

# Roundtable on Financing Water

## The Roundtable on Financing Water

Regional meeting: Asia, 26-27 November 2019

Asian Development Bank Headquarters, Manila, Philippines

### Discussion Highlights

The fifth meeting of the Roundtable on Financing Water gathered over 180 participants, including private investors and financiers, multilateral and bilateral donors, development finance institutions, government officials, philanthropies, NGOs and research institutions. The meeting focused on recent developments and analytical work around three key themes: (1) the transition towards commercial finance for water supply and sanitation; (2) mobilising additional finance for a broad range of water-related investments; and (3) managing water-related risks, adapting to climate change and improving resilience.

This was a regional meeting focused on Asia, organised in partnership with the OECD and Asian Development Bank (ADB). Participants shared experience related to financing water from a diverse range of countries, including Armenia, Bangladesh, Bhutan, the People's Republic of China (PRC), Fiji, Georgia, Indonesia, India, Japan, Korea, Mongolia, Nepal, Philippines, Samoa, Tajikistan, Tonga, Uzbekistan and Viet Nam.

A brief summary of the highlights is provided below. The agenda and background papers are available on the meeting [webpage](#).

#### Key messages

##### **1. Investment needs and financing capacities: Outlook and key challenges**

- Preliminary findings from the finance chapter of the Asian Water Development Outlook (AWDO) indicate that most countries in the Asia and the Pacific need to allocate between 1 to 2 % of GDP for investing in water supply and sanitation (WSS) infrastructure over the period 2015-30.
- Closing the financing gap requires a multi-pronged approach, beyond simply mobilising more capital. This includes taking advantage of opportunities to pool investments at a basin scale.

##### **2. Case studies of private sector participation in water distribution and wastewater treatment in PRC**

- With acute and growing pressures on water quality and quantity in the PRC, public-private partnerships (PPPs) have been widely used to scale up finance for water-related investments without recourse to sovereign guarantees. As of September 2019, over 12 000 PPP projects existed in the PRC, totalling USD 2.45 trillion.
- The rapid expansion of PPP projects for water faced challenges such as over-investment and lack of communication between the public and private sector in the course of project implementation. Nevertheless, the approach was successful in encouraging a transition from single projects towards more integrated projects combining plants and pipeline networks for wastewater collection, treatment and water supply with investments that deliver ecological benefits.
- A key lesson from this experience is that bundling projects is more effective from a financial perspective than implementing projects on an individual basis, which entails significant transaction costs.

##### **3. Managing water-related risks (flood and drought), improving resilience and adapting to climate change**

- Climate change is a fundamental factor to consider in the context of financing water-related investments, considering that a significant share of climate adaptation activities relate to improving water management. Climate finance needs to be coordinated and accelerated alongside the financing water agenda in order to pool resources effectively.

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- Evidence documenting the impacts of water-related risks (flood and drought) indicates that the frequency of extreme events and related economic costs are on the rise. This trend calls for urgent attention to re-examine the conventional approaches to designing and financing investments to manage water-related risks to more systematically improve resilience, including through nature-based solutions.
  - Although there is currently very limited investment in water-related infrastructure from pension funds and insurance companies, the potential for investment in the water sector is considerable. To enable more institutional investors to invest in water-related infrastructure, bundling projects to achieve the necessary scale is key.
- 4. *Landscape-based finance, fund development, and bonds***
- Landscape-based approaches consist of integrated projects within a given spatial area and can deliver multiple water-related benefits across several sectors, for example to agriculture, energy production, fisheries, recreation and tourism. Experience with landscape-based finance is still at an early stage; the approach could attract new revenue streams by combining projects at landscape scale that mutually reinforce each other.
  - Dedicated funds and facilities can be used to aggregate projects to a scale attractive to financiers and balance risks and returns across public and private actors, such as the Shandong Green Development Fund in the PRC.
  - Examples of financing models to mobilise private capital markets include the Kenya Innovative Finance Facility for Water (KIFFWA) as well as the US Environmental Protection Agency's State Revolving Funds and the finance facility for large water infrastructure projects established by the Water Infrastructure Finance and Innovation Act of 2015.
- 5 & 6. *Supporting the mobilisation of commercial finance: Managing risk, improving performance and creditworthiness (including country examples)***
- Many countries in Asia and the Pacific currently struggle to deliver adequate and sustainable water supply and sanitation services (WSS). Managing risk, improving performance and creditworthiness of WSS service providers is a pre-requisite to mobilising commercial capital in the sector.
  - One key tool to improve the information base on utility performance is [AquaRating](#), an international standard for assessing water and wastewater systems' creditworthiness. In addition, innovation can improve the financial and operational performance of utilities, contributing to facilitating access to commercial finance.
  - A number of countries in the region are working to supporting the transition towards commercial finance for WSS services, including Indonesia, Georgia, Viet Nam, Bangladesh, Bhutan and Fiji, drawing lessons in line with their particular circumstances and challenges.
- 7. *Practical examples to increase financing flows for water-related investments in Asia***
- Recently there have been several successful developments in mobilising additional finance for water-related investments in Asia and the Pacific. One example is the [Philippines Water Revolving Fund \(PWRF\)](#), which takes a blended finance approach using development finance to mobilise commercial finance and has benefitted from support from USAID and JICA.
  - Support of development partners is an important factor in many cases, for example USAID's support on capacity building and training enabled over 600 private water operators to access finance. In the Philippines, Water.org has been actively working to scale up financing in the sector, in particular through microfinance, with nearly 810 000 loans disbursed for water and sanitation since 2015.

