10 Public bank–public water collaboration in the Philippines

What potential for scaling up?

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Introduction

This chapter explores the potential for scaling up the collaboration between public banks and public water operators in the Philippines. Public–public collaborations (PPCs) are one way to mobilize the financing necessary at the scale, pace and terms needed to deliver equitable water supply and sanitation (WSS) services. The study suggests that despite some challenges, the foundation for greater public bank–public water collaboration has already been laid.

The Philippine Development Plan for 2023–28 (Neda 2022) acknowledges that universal access to safe, affordable and sustainable WSS services has yet to be achieved. To address deficiencies in investments in water infrastructure and service provision, the 2023–28 Plan has called for a new framework to allocate government resources for water projects. Our hope is that the lessons from this study provide insights that help to frame the discussion on how the Philippine Plan can meet its commitment to achieve the 2030 Sustainable Development Goal 6: Water for All (SDG 6), focusing on the advantages of PPCs.

As we detail in the chapter, water operators in the Philippines rely heavily on public banks and financial institutions to finance water projects. We document the important roles that three public financial institutions have played in supporting national government efforts to achieve universal access to water: the Local Water Utilities Administration (Lwua), the Development Bank of the Philippines (DBP) and the Land Bank of the Philippines (LandBank or LBP). We also examine the experiences of three local governments in the province of Eastern Samar—namely Borongan City, Jipapad and Arteche—in obtaining public finance from these institutions for their respective water projects, as well as the potential role that public universities can play in providing technical support.

Data for the multi-cited case studies come from primary and secondary sources. Primary data were obtained through key informant interviews, focus group discussions and stakeholder workshops. A list of sources of primary

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data is provided in Appendices A and B. Secondary data included popular and academic literatures as well as online information posted by the public banks, local government units (LGUs), as well as official government reports and orders. Documentation reports of fora and minutes of meetings of stakeholder groups in the study sites were reviewed. Newspaper reports were collected and analyzed.

This chapter is organized as follows. First, we provide a brief history of public water in the Philippines. Second, we offer a brief history of the public banks that have been involved in financing public water. Third, we evaluate the performance and significance of the public bank–public water relationship. Fourth, we present the lessons learned for possible future collaborations.

Existing data indicate that there is real potential to scale up public bank–public water collaborations in ways that respond to the financing needed to improve public water provisioning. For example, the combined amount of loans provided by the three financial institutions grew from US$15 million in 2018 to US$19 million by 2022 or an average annual increase of a little less than 7 per cent. At about the same time, the proportion of families with access to basic drinking water improved from 90.80 per cent in 2017 to 96.30 per cent in 2023 (Philippine Statistics Authority 2023).

This potential for scaling up, however, may not be realized unless certain barriers are overcome. The barriers include water operators' lack of technical capacity alongside adequate, predictable and sustainable public financing. Nevertheless, the findings suggest that significant benefits can be realized from enhanced public bank–public water collaborations.

A history of water service delivery in the Philippines

The collaborations between public banks and financial institutions and public water operators in the Philippines have been evolving since the turn of the 20th century. The first modern water system was established in the city of Manila in 1878 (Silva et al. 2012). In 1919, the government created the Metropolitan Water District to cover the city of Manila and the 14 cities and municipalities adjacent to it, and vested it with authority to contract indebtedness and to issue bonds. After the World War II, the newly established Rehabilitation Finance Corporation provided credit facilities to provincial, city and municipal governments for the rehabilitation, construction or reconstruction of (among others) waterworks and other self-liquidating or income-producing services (Republic of the Philippines 1946).

In 1955, the government created the National Waterworks and Sewerage Authority, which took control, direction and general supervision of all waterworks, sewerage and drainage systems of the Metropolitan Water District, of the Wells and Drills Sections of the Bureau of Public Works and of water projects of other government agencies. It was dissolved in 1971 and replaced with the Metropolitan Waterworks and Sewerage System, which was authorized to contract indebtedness and to issue bonds.

Presidential Decree 198, or the Provincial Water Utilities Act of 1973 (Presidency of the Philippines 1973b), further changed the public banks–public water ecosystem by authorizing provinces, cities and municipalities to create water districts to operate and maintain reliable and economically viable water supply and wastewater disposal systems for their respective population centres. That same year, the national government created the Lwua, whose primary task has been the promotion, development and financing of local water districts. The Lwua has been authorized to set the technical, financial and management standards for local water utilities, to monitor conformance to these standards, to provide technical assistance and institutional development support and to review water rates (Lwua 2022b). As discussed in further detail below, it also plays a public banking or financial institution role by providing loans for water supply projects using funds from the national government, from bilateral and multilateral sources and from internally generated revenues and second-generation income.

Further reforms in the WSS sector were introduced by the Letter of Instructions 683 (Presidency of the Philippines 1978a), which encouraged the formation of water districts, associations, cooperatives or corporations and systems directly operated and managed by local governments as well as self-help and self-reliant water supply projects. These reforms meant that:

a The Metropolitan Waterworks and Sewerage System would concentrate its operations in Metro Manila and adjacent areas.
b Lwua would promote water districts in cities and municipalities, and continue to provide institutional, technical and financing support.
c The erstwhile Department of Local Governments and Community Development would form water associations and cooperatives to operate and maintain community-level water systems and provide them with institutional, technical and financial support.

In 1980, the national government established the Rural Waterworks Development Corporation to provide institutional, technical and financial support to Rural Waterworks and Sanitation Associations, but it was dissolved a few years later, with its functions, assets and liabilities transferred to Lwua.

The state policy to attain complete coverage has given rise to a wide variety of water service providers (Dargantes and Dargantes 2007). By virtue of the 1991 Local Government Code (Republic of the Philippines 1991), the responsibility for facilities such as inter-municipal waterworks, drainage and sewerage, flood control and irrigation systems was transferred to provincial governments. Cities and municipalities were made responsible for small water impounding projects, artesian wells, spring development, rainwater collectors and water supply systems, drainage and sewerage, and flood control. Village-level governance units (*barangays*) were also to maintain water supply systems. The development of this infrastructure is funded using the share of national taxes dedicated to LGUs, other local revenues, as well as support from the national government and government-owned or -controlled corporations.

In the face of such diversity, the Philippine Development Plan for 2011 to 2016 (Neda 2011) recognized that many small water districts and LGU-operated utilities encountered difficulty in sustaining operations and in generating capital for expansion because of inadequate financing and low technical capacity. Purportedly to rationalize the allocation and distribution of service areas, and to provide incentives for the development of infrastructure or for new, clean, efficient and ecological technologies, Senate Bill 2997 was introduced (Angara 2011). The bill also proposed the reorganization of the National Water Resources Board and the creation of local WSS companies. However, representatives of the Southern Tagalog Association of Water Districts and the executive vice president of the Philippine Association of Water Districts pushed back, arguing that the bill promoted privatization. They drew attention to the fact that water districts:

a Had not received any appropriation from the national government, but rather derived their funds by borrowing from banks and other financial institutions;
b Were established not to generate profits but to provide service, while generating income to pay their loans and to cover their costs; and
c Have proven their capacity to pay existing loans. (Silva et al. 2012).

