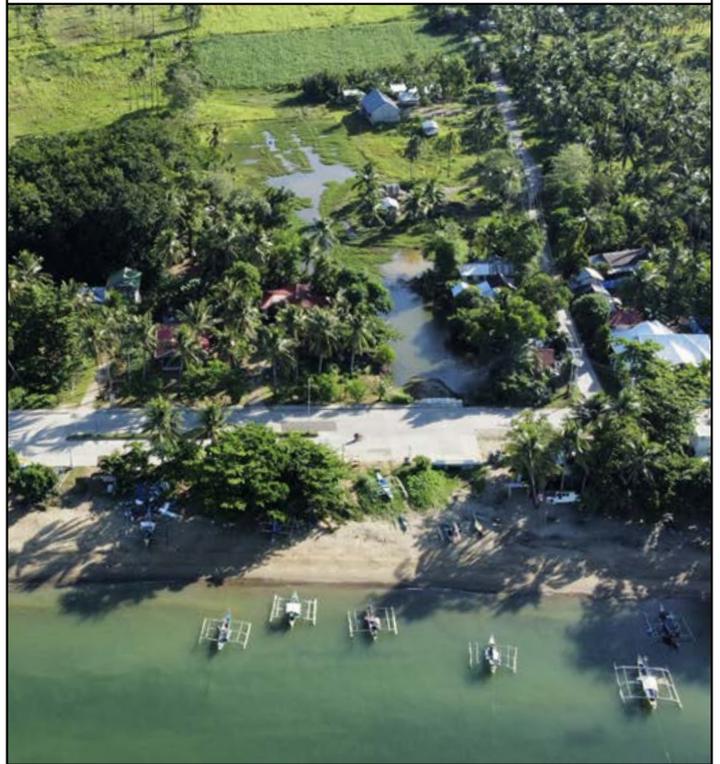


WATER OPERATORS' PARTNERSHIP

# CASE STUDY



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VEI - Four Water Districts in the Philippines under  
the Performance Enhancement  
Water Utilities Philippines (PEWUP) Project

VEI, Utrecht, The Netherlands **MENTOR**

Bayawan-Bogo-Carcar-Toledo,  
The Philippines (Phase I) **MENTEE**

November 2022

**GWOPA**  
Global Water Operators' Partnerships Alliance



**BEWOP**  
Boosting Effectiveness of  
Water Operators' Partnerships

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## Abbreviation List

BAWAD	Bayawan Water District
BWD	Bogo Water District
CSR	Corporate Social Responsibility
CWD	Carcar Water District
EUR	Euro
GM	General Manager
LIA	Low Income Areas
LWUA	Local Water Utility Administration
MTR	Mid-term Review
NRW	Non-Revenue Water
PAWD	Philippine Association of Water Districts
PEWUP	Performance Enhancement Water Utilities in the Philippines
PHP	Philippine Peso
TCWD	Toledo City Water District
WD	Water District
WOP	Water Operators Partnership
WWX	WaterWorX

# Key Facts



## Partners

**Mentees:** Bayawan Water District, Carcar Water District, Toledo City Water District and Bogo Water District

### Mentor: VEI

VEI B.V. is a Dutch not for profit public limited company established in 2005 by Dutch water utilities. VEI is a full subsidiary of Vitens N.V. and Evides N.V. and implements their international Corporate Social Responsibility policy on behalf of seven Dutch drinking water partners: Vitens N.V., Evides Waterbedrijf N.V., WML, Waterbedrijf Groningen, Brabant Water, WLN and PWN.

VEI implements Water Operator Partnerships (WOPs) with dozens of water operators, aiming at sharing knowledge and skills to make the partner water operators stronger, financially sustainable and more (climate) resilient. VEI creates improved access to water and sanitation services, for approximately 350,000 people every year, mostly in low-income areas in Africa, Asia and Latin-America.

Standing side by side as water operators, VEI strives to continuously increase her impact for people living in poverty, by systemically improving the maturity of working processes of her WOP partners, supported by peer-to-peer collaboration, training, technical assistance and smart investments.



## Facilitators

The WOP between VEI and PEWUP was facilitated by the Dutch Ministry of Foreign Affairs through the WaterWorX programme.



## Duration first phase

2017-2021



## Cost

**Total: EUR 2.3 million**  
(24% in infrastructure costs)

EUR 900,000 from VEI

(12% in infrastructure costs)

EUR 1.3 million in grant funding from the Dutch Government

(24% in infrastructure costs)

EUR 140,000,000 from PEWUP partner utilities



## Aims

The overall WOP is focused on connecting as many people as possible to safe and reliable water supply services and, where applicable, sanitation services, while ensuring the four mentee water districts (WDs) are operationally and financially sustainable going forward. In addition, due to unique contextual challenges and managerial priorities, each of the four mentee water districts comprising the WOP developed aims specific to that utility. For BAWAD, these objectives include expansion and connection of more households. For (TCWD), source development and reduction of non-revenue water; For CWD, implementation of a sanitation program, and for BWD, service expansion and improving staff capacity and management



## Approach

The WOP is part of the WaterWorX (WWX) programme, which seeks to contribute to ensuring sustainable access to safe drinking water and sanitation for 10 million people in the period 2017-2030. WWX is structured in three main phases with Phase I occurring between 2017-2021 and focused on sustainable technical and financial improvements for the selected water utilities, in this case, four WDs in central Philippines. This WOP has a

triangular approach, with one mentor utility and 4 mentees, together in one WOP with a “collective growing” approach.

Following an initial inception phase wherein a preliminary assessment of the four WDs was conducted, Phase I of the WOP has focused on project visioning, the identification of priorities for each WD, the completion of a leadership training programme, as well as numerous technical capacity development activities.

Capacity development activities of the WOP included classroom and online trainings (including videos, webinars and remote workshops), on-the-job operational guidance, extensive review of existing managerial and operation practices, and technical support regarding the

incorporation of tools and systems intended to modernize operations.

Due to the implications on work and travel resulting from the COVID-19 global pandemic, the approach of the WOP had to be adjusted, relying more on remote communications, trainings, and workshops.

Additional capacity development happened during this phase, thanks to the flexibility allowed by online activities and the dedication of experts from VEI. A national benchmark was launched as result of a shared effort from mentor and mentees, some webinars and masterclasses for water districts in the Philippines started, and some trainings for trainers were held.

## Results

- After the implementation of phase I, and despite unforeseen logistical and communication challenges stemming from COVID-19, PEWUP has been able to conduct the majority of its activities according to its initial WOP schedule and implementation plan.
- The project has achieved the planned outcomes for:
  - Coverage ratio. Most impressive from coverage indicators, is the drinking water coverage increase, which reached even up to 59% in the case of Bayawan, Carcar experienced 27% increase and Toledo and Bogo 8% and 7% respectively.
  - Increased income. Toledo, Bayawan and Carcar water districts, were able to improve their revenues and even going from a negative net revenue to a positive one, in the case of the first WD, partially attributed to the WOP.
  - Improved customer satisfaction. Based on conducted surveys, at the end of phase I implementation, customers have replied to be more satisfied with services provided by Carcar and Toledo WD.  
Increased operational efficiency. All WD experienced improvement on their NRW indicators.
- PEWUP has supported the increase of household water supply connections.
- PEWUP was instrumental in securing a EUR 80,000 grant subsidy from the Water for Life fund for investing in network extension.
- Effective trainings were conducted on using tools to improve processes and raising the profile of leadership needed to manage an organization.

- Design of pumping stations has been improved and pressure management for limiting water losses has been conducted.
- The leadership training programme has been quite effective in empowering WDs to better prioritize focus of WOP and in doing so, identifying specific challenges that should be addressed.
- A number of successful technical trainings have been conducted and overall, the partnership has been effective in generating capacity improvements including but not limited to, assistance in long-term planning (to consider climate change), asset digitization and management, hydraulic modeling, WD-specific business planning and modernization of financial management practices (e.g. incorporation of Management Information Systems) and business planning.
- Pro-poor strategic plans were developed and the expected number of connections were achieved by two WDs and even a new project proposal on the subject by Bayawan.



## Success Factors

- Flexibility in project design that allowed for adaptation of approach from a focus on collective learning and a joint training model to a more individualized model
- Success of leadership training programme and visioning exercises, which resulted in organic prioritization of WOP activities by WDs and provided an opportunity for staff to speak out regarding areas of improvement. Such open dialogue prompted the shift from the 'collective learning' model to a more context-specific approach
- Effective from remote communication and training practices. As a result of COVID-19, experts were unable to travel to the Philippines and therefore couldn't work on site for long periods (e.g. three weeks) as planned, but instead corresponded remotely with WD staff more regularly, allowing for more consistent communication. This sustained support model has been very effective
- Common language (English) between VEI, WD staff, and experts/trainers
- While the sustainability of results will not be known for some time, the level of commitment and motivation from three of the four WDs to ongoing activities is a guarantee that capacity and performance improvements may be maintained in the future
- High-Skilled and motivated members of the local mentor team helped to proactively seek solutions and adapt to reach the goals.



## Challenges

- As noted above regarding successes, the contextual uniqueness of each water district limited the effectiveness of the "collective learning" approach. The perspectives, priorities, and culture in each of the WDs play a critical role in determining how they would like to expand services, recruit their personnel, access financing, work with the local government, etc.<sup>1</sup> In addition, the geographic distance between the WDs and therefore required travel time to attend joint workshops and trainings, was a burden for WD staff.<sup>2</sup> A shift in the WOP away from the "collective learning" approach at the beginning of 2019 towards a "collective growing" approach, wherein certain trainings and workshops remain jointly

<sup>1</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

<sup>2</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020.

conducted, but individualized work plans are pursued by each WD, has been a welcome change for all partners involved in the WOP.<sup>3</sup>

- While three of the four WD General Managers (GMs) have been quite committed to the WOP, since the inception of the partnership, Bogo WD has demonstrated a less buy-in towards the WWX programme, ending in the withdrawal of the water district from the WWX programme at the end of 2021.
- For certain activities, relying on remote communication can be challenging as the classroom and onsite context is far more effective. This challenge will be particularly relevant as the project moves into Phase II wherein training of trainers workshops are envisioned.
- While the quality of the short-term experts (STEs) in the project has generally been satisfactory, there have been both some disappointing STEs and limitations in terms of experts provided. Limitations include both subject matter (human resources, pro-poor, sanitation) as well as in terms of representation (limited number of female or minority STEs).<sup>4</sup>
- Other COVID-19 related challenges include, but are not limited to, limitations in energy savings activities (require in-person inspection of pumps) and the completion of water safety plans (while videos have been produced to support this effort, in-person facilitation is a preferred method of engagement).
- More broadly, managing the expansion of services in response to national policy and the mandate of WDs in a sustainable manner is a challenge faced by all four WDs. Expansion is accompanied by the need to adapt water asset management practices, modernize billing and collection systems and, overall, introduce data management systems that can help optimize operations.<sup>5</sup> Additionally, all four WDs face challenges in accessing sustainable water sources, identifying adequate funding for services expansion, and incorporating modern water services management systems given their relatively small technical staff, fiscal limitations, and geographic and policy contexts.

