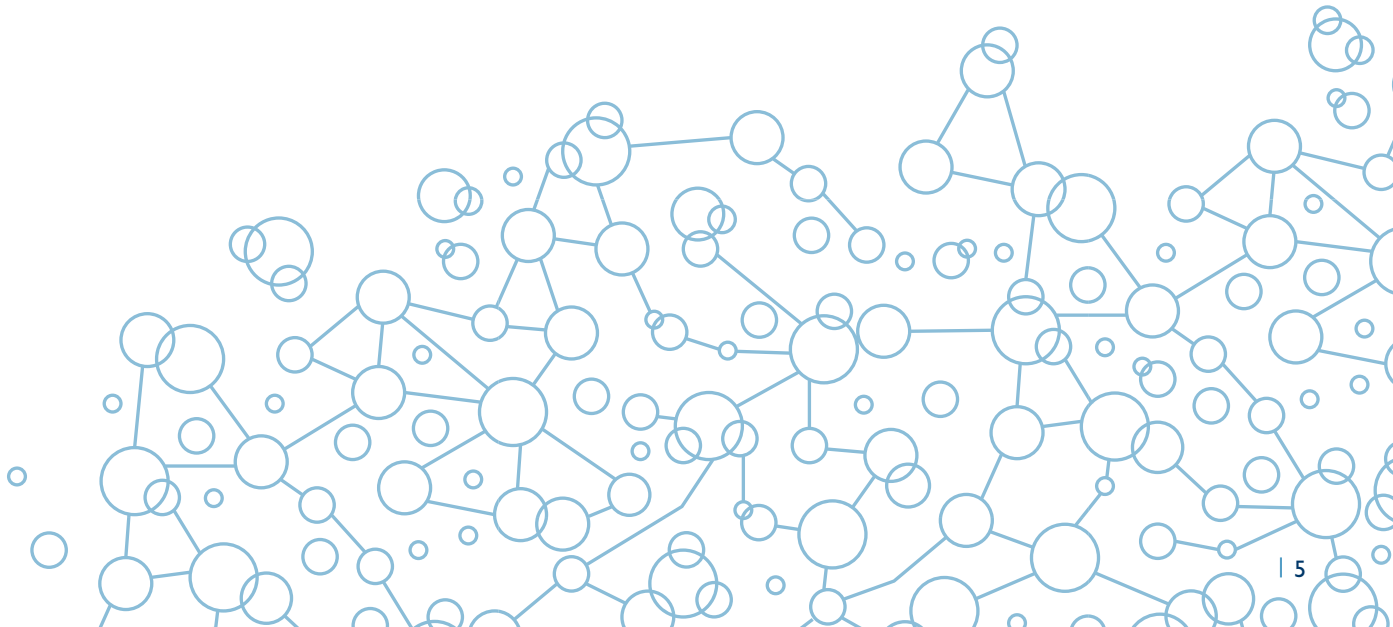


SUMMARY

The challenge of making water infrastructure projects 'bankable' could be partially addressed through a better understanding of investor types. Here a typology comprising institutional investors, corporations, development financiers and philanthropists is proposed. We describe how a typological approach could help unlock new capital through mechanisms such as blended finance, investor and corporate engagement, and impact investment. A classification that is based on the *mandate, motivation, materiality, mobility* and *momentum* of different types of investors is presented.

OVERVIEW

The public sector is, and will remain, a pivotal investor in water infrastructure, especially in the developing world. Many of the assets that underpin the delivery of water resources and services to consumers exhibit the characteristics of a public good. However, in the decade since the global financial crisis, it has become evident that public sector balance sheets do not have capacity to meet the infrastructure requirements of a growing, urbanising, and increasingly consumptive global population. More capital from the private sector will therefore be necessary if this 'infrastructure gap' is to be closed.

The encouraging news is that this capital is available. The Organisation for Economic Co-operation and Development (OECD) estimates that institutional investors in member countries alone will hold US$ 120 trillion of financial assets by 2019. The less encouraging news is that, at present, this capital is not particularly accessible. Pension funds currently only invest 1% of their assets into infrastructure as an asset class, and the majority of this is in the renewable energy and transport sectors. For a range of reasons, it has proven difficult to get private sector capital to flow at scale into water infrastructure. In response to this challenge, the World Water Council established a task force to investigate what practical measures could be taken to lower the barriers to financing water infrastructure, and to unlock new sources of capital investment. A framing paper [1] was published that identified a series of actions, including developing a typology of water infrastructure investors. This white paper sets out the rationale for the typology.