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## Session 1. Investment needs and financing capacities: Outlook and key challenges

To set the scene, presentations highlighting the current water financing landscape provided background on investment needs and opportunities, as well as challenges related to conventional approaches to financing water in Asia and the Pacific. This session covered three core sets of issues from the perspective of policymakers, financiers and borrowing clients. Henk Ovink, Special Envoy for International Water Affairs, Government of Netherlands, highlighted that more opportunities and solutions exist than challenges for financing water. Investment in water security contributes to sustainable growth and lack of investment exposes a country to a variety of risks and costs, affecting economic growth and livelihoods. Despite the strong economic case for investment in water security, financing persistently falls far short of needs. The water sector is particularly difficult to understand from the perspective of financiers, who have a major role to play in filling the financing gap for water-related infrastructure. Enhancing the understanding of investors about opportunities related to financing water is crucial. In this regard, the Roundtable on Financing Water acts as a platform for discussion and engagement across governments, a broad range of investors and financiers as well as other key stakeholders to accelerate financing on water, expand opportunities for better and efficient use of available sources of capital, and identify innovative financing approaches. The Netherlands has been collaborating with several Asian cities, including Chennai (India), Khulna (Bangladesh) and Semarang (Indonesia) to tackle urban water-related challenges in a catalytic, innovative, and inclusive way through the [Water as a Leverage for Resilient Cities in Asia](#) programme by creating sustainable, resilient and bankable projects.

Kathleen Dominique, Coordinator of the Roundtable on Financing Water, Environment Directorate of the OECD, introduced preliminary results from the [OECD work](#) on the finance chapter of the Asian Water Development Outlook (AWDO), a flagship ADB publication on water security. The chapter assesses the challenges and opportunities related to financing investments that contribute to water security and sustainable growth in Asia and the Pacific. The analysis covers investment needs and assesses financing capacities for (1) improving access to water supply and sanitation (WSS); (2) flood protection; and (3) irrigation infrastructure. Preliminary findings indicate that most countries in the region need to allocate between 1 to 2 % of GDP in investing in WSS infrastructure over the period 2015-30.<sup>1</sup> The analysis highlights that closing the financing gap requires a multi-pronged approach, beyond simply mobilising more capital. Making the best use of existing sources of funding, along with cost recovery from users through water tariffs and mobilisation of commercial finance will be crucial to meeting the needs of water-related investment in the region. In addition, sound policies can help to minimise future investment needs by setting realistic targets for service delivery, system performance, regulations and standards. Planning, setting priorities and sequencing investments along strategic investment pathways can contribute to ensuring investments are resilient over the long-term.

[Tom Panella](#), Chief of the Water Sector Group, ADB, emphasised that current levels of investments for water fall extremely short of total investment needs to reach the targets set out by Sustainable Development Goal (SDG) 6. Regionally, water-related investment needs are estimated to be USD 800 billion from 2016 to 2030.<sup>2</sup> Several approaches can stimulate the mobilisation of private capital: first, using pooled projects to diversify risks in order to access 'patient' private capital (e.g. pension funds, insurance); second, utilising non-sovereign lending for regional and local governments and utilities; and third, making use of new public and private partnership (PPP) models that create bankability across water value chains. Examples including landscape-based finance, which has shown success in increasing private investment in wastewater, sanitation and watershed management, will be discussed in more detail in the following sessions.