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<sup>3</sup> Interviews with General Managers of Bayawan, Carcar and Toledo City Water Districts. November 2020.

<sup>4</sup> Interviews with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October and November 2020.

<sup>5</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

## Introduction

The Global Water Operators' Partnerships Alliance (GWOPA) helps water operators help one another to provide quality services to all. The Global Water Operators' Partnerships Alliance (GWOPA) is an international network created in 2009 to support water operators through Water Operator's Partnerships (WOPs). WOPs are peer support exchanges between two or more water operators, carried out on a not-for-profit basis with the objective of strengthening operators' capacity and performance to provide a better service to more people.

A Water Operators' Partnership (WOP) is a collaboration between two or more water or sanitation operators, conducted on a not-for-profit basis, with the aim of developing their capacity. These partnerships are being used as a way of helping the world's public operators sustainably deliver adequate water and sanitation for all.

This report analyzes the progress and results of the implementation of Phase I WOP with four public utilities in the Philippines: Bayawan Water District, Carcar Water District, Toledo City Water District and Bogo Water District. These are government-owned and controlled utilities, situated in the Provinces of Cebu and Negros Oriental. Population in their service areas varies between 78,000 and 170,000 people. According to the last population census held in 2020, Bayawan's population is 122,747; Carcar is the home of 136,453 people, and Bogo's and Toledo's population is 88,867 and 207,314 respectively. The WOP programme is referred to as the Performance Enhancement Utilities Philippines or PEWUP.

The Philippine Association of Water Districts (PAWD), the national association of more than 500 active water districts in the Philippines, is a full project partner that supports the implementation of WOPs in the country, while the Netherlands Embassy in Manila and the Local Water Utilities Administration (LWUA) play an oversight and advisory role to the WOP and sit in the regular Steering Committee meetings mainly as WOP observers.

The WOP focuses on both improving capacity within the WDs as well as performance improvements and increasing service coverage. In terms of performance improvement, the WOP prioritizes work on operational and financial performance. More specifically, the WOP seeks to increase access to potable water supply, targeting an estimated 50,000 direct beneficiaries across the four WDs.

The Boosting Effectiveness in Water Operators' Partnerships (BEWOP) analysis framework was applied to understand the partnership scoping, the partnership creation, the project implementation, the evidence of progress towards impact and effectiveness of the project, and project evaluation. This analysis builds off of the Mid-Term Review (MTR) conducted by Jay Tecson and Goufrane Mansour of IRC in September 2019-2020 and supplements the information compiled in that review with interviews with relevant parties involved in the VEI-PEWUP WOP, project documents provided by project partners, as well as additional secondary sources.

The following sections will walk the reader through the different stages of the WOP, from partnership scoping, partnership creation and partnership formalization, to project implementation, evidence of progress and project evaluation. The main objective of this report is to understand the success factors of the VEI-PEWUP WOP and assess the sustainability of the improved performance of the four public utilities in Bayawan, Carcar, Toledo City, and Bogó going forward in the partnership, as well as after the partnership.

## Partnership scoping

### Philippines context

#### Philippines: a “decentralized institutional set up”

The WOP in the Philippines is a partnership between VEI and four WDs. All four WDs are government-owned and controlled corporations that operate independently from the local government. Local WDs in the Philippines were established by Presidential Decree 198, also known as “The Provincial Water Utilities Act of 1973,” which was signed into law on May 25, 1973, in order to encourage the decentralization of water and sanitation services and facilitate the transfer of water supply and wastewater disposal facilities to WDs.

Three of the WDs are located in the Cebu Province (Bogó, Carcar and Toledo) while one is located in Negros Oriental (Bayawan). A brief description of the service areas for each WD is provided below.

All four WDs operate in small to medium-sized towns:

- **Bayawan City** is a coastal city in the Province of Negros Oriental in the central Philippines and belongs to the Central Visayas Region or ‘Region 7’. Bayawan is the second most populous city in Negros Oriental (after Dumaguete, the provincial capital) with a population of approximately 180,000. Bayawan is the largest Local Government Unit (LGU) in the Province of Negros Oriental in terms of land area and consists of 28 barangays<sup>6</sup>. Bayawan Water District (BAWAD) is the main water service provider of the city. In 2015, 56.7% of its population was concentrated in urban areas, which constituted only 2.3% of the city’s total land area.
- **Bogó City** is a coastal city in Cebu Province. Cebu Province is located to the east of Negros Oriental and belongs to the Central Visayas Region or ‘Region 7’. Bogó City has a population of approximately 80,000 spread across 29 barangays. The city is served by the Bogó Water District (BWD). Far less concentrated in urban areas, only around 20% of Bogó’s population resides in 4 urban barangays.
- **Carcar City** is also a coastal city in Cebu Province and is considered one of the oldest towns in Cebu, dating back to before Spanish colonization. The city is considered a tourist destination in Cebu Province as it features a number of heritage sites (both Spanish and American), as well as hot springs and beaches.

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<sup>6</sup> Barangays refer to the smallest administrative division in the Philippines and is the native Filipino term for a village, district, or ward.

It has a population of approximately 120,000 across 15 barangays and over 90% of its population resides in urban areas. The city is served by Carcar Water District (CWD).

- **Toledo City** is a city on the western coast of Cebu Province on the Tañon Strait. The city has a population of approximately 170,000 spread across 38 barangays with a little over 55% of the population located in urban areas. The central industry in Toledo is mining. Toledo City Water District (TCWD) serves as the main water service provider of the city. In 2015, 55.3% of its population are in urban areas.



*City of Bayawan*

**One of the top three performers in East Asia,  
but still fighting against poverty in rural areas.**

Home to nearly 110 million people spread across 7,641 islands, the Philippines is among the top three growth performers in the East Asia region, after China and Vietnam. According to the World Bank, the Philippines' economy is projected to grow steadily at a rate of roughly 6.7 percent per annum over the next few years. The majority of both economic and population growth is concentrated in urban areas. Similarly, at the national level, the Philippines has made gains in reducing extreme poverty rates. However, high poverty rates remain prevalent in rural areas.

The Central Visayas Region, wherein all four of the WDs are located, has a population of approximately 7.4 million people and has experienced slightly higher population growth rates than the national average. Economic activity in the Region is focused primarily in Cebu Province, and in and around Cebu City more specifically, which is home to the Region's major port (Port of Cebu) and the country's second busiest airport after Metro Manila in Mactan-Cebu International Airport, located in Lapu-Lapu City just across the Mactan Channel from Cebu City.

## Water and sanitation sector characteristics and developments

### Water Utilities are the main water service providers

The partner utilities are the primary water service providers in their service areas. In addition to the WDs, which operate Level 3 (pipel) systems, community-based organizations provide services through Level 1 and Level 2 water systems (see **Table 1**), and many households use their own tube wells, although water quality can be a serious issue in these instances. Specifically, according to available data from 2019, BAWAD covers about 37% of its service area, BWD covers 50%, CWD covers 70%, and TCWD covers 38%.

**Table 1: Classifications of water systems in the Philippines**

<b>Level 1</b>	<b>Point source</b> A well-protected or developed spring with an outlet but without a distribution system as it is generally adaptable for rural areas where the houses are thinly scattered serving an average of 15 households with people having to fetch water from up to 250-meter distance
<b>Level 2</b>	<b>Communal faucet system or stand post</b> A piped system with communal or public faucets usually serving 4-6 households within a 25-meter distance
<b>Level 3</b>	<b>Waterworks system</b> A fully reticulated system with individual house connections based on a daily water demand of more than 100 lpcd

Aside from Bayawan City Water District, which is also indirectly involved in effluent treatment, the mentee utilities are only responsible for providing water services in their service areas. WDs were expected to begin providing sanitation services in support of the Government of the Philippines' vision of universal access to sanitation by 2030. In practice, however, this shift hasn't happened yet, mainly because it requires policy changes at the local level, and sanitation strategic plans to be developed, which has largely not yet occurred and is not being prioritized by many WDs or local governments. For that reason, sanitation targets were finally not part of Phase I.<sup>7</sup>

### Sourcing between surface water, wells and springs

The Philippines has a total annual renewable water resource of about 479 billion cubic meters (m<sup>3</sup>), which includes both surface and groundwater sources, and is understood to be adequate for domestic, agricultural and industrial uses given the country's annual average rainfall of 2,300 mm. However, both surface and groundwater resources are unevenly distributed across the archipelago given stark differences in rainfall patterns,

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<sup>7</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020.

geographical and geological conditions, and the variability of water demand and supply factors.

For instance, for the three WDs located in Cebu Province, due to the narrow and mountainous nature of Cebu island, there are considerable challenges regarding sourcing sustainable water supplies as there is no major river system and little to no water during the dry season.<sup>8</sup> This dynamic has resulted in water stress in Metro Cebu and to a lesser degree, in Toledo and Boggo. Despite challenges related to water supply and agricultural production, due to its strategic location and safe harbors, Cebu has become a commercial center in the region and has consequently experienced the fastest population growth in the Central Visayas Region.<sup>9</sup>

Conversely, for BAWAD, Negros Oriental includes plentiful surface and groundwater sources as well as far more limited demand than Cebu due to its lower population and corresponding commercial water demands.