1 Ten Actions for Financing Water Infrastructure, WWC (2018)

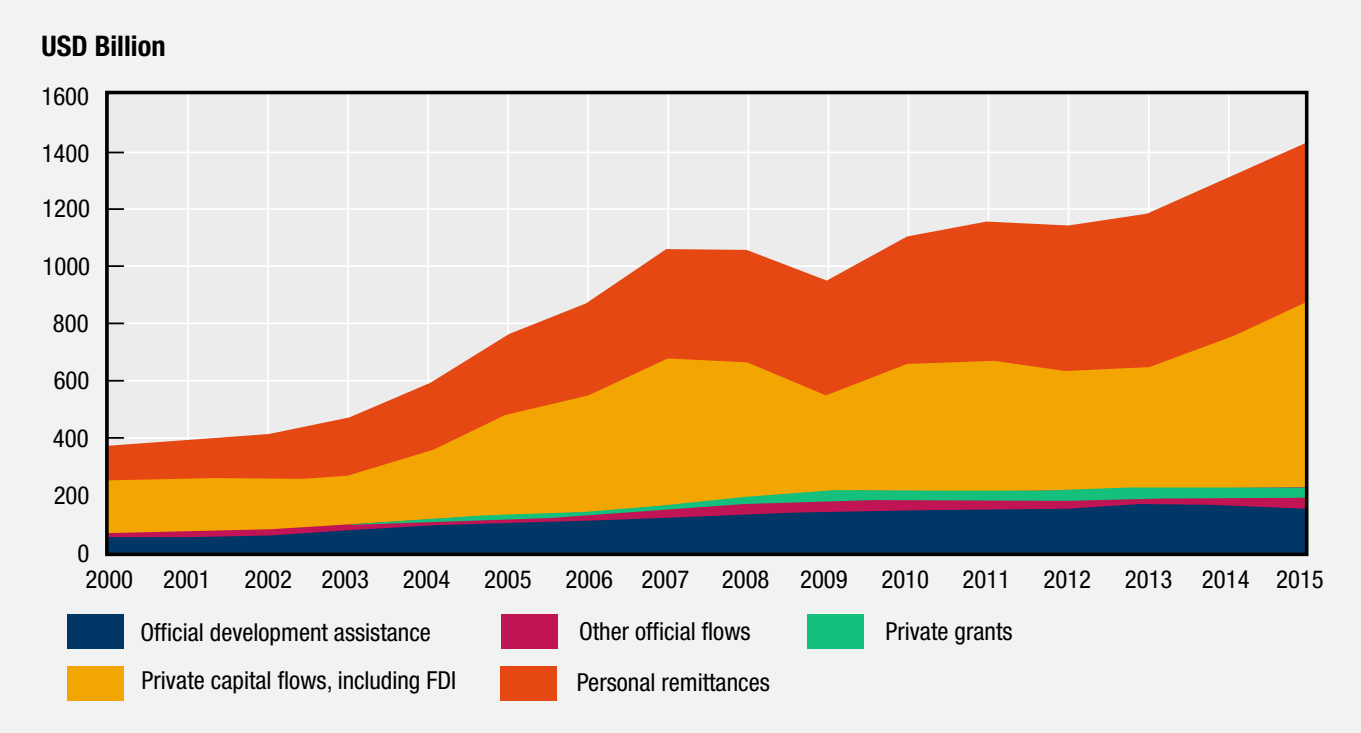
THE CHALLENGE OF BANKABILITY

Water infrastructure shares many of the attributes that are common to the infrastructure asset class more generally. These include a relatively high level of upfront capital expenditure, with income flows that are spread across the typically long life of the asset. From an investor perspective, this profile of a large financial outlay at the start of the project, which is then offset by small financial inflows (from e.g. tariffs) over many years, presents a range of risks. For example, if the investor does not receive a guarantee that these future inflows will be received, then the 'bankability' of the project may be reduced. Water presents particular challenges of bankability when compared to other infrastructure assets because water tariffs, particularly in developing countries, are often subject to stringent price controls. Water pricing is a complex issue, but a matrix of factors including affordability, human rights, political expedience and social acceptance frequently combine to make future inflows less predictable for water infrastructure assets, compared to other sectors.

The investment gap for water infrastructure is weighted towards developing countries, where domestic saving pools are often small, and financing at the scale required for infrastructure projects requires external financing. This paper reflects these realities, although it is important to emphasise that where it is available and affordable, mobilising domestic finance delivers direct benefits, such as eliminating foreign exchange risk; as well as indirect benefits, including better governance [2].