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<sup>1</sup> With the exception of a few outlier countries such as Timor Leste, Afghanistan, Nepal and Pakistan.

<sup>2</sup> ADB (2017). Meeting Asia's infrastructure Needs.

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## Session 2. Financing the water value chain without a sovereign guarantee: Case studies of private sector participation in water distribution and wastewater treatment in the PRC

This session discussed the key ingredients of bankability of water projects without a sovereign guarantee. In the PRC, ADB has been financing various forms of public-private projects with a wide range of structuring, including limited recourse project finance, portfolio programs, and approaches to keep up with evolving contractual structures. This session shared diverse perspectives from corporate leaders and senior officials to private sector utilities, legal experts, and leading financiers to discuss key success factors and lessons learned. Water scarcity, pollution and management issues are increasingly gaining attention in the PRC. With rapid industrial growth, just over 30% of national wastewater was discharged into rivers and seas without a proper treatment. This increases the costs of treatment before water can be supplied for domestic uses downstream. Over 30% of the water resources in the PRC is considered unsuitable to supply drinking water.<sup>3</sup> Over 400 of 660 Chinese cities are suffering from water shortage. Inadequate water supply and unequal geographic distribution of water resources cause severe water shortage in the northern and eastern part of the country. In addition, demand for water is increasing, driven by growing rapid urbanisation, increasing population and economic growth.

To attract private capital to the water sector and finance water-related investments without a sovereign guarantee, private sector participation in water supply and wastewater treatment was encouraged. ADB's Public-Private Partnership (PPP) projects supported city governments to open the water sector to water companies across the PRC. As of September 2019, over 12 000 PPP projects existed in the country, totalling USD 2.45 trillion.<sup>4</sup> This expanding [private sector engagement](#) contributed to closing the financial gap for water infrastructure investment. Comprehensive improvement of the ecological environment and shared understanding of importance of clean water led to the improvement in water quality as well as diversification of investment and financing entities since 2014. Some examples of river rehabilitation projects implemented via PPPs in the PRC targeting improved water quality are the Xinfeng river basin and the Daoxiang lake sewage treatment plant.<sup>5</sup> The first project focuses on river ecological restoration, landscape development and construction of park facilities. The second one aims to provide amenity value through park and leisure grounds for recreation, while achieving ecological improvements.

However, many problems emerged in the proliferation of PPP projects for water, including: over-investment, lack of communication between public and private sectors prior to project implementation, and excessive use of PPP models for a number of projects without vetting systems to assess their feasibility and suitability. Despite these bottlenecks, the experience in the PRC has encouraged a transition from single projects towards more integrated sub-sector projects combining plants and pipeline networks for wastewater collection, treatment and water supply along with delivering ecological benefits. Looking forward, one lesson learned is that bundling projects is more effective from a financial perspective, than implementing projects on an individual basis, as dealing with each project individually increases transaction costs.

Perspectives from commercial banks illustrate that the following key factors are important in assessing water infrastructure investments and designing appropriate financing structures. First, the type of financing and structural considerations (e.g. portfolio basis, single project, existing cash flow) matters; second, a sub-sector-based approach (e.g. water distribution, wastewater treatment, and others) can deliver more integrated results; third, concessional terms (e.g. long-term tenors of approximately 20 years) are often required; fourth, technical expertise (with acknowledgement of local government and experience) is paramount. Lastly, ensuring that investments provide benefits for end users, while safeguarding local government's independence is key.