For the most part, water districts must identify sufficient water sources within their own service area as they are generally not allowed to extract ground or surface water from other municipalities. Furthermore, as WDs do not have sole rights to groundwater extraction within their service areas, private stakeholders have continued to pursue groundwater extraction.<sup>10</sup> Private activity is expected to increase the severity of water stress in certain areas. In some instances, as is the case in Metro Cebu, due to the over-extraction of groundwater, saltwater has intruded coastal aquifers and groundwater sources.<sup>11</sup> The consistency of challenges related to water stress results in WDs in Cebu mainly focusing on short-term solutions (i.e. planning less than 5 years in the future).<sup>12</sup>

Currently, the main source of water for the four WDs is groundwater (including both wells and spring sources) with limited use of surface water sources. However, due to increasing groundwater depletion, land subsidence, and increased salinity in groundwater sources throughout the country, the Government of the Philippines through the Philippine Water Supply & Sanitation Master Plan (PWSSMP) is encouraging greater reliance on surface water extraction as it is seen as a more sustainable water source and a key strategy for rapid expansion.

### The “Philippines Water Supply and Sanitation Master Plan”

The expansion of safely managed water services in the Philippines is not keeping pace with population growth, resulting in a reduction in the proportion of households with access to piped water supplies between 2010 and 2017 (from 43% to 40%). With regards to

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<sup>8</sup> Flieger, W., & Cusi, D. R. (1998). *The mountains of Cebu and their inhabitants: Measurements & estimates* (pp. 16-17). Honolulu, HI: Program on Population, East-West Center.

<sup>9</sup> Gultiano et al. (2015). *Cebu: Administrative and Demographic Trends*.

<sup>10</sup> VEI. (2017). *Inception Phase III: Project Plan: Performance Enhancement Water Utilities in the Philippines through Benchmarking and collective learning (PEWUP)*.

<sup>12</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020.

sanitation, an estimated 75% of the population of the Philippines benefits from basic services, however, slightly more than half of the households have access to safely managed services. Perhaps surprisingly, these managed sanitation service coverage levels are equally comparable in both urban and rural areas. Only 4% of the total population benefits from sewer services.

In 2021, to improve levels of access and coverage to safely managed water and sanitation service, the Philippines Government adopted the Water Supply and Sanitation Master Plan (PWSSMP). The Master plan sets ambitious targets and establishes strategies for the water and sanitation sector for both 2022 (the time horizon of the Philippine Development Plan) and 2030, in line with the Sustainable Development Goals.

The main goal of the Master Plan is to achieve universal access to water and sanitation services by 2030. In route to this universal coverage, the Master Plan envisions more than three-quarters of the population will have access to piped water systems (i.e. Level 3 systems – see Table 1). Regarding sanitation coverage, the national strategy aims for universal coverage of safely managed onsite sanitation services by 2030.

Key targets set in the Master Plan are presented in the following table (Table 2).

**Table 2: PWSSMP Water and Sanitation Targets<sup>13</sup>**

Water Supply Indicators	% of Population		
	2015 Baseline	2022 Target	2030 Target
With Access to safe Water	87.7%	95.9%	100%
Without Access to Safe Water	12.3%	4.1%	-
Households with Level 3 systems	43.6%	58.3%	77.1%
Households with Level 2 systems	11.2%	15.0%	14.0%
Households with Level 1 systems	45.2%	20.1%	8.9%
Sanitation Indicators	% of Population		
	2015 Baseline	2022 Target	2030 Target
Households with septic tanks	74%	97%	100%
Households with access to septage collection services	17%	69%	100%
LGUs declared Zero Open Defecation	96%	100%	100%

As part of the PWSSMP, an eight-point reform agenda was used to streamline sector activities and provide for national direction in setting local strategies. Among these, the

<sup>13</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

PWSSMP recognizes the need to strengthen institutions and enable access to funding and financing (Table 3).

**Table 3: The 8-point reform agenda<sup>14</sup>**

No.	Reform Agenda	Focus
1	Establishing Effective WSS Sector Institutions	Addressing the fragmented sector
2	Strengthening Regulatory Environment	Regulating and managing water resources and WSPs, including water tariff
3	Balancing Water Supply and Demand	Managing finite water resources with end-users
4	Building Climate Resiliency	Adapting to climate change
5	Creating and Ensuring Effective WWS Services	Ensuring effective and sustainable WSS services and service providers
6	Enabling Access to Funding and Financing	Improving access to funds
7	Managing Data and Information	Ensuring availability and accessibility of reliable WSS data
8	Driving Research and Development	Investing on research and innovations

Despite these ambitious goals, the PWSMP estimates a significant financial shortfall for the water and sanitation sector to meet its objectives. In 2017, the nationwide annual investment for the sector was estimated to be approximately P3.4 billion (EUR 60 million), a far cry from the estimated annual investment level to achieve universal access for water and sanitation services by 2030 of P89 billion (EUR 1.6 billion).

**Institutional: decentralized water services**

All four WDs are government-owned and controlled corporations that operate independently from the local government. Local WDs in the Philippines were established by Presidential Decree 198 (PD 198), also known as “The Provincial Water Utilities Act of 1973” in response to advocacy for corporatized service provision in the 1970s. PD 198 was established in order to encourage the decentralization of water and sanitation services and facilitate the transfer of water supply and wastewater disposal facilities to WDs. Since 1991,

<sup>14</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

Local Government Units (LGUs) - provinces, municipalities and villages (barangays) have been responsible for ensuring basic water services are delivered to populations within their jurisdiction.

For instance, Bayawan Water District or BAWAD was authorized to become a local Water District, but was not officially established until 1982.<sup>15</sup> Similarly, Carcar Water District (CWD) was not officially established until 1980<sup>16</sup>, Toledo City Water District (TCWD) not until 1980<sup>17</sup>, and Bogó Water District not until 1999<sup>18</sup>.

PD 198 also established the Local Water Utilities Administration (LWUA), which provides technical and institutional support and serves as a financial assistance body for WDs. For WDs of the scale of those in this WOP, they rely on LWUA (along with external financial institutions) to fund capital improvements as operating revenues are likely insufficient. However, the processing of loans through LWUA can be cumbersome, lengthy and politically charged, which therefore limits the role it might play in supporting water and sanitation infrastructural expansion for the PEWUP utilities.

There have been efforts at the national level to better organize WASH sector institutional support, including reforms outlined in the PWSSMP such as the establishment of new consolidated regulatory bodies (Department of Water Resources and a Water Regulatory Commission).

### Governance structure

All four mentee utilities are governed by a Board of Directors appointed by the Mayor every five years, which consists of a representative of the women civil society organizations of relevance on the area the professional sector, the civil sector, the education sector, and often one or two additional board members. Every five years, the Board of Directors also appoints the General Managers (GMs) of utilities, which are intended to be independent of political interference. However, in practice, political interference remains significant. This is particularly the case for smaller and mid-sized utilities such as the four engaged in this WOP. For instance, while decision-making on human resources, water services expansion, and setting tariffs are intended to be independent of an LGUs' political control, in practice they are largely affected by political interference.<sup>19, 20</sup> However, despite the often politicized

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<sup>15</sup> Bayawan Water District. *About BWD*. Retrieved November 02, 2020, from <https://www.bayawanwd.gov.ph/about>

<sup>16</sup> Carcar Water District. *About us*. Retrieved November 02, 2020, from <http://carcarwaterdistrict.gov.ph/about-us/>

<sup>17</sup> Toledo Water District. *About us: history*. Retrieved November 02, 2020, from <https://www.toledocitywd.gov.ph/index.php/about-us/history>

<sup>18</sup> Bogó Water District. *About us*. Retrieved November 02, 2020, from <https://bogowd.gov.ph/about-us/>

<sup>19</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

<sup>20</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020.

decision-making discussed, all four utilities do retain a certain level of autonomy regarding operations, maintenance, and corresponding budget allocation.

Similar to GMs, division managers and the rest of the utility staff are first identified by a selection committee established within each water district, however, final hiring decisions are made by the GM. All water district assets are owned by the water districts themselves.

### Financial and administrative capacity of mentee utilities

As for the in-depth review conducted as part of the 2019 MTR, all four mentee utilities were found to maintain reasonably strong financial positions, with net revenues, for the most part, exceeding net expenditures. However, as noted in the MTR, there remains questions about the reliability of certain data as despite all four WDs having produced multi-annual business plans (required under LWUA's regulations for any utility to be able to access LWUA funding for capital improvements), these plans do not directly inform planning and budgeting. That being said, interviews with the Resident Project Manager (RPM) and WD General Managers (GMs) suggest that the financial status of the four partner utilities does indeed remain strong, especially since the beginning of the COVID-19 global pandemic.

Despite the assumed strength of the WD's operational financial situation, the utilities face challenges in generating adequate capital to fund network expansions. These challenges stem primarily from a combination of regulated tariff levels that are pegged to consumers' affordability – which in turn limits a utilities' ability to increase revenues to fund improvements—and the barriers to accessing financing due to both the lack of financing options available and to limitations in the internal capacity required to prepare feasibility studies, terms of references for procurement, and evaluating proposals from the private sector.

Given the barriers to financing expansion improvements through internal and procurement mechanisms, as is the case with most small utilities in the Philippines, the main source of finance comes from LWUA. The national agency provides loans below commercial rates (currently at approximately 4% interest rates), which are below other state-owned development banks' rates. However, LWUA loans are accompanied by conditionalities that make them less attractive for WDs such as requiring complete design oversight to be conducted by LWUA at the cost of the WD. Additionally, the timeframe between project identification and loan approval can be lengthy, such has been the case with regard to a current loan application from TCWD.<sup>21</sup> Both BAWAD and TCWD also have ongoing projects financed by LWUA.<sup>22</sup>

In terms of administrative capacity, small and mid-size WDs in the Philippines often face challenges related to technical resources. However, purely in terms of staffing levels, as shown below in **Table 4**, the ratio of Full-Time workers to 1,000 connections suggests that the four WDs, before the WOP, appear to maintain reasonable staffing ratios given

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<sup>21</sup> Interview with General Manager of Toledo Water District, Egay Nicolas. November 2020.

<sup>22</sup> Interviews with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020, January 2022.

the size of the utilities (for comparison, the FT employees per 1,000 connections of the mentor utility, VEI, is approximately .55, though this reflects a consortium of large-scale utilities with high levels of operational autonomy that benefits from economies of scale). Bayawan and Carcar with an FT/1,000 connection ratio of 4.61, are the highest among the partner utilities, but this largely reflects the size of the utility (i.e. Bayawan is smaller than the other utilities).