The proposed bill did not pass.

As an alternative, the Department of the Interior and Local Government (DILG) (2017) launched the Adequate and Safe Water for All (Sagana at Ligtas na Tubig sa Lahat) or Salintubig Program, which targeted municipalities with low water service coverage and high incidences of water-related diseases and poverty. The programme covered 347 LGUs in 2013 with funding of US$25 million, 630 LGUs in 2014 with funding of US$49 million and 745 LGUs in 2015 with funding of almost US$59 million. Moreover, the programme endeavoured to enhance the capacities of LGUs in planning, implementation and sustainable operation and management of their respective facilities. Despite these efforts, Neda (2017) still categorized 337 municipalities, mostly located in the ten poorest provinces, as lacking access to safe water supplies, and the problems facing small water districts and LGU-operated utilities remained unresolved.

In view of these continuing challenges, the 2017–22 Plan proposed institutional reforms to encourage and guide investments in the WSS sector, to create an independent economic regulatory body, to enable more transparency and consistency, to formulate a unified financing framework and to consolidate and make more accessible all available financial resources to support water projects (Neda 2017). To improve the response from water districts and LGUs, the scope of the National Sewerage and Septage Master Plan was expanded to include the provision of technical assistance to help operators improve service coverage and achieve operational efficiency (for example, how to reduce non-revenue water).

The COVID-19 pandemic brought new challenges to water districts and LGUs. Public health authorities recommended proper handwashing as a way to hinder the spread of the virus. Water operators had to face the critical burden of ensuring water availability to protect human health. In response, the government passed the Republic Act 11494 (Republic of the Philippines 2020), which tasked the DBP and the LBP with supporting economic recovery by providing funds that LGUs could use to subsidize interest payments for new and existing loans. This action is similar to the responses of other governments in the Global North and South that relied on existing public banks to help navigate the pandemic crisis (McDonald et al. 2020).

Confronted with the persisting challenges of poor water infrastructure planning, financing and management, the Philippine Development Plan for 2023–28 included in its strategic framework such interventions as investing in water infrastructure services provision and providing accessible financing for WSS projects. The 2023–28 Plan stipulates the rationalization of the economic regulatory environment, while tapping public–private partnerships (PPPs) to provide the needed water infrastructure facilities and services.

As of 2023, the amounts required for investing in water infrastructure service provision have not yet been specified in the 2030 Nationally Determined Numerical Targets for the SDGs (SDGs Secretariat 2023). This is because the estimated funding requirements for SDG 6 fall within the purview of the General Appropriations acts, which are formulated every year. The Public Investment Program (Neda 2023), however, provides a list of projects on water supply development that address Chapter 12: Expand and Upgrade Infrastructure of the Plan 2023–2028. Under this programme, water projects require investments of US$142 million to US$208 million per year for an aggregate of US$1.041 billion by 2028.

Financing public water in the Philippines

Advocating for more strategic and effective collaboration between public banks and public water operators does not sidestep the challenges of realizing it effectively, accountably and in the public interest. Such advocacy acknowledges that collaboration takes time to test at a systemic level and at the national scale. It does not imply, however, an endorsement of the “cascade approach,” whereby public money is used to de-risk private investments in public infrastructure, an ideological agenda which is promoted by the World Bank and multilateral organizations (Duarte 2017). PPCs are an alternative to this approach and offer better potential to achieve the SDGs targets on water (McDonald et al. 2021).

For some time already, Philippine public financial institutions and banks have been building the foundations that allow for a scaling up of public finance for public water and sanitation. To date, the potential of Philippine public banks to better support the funding requirements for clean, equitable and sustainable public water has not been adequately studied. Case studies from the Global North, such as that by the Assembly of First Nations (2019) and from the Global South (McDonald et al. 2021; Marois & McDonald 2022), demonstrate that public banks can have a catalytic impact on financing public water and sanitation services. As such, we now turn to the roles of the three most important public financial institutions and banks that have been tasked with helping local governments obtain water financing to support operations and infrastructure development in the Philippines: the Lwua, the DBP and the LBP.

The Local Water Utilities Administration

Based on a national policy that prefers the local operation and control of water systems, the Lwua (Presidency of the Philippines 1973b) was given powers around water standards, procedures, design, construction, monitoring and evaluation, systems integration, investments, annexation and de-annexation and personnel training vis-à-vis water provisioning. Significantly, the Lwua also functions as a specialized government lending institution for local water operators. Lwua is permitted to borrow funds, which it can relend through its Revolving Loan Fund to qualified water districts. In short, Lwua functions like a public development bank.

In granting loans, Lwua takes as collateral authorized bonds or other evidence of debt from a water district, including mortgages on its properties. To access loans from Lwua, a local water utility must have:

a A certificate of conformance from Lwua;
b A feasibility study for the proposed project;
c Documents that outline the procedures that ensure payment and avoid default; and
d A programme of expenditure of the loan amount to ensure project completion.

In case of default in payment, Lwua is authorized, without the need for a judicial process, to take over and operate the water district until all overdue accounts have been paid, all reserve requirements satisfied, and all causes of default addressed.

As a government-owned public entity mandated to support water districts, Lwua is not without challenges and contradictions. For example, Lwua claims to be “the only lending institution […] with the financial, technical and institutional development competence to enable a water district’s water supply project to generate return-on-investments” (Lwua 2022a). At the same time, Lwua considers rural water supply development as a “developmental endeavour” to assure communities of a reliable and sustainable water supply (Ibid.). There appears a possible contradiction between the Lwua aim to make profits and to deliver on its pro-poor development objective.

The Lwua gets financial resources from the national government, from bilateral and multilateral sources, and from internally generated funds and retained earnings (Lwua 2022b). For example, Lwua requested a $60 million loan from the Asian Development Bank (ADB) for the Water District Development Sector Project. The ADB loan, which included a US$2 million grant, helped to finance the extension and rehabilitation of water supply systems and the construction of new sanitation facilities in water districts. This form of PPC among multilateral and national-scale public banks to fund public infrastructure has emerged as a promising option within global finance for sustainable development (Marois et al. 2023). More recently, however, different public financial institutions (as well as private banks)—which traditionally were inaccessible to water districts—have been providing funds. Lwua in turn releases these funds as loans to water districts at competitive terms or as grants. Simultaneously, Lwua works with water districts to help them achieve creditworthy status to better access non-traditional sources of funds.