External financial inflows to developing countries have trebled in the last fifteen years, driven by private capital. [3]

Fig 1: External Finance to Developing Countries 2000-15



Source: OECD

2 Domestic resource mobilisation and external financing, Brookings (2016)

3 Making Blended Finance Work for the SDGs, OECD (2017)

This increase in capital inflows from the private sector may indicate a growing appetite to invest in infrastructure assets in the developing world. However, there are (well-rehearsed) arguments to the effect that such flows will only occur at scale if there is an appropriate enabling environment in place [4]. The lack of 'bankable' project pipelines is a challenge in both the developed and developing world. High development and transaction costs often preclude project preparation, while business funding models that are not sustainable generally deliver inadequate risk-adjusted returns. While regulatory and institutional intervention in many countries could help make the asset class more attractive to private investors (and deepen domestic capital markets), global regulatory guidelines such as Basel III [5] can have the effect of reducing the capital available for investment into infrastructure projects.

Perceptions of project risk are frequently cited in the literature as a major deterrent to infrastructure investment. Our white paper on project typologies deconstructed risk into the four components of project development risk, off-taker risk, political and regulatory risk and currency risk, each with different project-specific and market-specific attributes. Frequently however these component risks are not deconstructed or systematically evaluated – leaving them as a poorly understood amalgam.

In terms of returns on investment, many projects are frequently stymied by business models that prove to be unviable in an operating context. For example, a recent study by the consultants McKinsey estimated that up to 70 % of water provided by utilities in sub-Saharan Africa is leaked, unmetered, or stolen [6]; leaving an unsustainably small revenue base to fund capital or operational expenses. In the absence of a public-sector owner who can underwrite the losses, these utilities end up becoming insolvent, with investors being wiped out.

In summary high development costs, regulatory constraints, poorly understood risks, and inadequate returns on investments are some of the key reasons why such few infrastructure projects are considered bankable. This paper does not attempt to propose a wholesale fix for these problems. Instead, we argue that another approach to improving project bankability would be to reduce the information asymmetries between project developers and investors, thereby lowering transactional costs. A good first step would be to increase the clarity on who these prospective investors might be.

4 Financing Change, McKinsey (2016)

5 Basel III is a voluntary framework on bank capital adequacy, stress testing, and market liquidity risk.

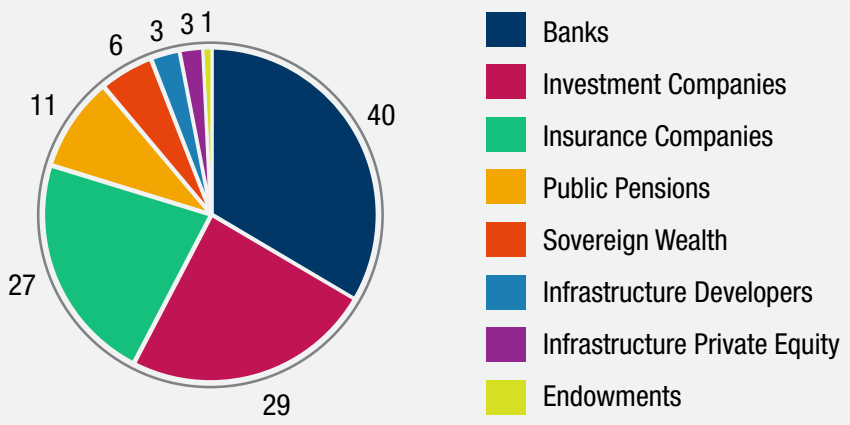
6 Financing Change, McKinsey (2016)

INSTITUTIONAL INVESTORS

McKinsey and Co estimate that of the US$ 2.5 to US$ 3 trillion spent on infrastructure each year, around 30-40 % comes from the private sector; principally institutional investors and corporations. They offer a typology of institutional investors based on defining eight groups.

Investment in infrastructure is usually through debt (loans), equity (shares), or a combination thereof. As Fig 2 shows, with US$ 40 trillion of assets under management, bank loans are the most significant source of private sector finance to infrastructure projects. Thereafter, in descending order of assets under management are investment companies, insurance companies and public pension funds. They collectively account for nearly US$ 70 trillion of investment capital, which is around one-third of the total institutional assets under management. These three sources share the objective of achieving yields that either match their liabilities (such as insurance claims or pension payments), or the returns that investors require. Sovereign wealth funds (SWFs) account for US$ 6 trillion of assets and may have strategic objectives that accommodate investments with lower yields. Finally, infrastructure developers and private equity funds often invest at an earlier stage of the project, where risks are higher. They typically take an equity position and target a higher return on investment to compensate for the additional risk.