In terms of gender balance within the workforce and at the managerial level, the four utilities have a representation of female employees of between 23% and 31% across the entire WD. At the managerial level, these levels are considerably higher (between 50% and 67%). Gender equality in the workplace in the Philippines remains a national priority and given the existing levels of female employees and managers in the four partner utilities, has never been considered a priority of the WOP.<sup>23</sup>

**Table 4: Key financial and administrative indicators (Baseline-2017)<sup>24</sup>**

	Toledo	Bogo	Carcar	Bayawan
<b>Working ratio</b>	0,98	0,98	1,32	1,32
<b>FT employees per 1,000 connections</b>	6,27	6,32	4,61	4,61
<b>% of FT female employees</b>	28%	30%	23%	23%
<b>% of FT female employees in management position</b>	50%	46%	57%	57%

**Key technical indicators of mentee utilities**

Based on the assessment conducted as part of the MTR and data provided by the mentor utility (VEI), the following findings regarding key technical indicators at the onset of the WOP for the mentee utilities were established (i.e. benchmark levels). See **Table 5** below for specific figures:

- All four WDs face challenges regarding non-revenue water (NRW), although Carcar Water District’s baseline levels are significantly lower than the other three utilities.
- Collection efficiency is high for all four utilities
- Only TCWD faces significant issues with continuity of supply<sup>25</sup>
- All four WDs face challenges regarding coverage. 2017 baseline data indicate that at the beginning of the WOP, only CWD was estimated to provide water services to more than half of the population in its service area (61%), while coverage rates in BWD, TCWD, and BAWAD were found to be quite low at 46%, 38% and 22%,

<sup>23</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020, January 2022.

<sup>24</sup> VEI (2021). *PEWUP Monitoring and Evaluation Annual Plan*. Compiled by: Carl Kamstra. Shared: March 2022. (Working Draft).

<sup>25</sup> It should be noted that continuity of water supply remains a very difficult indicator to measure. According to interviews with project partners, the estimates provided may not accurately reflect the realities on the ground. Data has not been verified by VEI.

respectively. Coverage challenges relate primarily to limited funding for capital investments (as previously discussed) and prohibitively high upfront connection costs for households (i.e., households are required to pay a connection fee).

- All four utilities possessed limited knowledge of their infrastructural assets or asset management systems at the beginning of the WOP. As will be discussed in the following sections, asset digitization has been a priority of the WOP and efforts to develop both a mapping and systematized approach to asset management are ongoing.

**Table 5: Key technical indicators (2017 figures)<sup>26</sup>**

	Toledo	Bogo	Carcar	Bayawan
<b>Coverage</b>	38%	46%	61%	22%
<b>NRW</b>	38%	32%	17%	27%
<b>Collection efficiency</b>	105%	99%	97%	99%
<b>Continuity of supply (hour/day)</b>	17	24	24	24

### Financial aid and parallel investments

All four Water Districts have to complete a 10-year Strategic Business Plan (SBPs) covering the period 2020-2029. The SBPs are submitted to LWUA and form the basis for all WD activities and will subsequently be revised annually or bi-annually. The business plans are based on comprehensive commercial and financial forecasts, including investment and financing plans. All four partner utilities are finalizing their individual business plans that highlight different priorities going forward:

- BAWAD: network expansion and connecting more households
- TCWD: source development and reducing NRW
- CWD: implementation of a sanitation program
- BWD: network expansion and improving staff capacity in data management

Three out of four water districts' SBPs will be completed in 2021. Despite the fact that online support from the mentor partner was provided in the preparation of Business Plans and Projection Models, the pandemic has caused delays.

As a part of the WOP, VEI has established a goal of increasing the number of water supply beneficiaries by nearly 48,000 people. The total estimated costs of investment needed for this effort were estimated at PHP 33.7 million (EUR 600,000). This effort, which is being pursued during the four-year Phase I of the partnership includes a nine million Philippine

<sup>26</sup> VEI (2020). *PEWUP Monitoring and Evaluation Annual Plan*. Compiled by: Carl Kamstra. Shared: October 2020.

peso grant from VEI to each of the four water districts, which will contribute an additional 1.2 million pesos per year or 1.8 million Euros (1EUR= +/- 64 Philippine peso). See **Table 6** below for more detail.

**Table 6: Number of connections and beneficiaries anticipated in the project plan<sup>27</sup>**

	Investment (PHP)	Water Connections	# of Beneficiaries (water)	# of Beneficiaries (sewer)	Total # of Beneficiaries
<b>Bawayan</b>	9,000,000	2,500	1,500	1,500	3,000
<b>Bogo</b>	9,000,000	1,500	7,500	0	7,500
<b>Carcar</b>	9,000,000	1,500	7,500	0	7,500
<b>Toledo</b>	9,000,000	3,517	17,585	0	17,585
<b>Total</b>	<b>36,000,000</b>	<b>9.017</b>	<b>47,585</b>	<b>1,500</b>	<b>58102</b>

PEWUP also facilitated the preparation of a proposal submitted to the Water for Life fund<sup>28</sup> for investing in network extension, that was approved in 2018. This was for a EUR 80,000 grant subsidy to support coverage expansion.

**The challenge of finding potential surface water sources**

As discussed previously, a critical issue for all four partner WDs (as well as for WDs across the Philippines) is expanding access to surface water sources and reducing reliance on groundwater sources. All utilities currently use groundwater sources, which are generally easily accessible and cheaper to treat. However, given the directives from the PWSSMP urging utilities to identify opportunities to source surface water, all four utilities are working to identify potential surface water options. As surface water is more vulnerable to accumulating pollutants, sourcing can negatively impact the watershed, and identification of adequate sources can be a challenge. For some of the partner utilities, such as TCWD, no adequate surface water is accessible within the district, thus requiring the identification of sources in adjacent municipalities (in the case of TCWD, this has been the municipalities of

<sup>27</sup> VEI (2020). *PEWUP Monitoring and Evaluation Annual Plan*. Compiled by: Carl Kamstra. Shared: October 2020.

<sup>28</sup> The Water for Life Fund is a Dutch organization dedicated to supporting projects for sustainable water and/or sanitation access around the world. It is funded mainly by donations coming from tap water customers in The Netherlands.

Balamban and Pinamungahan), which would, in turn, require a long-term sourcing agreement to be negotiated.<sup>29</sup>

### Climate and pro-poor policy

In terms of climate change, utilities' policies are guided by the National Climate Change Action Plan, the National Disaster Risk Reduction and Management Plan, and related local ordinances, which urge WDs to seek sustainable water sources (both groundwater and surface water) and to build redundant systems in order to mitigate the risks generated by natural hazards and other extreme weather conditions.

Aside from the provision of 'lifeline tariffs' (which imposes a ceiling of 5% of a customer's income and applies to consumption of up to 10 m<sup>3</sup>),<sup>30</sup> none of the four WDs were found to have specific pro-poor policies. Furthermore, the prioritization of universal coverage by 2030 outlined in the PWSSMP, as opposed to the prioritization of expanding services to low-income areas, ensures the expansion focus remains on inclusive services (inclusive of all those in the utilities' service areas) rather than targeting low-income areas specifically.<sup>31</sup>



WOP commitment signature

<sup>29</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

<sup>30</sup> National Water Resources Board. (2005). *Primer on Tariff Setting and Regulation*. [https://nwr.gov.ph/images/Site\\_image/Primer\\_on\\_Tariff\\_Setting\\_&\\_Regulation.pdf](https://nwr.gov.ph/images/Site_image/Primer_on_Tariff_Setting_&_Regulation.pdf)

<sup>31</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

## Partnership creation

WaterWorX (WWX) is a partnership of water operators aimed at improving utility performance and access to (improved) services. The overall goal of the programme is “well-performing utilities that provide sustainable, inclusive and climate resilient water services (basic or safely managed) to their current customers and to an additional 10 million people by 2030.” WWX is co-funded and jointly implemented by the Dutch Ministry of Foreign Affairs, and the 10 Dutch Water companies (represented by VEI, WorldWaternet, Oasen, WMD and Dunea), in partnership with 39 selected water utilities in 15 countries in Africa, Asia and Latin America.

WWX is structured in three main phases with Phase I occurring between 2017-2021 and focusing on sustainable technical and financial improvements for the selected water utilities, in this case, four WDs in central Philippines. According to WWX’s Theory of Change (ToC), improving business practices and the financial situation of local water companies creates capacity (and financial) scope for expansion investments, which can then be managed, maintained and financed adequately.<sup>32</sup>

This case study covers the first phase of a WOP located in the central Philippines, which serves as a preparatory phase to Phase II (2022-2026), during which WWX will support utilities in the central Philippines to mobilize and implement investments.

### Enabling factors

While there was no previous experience between VEI and the four WDs, the success and recognition of an ongoing project between VEI and Metro Cebu Water District (MCWD) led to the idea of initiating a regional WOP.

The support of PAWD, along with the long-term commitment (nearly four years in Phase I alone) under the WaterWorX programme, was instrumental in establishing early support for the partnership. However, it has been the commitment of the partner utilities and sustained engagement of VEI that has enabled the continued effectiveness of the WOP more broadly.

### Partnership formalization

The formation of the current WOP occurred through a combination of the mentor utility’s previous connections in the area, the facilitation of the Metropolitan Cebu Water District (MCWD), and a spontaneous interaction through the WaterLinks conference held in Manila in 2016. VEI was initially introduced to BAWAD through the PAWD, as the then president of PAWD also happens to be the current General

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<sup>32</sup> VEI. (2017). *Annual Report 2017*.

Manager of BAWAD. TCWD was introduced to VEI at the WaterLinks in Manila. Following these initial introductions, meetings were held in Cebu City that included several utilities, including TCWD, BWD and CWD, wherein the WDs made clear their interest in taking part in the WWX programme.<sup>33</sup>

Once interest was established, the selected utilities and VEI collected baseline data to assess the contexts and individual needs of the four utilities. All four WDs were found to be typical secondary town water utilities motivated to expand their water supply networks and improve services. Through its initial evaluation, VEI found that all four utilities possessed adequate capacity and organizational development to participate in the WWX programme, which prioritizes supporting utilities to prepare for services expansion and increasing coverage rates. Lastly, by including four WDs, the WOP provided an opportunity to spread knowledge and know-how through a “collective learning” approach and incentivize performance through collective benchmarking across utilities.<sup>34</sup> The official utility partner selection occurred in October 2017, with PAWD identified to serve as a project partner and facilitator.