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<sup>3</sup> [Liu, Yong \(2019\). A Decade-long Partnership of ADB and China Water Affairs Group Limited.](#)

<sup>4</sup> [Wang, Tianyi \(2019\). The Execution of PPP model in Wastewater treatment industry in China](#)

<sup>5</sup> [Zhou, Min \(2019\). Sharing PPP experience in PRC's water industry](#)

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## Session 3. Financing water-related risks (flood and drought), resilience and adaption to climate change

Flood risk management, water-related disaster risk management and climate change adaptation are interrelated and increasingly understood to be critical to sustain economic and social well-being in Asia and the Pacific. Physical impacts and monetary losses from extreme weather events have been steadily increasing over the last generation. This session discussed innovative financing opportunities to manage risks, improve resilience, and adapt to climate change, including a more systematic use of nature-based solutions. Financial protection instruments, including insurance and catastrophe bonds, contingent liability facilities, and risk pooling were also been discussed. Climate change is a fundamental factor to consider in the context of financing water-related investments, considering that a significant share of climate adaptation activities relate to improving water management.<sup>6</sup> In this sense, distinctive features of various sub-sectors: wastewater management, sanitation, irrigation, water supply, etc. should be considered, along with the extent of their vulnerability to climate impacts. At the same time, the impacts of climate change on water should be considered in an integrated manner, rather than a siloed approach. Therefore, climate finance needs to be co-ordinated and accelerated alongside the financing water agenda in order to pool resources effectively. This can be aided by treating water as a “connector” between sectors and policy objectives related to climate adaptation, instead of considering it as a separate, standalone sector.

Evidence documenting the impacts of water-related risks (floods and droughts) indicates that the frequency of extreme events and related economic costs are on the rise. For example, 2017 recorded the second largest loss of USD 330 billion from natural disasters (e.g. hurricanes, severe storms, wildfires, floods and other weather events) globally. Only in 2011 were higher loss figures for natural disasters (USD 350 billion) recorded, driven by losses from the Tohoku earthquake and floods in Thailand.<sup>7</sup> These figures call for urgent attention to re-examine conventional approaches to designing and financing investments to manage water-related risks and improve resilience. [Swiss Re's Natural Catastrophe Insurance Resilience Index \(2018\)](#) is one example of a tool to measure society's preparedness to deal with and recover from natural disasters such as storms, earthquakes and floods.<sup>8</sup>

Although there is currently very limited investment in water-related infrastructure from pension funds and insurance companies, the potential for such investment is considerable. To enable more institutional investors to invest in water-related infrastructure, bundling projects into pools to achieve the necessary scale is key. In addition, standardisation, establishing benchmarks and improving credit enhancement is crucial to maximise the use of available assets of long-term institutional investors. Since every project has a different risk-return profile, bundling projects and ensuring consistent cash flows is vital for success and attracting more investors. From the policy perspective, improving the regulatory<sup>9</sup> and policy environment is important, while the Multilateral-Development Banks (MDBs) and other development partners can contribute with technical and financial support to assess climate risks and enable climate-resilient investments

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<sup>6</sup> [Matthews, John \(2019\). New financing modalities for climate adaptation](#)

<sup>7</sup> [Altamirano, Monica \(2019\). Hybrid \(green-grey\) water security strategies: a blended finance approach for implementation at scale](#)

<sup>8</sup> [Swiss Re's Natural Catastrophe Resilience Index](#)

<sup>9</sup> In this context, considering the treatment of infrastructure projects from a regulatory capital charge perspective can make such investments more appealing to institutional investors. Typically, infrastructure projects are treated as more risky than other types of investments (e.g. government bonds), which incurs a higher capital charge and makes them less attractive from a risk-return standpoint.

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## Session 4. Landscape-based finance, fund development and bonds

Several recent initiatives are exploring approaches to scale up financing water-related investments, including approaches to combine public and commercial financing. This session explored some of the proven as well as evolving financing modalities. With an estimated population of 5.2 billion by 2050, its rapid urbanization and buoyant economic growth, Asia and the Pacific faces alarming water challenges: 3.4 billion people are expected to be living in water-stressed areas by 2050, which is roughly 20 % of the population in Asia.<sup>10</sup> Additionally, almost 80% of wastewater is discharged in rivers, lakes and the sea with little or no primary treatment.<sup>11</sup> These challenges are compounded by climate and land use changes, increasing extreme weather events, water-related crises and associated disasters. Water risks affect not only livelihoods and ecosystems, but also the economy.<sup>12</sup>

Meeting these challenges will require novel approaches to designing and financing water-related investments, including tapping into new revenue streams and sources of capital. One opportunity to do so is with landscape-based finance, which can help to generate new revenue streams by combining projects that mutually reinforce each other at the landscape scale, while providing benefits for people and nature and creating a positive financial return for investors. Landscape-based approaches (integrated projects within a given spatial/territorial dimension of area) have advantages in that they deliver multiple water-related benefits across several sectors, for example to agriculture, energy production, fisheries, recreation and tourism. Projects incorporating landscape-based approaches are increasingly being developed to address SDG-related challenges.<sup>13</sup> One notable example is the Büyük Menderes Basin in Turkey, where the WWF developed the Better Cotton Initiative (BCI) to enhance energy efficiency via the landscape finance approach combining investments at river basin scale. The BCI aims at improving the environment, farming and the economies of cotton-producing areas through water stewardship in the textile sector and promote conservation and sustainable use of water resources that can be scaled up to other basins in Turkey.