Fig 2: Institutional investor typology by assets under management (US$ tn), 2016



Source: author, McKinsey & Co

CORPORATE INVESTORS

McKinsey's typology of institutional investors accounts for around two-fifths of private sector infrastructure investment per annum. The balancing 60 %, representing over US$ 1 trillion of private sector investment in infrastructure is largely accounted for by the corporate sector. Companies, including large multinational organisations, invest in infrastructure principally for directly operational reasons. Most investments are deployed within their 'fence line', i.e. on production facilities that they own or control. In recent years however, new initiatives such as corporate water stewardship have increased the volume of corporate spending on infrastructure beyond the fence line, although these investments are still typically concentrated within a vertically integrated supply chain.

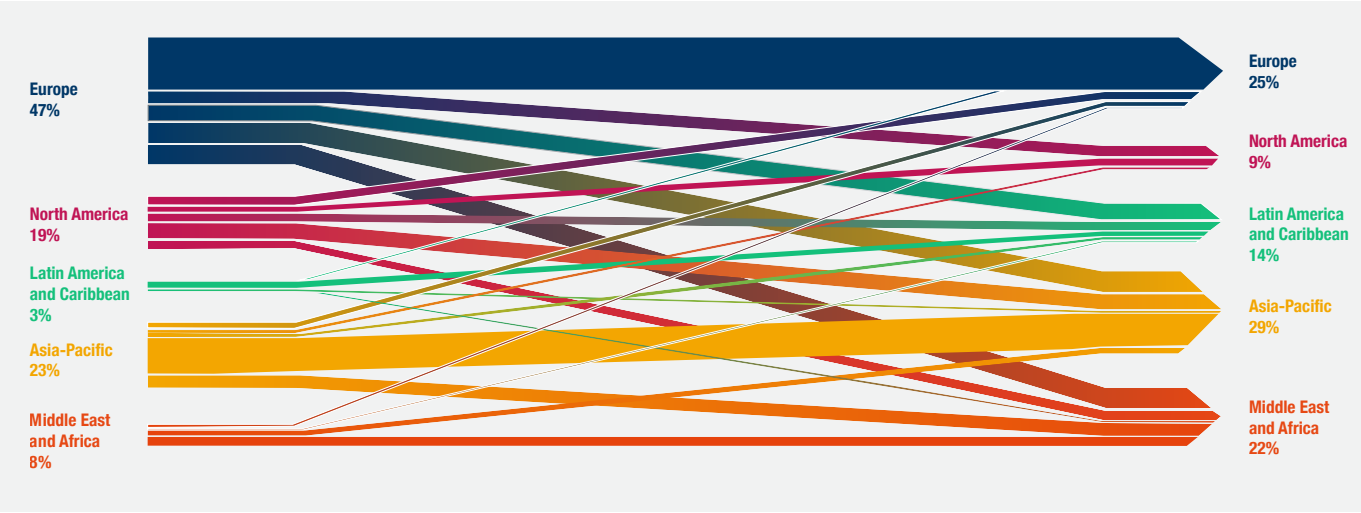
Typologies that include corporations as investors in water infrastructure are relatively undeveloped, perhaps because the data is difficult to come by. Unlike most institutional investors, corporations have few obligations to disclose what investments they make in infrastructure, particularly when they are investing in their own production capacity. However, we argue that corporations are likely to become much more significant as investors in the next few years, as the implications of the infrastructure gap start being felt on company revenues and profits.

Without adequate infrastructure to make and sell products to consumers in local markets, businesses will not be able to fully tap latent demand. Large corporations that are listed on stock exchanges often have access to the international capital markets and can borrow money at much lower rates of interest than state-owned utilities in many developing countries. For infrastructure projects where mutual benefits accrue to both the utility and the corporation, there is even the potential for corporations to take advantage of variations in the cost of capital by borrowing money at low rates on the international markets, and then investing in the debt of local infrastructure projects.

Beyond these financial opportunities, we suggest that corporations may also be able to leverage their internal resources and knowledge networks to evaluate risk and return more adeptly than many institutional investors. In doing so, they may identify new opportunities to invest in projects that would otherwise not have been developed. The scale of this opportunity is difficult to quantify, but the motivations for such behaviour increases as pressure builds on existing infrastructure resources.