In the past, the Neda (1994) mandated that Lwua should implement only financially viable projects and specifically target large commercially viable service areas for privatization. This commercialization policy led private corporations to enter into joint venture agreements with water districts operating in commercially viable service areas. Moreover, the Neda rule prohibited Lwua from intervening in projects, which have been deemed to be not financially viable, while delegating that responsibility to LGUs. This rule affected the Borongan water district, as discussed below, which was categorized as "non-creditworthy" (Lwua 2012, 2013), and thus had to access funds through "non-traditional financing" mechanisms, which effectively reduced subsidies to poor consumers (see for example, Agwwas & PSIRU 2005; Dargantes et al. 2013). Since Lwua loans bear higher interest rates, the smaller water districts have been clamouring for Lwua to charge interest rates that are at par with, or even lower than, what public banks offer—a step that could be beneficial to their operational performance and would help to overcome limitations in water sector financing.

In response to the Philippine Development Plan of 2017–22, Lwua (2020) committed to expand water supply coverage to provide 95.37 per cent of households with access to safe water. Considering that Lwua support is through water districts, the projects it has financed contributed to the installation of 4.762 million household service connections, equivalent to a service coverage of 61.35 per cent. The increase from the 4.582 million households with service connections in 2018 to the 2019 level of coverage was achieved by providing US$95 million in financial assistance to 122 water districts, US$59 million in loans to 120 water districts, and by reducing the interest rates on existing loans from 8.2 to 0–4 per cent. However, the reduced interest

Table 10.1 Lwua basic financial information, US$1000

Basic information	*2022*	*2021*	*2020*	*2019*	*2018*
Loans & receivables	127,546	136,825	134,114	127,762	122,501
Net income	-742	4	-4,561	14,732	-735
Total assets	276,875	300,6545	322,250	295,419	283,825
Return on average assets (%)	-0.270	0.001	-1.438	4.991	-0.254

Sources: COA (2019a, 2020a, 2021a, 2022a, 2023a) and BSP (2023a, 2023b).

rates have been introduced as part of restructuring agreements covering past-due loans of debtor water districts.

As of 2022, Lwua extended loans of nearly US$128 million (see Table 10.1). In the four preceding years, the Lwua loan quantities fluctuated between US$122 million and nearly US$137 million. Lwua income fluctuated between losses of over US$4 million and earnings of nearly US$15 million. Lwua incurs losses related to financial difficulties experienced by water districts, which could involve defaults on interest and principal payments of loans and to deteriorating economic conditions (Commission on Audit [COA] 2023b). Government backing has helped sustain Lwua as a public financial institution, without which financial losses could lead to the collapse of Lwua.

Between 2018 and 2022, the return on average assets (ROAA) of Lwua fluctuated from negative 1.438 per cent to positive 4.990 per cent for a five-year average of 0.251 per cent. The negative 1.438 ROAA reported in 2019 could be mainly attributed to the forgiveness of interest payments by water districts with past-due loans. By 2022, Lwua recorded a negative 0.27 per cent ROAA mainly because of reported losses for the year. Nonetheless, Lwua also reported a decrease in total assets, which had been affected by the impairment of financial assets brought about by financial difficulties experienced by debtor water districts, including the probable bankruptcy of the debtor water districts.

In view of the broad mandate given to Lwua under Presidential Decree 198 (Presidency of the Philippines 1973a), it has had to contend with the burgeoning financing requirements of water districts. If the 2022 level of loans and receivables of Lwua is maintained throughout the 2023–28 period of the current Philippine Development Plan, Lwua may only be able to provide, on average, 0.07 per cent of the investment requirements for water supply development. A significant increase in the financial support to Lwua can improve its contribution to the investment programme for the WSS sector and can strengthen debtor water districts or even pull some of them out of bankruptcy.

The Development Bank of the Philippines

The DBP was founded in 1958 as a 100 per cent publicly owned bank. Based on the ranking made by the Philippines Central Bank (BSP 2023b), the DBP

Table 10.2 DBP basic financial information, US$1000

Basic Information	*2022*	*2021*	*2020*	*2019*	*2018*
Loans & receivables	400,908	360,261	367,302	355,652	234,283
Net income	69,386	83,157	73,749	110,439	108,540
Total assets	18,643,285	22,879,082	21,700,495	15,001,644	12,699,871
Return on average assets (%)	0.382	0.460	0.448	0.797	0.855
Number of employees	3,433	3,600	3,594	3,454	3,251

Sources: COA (2019b, 2020b, 2021b, 2022b, 2023b) and BSP (2023a, 2023b).

is the country's eighth-largest bank overall and second-largest public bank in the Philippines.

According to the COA, in 2022, the DBP had total assets of nearly $19 billion, an almost 47 per cent increase over the previous five years, and provided more than $400 million in loans, a 71 per cent increase in lending over five years (see Table 10.2). However, net income in 2022 declined to $69 million or a –36.07 per cent drop in net earnings over the same five-year period. ROAA has ranged from 0.38 to 0.8 per cent, which is in line with most public development banks (Marois 2021). The lower earnings have been reflected in fewer employees, which decreased to 3433 in 2022 from a high of 3600 in 2021. Fitch Ratings (2023a) has assigned the DBP a stable outlook and a "BBB" credit rating. This is equal to the BBB rating assigned to the Philippine government given the high likelihood of state backing should the DBP require financial support.

The history of the DBP links back to the now-defunct National Loan and Investment Board, which was created in 1935 to invest government funds and to make these funds available for loans (National Assembly of the Philippines 1939). This public financial institution then evolved into the Agricultural and Industrial Bank (National Assembly of the Philippines 1939) whose core purpose was to grant agricultural, industrial and real estate loans. It evolved again into the Rehabilitation Finance Corporation (Republic of the Philippines 1946) to support postwar reconstruction through loans to subnational governing authorities. In 1958, the government converted the Rehabilitation Finance Corporation into the DBP (Republic of the Philippines 1958). This final evolution marked a break from rehabilitation and reconstruction financing to the provisioning of intermediate and long-term public credit to provincial, city and municipal governments for infrastructure, including waterworks. The Philippines was not alone in the shift of public development banks from postwar reconstruction efforts to long-term support for infrastructure. For example, the German public development bank, the Kreditanstalt fuer Wiederaufbau, underwent a similar postwar transformation (Marois 2024).