In addition to landscape-based approaches, other funds and financing models can be used to aggregate projects to a scale attractive to financiers and provide financing structures to balance risks and returns across public and private actors. For example, the Shandong Green Development Fund (SGDF) is a fund that uses public funding to crowd in private capital for investments that address climate-related risks. With a public investment of USD 1.5 billion, the SGDF can achieve a leverage ratio of more than five by crowding in private, institutional and corporate capital at both the fund and projects level. With 45 % of private funding, SGDF finances selected climate sub-projects for a fixed period through differentiated pricing to make the sub-projects bankable. Through its approach, the Fund helps to address the risks related to climate impacts and fosters an integrated approach to climate finance<sup>14</sup>.

Other examples include two major water infrastructure finance models managed by the U.S. Environmental Protection Agency: (1) the State Revolving Fund Model and the (2) finance facility for large water infrastructure projects established by the Water Infrastructure Finance and Innovation Act of 2015. Each of these models encourages new investment in water-infrastructure projects, by providing access to capital at minimal or below market rates for high priority projects, which address national public health and water quality goals. These are designed to leverage non-public sources of capital (i.e. they operate with blended finance attributes) and crowd-in private investment to increase financing available for water infrastructure. In addition, Environmental Impact Bonds (EIB) have been gaining traction in the U.S., with DC Water a notable example. The DC Water EIB is the first use of a “Pay for Success” model in the water space and the first to be issued as a tax-exempt municipal bond.

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<sup>10</sup> [Schaub-Jones, David \(2019\). Experience with Water Funds in the region and lessons learned](#)

<sup>11</sup> [ADB \(2016\). Asian Water Development Outlook](#)

<sup>12</sup> [Cardascia, Silvia \(2019\). Financing Water Infrastructure and Landscape Approaches in Asia and the Pacific](#)

<sup>13</sup> [OECD \(2019\). Making Blended Finance Work for Water Sanitation and Infrastructure](#)

<sup>14</sup> <https://www.adb.org/publications/green-finance-catalyzing-facility>

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Another example of a financing facility to mobilise private capital markets is the Kenya Innovative Finance Facility for Water (KIFFWA), managed by the Netherlands Water Partnership (NWP). KIFFWA supports commercial finance initiatives from the development stage through financial closure and implementation. Apart from providing finance during the development phase, KIFFWA helps structure a project so that it becomes ready for investment and attractive enough for different types of financiers. KIFFWA is now at the stage of operational activities from its establishment since 2017, and recently became an independent entity in Kenya. KIFFWA also funds smart meters and help with revenue collection to make a business case to address water scarcity.

## **Session 5. Supporting the mobilisation of commercial finance: Managing risk, improving performance and creditworthiness**

One of the most direct and common ways to mobilise additional financing into the water sector has been through the step-wise transition from purely public financing for water and sanitation service providers moving from the use of a combination of tariffs and public subsidies to eventually transitioning to only tariffs and commercial finance. The last step in accessing commercial financing is challenging and requires both a well performing and creditworthy service provider as well as a stable enabling environment. A robust enabling environment for investments can help to ensure risk sharing is balanced among commercial and public actors as well as encourage the engagement of private sector water service providers, where appropriate.

Many countries in Asia and the Pacific currently struggle to deliver adequate and sustained water and wastewater services. Approximately 260 million people in region still do not have access to a safely managed source of water. In addition, there are significant gaps in coverage and substantial physical losses due to outdated and poorly maintained infrastructure, poor water quality and high commercial losses.<sup>15</sup> Managing risks, improving performance and creditworthiness of these service providers is a pre-requisite to mobilising commercial capital.