Multi-national corporations operating in local markets may have even more advantage over traditional infrastructure investors. Institutional investors tend

Fig 3: FDI in greenfield infrastructure from source to destination (2000-15)



Source: McKinsey & Co

to exhibit 'home bias', in that they prefer to invest in the region that they are most familiar with. McKinsey research suggests that over 40 % of foreign direct investment in new infrastructure flows to the region where the investor is based.

Corporations with a local presence in multiple markets are well positioned to avoid home bias. Their understanding of domestic market conditions has been honed by the operational experience of transacting business in these countries, often for decades or longer. This insight helps to optimise capital allocation based on the standalone merits of each opportunity.

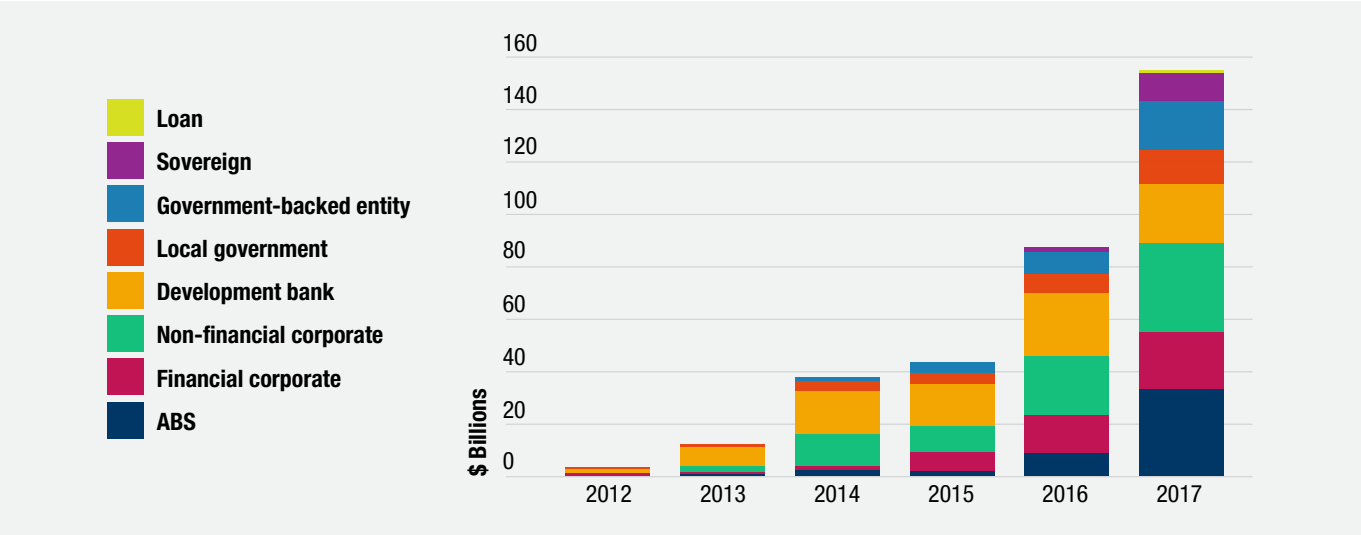
By contrast, over 60 % of total spending on infrastructure by institutional investors in the last decade has been into high income countries, which account for just 20 % of the global population. Meanwhile lower-middle income countries, which account for 40 % of the global population, have received just 5 % of total institutional investment. For many global corporations who sell to local consumers, the lower-middle income countries present the greatest strategic opportunity over the medium term, and this may provide the justification to invest in local infrastructure, provided the opportunities to do so exist.

INSTITUTIONAL AND CORPORATE INVESTMENT

There are some important intersections between institutional and corporate investment that we believe are likely to grow dramatically in significance. Institutional investors can hold shares in corporations, and as beneficial owners then have exposure to the infrastructure investments that the corporations make. It may be that over time, corporations develop a comparative advantage over institutional investors; for example, in opportunities outside their home market, or in lower-middle income countries. In these circumstances, investors may seek to increase their exposure to corporations as a proxy for access to infrastructure projects.

There are various financial instruments beyond simple shareholdings that can facilitate and optimise such exposure. In the last five years, corporate green bond issuance has soared [Fig 4], driven by a strong appetite from investors. The proceeds from such issues are usually earmarked for specific uses, such as sustainable infrastructure. Other instruments such as loan syndication, debt subordination and asset securitisation could help to increase corporate investment in water infrastructure by optimising the amount of debt on companies' balance sheets. Financial innovations that allow risks to be tranched and parcelled did not earn the best publicity following the global financial crisis. However, used appropriately they create options that give institutional investors with differing risk appetites the opportunity to get exposure to the infrastructure asset class.