With the initial capital stock of US$250 million fully subscribed by the Philippine government, DBP expanded its operations and established branches throughout the country. With its mandate to issue bonds, debentures, securities, collaterals and other obligations, DBP tapped foreign and local sources of funds to complement its capital resources and directly obtained credit from international financial institutions (Development Bank of the Philippines 2022b). In 1963, the capitalization of DBP was increased to about $513 million, and its borrowing capacity raised to ten times its paid-in capital and surplus (Ibid.). By 1966, DBP became an investment bank aimed at establishing a broad and prosperous securities market.

The 1970 Philippines peso devaluation forced the DBP to cut domestic lending and suspend most of its new guarantees. During the oil and debt crises across the Global South in the late 1970s and early 1980s, agriculture remained a top priority with lending directed towards food production, and industrial lending to industries that utilized agricultural raw materials and products. Although Presidential Decree 195 (Presidency of the Philippines 1973a) increased the capitalization of DBP to PhP 3 billion, this amount came to only US$444 million, which was less than its pre-devaluation capitalization. Nonetheless, the DBP took on a role of crisis management by offering refinancing for shipping, mining, cement, hotels and telecommunications while financing new energy and transport services (Development Bank of the Philippines 2022b). This counter-cyclical role of public banks, or lending during moments of economic crisis, is widely regarded as supportive of establishing economic stability amidst financial instability (Marois 2021; Griffith-Jones & Ocampo 2018).

Public banks absorbing the costs of economic crises is not without complications or contradictions (Marois & Güngen 2016). By 1986, Executive Order No. 816 (Presidency of the Philippines 1982) revised the DBP charter and ordered a clean-up of its financial operations, a staff reorganization and an infusion of an initial operating budget. This restored DBP's financial viability and allowed it to resume lending operations. With the transfer of non-performing assets and liabilities to the Philippine government, DBP was able to revise its credit processes and implement a training programme on its new lending thrusts.

As DBP resumed full development banking operations, it got accredited as a participating financial institution in the Industrial Guarantee and Loan Fund, which was established through an agreement between the US and Philippine governments with fund assistance from the International Bank for Reconstruction and Development and from the ADB. As a participating financial institution, DBP is able to access credit for relending to eligible borrowers. By 1995, the DBP attained universal banking status, meaning it could perform both retail/commercial operations and development bank lending. In 1997, its 50th year, DBP returned a dividend of $34 million to the national government. The following year, the government again increased DBP-authorized capital stock to $856 million (Republic of the Philippines 1998).

Not until 1999 did the DBP jump into financing water infrastructure. The DBP did so by launching the LGU–Urban Water and Sanitation Project to strengthen service provisioning among provincial water utilities and to improve and sustain the delivery of water services to urban populations. The project included bulk water supply, treatment and transmission; water district rehabilitation and expansion; sanitation and drainage; as well as technical assistance (Lucero 2008). Over the next six years or so, DBP approved 12 projects under the LGU–Urban Water and Sanitation Project with a total commitment of US$14 million.

The DBP intervention into water brought financial benefits to local water operators, albeit not without contestation. For example, in 2006, the DBP refinanced a US$28 million Lwua loan to the Metro Cebu Water District. The deal enabled Lwua to recycle the repayments on the loan to the Metro Cebu Water District to then on-lend to smaller water districts. The Metro Cebu Water District also used the savings from the cheaper DBP loan to improve water service delivery. The Metro Cebu Water District Employees Union supported the refinancing. However, water districts affiliated with the Alliance of Government Workers in the Water Sector (Agwwas) expressed concern that the DBP project favoured larger water districts, that is, those with at least 30,000 service connections (Department of Budget and Management 2011). Smaller Agwwas-affiliated water districts could only access Lwua financing, which charged higher interest rates than the DBP. Agwwas argued that the DBP should extend its more favourable lending programme to include all water districts or, as noted above, that Lwua offer similarly favourable terms.

In a parallel development in the 1990s, the Philippines institutionalized private sector participation in infrastructure and development projects (Asian Development Bank 2020). The government enacted such laws as the Build-Operate-Transfer (BOT) Law (Republic of the Philippines 1990) and the Implementing Rules and Regulations of the BOT Law (Republic of the Philippines 2012, 2023). These laws serve as the legal and regulatory framework for governing PPPs in the Philippines. The 2011–16 Philippine Development Plan (Neda 2011) highlighted infrastructure development as a top priority, with PPPs as a major conduit for generating investments. For its part, DBP was able to raise US$300 million in global dollar notes as its contribution to the US$4.736 billion in PPP projects. This includes a development project in Philippines' premiere tourist destination, Boracay Island, that involved the expansion of local water infrastructure (see Manila Water Philippine Ventures 2015).

In 2016, the government tried to mandate a merger of the DBP with the LBP, making the future of the DBP uncertain. Nonetheless, the DBP continued to position itself as the country's main infrastructure bank capable of advancing sustainable and inclusive development. Moreover, DBP continued to pursue initiatives like DBP Forest, which aims to rehabilitate watersheds as critical sources of water supply, and DBP Water. DBP Water aims to provide local governments financing for developing municipal and bulk water supply; water transmission and/or distribution systems; water treatment facilities; operational infrastructure; and climate change adaptation technologies (Development Bank of the Philippines 2022b, 2022c). No immediate action was taken on the proposed merger.

Even with the onset of the COVID-19 pandemic, the DBP (2022a) reported that the DBP Water Program increased water supply capacity by 103 million cubic metres per day in 2020, and by another 104 cubic metres per day in 2021. Such an increase in water supply capacity was accompanied by the installation of more than 2000 kilometres of pipelines in 2020 and an additional 12,000 kilometres in 2021. During the height of the pandemic, the DBP Water Program financed the construction of 114 groundwater source facilities, with an aggregate capacity of 335,025 cubic metres per day, and 29 surface water sources facilities, with an aggregate capacity of 200,033 cubic metres per day.

In 2024, the government decided not to implement the merger mandate with the LBP. The DBP continues to finance capital investments, which include working capital requirements, waivers on interest on loans during construction, refinancing of existing loans and consultancy and project development costs (Development Bank of the Philippines 2022a). These initiatives, carried out within the Assistance for Economic and Social Development (Asenso) for LGUs Financing Program, have financed LGU projects that accelerate infrastructure and socio-economic development (Development Bank of the Philippines 2022b). In addition to meeting the objectives of the Philippine Development Plan and targets of the SDGs, the Asenso for LGU Financing Program has operationalized the LGU's mandate to provide water supply systems and facilities provided by earlier legislation (Republic of the Philippines 1991). In effect, this programme allows the DBP to continue to provide water infrastructure financing as a matter of public policy.