One tool to improve the information base on utility performance is [AquaRating](#), an international standard for assessing water and wastewater systems' creditworthiness. It provides lenders with critical information on creditworthiness to enhance the commercial financial flow to the water sector. It helps water and sanitation service providers to better measure their performance compared to others, identify opportunities for further improvement and implement actions toward good international practice in the short term.<sup>16</sup> By evaluating utilities based on key performance indicators and adoption of best practices, AquaRating provides indicators across eight areas, quality governance, financial planning and environmental sustainability.

[Improving utility performance through technology and innovation](#) is also important for the water utility performance and creditworthiness. For example, Isle Utilities highlighted how three technologies can enhance utilities' performances: first, RTAP, a smart network pressure management technology; second, UNTAPPED, which uses "pay-as-you-go" smart meters in Kenya; lastly, Rezatec, a tool that provides geospatial analytics and intelligence for holistic catchment management. As these examples indicate, innovation can improve the financial and operational performance of utilities, contributing to facilitating access to commercial finance.

A number of countries in the region are taking action to support the transition towards commercial finance. The following country examples illustrate the process of mobilising commercial finance for the sector and lessons learned along the way. In Indonesia, there is growing debate about the opportunities of gradually transforming publicly owned regional drinking water companies (PDAMs) into commercial companies. Water services are viewed as a government obligation to the community and for this reason, local governments own PDAMs. As a result, different water tariffs created by local government regulations apply. As the political involvement is very high, mobilising commercial finance is a huge

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<sup>15</sup> [OECD and ADB \(2019\). Supporting the mobilisation of commercial finance: managing risk, improving performance, and creditworthiness.](#)

<sup>16</sup> [OECD and ADB \(2019\). "Supporting the Mobilisation of Commercial Finance: Managing risk, improving performance and creditworthiness"](#)

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challenge in the sector. Out of 300 PDAMs, only 180 are operating at a full cost recovery of OPEX investments. To establish commercial utilities in Indonesia that can mobilise commercial finance requires: (1) developing a very strong business case for investment, including improving cost recovery; (2) drawing government support for commercial finance that includes an enabling environment for water-related investments; and (3) improving the quality of project preparation projects that can attract commercial finance is essential; and (4) the transition from public to commercial shall be gradual and supported by the government to build financial and human capacity

In the PRC, the construction of water sewage plants largely began in the 1990s. In the beginning, they were mostly financed by the private sector with the build-operate-transfer (BOT) approach, with 40% equity and 60% public debt. Sewage treatment operators grew rapidly in the 2000s by winning a number of BOT projects. Likewise, the sewage treatment ratio in the PRC increased from less than 10% in 1990 to 95% in 2017. PRC's growth in constructing sewage plants has been remarkable. From 2005 to 2014, the valuation of treatment operators ballooned to a peak of ~25x the price-to-earnings ratio at one point. The earnings of these companies at the time were growing at over 30% per annum. Since 2016, however, the market's view of these publicly-traded companies has become more cautious, largely driven by the government's tightening on credit, coupled with these companies' negative free cash flow and growing capital expenditure.

Unlike the BOT projects described above, which involved an investment in exchange for a steady stream of cash flow in the form of sewage tariff, PPP projects are mainly construction projects backed only by a local government's investor-owned utilities. PPP contracts are used for local companies to build roads or other infrastructure and government pays back the investment over a 20-year period. The government's payment arrangements can result in an inconsistent cash flow, due to changes in local political leadership and fluctuations in the city's financial status. Thus, from 2008 to 2015, these PPP projects were not viable for investors. Water companies also faced challenges related to the government's crackdown on shadow banking, which led to difficulties for many water companies. Investors generally do not prefer companies to take on PPPs because as they see risks from: (1) relatively low risk-adjusted returns of 6-7%; (2) local government not paying on time; and (3) long-term accounts receivables of 10-20 years. Responding to these challenges to attract finance, water companies have used off-balance sheet vehicles to fund these projects<sup>17</sup>. This allows them to lessen the strain on the balance sheet but does not give investors clarity on the receivables owed and actual debt taken on by the company. In conclusion, from equity investors' perspective, investing in companies involved in these types of PPP projects is not a very attractive option.