### The parties: mentor, mentee, facilitators

#### Mentor (VEI)

VEI B.V. is a Dutch not-for-profit public limited company established in 2005 by Dutch water utilities. VEI is a full subsidiary of Vitens N.V. and Evides N.V. and implements their international Corporate Social Responsibility policy on behalf of seven Dutch drinking water partners: Vitens N.V., Evides Waterbedrijf N.V., WML, Waterbedrijf Groningen, Brabant Water, WLN and PWN.

VEI implements Water Operator Partnerships (WOPs) with dozens of water operators, aiming at sharing knowledge and skills to make the partner water operators stronger, financially sustainable and more (climate) resilient. VEI creates improved access to water and sanitation services, for approximately 350,000 people every year, mostly in low-income areas in Africa, Asia and Latin-America.

Standing side by side as water operators, VEI strives to continuously increase their impact for people living in poverty, by systemically improving the maturity of working processes of their WOP partners, supported by peer-to-peer collaboration, training, technical assistance and smart investments.

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<sup>33</sup> VEI (2017). *Inception Phase III: Project Plan: Performance Enhancement Water Utilities in the Philippines through Benchmarking and collective learning (PEWUP)*.

<sup>34</sup> As will be discussed further, in practice, the collective learning approach was less effective than originally envisioned and adjustments to the partnership were required.

**Table 7: Size and service indicators of VEI (2020)**

Population served (in millions)	13,89 customers
Number of households (in millions)	6,7
Water produced (millions of m <sup>3</sup> )	970
Number of employees	3683
Number of water treatment plants	n/a
Length of network (in kilometers)	103,410 km
Unaccounted for water (percent of total)	n/a
Staff per 1000 connections (water supply)	0.55
Staff per 1000 population served (water supply)	0.26
Turnover (in millions EUR)	1,063
Average drinking water price per m <sup>3</sup> (EUR)	1,04 (Vitens)

### Motivations, interests, opportunities

VEI has previously worked in the Philippines and has detected the country's potential for significant impact through WOPs given the combination of motivated water utilities and large low-income populations. The motivations for VEI to enter a partnership with these specific four mentee utilities was born out of previous work with Metropolitan Cebu Water District and both the success of that engagement and the enthusiasm it garnered in the region.<sup>35</sup>

The motivations of the WaterWorX programme more broadly stem from the desire for a sustainable contribution to the realization of the Sustainable Development Goals through the provision of sustainable access to water and/or sanitation for 10 million people and to improve services for the current customers of the utilities.

Furthermore, another underlying motivation for VEI is the Corporate Social Responsibility (CSR) of the participating Dutch utilities in VEI and the will to increase the interest of a younger workforce to work at the Dutch utilities with the perspective to work abroad for VEI.

### Mentee (PEWUP)

The water districts of Bayawan, Carcar, Toledo City and Bogo are all government-owned and controlled utilities, situated in the Provinces of Cebu and Negros Oriental. The population in their service areas ranges between approximately 80,000 and 170,000 people. More detail on general size and service indicators for the four partner utilities is provided below in **Table 8**.

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<sup>35</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020.

**Table 8: Size and service indicators of PEWUP operators (2020)<sup>36</sup>**

Size and Service Indicators	Toledo	Bogo	Carcar	Bayawan
Population served	68,705	42,535	90,825	45,095
Annual volume billed (m3/year)	3,624,118	1,893,881	4,684,082	1,327,775
Number of households	13,741	8,507.00	18,165.00	8,199.00
Water supply (m3/year)	5,319,724	2,344,397	5,866,212	1,636,009
Number of employees	83	50	90	84
Staff per 1000 connections (water supply)	5.7	5.2	4.6	9.6
Service coverage of water supply (percent)	38%	50%	70%	37%
Net Revenue (EUR) <sup>*37</sup>	124,223	129,296	179,959	120,774
Cost coverage ratio (Operating ratio)	1.09	1.11	1.12	1.17

### Financing

As is the case with most small utilities in the Philippines, the mentee utilities face barriers to financing expansion and improvements through internal and procurement mechanisms. Due to these internal limitations, the main source of finance for expansion and/or significant operational improvements is the Local Water Utility Administration (LWUA). LWUA is a national agency that provides loans often at below commercial and other state-owned development banks' rates (currently at approximately 4% interest) to water utilities across the Philippines. However, LWUA loans are accompanied by conditionalities that make them less attractive for WDs including requiring LWUA have complete design oversight, a cost borne by the WD. Additionally, the timeframe between project identification and loan approval can be lengthy, such has been the case with regard to a current loan application from TCWD.<sup>38</sup> Both BAWAD and TCWD also have ongoing projects financed by LWUA.<sup>39</sup>

### Motivations, interests, opportunities

Given the relatively small size of the four mentee utilities, and associated limitations in numbers and training of technical staff, managerial capacity, and financial capacities, generally shared motivations for engaging in the partnership stem from a desire to expand services, acquire new skills and approaches, and make sustainable operational improvements. In addition, the four mentee utilities have unique motivations, interests and opportunities for their involvement, which include, but are not limited to, increased exposure to new technologies, improved

<sup>36</sup> VEI (2020). *PEWUP Monitoring and Evaluation Annual Plan*. Compiled by: Carl Kamstra. Shared: October 2020.

<sup>37</sup> Reflects exchange rate for December 2019. European Central Bank.

<sup>38</sup> Interview with General Manager of Toledo Water District, Egay Nicolas. November 2020.

<sup>39</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project. October 2020.

competency within the WD to better leverage future financial resources and improved managerial practices.<sup>40</sup>

### Facilitators

The Philippine Association of Water Districts (PAWD), the national association of more than 500 active water districts in the Philippines, is a full project partner that supports the implementation of WOPs in the country.

While not officially partners in the WOP, the Netherlands Embassy in Manila and LWUA were initially intended to serve in oversight and advisory capacities, participating primarily as observers in the WOP's regular Steering Committee Meetings. However, according to interviews with project participants the involvement of the LWUA has been more limited thus far than originally envisioned.<sup>41</sup>

### Motivations, interests, opportunities

According to its mission statement, PAWD is "[committed]... to promoting self-reliant water districts in the country. It is dedicated to advocating and promoting pertinent policies, standards and programs to ensure effective and sustainable water district operation and collaboration in the country." PAWD's motivation for engaging in the PEWUP is helping to facilitate sustainable improvements in water and sanitation service provision across the Philippines. It is also noteworthy that the former president of PAWD is also the general manager of BAWAD.<sup>42</sup>

Although the Netherlands Embassy does not have specific water or sanitation programs in the Philippines, it has expressed its support for PEWUP, further involvement in the Philippines water sector, as well as any spin-off opportunities for Dutch businesses that may materialize in the future.<sup>43</sup>

LWUA's interest in being involved in the WOP stemmed from its support of capacity expansion and the overall strengthening of WD asset portfolios.

### Financing of the WOP

The overall budget for the WOP is approximately EUR 3.3 million, which includes EUR 312,000 in mentee contributions. CWD has provided the project with office space and serves as the residence of the VEI Resident Project Manager. The majority

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<sup>40</sup> Interview with General Managers of Carcar, Bayawan, and Toledo Water Districts. November 2020.

<sup>41</sup> Interviews with PEWUP partners. October and November 2020.

<sup>42</sup> VEI (2017). *Annual Report 2017*.

<sup>43</sup> VEI (2017). *Inception Phase III: Project Plan: Performance Enhancement Water Utilities in the Philippines through Benchmarking and collective learning (PEWUP)*.

of the budget has been allocated for technical assistance activities. Due to the COVID-19 global pandemic, adjustments to the budget to reflect more limited travel by experts and local staff have been necessary.



Beneficiary utility staff during technical training activities



WOP technical training activities

At the time of reporting, PEWUP’s budget expenditure in phase I was, in general terms, as anticipated.<sup>44</sup> According to VEI Resident Project Manager, Carl Kamstra, budgetary flexibility was required following both the onset of the COVID-19 global pandemic and prior shift in approach from the “collective learning” model envisioned at the onset of the WOP to a more individualized, utility-specific structure. Key changes in WOP expenditures stemming from these two factors have included the hiring and placement of local staff as part of the project team in each WD location as well as a shift in the implementation of certain activities originally planned to be in-person and/or with the support of experts from the Netherlands or elsewhere.

Despite these shifts in prioritization and budgetary allocation, aside from staff time, the majority of budget expenditures have remained related to technical assistance activities such as asset digitization, GIS training and the installation of network system infrastructure such as new household connections, pipes, pumps, and meters. For example, the initial budget for the WOP, funded by VEI, set aside was EUR 195,000 for operational investments in NRW reduction. In addition, preliminary budget allocated EUR 600,000 to pro-poor investments and EUR 100,000 in support of the development of investment proposals.<sup>45</sup> The bulk of outputs expected from technical assistance activities are presented in **Table 9** below.

<sup>44</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

<sup>45</sup> VEI (2017). *Inception Phase III: Project Plan: Performance Enhancement Water Utilities in the Philippines through Benchmarking and collective learning (PEWUP)*.

**Table 9: Expected outputs of PEWUP**

<p><b>People and Organization</b></p>	<p>Business plan  Management information system  Organization improvement  Capacity development programme  Result-based planning and development included in HR strategy  NRW reduction (DMAs)  Maintenance and management programme  Improvement plan for sanitation, sewage and wastewater treatment  Pro-poor vision, strategy and objectives  Pro-poor coordinators appointed and trained  Proposals for providing people with direct access to improved water and/ or sanitation facilities  Climate resilient water supply programme 2050  Energy saving programme  Gender analysis and approach</p>
<p><b>Water</b></p>	<p>NRW reduction (utility level)  Water distribution programme  Water quality monitoring programme  Water safety plans  Customer processes improvement  Customer satisfaction monitoring  Number of social household connections build (water)  Number of sewerage connections  Number of DMAs developed  Assets digitized in GIS</p>
<p><b>Finance</b></p>	<p>Administrative (customer) processes  Billing &amp; collection monitoring system  Climate robust investment proposals for providing new people (expanding the network) with direct access to improved water and/ or sanitation facilities in the period 2022-2030.</p>

### Diagnosis of needs and agreement characteristics

VEI and the four partner utilities jointly carried out an initial diagnosis of needs and decided which improvement tracks to prioritize. As is often the case in multi-year WOPs, the prioritization of different improvement tracks has shifted since the project's inception.