Fig 4: Green bond issuance 2012-17, US$ bn



Source: Climate Bonds Initiative

DEVELOPMENT FINANCE AND BLENDING

Separate to the private capital flows of institutional and corporate investors, development finance plays a significant role in mobilising infrastructure investment. Of particular interest are public sector multilateral development banks (MDBs), and private sector development finance institutions (DFIs). MDBs typically provide debt in the form of concessional loans (i.e. on terms that are more attractive to the borrower than commercial loans) to public sector institutions; while DFIs provide finance to the private sector through a mixture of equity, loans and guarantees.

It has been proposed that development finance can and should play a much bigger catalytic role in 'crowding in' private sector capital to water infrastructure, through the use of instruments and structural mechanisms that reduce the risk and enhance the return of these investments. This concept of 'blending' development and private finance is not new, but it is receiving fresh impetus as the need to engage the private sector becomes more pressing. A recent survey by the OECD found that seventeen out of twenty-three members of their powerful Development Assistance Committee (DAC) are engaging in blended finance; but just ten report having well-established programmes that have been in place for a number of years [7]. This suggests that as blended finance matures, there is considerable scope for governments to engage further. We argue that blended finance has a fundamentally important role to play in financing water infrastructure, and we develop our thinking in a separate paper, Hybridity and Blended Finance [8].

7 Making Blended Finance Work for the SDGs, OECD (2017)

8 Hybridity and Blended Finance, WWC (2018)

PHILANTHROPY

Capital flows from global private philanthropic foundations are estimated at over US$ 8 billion per annum [9]. The majority of these flows were targeted at the health sector. The correlations between improved water security and better health outcomes are well established in the literature, and so the narrative that philanthropic capital should help fund water infrastructure deserves to be much better developed. Foundational philanthropic capital is often more patient, more risk tolerant, and more receptive to non-financial return than institutional investment.

Data on non-foundational philanthropy (including from family offices, personal donations, crowdfunding etc.) is patchy but anecdotal evidence suggests that this is rapidly becoming a material source of capital. For example, the UK philanthropic crowdfunding website just-giving, claims that over US$ 4 billion have been raised through its platform since it was established in 2001. Moreover, it has over 20 million registered users [10].

A plethora of such sites have emerged in the recent years, predominantly in the global North. Personal remittances to developing countries are soaring [Fig 1] and we think it is only a matter of time before a dominant and disruptive alternative to just-giving emerges in and for the global South.

While it may appear somewhat premature to include philanthropy within a typology of water infrastructure investors, there may be a significant alignment of objectives between project developers and the providers of philanthropic capital. As we discuss in our white paper on project typologies, the SDGs are an effective framework to contextualise non-financial return. Twelve of the seventeen goals are underpinned by the quantity and quality of infrastructure investment [11]. It is at least conceivable that in time, crowdfunding campaigns targeting specific SDGs could mobilise foundational and non-foundational philanthropic capital into water infrastructure.

9 Global Private Philanthropy for Development, OECD (2017)

10 https://www.justgiving.com/about-us/media-centre/media-faq (March 2018)

11 International Institute for Sustainable Development (2015)

IMPACT INVESTORS

Impact investment describes capital allocated with the explicit intention to generate social and environmental impact alongside a financial return. This allocation can be made by institutional investors, corporations, development finance organisations, philanthropists – indeed any entity. Just 200 institutional investors collectively manage over US$ 115 billion of assets mandated for impact investment, according to a recent survey [12], and in 2016 they invested US$ 28 billion of these funds in around 8,000 deals. The data is still not of the quality to be definitive, but the same survey suggests the majority of these impact investors intend to align their allocations to specific SDG objectives. At the least, impact investment provides a useful lens to better understand how investors evaluate non-financial return. In time, this could become an important channel for unlocking new sources of finance for water infrastructure projects.

12 Global Impact Investing Network (2017)

A TYPOLOGY OF INVESTORS

We propose a model of classification that is based on the *mandate, motivation, materiality, mobility and momentum* of different types of investors.

- **Mandate** describes their terms of reference, such as what assets they can invest in; over what timeframes; against what return benchmarks; with what risk appetite; in which countries, etc. Mandates prescribe the nature and extent of investor engagement.