The DBP 2022 Annual Report shows that it has used the funds provided by Republic Act 11494 (Republic of the Philippines 2020) for COVID-19 response and recovery interventions to accelerate the recovery of the Philippine economy and improve the country's water supply situation. However, if DBP continues to provide loans at a level equivalent to its 2022 lending performance for the period 2023–28, its resources can only address between 0.16 and 0.28 per cent of the investment requirements for the WSS sector. For DBP to significantly contribute to the investment programme for SDG 6, it should generate additional financial resources for relending in its Asenso Program and the DBP Water and DBP Forest programmes.

The Land Bank of the Philippines

The LBP was founded in 1963 via the Philippine Agricultural Land Reform Code (Republic of the Philippines 1963) with the purpose of financing the acquisition of agricultural estates for resale and distribution to small landholders. The LBP was not, however, mandated to provide credit to cooperatives and to smallholder farmers. At that time, the colonial legacy of land ownership generated social tension and violent conflict, resulting in the underperformance of the rural economy. Redistributive land reforms became the main strategy of government to address colonial distortions (Ballesteros et al. 2017), with the LBP being given the task of financing agrarian reform. Initially, the LBP was authorized to be capitalized at US$385 million, but it received an initial infusion of $513 million. The funds were used to purchase private agricultural lands devoted to rice and corn under share-crop or lease-tenancy arrangements for transfer to tenant-farmers as part of wider agrarian reforms (Presidency of the Philippines 1972).

The first decades of LBP operations were difficult. Citing inadequacies in capitalization and in the organizational structure of the LBP under its original mandate, the government transformed the LBP into a government corporation with the mandate to provide timely and adequate financial support for the advancement of agrarian reform (Presidency of the Philippines 1973a). As a 100 per cent state-owned financial institution, the government increased its authorized capital to US$444 million and restructured the LBP into a universal bank (a bank which combines development with commercial operations, such as deposit taking). LBP supports rural development, which includes subsidizing agrarian land transfers; lending to small farmers, fishers and cooperatives to facilitate production; marketing of crops and acquisition of essential commodities; and financing industrial and housing projects. These supports were in step with other Global South governments that created or nationalized banks within their borders, tasking these public universal banks to support national development ambitions, often focused on agriculture (for example, in Turkey, India, Brazil and China) (Marois & Güngen 2016). The political intention was to adopt an integrated approach to the provision of financial assistance to farmers.

To solidify its position as the agricultural bank of the country, the LBP absorbed the Agricultural Credit Administration, its assets and its functions of supporting small farmers (Presidency of the Philippines 1982). In the 1990s, the LBP then assumed the government responsibility of determining land values. The Republic Act 10374 (see Republic of the Philippines 2012) extended the corporate life of LBP for a period of 50 years, renewable for another 50 years. The Act established the LBP as an official government depository with the mandate to issue Agrarian Reform Bonds to help fund land transfer payments. In 1998, the authorized capital of LBP was increased to more than US$611 million; by 2016, authorized capital reached US$7.8 billion in order to support the Philippines' sustainable and inclusive growth agenda.

As a state-owned institution, the COA reported that, as of 2022, the LBP had total assets of US$56 billion, a 57.7 per cent increase from 2018 (see Table 10.3). The LBP is now the second-largest bank overall and the largest public bank in the Philippines (BSP 2023b). Loans were more than US$19 billion in 2022, which grew significantly since 2018, by just under 30 per cent. Correspondingly, LBP generated a net income of more than US$690 million in 2022. LBP ROAA was 1.488 per cent in 2022, which is comparable to many private commercial banks. As LBP grows in size, so too

Table 10.3 LBP basic financial information, US$1000

Basic information	*2022*	*2021*	*2020*	*2019*	*2018*
Loans & receivables	19,472,371	17,005,259	17,040,563	16,288,388	15,029,036
Net income	690,723	491,526	474,671	368,279	58,062
Total assets	56,131,859	51,085,197	49,219,651	40,100,515	35,602,393
Return on average assets (%)	1.488	1.117	1.140	0.973	0.852
Number of employees	12,662	9,790	9,680	9,298	8,599

Sources: COA (2019c, 2020c, 2021c, 2022c, 2023c) and BSP (2023a).

does its employee numbers, which increased from 8599 in 2018 to 12,662 in 2022. Fitch Ratings (2023b) rated the LBP as stable in 2023 from negative, with a "BBB" credit rating, matching the credit ratings of the government of the Philippines and the DBP.

In the context of COVID-19, the Republic Act 11494 (Republic of the Philippines 2020) authorized LBP to allocate US$3 billion to subsidize interest payments for new and existing loans of LGUs affected by the pandemic. Through its 2020 "Rise Up LGUs" programme, LBP has supported LGU responses to COVID-19 (LandBank 2020). Moreover, the LBP supported other government financial institutions and banks through co-lending arrangements, and it financially supported domestic industries and businesses impacted by the pandemic.

In terms of water lending in the COVID-19 era, the LBP "Water Program for Everyone" financed water and sanitation projects, including water system development and distribution, expansion and rehabilitation. In 2021, outstanding loans for water projects reached more than US$3 billion, representing 17.9 per cent of loans to all sectors (LandBank 2022). The Rise Up LGUs LBP programme also supported local government efforts through financing for priority services, including water system development, distributions and expansion (Dominguez 2022). By the end of 2021, the LBP had provided loans to 34 water districts totalling US$75 million for water system development, distribution and expansion under the "Water Program for Everyone" (LandBank 2022). For its part, LBP (LandBank 2020) envisions becoming the leading universal bank that promotes inclusive growth through innovative financial products and services, accessible and best technology solutions for timely and responsive financial services and support to LGUs, and the promotion of sustainable development anchored on good governance.

Key informants from the case study sites disclosed that the loans granted by the LBP have about the same terms as those of the DBP. The LBP, however, has attained a "proximity and accessibility advantage" considering that the LBP loan officer has been based in Borongan City while the DBP Lending Center has been based in Tacloban City. Furthermore, LBP personnel from the Borongan branch have visited the case study sites and conducted orientation seminars regarding the lending programmes.

The amount of loans provided by the LBP in 2022, if sustained for the period 2023 to 2028, can contribute between 9.35 and 13.72 per cent of the public investment requirements for the WSS sector. Allocating more funds for the Rise Up LGUs LBP programme can significantly boost the fulfilment of SDG 6, as well as the attainment of the objectives for the WSS sector enunciated in the Philippine Development Plan for 2023 to 2028.

Promising lessons: Borongan City, Jipapad and Arteche

The Local Government Code (Republic of the Philippines 1991) has vested LGUs with the responsibility of ensuring universal access to safe, affordable and sustainable water. LGUs therefore must confront the major stumbling blocks of inadequate financing, and of potentially low technical capability among their respective personnel. The case studies from Borongan City, Jipapad and Arteche in the province of Eastern Samar provide insights into some of the opportunities and challenges that water districts and LGUs encounter when trying to access public financing for public local water services. Most of the information narrated in the following sections have been gathered during the meetings with respondents listed in the appendices.