## Session 6. Supporting the mobilisation of commercial finance: Country examples

In addition to the examples discussed in the previous session, there are a number of other countries in the region that are eager to support the transition towards commercial finance for water supply and sanitation services (WSS). Georgia, a water-abundant country with a population of 4 million, suffered from poor service quality and intermittent supply that has led to deficiencies in WSS service since its independence from the Soviet Union in 1991. Until 2003, its WSS sector was under-financed, with neglected infrastructure. From 2003, a new government took initiative to transfer the responsibility of WSS from local governments to the United Water Supply Company of Georgia (UWSCG). Investments to improve service delivery were financed by loans and grants from foreign donors. However, cost recovery remains a persistent problem. The UWSCG seeks to mobilise commercial finance into the sector, while improving operational efficiency through this shift from a state-owned company to one operating on a commercial basis.

Viet Nam is in the process of transforming the sector from state-owned water supply companies to joint stock companies. In 2016, the government decided to hold less than 51% stake in the water sector. At present, Viet Nam has over 64 provincial water supply companies (mostly joint stock companies) with the exception of Hanoi and Ho Chi Minh cities. Viet Nam has a huge potential for investment, where approximately 80% of the population residing in urban areas and urbanisation growing by 3.2 % per year. In addition, joint stock companies are looking for commercial loans to accelerate investments to improve operational efficiency and service quality. However, they are facing difficulties in

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<sup>17</sup> Because companies own only 10-30 % of the Special Purpose Vehicle (SPV) used to facilitate this type of investment, they do not need to consolidate the debt in their own balance sheet.

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securing loans. To address this, three approaches are being taken: first, increasing water tariffs to encourage investment for water supply networks; second, strengthening regulation to encourage commercial loans for WSS services at a preferred interest rate; and third, encouraging financing tools (e.g. bonds, credits, and funds) to focus on environmental and social improvement. To support a smooth transition towards commercial finance, ensuring the needs of rural areas are addressed will be important and can benefit from the involvement of IFIs.

In the Philippines, the WSS sector is suffering from poor management of water resources and WSS service delivery. Three out of 10 water districts are considered to be non-operational, and only one person out of 1 000 has access to sewerage management systems.<sup>18</sup> In addition, water resources are poorly managed due to weak and fragmented institutional set-up, uncoordinated sectoral plans, no single repository of water data and no regular update of data on water availability. In order to resolve these problems, the government commissioned a national master plan in 2018 to increase public spending, support capacity-building, increase equity for resource mobilisation and improve the measurement and reporting of key performance indicators. Two topics are high on the national water agenda of Philippines: (1) a revision of the water allocation regime and (2) options to harness domestic commercial finance for water-related investments.

In Bangladesh, the Dhaka Water Supply and Sewerage Authority (DWASA), which serves around 70 million people, has been working to increase its capacity to make the WSS sector and company projects bankable. However, there have been challenges to scale up wastewater coverage, which is currently only at 20%. The Water Operator Partnerships (WOP)<sup>19</sup> with bilateral organisations is one of the initiatives that Bangladesh is involved with to improve the functioning of the sector, including exploring opportunities for PPPs. For example, a first PPP project is underway with the cooperation of the PRC and Bangladesh to develop water distribution and supply facilities at Purbachal New Town.

In Bhutan, access to water has been a challenge with growing water scarcity arising from climate change, a lack of finance and investment as well as weak sector governance. Challenges to deliver WSS services also arise from the distinct physical geography of this mountainous country with a population dispersed throughout the country. As the country seeks to move from the Least Developed Country status by 2023, the government is actively promoting access to safe drinking water and irrigation as one of the national top priorities. Establishing a single water agency has been one of the goals, while using PPP strategy to facilitate and improve the sector.

The water sector in Fiji is currently in a transition phase after having been privatised five years ago. Covering both urban and rural areas, the Water Authority has been working in the 110 inhabited islands to provide access to safe WSS. Non-revenue water remains high at 39%. Cost recovery is low as well, with only about USD 1 in revenue for every USD 2 spent on water service delivery. Increasing the rate of cost recovery has been one of Fiji's goals. The country has also been harvesting rainwater as part of a strategy to overcome water scarcity. One of the key learnings towards the commercial finance is that transition is a journey: transforming from the centralised public system to de-centralised private system.