- **Motivation** describes their propensity to invest in water infrastructure. For example, the extent to which they identify as impact investors; or if they are a corporation, the extent to which their business is at risk from poor infrastructure.

- **Materiality** describes both the amount they have available to invest, as measured by assets under management; but also, their influence in triggering changes in the behaviour of other investors, through blended finance for example.

- **Mobility** describes their executional capability. Do they have fresh capital to deploy or are they 'fully invested' i.e. would need to sell some existing holdings or raise funds before they could invest. Also, investors such as sovereign wealth funds may need to follow institutionally ponderous processes.

- **Momentum** describes their track record or progress with investments of this type. For example, an investor who has made investments in the water infrastructure asset class in the past is likely to be better positioned to make decisions on opportunities in the future, compared to a novice investor.

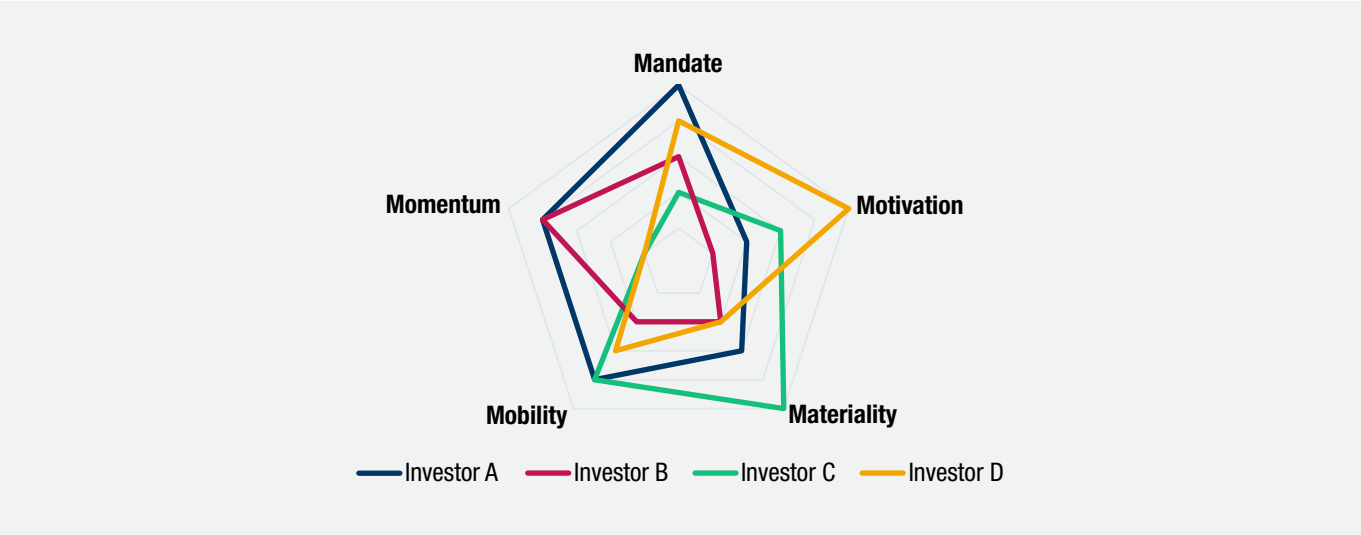
We consolidate these attributes through a stylised example in Fig 5:

The framework is extensible, in that it allows a comparison at different scales. Just by way of example, we suggest that Investors A through D could potentially represent:

i) individual investors of a single type (e.g. different SWFs)
ii) consolidated investors of a single type, (e.g. SWFs, banks)
iii) individual investors of different types (e.g. SWF, MDB, DFI, private equity)
iv) hybrid investors of different types (e.g. a corporation and a bank working in concert, a DFI blending finance from a philanthropic foundation, etc.)

Various other combinations are obviously also possible. The examples here are purely illustrative.