Improving water services in Borongan City

The Borongan City case study portrays an example of an initially fragmented partnership between a water district, an LGU and a public financial institution (Lwua). Over time, the two water operators came to mutually recognize the need for supportive public financing of public water after realizing that public finance is cheaper, more accessible and involves fewer risks than private financing. Nevertheless, there is room for improvement in how Lwua operates.

The City of Borongan, the capital of the Province of Eastern Samar, has a history of inadequate water supply for domestic use from the Borongan water district. This has generated a growing number of complaints from water consumers, who could only access limited quantities via their service connections, and from local commercial and business establishments, which could not get connections from the water district. Confronted with this situation, the Borongan City LGU established and operated its own water supply facilities to serve areas that were not being covered by the Borongan water district. By early 2021, Borongan City LGU formally offered to sell water in bulk to the water district, but the management of the water district declined.

Even with the establishment of its own water supply facilities, the Borongan City LGU was still beleaguered by citizen complaints over inadequate water supply. In mid-2021, the National Irrigation Administration turned over six communal irrigation systems to the Borongan City LGU. Despite the heavy costs and responsibility involved with managing the irrigation systems, they were seen as key infrastructure to support the "Dukwag Agrikultura" programme, a developmental initiative of the Borongan City LGU that aims to achieve water, food and energy security by producing water for domestic consumption and to generate power, in addition to irrigation. An initial assessment conducted by LGU personnel revealed that two of the six irrigation systems were producing more water than needed by the local agricultural sector. The LGU began to explore sources of public financing to support the project.

During a multi-stakeholder forum held in November 2021 on water issues affecting the city, a representative from the Borongan water district revealed that they had not increased the number of service connections, which has been pegged at about 2500 for the entire service area. The representative further disclosed that private investors had talked to the water district management about a possible PPP, even though it had fewer than 3000 service connections and was therefore classified as non-creditworthy (Lwua 2013). Reportedly, some members of the water district's board of directors opposed the idea, but neither did the private investors further pursue the initiative.

Several months later in June 2022, representatives of the LBP branch in Borongan City and the LBP "Rise Up LGUs" lending programme gave city officials an orientation on options for financing. Meanwhile, the city's mayor was scouting for international partners to provide financing for the water project. In late 2022, the city's mayor travelled to Sweden to meet with business representatives to explore the possibilities of forming a partnership in the development of the irrigation facilities as sources of water supply.

By early 2023, the city's mayor appointed new members of the board of directors of the water district, with whom the LGU held a series of meetings to discuss ways to strengthen service delivery. The new management reported that the deterioration of the water district's performance was aggravated by a rate hike related to the terms of the restructuring of a 2018 loan from Lwua, the costs of which were passed on to users. Managers from the LGU and water district speculate that when negotiating the new terms, the Lwua did not provide adequate technical support or conduct a due diligence check on the capacity of users in the water district to pay the proposed higher water rates. The water district's financial situation was made worse by the fact that some of the existing consumers were no longer paying their water bills because they could not get adequate quantities of water.

Moreover, controversies emerged over the lack of third-party oversight in contracting processes and the costs of drilling wells. Together with the restructured loan, Lwua provided a grant of almost US$450,000 for system improvement. Of that amount, around US$100,000 was paid to test-drill deep wells. Lwua also prepared the detailed engineering design and the documents for the bidding process. The water district awarded a private contractor the contract, who drilled the wells. The contractor bills the water district, which conducts the inspection of the actual accomplishment as basis for payment. The new management of the water district has expressed reservations about whether drilling wells is the most cost-viable option considering the availability of abundant surface water.

An in-house assessment by the Borongan water district also pointed out that the main source of revenue losses come from non-revenue water. The assessment estimated that about 40–50 per cent of total water produced is lost due to leaks, an amount that represents US$89,000 per month in lost revenue. The new management negotiated with the Borongan City government to share the cost of replacing the old asbestos pipes to improve operational efficiency and to minimize threats to public health.

As of the time of writing, the Borongan City LGU and the water district management were still looking into possible interventions to improve water service provision. Both entities have also explored the possibility of collaborating with the Eastern Samar State University Borongan Campus to conduct feasibility studies, which will eventually be required when the Borongan City LGU and/or the Borongan water district files the application for financing.

Rehabilitating the Jipapad water system

The Jipapad experience shows an example wherein a public bank and an LGU can collaborate to deliver public financing for a stable and favourable delivery of public services. The Jipapad LGU sought to enhance the operations of its water system using financing provided by the LBP under the “Rise Up LGUs” lending programme.

Jipapad, a landlocked municipality in the northern tip of the province of Eastern Samar, has a population of 8439 inhabitants. Heavy rainfall and mountainous terrain have contributed to a high level of flooding risk for the residents. In 2019, the newly elected mayor shared his developmental aspirations of transforming the nearby Sanizi Falls into a source of domestic water supply, a source of hydro-electric power, and a tourism destination, in addition to reducing the risk of flooding. Some municipal officials reckoned that managing the water at the source could somehow divert water from the town and eventually minimize the cost of flood damage, which has depleted the very limited LGU financial resources.

Some 10 years ago, the Jipapad LGU established and operated a water system for domestic use. However, in view of the distance of the water supply source to the town, the amount allocated by the LGU could not sufficiently cover the cost of the system. In 2017, the LGU applied for inclusion in the Assistance to Disadvantaged Municipalities under the Salintubig Program (Department of the Interior and Local Government 2017), which approved US$477,000 for the project. The amount covered the cost of nine community water systems with water treatment facilities, transmission and distribution lines, storage tank and service connections with water meters. However, the systems reached only 11 of the 13 *barangays* of the town, albeit not all households in the *barangays* were provided with service connections.

The LBP "Rise Up LGUs" lending programme offered a new opportunity to access financing for water systems development. Even though the loan from LBP could barely cover the cost of laying the main water transmission line and the distribution pipes for the households in the various settlements, the Jipapad LGU pursued its application for the financing of a water system that was also hoped to provide water not only to Jipapad but also to downstream municipalities, many of which have been experiencing inadequate water supply.

In March 2023, the LBP extended a US$3.6 million loan to the Jipapad LGU. A total of $891,000 was allocated for the rehabilitation of the existing water system, but most of the money has been assigned to the construction of an evacuation centre, the acquisition of equipment for use during flooding events and the building of a multipurpose centre. All of these projects have been deemed urgent in view of the disastrous consequences of the recurring floods.