At large, the WOP is structured around the leveraging of technical assistance, in the form of training and advisory services, to motivate utilities to tackle their operational and technical performance and extend services. In order to prioritize within this

general framework, a leadership training programme was developed, which helped identify the individual concerns and contextual challenges within each of the four partner utilities.

As reported in the MTR, the process by which prioritization has occurred and the range of activities planned and implemented has been seen favorably by the majority of those interviewed from within the partner utilities. Perhaps the only exception is BWD, where the General Manager has, at times, clashed with the WOP approach, and has distanced Bogo WD from the project, resulting in limited engagement over the course of the past 12 to 18 months.

### Timeline



## Project implementation

### Management of the partnership and inter-organizational dynamics

As reported in the 2019 MTR, PEWUP is managed by a Resident Project Manager (RPM) recruited by VEI coming from The Netherlands and overseen by a steering committee consisting of the General Managers of the four mentee water districts and a representative of PAWD. Steering Committee meetings also may be attended by representatives of the Dutch Embassy (EKN) and LWUA as observers.

The Project Management Unit (PMU) is responsible for coordinating day-to-day operations such as the coordination of the roll-out of Short-Term Experts (STEs), from initial data collection to preparing activities, setting the logistics for the training sessions and supporting the delivery of technical assistance. The PMU consists of the RPM, the local Project Manager, the local Pro-Poor coordinator, the local Young

Expert and a local project assistant. The PMU has monthly meetings with the General Managers of the WDs.

The RPM is based in Carcar Water District's main office building. The local staff are stationed in, and are on the payrolls of, the four WDs (with their salaries invoiced to PEWUP) .

The RPM and technical support staff of PEWUP hold regular meetings with the WDs' management. There are Steering Committee Meetings and operational meetings, which serve as a clearinghouse for issues affecting the programme's implementation, including technical issues such as the deployment of STEs and review of program approach, among others, and for information dissemination on forthcoming activities and training, including travel. PEWUP is also in regular contact with PAWD, the Dutch Embassy in Manila, and LWUA.<sup>46</sup>

### Improvement tracks

The Project Plan<sup>47</sup> for the WOP originally outlined eight (8) improvement tracks or 'Expertise Areas', which correspond with key outputs and expected outcomes. As the project has progressed, some of these improvement tracks (or more precisely, activities aligned with particular tracks) have been prioritized while others have been found to be less relevant over the short- and medium-term. For instance, after a more in-depth evaluation of needs and utility capacities, some activities were found to be lower priorities than originally suspected such as efforts to improve the gender balance in the partner utilities and approaches for reducing NRW in the case of CWD (which was found to already show a relatively low NRW level at the onset of the WOP). Furthermore, as noted previously, the WOP initially intended to improve the performance of the four WDs through "a collective learning approach and by a developed benchmark between the four WDs". However, following the leadership training programme and feedback from the WDs management and staff, the WOP approach was modified, in part away from the "collective learning" model, and towards a more individualized approach reflecting each partner utility's specific short-term priorities along with their contextual situation, internal capacities and organizational maturity.<sup>48, 49, 50</sup>

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<sup>46</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

<sup>47</sup> VEI. (2017). *Inception Phase III: Project Plan: Performance Enhancement Water Utilities in the Philippines through Benchmarking and collective learning (PEWUP)*.

<sup>48</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020.

<sup>49</sup> Interview with General Manager of Bayawan Water District, Alma Abrasaldo. November 2020.

<sup>50</sup> Interview with General Manager of Carcar Water District, Edward Remo. November 2020.

Therefore, while the main improvement tracks included in the WOP have remained largely consistent with those outlined in the Project Plan, the implementation of related activities has shifted to some degree towards strategic topics like leadership, management training, and business planning. More detail on specific outcomes is presented in **Table 10** below.

**Table 10: Outcomes expected from PEWUP for partner utilities**

1.	Improved access to sufficient and sustainable water resources to meet the water demand now and in the future (2050);
2.	Improved financial capacities that is based on: 1) fair competition and fair tariff settings and 2) access to investments funds against market-conform interest rates
3.	Increased coverage ratios, especially for the poor in resettlement areas
4.	Improved business plans
5.	Improved Management Information Systems (MIS)
6.	Working GIS and Hydraulic modelling systems
7.	Improved management skills
8.	Improved staff capacity
9.	Pro-poor policy
10.	Improved access to financing
11.	Climate resilient investment plans
12.	Reduced NRW

**Main activities undertaken in phase I of WOP**

After four years of implementation, and despite challenges related to the global COVID-19 pandemic and limited engagement from BWD management, PEWUP completed most activities according to plan. However, as noted in the MTR and confirmed by PEWUP partners, some activities took longer to initiate or progress such as the development of a pro-poor strategy, the Capacity Development Programme, and the Water Distribution Programme.

Activities implemented in the first phase of the WOP can be categorized into three main categories:

- Strengthening capacity
- Plan development and implementation
- Infrastructure development

## **Strengthening Capacity**

As a part of the efforts intended to 'strengthen capacity', planned activities largely focused on classroom-style and on-site trainings. However, with the onset of travel restrictions and social distancing requirements due to COVID-19, some of the planned activities were either postponed or altered to take place online. Some of the key capacity strengthening activities included:

- Leadership and personal development training for General Managers and Division Managers and the development of Organizational Improvement Plans
- Business planning and budget preparation workshops
- Development and implementation of Management Information System monitoring tools, including budgeting, commercial operations, and billing and collection
- Asset management including training on GIS/digitization of assets
- Training on NRW reduction
- Training on hydraulic modeling
- Workshops covering project management
- Excel software trainings (including budgeting-specific trainings)
- Webinars and online masterclasses for members of the Philippine Association of Water Districts (PAWD)

Also included in the strengthening capacity category is the planned hiring of a local young female professional/expert to be part of the VEI local team for the WOP, as gender inclusiveness wasn't a problem at a national level in the Philippines.

## **Plan Development and Implementation**

For the 'plan development and implementation', the main activities for all four water utilities, included:

- Drafting of Asset Management Plan and Preventive Maintenance Plan
- Drafting the NRW-Reduction Plan (which includes pressure management)
- Risk assessment exercise and drafting of Water Safety Plan
- Workshops covering business planning
- Support in the development of Climate Resilient Water supply plans
- Development of the energy-saving programme
- Support in the drafting of pro-poor business plans, including vision, strategy and objectives.
- Implementation of new connections to safely managed water in low-income areas.

The 'plan development and implementation' activities are seen as crucial to identifying priority infrastructural development going forward, especially capital investments identified as part of the Business Plans and Climate Resilient Water Supply Plans.

**Infrastructure Development**

With regards to 'infrastructure development', PEWUP supported the preparation of a proposal (that was subsequently approved in 2018) to Water for Life requesting funding for network expansion. Several other proposals were drafted and approved for financing by WaterWorX and VEI. Significant progress in these thematic areas was made, largely related to the pro-poor connectivity efforts, which have mainly been focused in Bayawan and Carcar but also took place in Toledo, although the project has until June 30, 2022, to complete the remaining connections because of the difficulties that the pandemic brought in.

*Key performance indicators*

In total, 20 Key Performance Indicators (KPIs), final outcomes, were identified by the WaterWorX programme, of which some were either irrelevant (as is the case with sanitation-related KPIs) for the PEWUP project or no data was available. For the purposes of this case study, KPI progress was evaluated for those which include sufficient data for all four WDs over time, allowing for an assessment of measurable progress in various improvement tracks. This section discusses some of the rationales for data limitations and/or the lack of established KPI targets, and then seeks to highlight some of the notable trends suggested by the data.

KPIs tracked in the WOP are organized under four main themes (not counting sanitation coverage, which while originally envisioned, but not applied to the WDs): drinking water coverage, operational performance, financial performance, and inclusion. **Table 11** below provides an overview of these six thematic indicator groupings and the 20 KPIs identified by WaterWorX, that comprise them. Where 2021 KPI targets have been established for a given utility it is noted in the table, shaded in green.

It is noteworthy that the establishment of KPI targets is not uniform across the four utilities. This variation reflects both differences in data availability across the four partners as well as prioritization. On one hand, targets for specific KPIs may have been established prior to the initiation of the WOP or were decided upon in the initial stages. On the other hand, certain KPIs may not have received much attention from partner utilities as they were not seen as a priority to pursue.

**Table 11: Key Performance Indicators and Established Targets**

Key Performance Indicator	Established KPI Targets (2021)			
	Bayawan Water District	Bogo Water District	Carcar Water District	Toledo Water District
<b>Drinking water coverage</b>				
Total number of people served drinking water				
Total number of people served sanitation				
Total number of poor people served drinking water				
Total number of poor people served sanitation				
Number of active other connections: commercial, institutional, industrial				
Water coverage (total service area)				
Water coverage (LIA/poor)				
Sanitation coverage (total service area)				
Sanitation coverage (LIA/poor)				
<b>Financial Performance</b>				
Cost coverage ratio				
<b>Operational performance</b>				
NRW in m3 per active connection per year (utility level)				
NRW as percentage of produced annual volume (utility level)				
Average hours of supply per day				
Collection efficiency				
Production sufficiency				
Customer satisfaction				
Energy consumption per m3 system input				
Percentage of wastewater treated				
<b>Inclusion</b>				
% Female employees				
% Female employees in management positions				

# Evidence of progress towards impact and effectiveness of the project

## Changes in performance and capacity of the mentee (KPIs)

As for the tracking and performance of the KPIs themselves, the following discussion highlights key findings organized by thematic indicator groups: drinking water coverage, inclusion (staffing and gender representation), operational performance (including customer satisfaction), and financial performance. An analysis of quality/environment KPIs is also included, as a key subject for the beneficiary partners.