Fig 5: Typology of Investors



Source: author

NEXT STEPS

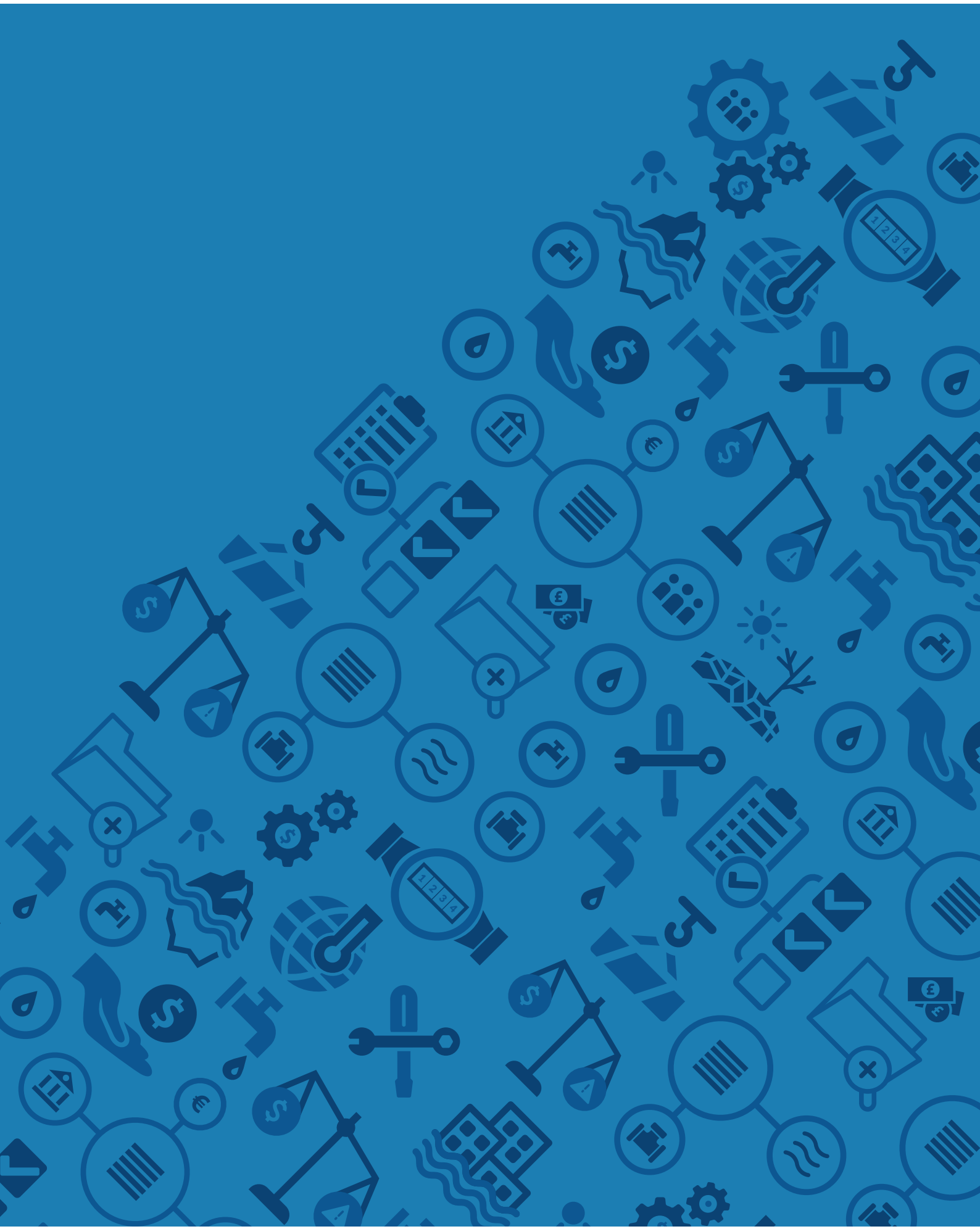
In our framing paper [13], we set out ten discrete issues that we associated with barriers to investment in water infrastructure. The absence of an adequate typology of investors was one of those issues, and the purpose of this paper is to set the terms of reference for discussion, debate and engagement with informed stakeholders.

Excellent recommendations have already been published in this field. It would appear that the value or otherwise of this typology will eventually boil down to three questions. First, does it help to lower the knowledge asymmetries that exist between projects and investors? Second, are there sustainable models to collect the information necessary, and to keep it up to date? Third, exactly what are the improved outcomes that can be credibly be attributed to using the framework?

To answer those questions and to advance best practices on financing water infrastructure, an applied approach was taken, hereby seeking to engage an extensive network of stakeholders. Critical and constructive comments from all parties are welcome and desired. These inputs will determine if and how we can convert conceptual frameworks into an applied programme of change.

When it comes to financing sustainable water infrastructure, the scale of the challenge leaves no room for complacency. But nor can pessimism be justified. Over two billion people still lack access to adequate water supply and sanitation due to insufficient infrastructure. The financing gap must be fixed.

13 Ten Actions for Financing Water Infrastructure, WWC (2018)



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