Key informants reported that they find the terms of the 15-year loan with LBP favourable. In the first three years, the municipality only had to pay the interest (thus freeing up liquid capital for other development projects). From the 4th to the 15th year, the municipality will pay the principal amount plus 5.5 per cent interest. By this time, the water system is expected to generate revenues from projected water sales.

Moreover, the Jipapad LGU has formalized an agreement with Eastern Samar State University for the conduct of onsite assessments needed for the implementation of the water system project, as well as studies for the establishment of a micro-hydro power plant and for the preparation of a tourism development plan with the Sanizi Falls as the centrepiece tourism destination. These interventions, if realized, are expected to contribute to the overall revenue stream, which can lighten the loan repayment burden of the LGU.

Improving management of the Arteche water system

The Arteche experience shows the interactive dimension of public financing and of the need for local technical and organizational capacities for the establishment and operational viability of water systems. In this case, the problem is not the lack of financing, but rather the water operator's lack of capacity to execute the project.

Arteche is a coastal town of Eastern Samar with a population of 16,360. Much of the town's territory is classified as a forest watershed area. Most residents obtain their water supply from the Bulnod River and the Katingulan Spring, and from shallow tube wells.

In 2016, Arteche experienced a severe drought, which, according to local key informants, highlighted the deficiency of local water service delivery. That same year, the Coca-Cola Company started the construction of a water storage facility in *barangay* Casidman, but for some reason, the project was abandoned. The lack of clean water further exacerbated the increasing number of children affected by diarrhoea and schistosomiasis. The inadequacy of medical facilities contributed to the dire situation experienced by local residents. To address these problems, the LGU proposed the establishment of a water system with assistance from the Payapa at Masaganang Pamayanan (Pamana) programme of the national government. The water system project was approved with an allocation of US$54,000 (Department of the Interior and Local Government 2017).

Two years after the installation of the water system, the Arteche LGU aspired to enhance the municipal waterworks. Municipal Ordinance No. 18-04, authorized the LGU to borrow US$1.7 million. A feasibility study, a requirement for the loan application, was commissioned to assess the sustainability of the identified water source. However, the LGU lacked expertise in making the assessment and in preparing the feasibility study, so the LGU hired expensive external experts to conduct the study and to prepare the detailed engineering design, thus draining the LGU of financial resources. The DBP found the project proposal compliant with the application requirements and approved the loan.

Project implementation faced several challenges during the COVID-19 pandemic, particularly in relation to the mandated restrictions on various economic activities. The situation worsened during the recurring floods caused by typhoons and heavy rains, further exhausting the financial resources of the LGU. Faced with these disasters, the LGU has also not been able to focus on setting up an organizational structure to manage the water project.

As of 2023, the incipient LGU-operated waterworks of Arteche have not yet been fully operational due to the lack of personnel. Only one person had been hired to oversee the implementation of the project and the management of the system. The LGU had not yet created a specialized home unit needed to operationalize the establishment of the water system. No new positions were identified for hiring, and no budgetary allotment was proposed to execute the project. Subsequently, the staffing complement as recommended by the Department of Budget and Management (DBM) (2011) has not been implemented.

In the course of conducting the case study, the Arteche LGU initiated a collaborative endeavour with the Eastern Samar State University, which has responded positively by providing research and community extension support on water system establishment and on organizational development. Faculty members have expressed interest in working with the LGU as part of their respective official workload. University management has favourably endorsed the collaboration especially that an improved water system would also benefit the Arteche Campus of the university.

The future of public banks–public water in the Philippines

The Philippine Development Plan for 2023–28 recognizes that the effective provisioning of water service continues to suffer from poor planning and financing of infrastructure (Neda 2022). Nonetheless, public bank–public water collaborations can play in important role in addressing these challenges, provided that some key problems are addressed, specifically LGU's lack of technical capacity and restrictions on financing determined by public policy.

First, the technical capacity of LGUs is uneven. The decision to invest in raising capacity requires the political will of local leaders. In the case of Borongan City, for example, the complaints regarding poor access to safe drinking water for domestic and commercial uses inspired LGU leaders to mobilize local resources to establish its own source of water supply, to organize from among its personnel a technical working group to formulate a plan to provide adequate and accessible water supplies to residents and local businesses and to conduct capacity-building sessions for technical working group members. Financially strapped LGUs like Jipapad and Arteche, on the other hand, have not allocated sufficient funds needed to build the capacity of their respective personnel to increase the knowledge and expertise necessary to implement and manage local water systems. This situation is somewhat surprising given the fact that the mayors in both cities are medical professionals who have raised concerns about the negative effects of the lack of safe water supply on public health and the municipal budget.

Raising capacity will require the implementation of sound management practices in water service delivery through the application of appropriate technologies. Such practices could allow the LGUs to raise funds for the improvement of service quality and for the expansion of coverage. Active involvement of local public universities could provide opportunities to financially strapped LGUs to gain technical competence for the preparation of studies and assessments needed in loan and/or grant applications.

Second, to attain universal access, the national government needs to create an enabling environment that allows for the adequate financing of water operators. The national government should increase the financing options available for LGUs that serve low-income and remote areas where cost-recovery mechanisms would make water inaccessible. Operationally, this could mean financing LGUs with existing plans to provide water to underserved rural communities, as well as urban low-income and peri-urban areas.

In 2017, access to public financing was facilitated by Joint Memorandum Circular No. 2017-1 (Department of the Interior and Local Government & Department of Budget and Management 2017), which identified the construction or rehabilitation of local government-owned potable water supply systems as "Allowable Development Projects Chargeable Against the 20 per cent Development Fund." The legislation stipulated that amortization of loans for development projects is subject to a 20 per cent debt service cap prescribed under RA No. 7160 (Republic of the Philippines 1991), which serves as a control against overspending. This limitation, however, has adversely affected the financing of municipal water systems and the attainment of full service coverage in the LGUs. The formulation of a definancialization policy (see Marois 2021), which could allow public banks to provide financing to water projects based on a set of financial and economic viability criteria and ecological sustainability criteria (and not based on the amount allocated by the national government as LGU share of national taxes), could be embedded in the rules governing the lending programmes of the DBP and the LBP.

On a more positive note, the Joint Memorandum Circular included environmental management projects that promote water quality, as well as the productivity of freshwater habitats and forest lands for conservation and for possible wastewater reuse as allowable projects. It is important to underscore the fact that public financing of public water does not stop with the establishment of networked infrastructure, but it must also include projects that ensure the sustainability of critical sources of water supply.