### Drinking water coverage

As noted throughout this case study, the expansion of water supply services is a priority of all four WDs. This expansion includes both network expansion and increasing the number of connections.

While the MTR estimated that target access numbers were unlikely to be met in Phase I, **Table 12** shows below that targets related to the increase in the number of households and population served were met. It is also worth noting that some of these increases are attributable to organic growth<sup>51</sup> (i.e., indirectly tied to WOP activities). However, for certain WDs, such as Bayawan, the coverage expansion that has occurred since the onset of the WOP is largely directly tied to the investment provided by the partnership and would not have been possible otherwise.<sup>52</sup>

Interviews with VEI Resident Project Manager Carl Kamstra suggest that delays regarding the projects in Bogu impeded gains in several areas, including pro-poor-related connectivity improvements. Similarly, there were delays in the implementation of projects due to COVID-19. However, the truncated implementation timeline for planned projects still met most of the goals of the WOP in Phase I.

**Table 12: Progress through Phase I on access to water services<sup>53</sup>**

		Target Households	Accomplished Households	Target Beneficiaries	Accomplished Beneficiaries
Water Districts	Bayawan	2,500	3,642	15,000	20,031
	Carcar	1,500	1,578	7,500	7,890
	Toledo	3,517	1,715	17,585	19,225 (incl. Schools)

<sup>51</sup> Tecson, L. and Mansour, G. (Aguaconsult). (2020). *Mid-Term Review of the Water Operator Partnership in the Philippines*. (Final).

<sup>52</sup> Interview with General Manager of Bayawan Water District, Alma Abrasaldo. November 2020.

<sup>53</sup> VEI (2021). *PEWUP Annual Progress Report*. Compiled by: Carl Kamstra. Shared: March 2022.

	<b>Bogo</b>				5,078 (incl. School, hospital and evacuation center)
		1,500	318	7,500	
	<b>TOTAL</b>	<b>9,017</b>	<b>7,270</b>	<b>47,585</b>	<b>52,224</b>

As shown below in **Table 13** below, in terms of increasing connections and overall service population, Bayawan, Bogo and Carcar have made measurable progress between the 2017 baseline figures and reported 2021 totals, whereas Toledo appears to have made little progress in this regard. Bayawan Water District is particularly noteworthy given its increase in coverage from 22% in 2017 to 35% in 2021.

**Table 13: Drinking water coverage improvements<sup>54</sup>**

Water District	Period	Drinking water coverage			
		Total number of connections	Population served	Number of active household connections	Coverage drinking water
Bayawan	Baseline (2017)	5,794	26,605	5,303	22%
	2018	6,522	36,078	6,001	30%
	2019	8,762	45,095	8,199	37%
	2020	9,070	42,390	8,478	37%
	2021	10,909	49,090	9,818	35%
	<b>Target</b>	<b>no target</b>	<b>52,806</b>	<b>8,801</b>	<b>22%</b>
Bogo	Baseline (2017)	8,55	37,25	7,45	46%
	2018	9,197	40,115	8,023	48%
	2019	9,640	42,535	8,507	50%
	2020	9,736	43,020	8,604	49%
	2021	10,163	43,495	8,699	49%
	<b>Target</b>	<b>no target</b>	<b>50,765</b>	<b>no target</b>	<b>57%</b>
Carcar	Baseline (2017)	16,256	76,57	15,314	61%
	2018	17,745	83,705	16,741	66%
	2019	19,379	90,825	18,165	70%
	2020	20,751	97880	19576	74%

<sup>54</sup> VEI (2021). *PEWUP Annual Progress Report*. Compiled by: Carl Kamstra. Shared: March 2022.

	2021	22,529	106,010	21,202	78%
	<b>Target</b>	<b>no target</b>	<b>108229</b>	<b>no target</b>	<b>80%</b>
	<b>Baseline (2017)</b>	14,03	66,39	13,278	38%
<b>Toledo</b>	2018	14,494	68,555	13,711	38%
	2019	14,521	68,705	13,741	38%
	2020	14,722	69,860	13,972	38%
	2021	16,078	76,465	15,293	41%
	<b>Target</b>	<b>15,532</b>	<b>73,12</b>	<b>14,624</b>	<b>39%</b>

Purely in terms of growth, **Table 14** illustrates the rapid improvements in drinking water coverage for CWD, and most notably, for BAWAD, which shows a coverage increase of 68%, between 2017 and 2021. Similarly, the coverage increases for low-income populations during this period for these three WDs is estimated to be 7% for Bogo, 27% Carcar, and 59% Bayawan, highlighting the great improvement from the last two WD as a result of their great eagerness to achieve their goals to improve services for Low Income Areas (LIA).

On the other hand, Toledo experienced a reduction in LIA coverage due to all the challenges faced during COVID to access the areas and deliver the necessary materials, even though great efforts were made to accomplish the targets, the performance, particularly from Bogo, resulted in an underscoring of the efficacy of the pro-poor investments prioritized under the PEWUP.

**Table 14: Drinking water supply coverage indicators 2017-2021<sup>55</sup>**

<b>Drinking Water Coverage indicators</b>	<b>Increase percentage 2017-2021</b>			
	<b>Toledo</b>	<b>Bogo</b>	<b>Carcar</b>	<b>Bayawan</b>
Total number of connections	15%	19%	39%	88%
Population served	15%	17%	38%	85%
Number of active household connections	15%	17%	38%	85%
Coverage drinking water	8%	7%	27%	59%
Water coverage for Low Income population	-31%	7%	27%	59%

### **Staffing and gender representation**

As can be seen below in **Table 15**, Toledo has made improvements in gender staffing, increasing both its percentage of female employees (4% increase) and the percentage of female employees in management positions (25% increase). Bayawan and Carcar have also improved both, the overall staffing levels and the number of female employees, although the number of female employees in management positions has stayed at the same level since the onset of the project.

<sup>55</sup> VEI (2021). *PEWUP Annual Progress Report*. Compiled by: Carl Kamstra. Shared: March 2022.

**Table 15: Percentage increase of staff and gender representation indicators (2017-2021)<sup>56</sup>**

Staffing levels and gender representation	Increase percentage 2017-2021			
	Toledo	Bogo	Carcar	Bayawan
FT employees	-5%	-24%	56%	33%
FT female employees	4%	-6%	59%	38%
FT female employees in management position	25%	-83%	0%	0%

### Operational performance

Perhaps most notably, as shown below in **Table 16**, the four WDs have shown improvements in reducing their percentages of non-revenue water (NRW) between 2017 and 2021, with Bayawan Water Districts exceeding its 2021 target by the end of phase I. Carcar has maintained its percentage of NRW since 2017, but the overall level remains quite low and the WD anticipates further reductions in the years to come based on increased knowledge derived from trainings on water balance, the establishment of metering, and an overall improvement in staff accountability and responsiveness to leaks.<sup>57</sup> These same positive trends can be observed in the levels of NRW per m<sup>3</sup>, as BAWAD, TCWD, and BWD have all shown significant reductions, while CWD has seen slight increases.

Collection efficiency and the average hours of water supply were found to be high for all four utilities, TCWD's hours of supply reached 24 hours, although they faced several challenges at the beginning of phase I due to drought conditions derived from El Niño in 2019 and subsequent sourcing challenges and a disconnect between customer demand (e.g. there is abundant water sourcing available in the north zone of the service area while the demand is highest in the central zone). In 2020, TCWD General Manager Egay Nicolas expected supply continuity to approach 24 hours per day once new pumps had been implemented in the southern part of the service area, which indeed happened.<sup>58</sup> Changes in collection efficiency are not attributed to the WOPs activities.<sup>59</sup>

<sup>56</sup> VEI (2021). *PEWUP Annual Progress Report*. Compiled by: Carl Kamstra. Shared: March 2022.

<sup>57</sup> Interview with Carcar Water District General Manager, Edward Remo. November 2020 and January 2022.

<sup>58</sup> Interview with General Manager of Toledo Water District, Egay Nicolas. November 2020.

<sup>59</sup> Interviews with VEI Resident Project Manager for WaterWorX PEWUP project, Carl Kamstra. October 2020 and January 2022

Table 15: Operational performance indicators (2017-2021 with Phase I targets)<sup>60</sup>

Water District	Time	Operational performance			
		Hours of supply (yearly weighted average)	NRW in m3 per active connection per year	NRW as percentage of system input	Collection efficiency
Bayawan	Baseline (2017)	24	64	27%	99%
	2018	24	42	20%	98%
	2019	24	35	19%	97%
	2020	24	52	23%	99%
	2021	24	38	19%	98%
	<b>Target</b>	<b>24</b>	<b>54</b>	<b>20%</b>	<b>90%</b>
Bogo	Baseline (2017)	24	92	32%	99%
	2018	23	95	33%	95%
	2019	23	47	19%	96%
	2020	22	49	20%	99%
	2021	20	48	20%	104%
	<b>Target</b>	<b>24</b>	<b>31</b>	<b>20%</b>	<b>98%</b>
Carcar	Baseline (2017)	24	47	17%	97%
	2018	23	51	18%	97%
	2019	23	61	20%	96%
	2020	24	57	18%	99%
	2021	24	50	17%	100%
	<b>Target</b>	<b>24</b>	<b>N/A</b>	<b>16%</b>	<b>95%</b>
Toledo	Baseline (2017)	17	149	38%	105%
	2018	16	138	36%	100%
	2019	15	117	32%	101%
	2020	17	124	32%	98%
	2021	17	120	32%	98%
	<b>Target</b>	<b>20</b>	<b>N/A</b>	<b>27%</b>	<b>94%</b>

### Customer satisfaction

Based on interviews conducted with the project partners, customer satisfaction was not highlighted as a priority. However, it is worth noting that for the three WDs that provided data on customer satisfaction, as shown in Table 17 below, all appear to maintain high levels of customer satisfaction.

<sup>60</sup> VEI (2021). *PEWUP Annual Progress Report*. Compiled by: Carl Kamstra. Shared: March 2022.