Given these country examples, there is an increasing trend of the pursuing the transition towards commercial finance for water-related investments in the Asia and Pacific region. There is still a long way to go in many countries. Participating in platforms such as the Roundtable on Financing Water provides opportunities to learn from other countries' experiences and tailor the best examples to their own country's context for supporting the mobilisation of commercial finance in the water sector.

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<sup>18</sup> [Planta, Rodrick \(2019\). "How to finance Philippine Water Supply and Sanitation Masterplan?"](#)

<sup>19</sup> Water Operator Partnerships are peer support partnerships between Dutch Water Utilities and water and sanitation utilities in developing countries aiming to share knowledge and skills to make utilities stronger, healthier and more resilient. See: <https://www.vei.nl/home>.

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## Session 7. Practical examples to increase financing flows for water-related investments in Asia

Recently there have been several successful developments in mobilising additional finance for water-related investments in Asia and the Pacific. For example, [Philippines Water Revolving Funds \(PWRF\)](#) addresses challenges that prevent the commercial finance flow into the water sector by blending Official Development Assistance (ODA) and domestic public funds with commercial financing to lower borrowing rates, and to market water and sanitation projects to private finance institutions. By supporting innovative financing approaches, operational strengthening and regulatory reforms, the PWRF resulted in lower borrowing costs for water service providers with longer tenors of 20 years, inclusive of maximum of 3 years grace period.

Manila Water, a water service provider reaching over 6 million people of the East Zone of Metro Manila, has also been diversifying its funding sources to raise over USD 90 billion. Making use of foreign currency borrowing, Manila Water has been seeking concessions and financing for large private urban water utilities as well as expansion to secondary cities in Philippines.

Improving the financial and operational performance of the public sector with the support of development partners has been key to unlocking financial investments. Due to the multi-faceted nature of the water sector that comprises a very diverse set of investments, such as water supply, sanitation, managing floods and droughts and pollution, well-aligned coordination of incentives between government, development partners and relevant stakeholders is crucial to maximise investments in the sector. As a result, effective planning for investment and preparation for project contribute to a better commercial viability and future financing for water.

By taking this approach, the current financing gap of USD 191 million in Cambodia's Water Sanitation and Hygiene (WASH) market could be bridged.<sup>20</sup> Initially, less than 30% of Cambodia had piped water coverage, with a breakdown of urban area coverage just over 45% and rural area less than 16%. The support of USAID on capacity building and training has enabled over 600 Private Water Operators to access finance. In the Philippines, Water.org has been actively working to scale up financing in the sector, in particular through microfinance, with nearly 810 000 loans disbursed for water and sanitation disbursed since 2015. Previous experience from India and Bangladesh show that it is possible to reach a 98%-99% repayment rate on these loans. In total, USD 145 million in loans have influenced 3.5 billion people. Water.org is currently working to launch a credit facility in India to further scale access to finance for the sector.

As these examples above indicate, water is one of major focus areas in the region along with energy, transport, urban and digital infrastructure for the Asian infrastructure Investment Bank (AIIB). Having approved seven water-related projects in six countries so far, AIIB released a Draft Water Sector Strategy<sup>21</sup> in 2019. Approximately USD 1.42 billion is planned to be spent to finance water focusing in Asia and the Pacific.

The Roundtable on Financing Water provides a unique opportunity to share experiences and learning, identify innovative approaches to scale up financing for water-related investment and exchange good practice on experience to strengthen the enabling environment for investment. Several key messages emerged from Asia and the Pacific that include primarily the importance of developing new knowledge. There is a need for water financing discussions to go beyond only WSS and ensure adequate attention is given to the broader range of water-related investments, including for agriculture, irrigation efficiency and developing the rural areas' water infrastructure (such as illustrated by the example from Viet Nam). Second, tailoring each financial players' perspectives to the relevant sub-categories of water-related investments as well as disaggregating the diverse categories of commercial financiers are important. Third, the role of government to provide tools and facilities that improve enabling environment for water-related investments is important. Making reforms is only possible when these are supported by robust analyses developed in the context of country-specific work, policy dialogues and regional initiatives.

For more information, please visit: <http://www.oecd.org/water/roundtable-on-financing-water.htm>

<sup>20</sup> [Lazarte, Ella \(2019\). "Leveraging OPM – Other People's Money – for Water, Sanitation and Hygiene \(WASH\)"](#)

<sup>21</sup> [Ginting, David \(2019\). "Draft AIIB Water Strategy"](#)