Conclusion

During the sixth edition of the Philippines Water Conference and Exposition, President Marcos admitted that the country had been experiencing a water crisis (Bajo and GMA Integrated News 2023), but he did not even mention public banks despite the important role they play in financing public water. Worldwide, public banks have shown that they can mitigate and reverse tendencies towards short-term, high-return financing because they do not have to operate according to a profit-maximization motive (Marois 2021; Fonseca et al. 2021; McDonald et al. 2021; Marois & McDonald 2022). They can undertake coordinated lending to reduce the cost of borrowing and generate cost savings for public water providers. Nonetheless, public banks only do so as a matter of explicit mandate and policy support, given the prevailing political will.

At times, there are attempts to facilitate the incursion of private investors and to turn public water into yet another bankable asset class. The case studies of the three LGUs have demonstrated that local authorities can resist this commercialization agenda based on the principles of sustainability and social equity. LGUs perceive public lending institutions to be more friendly in terms of providing the financing needed by public water utilities. But in order to make it easier to access public funds, the national government must play its part. The government should allow public banks to grant loans to LGUs based on the financing requirements of a project as determined by the feasibility study prepared for the purpose. If the total amount of financing needed goes beyond the mandated debt service cap, that amount could be covered using other forms of sovereign guarantee from the national government.

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Appendix A: Position/designation and institutional affiliation of key informants

Position/Designation	*Institutional Affiliation*	*Address*
President	AGWWAS	Cebu City
Deputy Secretary-General	AGWWAS	Cebu City
Municipal Mayor	Arteche Municipal LGU	Arteche, Eastern Samar
Local Disaster Risk Reduction and Management Officer	Arteche Municipal LGU	Arteche, Eastern Samar
Municipal Engineer	Arteche Municipal LGU	Arteche, Eastern Samar
City Planning and Development Officer	Borongan City LGU	Borongan City, Eastern Samar
City Cooperatives Development Officer	Borongan City LGU	Borongan City, Eastern Samar
Human Resources Management and Development Officer	Borongan City LGU	Borongan City, Eastern Samar
Executive Assistant Office	Borongan City LGU	Borongan City, Eastern Samar
Project Management Officer	Borongan City LGU	Borongan City, Eastern Samar
Senior Agriculturist	Borongan City LGU	Borongan City, Eastern Samar
City Agricultural Officer	Borongan City LGU	Borongan City, Eastern Samar
Senior Cooperative Development Specialist	Borongan City LGU	Borongan City, Eastern Samar
Assistant City Engineer	Borongan City LGU	Borongan City, Eastern Samar
Engineer 1	Borongan City LGU	Borongan City, Eastern Samar
City Environment and Natural Resources Office Administrative Aid	Borongan City LGU	Borongan City, Eastern Samar
Forester 1	Borongan City LGU	Borongan City, Eastern Samar
Environmental Management Specialist	Borongan City LGU	Borongan City, Eastern Samar
City Tourism Office Administrative Aid	Borongan City LGU	Borongan City, Eastern Samar
Department of Social Welfare and Development Office Officer-in-Charge	Jipapad Municipal LGU	Jipapad, Eastern Samar
Head, Training and Education Services Office	Eastern Samar State University	Borongan City, Eastern Samar

Position/Designation	*Institutional Affiliation*	*Address*
Head, Disaster Risk Reduction and Management Office	Eastern Samar State University	Borongan City, Eastern Samar
University President	Eastern Samar State University	Borongan City, Eastern Samar
Head for Training Services, Training and Education Services Office	Eastern Samar State University	Borongan City, Eastern Samar
Technical Expert, Information Technology Support Office	Eastern Samar State University	Borongan City, Eastern Samar
Campus Dean	Eastern Samar State University – Arteche Campus	Arteche, Eastern Samar
Local Disaster Risk Reduction and Management Officer	Jipapad Municipal LGU	Jipapad, Eastern Samar
Municipal Mayor	Jipapad Municipal LGU	Jipapad, Eastern Samar
President	Surok Irrigation Association	Borongan City, Eastern Samar
LBP Department Manager	Land Bank of the Philippines Borongan City Branch	Borongan City, Eastern Samar
In-Charge, LBP Rise-Up LGUs Program	Land Bank of the Philippines Borongan City Branch	Borongan City, Eastern Samar
DBP Executive Vice President	Development Bank of the Philippines Catbalogan Lending Center	Tacloban City
DBP Administrative Officer	Development Bank of the Philippines Catbalogan Lending Center	Tacloban City
General Manager	Borongan Water District	Borongan City, Eastern Samar
Head Administrative Section	Borongan Water District	Borongan City, Eastern Samar
Senior Engineer	Borongan Water District	Borongan City, Eastern Samar
Corporate Budget Analyst	Borongan Water District	Borongan City, Eastern Samar

Appendix B: Position/designation and institutional affiliation of participants of focus group discussions and stakeholder workshops

Position/Designation	*Institutional Affiliation*	*Address*
National Auditor	AGWWAS	Baguio City
Vice President for Southern Luzon	AGWWAS	Legazpi City
Vice President for Eastern Visayas	AGWWAS	Baybay, City
Vice President for Southern Mindanao	AGWWAS	General Santos City
Vice President for North Luzon	AGWWAS	Baguio City
Vice President for Central Visayas	AGWWAS	Cebu City
Chairperson, Committee on Youth	AGWWAS	Koronadal, South Cotabato
Chairperson, Committee on Welfare and Benefits	AGWWAS	Toledo City, Cebu
Chairperson, Committee on Women	AGWWAS	Legaspi City
Deputy Secretary-General	AGWWAS	Cebu City
Chairperson, Committee on Local and International Networking	AGWWAS	Calumpit, Bulacan
National Treasurer	AGWWAS	Cebu City
Chairperson, Committee on Environment & Sustainability	AGWWAS	Baguio City
Municipal Mayor	Arteche Municipal LGU	Arteche, Eastern Samar
Local Disaster Risk Reduction and Management Officer	Arteche Municipal LGU	Arteche, Eastern Samar
5 Municipal Staff Members	Arteche Municipal LGU	Arteche, Eastern Samar
5 Staff Members of the Office of the City Mayor	Borongan City LGU	Borongan City, Eastern Samar
City Cooperatives Development Officer	Borongan City LGU	Borongan City, Eastern Samar
2 Staff Members of the Office of the City Vice Mayor	Borongan City LGU	Borongan City, Eastern Samar
Project Management Officer	Borongan City LGU	Borongan City, Eastern Samar
8 Staff Members of the City Agriculture Office	Borongan City LGU	Borongan City, Eastern Samar
Senior Cooperative Development Specialist	City Coop Borongan City LGU	Borongan City, Eastern Samar
Assistant City Engineer	City Engineering Office Borongan City LGU	Borongan City, Eastern Samar
Engineer 1	City Engineering Office Borongan City LGU	Borongan City, Eastern Samar
Administrative Aid	City Environment and Natural Resources Office Borongan City LGU	Borongan City, Eastern Samar