**Table 16: Customer satisfaction improvements (2017-2021 with Phase I targets)<sup>61</sup>**

Water District	Time	Customer satisfaction
Bayawan	Baseline (2017)	9,9
	2018	8,9
	2019	8,1
	2020	8,4
	2021	8,5
	<b>Target</b>	<b>8,0</b>
Carcar	Baseline (2017)	8,9
	2018	no survey
	2019	9,2
	2020	9,2
	2021	8,8
	<b>Target</b>	<b>9,3</b>
Toledo	Baseline (2017)	8,1
	2018	7,64
	2019	8,4
	2020	9,4
	20221	no survey
	<b>Target</b>	<b>8,0</b>

### Finance

Like NRW, in terms of financial KPIs, three of four WDs have shown improvements in their cost-coverage ratio and improvements in their net revenue as shown below in **Table 18**. While cost-coverage ratio improvements have met the established 2021 targets (where applicable), they overall demonstrate progress. Interestingly, Carcar Water District began the WOP with the highest cost-coverage ratio of the mentee WDs, but is the only WD to have experienced a decrease since 2017. In an effort to reverse this trend, CWD continues to pursue an increase in the tariff rate (which have not been raised since 2013) as the district maintains the lowest tariff rates for water of the four WDs by a significant margin.<sup>62</sup>

Net revenue increases and cost coverage ratios have been driven in large part from capacity increases, as is the case in Bayawan, wherein the WD has experienced an increase in total connections of nearly 90% between 2017-2021 (refer to **Table 14** for figures), leading directly to increased revenue. As these connections were in large part financed by PEWUP (including Water for Life funding), the cost-coverage ratio is in turn strongly positive and is expected to be sustained in time.

<sup>61</sup> VEI (2021). *PEWUP Annual Progress Report*. Compiled by: Carl Kamstra. Shared: March 2022.

<sup>62</sup> Interview General Manager of Carcar Water District, Edward Remo. November 2020.

Table 17: Progress on key financial indicators (2017-2021 with Phase I targets)<sup>63</sup>

Water District	Time	Finance	
		Cost-coverage ratio (Operating ratio)	Net Revenue (PHP)
Bayawan	Baseline (2017)	0.99	-179,238
	2018	0.96	-1,449,572
	2019	1.17	6,872,092
	2020	1.08	3,829,338
	2021	1.03	1,600,391
	<b>Target</b>	<b>1.20</b>	<b>N/A</b>
Bogo	Baseline (2017)	0.98	-1,317,588
	2018	0.95	-2,958,106
	2019	1.11	7,356,951
	2020	1.19	12,168,717
	2021	0,99	-904,272
	<b>Target (2021)</b>	<b>N/A</b>	<b>N/A</b>
Carcar	Baseline (2017)	1.32	19,163,547
	2018	1.25	16,785,798
	2019	1.12	10,239,677
	2020	1.07	6,959,196
	2021	1,01	625.414
	<b>Target</b>	<b>1.40</b>	<b>N/A</b>
Toledo	Baseline (2017)	0.98	-1,732,910
	2018	1.02	1,415,279
	2019	1.09	7,068,292
	2020	1.04	3,131,058
	2021	1,01	1,389.071
	<b>Target</b>	<b>1.02</b>	<b>N/A</b>

### Quality/Environment

Data (where available) on energy consumption indicate that, aside from TCWD, the mentee WDs have experienced significant increases since the beginning of the WOP and not being able to meet the target of reducing energy consumption per m<sup>3</sup> of system input as shown below in **Table 19**. Interviews with project partners suggest that these increases stem from a number of factors including aging pumps and other infrastructure, increases in energy costs, and an increased number of connections.

<sup>63</sup> VEI (2021). *PEWUP Annual Progress Report*. Compiled by: Carl Kamstra. Shared: March 2022.

It is also notable that in 2020 energy consumption figures continue to increase due to increased household water consumption as a result of stay-at-home orders during the COVID-19 pandemic.<sup>64</sup>

**Table 18: Energy consumption**

Water District	Time	Energy consumption per m <sup>3</sup> of system input
<b>Bayawan</b>	Baseline (2017)	0,10
	2018	0,11
	2019	0,15
	2020	0,30
	2021	0,23
<b>Bogo</b>	Baseline (2017)	0,26
	2018	0,26
	2019	0,32
	2020	0,32
	2021	0,29
<b>Carcar</b>	Baseline (2017)	0,20
	2018	0,22
	2019	0,22
	2020	0,29
	2021	0,29
<b>Toledo</b>	Baseline (2017)	0,35
	2018	0,28
	2019	0,30
	2020	0,31
	2021	0,31

**Results derived from the project targeted improvement tracks**

The main outcomes of the project Phase I relate to improvements in staff, managerial, and operational capacity as well as coverage expansion. In addition to the measurable gains highlighted by the evaluation of the project’s KPIs (see previous section), selected activities and their preliminary results are briefly discussed below.

<sup>64</sup> Interview with General Manager of Toledo City Water District, Egay Nicolas. November 2020.

### Leadership training

As noted in previous sections, all four WDs underwent leadership training for general managers and managers in 2018 and a Strategic Leadership and Change Workshop in 2019, both of which were led by Dr. Herman Wittockx. In 2020 and 2021, masterclasses were given virtually to all members of the Philippine Association of Water Districts (PAWD) and led by short-term experts, the project manager, local staff, and a local advisor. Based on the training and workshops, three of the four WDs indicated that they have incorporated their 'vision' and 'values' into all organizational activities and have given very positive feedback on the activities.

Interviews with project partners indicate that the leadership and visioning activities have made direct impacts on the prioritization within the WOP itself, as individual WDs developed more clarity about what they wanted to get out of the partnerships, what their unique interests and areas of desired growth were. In practice, this has meant that the Boards of Directors and WD staff are more actively involved in changing the organization and action plans have been developed and integrated into the Strategic Business Plans.

*"We have learned the character of frankness and honesty – the Dutch way of discussing things. And in doing so, we have built a deeper kind of trust."*

*Alma Abrasaldo, GM Bayawan Water District*

### Asset digitization

Following the visit of a Short Term Expert (STE) in January 2020, which included the identification of key assets across all four WDs, a series of online consultations between the expert and WD staff took place. Asset digitization was implemented in 3 of 4 partner utilities (Bogo did not participate in the implementation due to a lack of managerial motivation). Asset digitization will allow for partner utilities to, in real-time, understand where certain assets require maintenance or replacement. Asset digitization also allows for WDs to obtain a fuller picture of their infrastructure, better inform capacity improvement decisions and strategically address issues more effectively. It should be noted that the partner WDs have been open and enthusiastic about involving non-project WDs in trainings, which has allowed for the project to make impacts outside of the partnership.

### Pro-poor access to water supply services

The initial pro-poor element of the WOP envisioned 36 million PHP in investment (9 million PHP or +/- 157,680 EUR to each of the four WDs) to support a little over 9,000 water and 2,500 sewer connections across the four mentee utilities. As the

project progressed, this approach was modified to focus only on water connections. The total planned number of water connections is slightly over 7,100. Additionally, due to decision-making at the General Manager level, funding originally earmarked for certain planned connections (i.e. those in Bogó) has been repurposed for supporting connectivity improvements in other districts (in this case, Bayawan). Although the implementation of pro-poor connections faced a number of delays and challenges because of the pandemic and the difficulty to reach the areas, the outcomes are encouraging with a cumulative amount of 25,630 new beneficiaries in low-income areas.

**Table 19: Updated cumulative pro-poor project improvement<sup>65</sup>**

Water District	Number of beneficiaries (cumulative)				
	2018	2019	2020	2021	2022 (additional)
<b>Bayawan</b>	2,371	11,022	18,332	20,031	20,031
<b>Carcar</b>			2,270	7,890	7,890
<b>Toledo</b>				10,655	19,225
<b>Bogó</b>				370	5,078
<b>Total</b>	<b>2,371</b>	<b>11,022</b>	<b>15,795</b>	<b>37,247</b>	<b>52,224</b>

The first pro-poor project took place in Bayawan, beginning in 2018. By the end of phase I, they had reached 3,642 new connections, 20,031 beneficiaries. The Bayawan project was delivered with the support of co-funding from the Water for Life Foundation<sup>66</sup>.

Pro-poor project in Carcar Water District has been underway since February 2020, and by the end of phase I, they reached 1,578 connections, 7,890 beneficiaries. A partial project proposal for Toledo City Water District was approved and implementation started in 2021.

In addition to direct connectivity improvements in low-income areas envisioned under the PEWUP, the Project Plan discusses a goal of “embedding [a] pro-poor focus within the organization of the partner WDs”.<sup>67</sup> The mechanism by which to

<sup>65</sup> 2018 and 2019 figures reflect connectivity improvements that have been delivered. Data provided by Carl Kamstra. March 2022.

<sup>66</sup> Water for Life is VEI’s foundation dedicated to improving drinking water for the urban poor in the areas where VEI is working. The foundation has been in existence since 2004 and is funded through voluntary contributions from customers in the Netherlands. For more information, see: VEI (2015). “Water for life.” <http://www.vitensevidesinternational.com/about-vitens-evides-international/water-life/>. Updated: 2015. Accessed: October 15, 2020.

<sup>67</sup> VEI (2017). *Inception Phase III: Project Plan: Performance Enhancement Water Utilities in the Philippines through Benchmarking and collective learning (PEWUP)*.

institutionalize access improvements to such populations within the water districts going forward is the placement of a pro-poor coordinator within each of the four WDs.



*WOP capacity development activities*

## Project evaluation

### Replicability

As this WOP is part of the WWX programme, partner utilities will continue onto Phase II. There will be changes to the number and group of WDs engaged (e.g. additional partners have been added to the WOP and Bogo Water District will not continue due to managerial displeasure with the WOP and lack of commitment from the operator), but the overall success and satisfaction with the WOP by parties involved suggests that the overall approach (i.e. multiple mentee organizations of similar size and scope with a single mentor that can offer expertise on a wide range of topics) is indeed replicable.

On a more technical level, the success demonstrated by the leadership training programme in the PEWUP WOP, and its usage in helping refine and direct priorities for the engaged partners has been noted by VEI. It appears likely that this approach may well be adopted in a wide range of WOPs VEI is involved in going forward.

For the mentee utilities specifically, the positive experience with the partnership certainly has the potential to motivate the WDs to seek out further partnerships, WOPs or otherwise.

### **Mentees becoming mentors**

In summer 2021, the selection of new partners for phase II started, along with a review of utilities' staff capacities, abilities and willingness to change. According to Carl Kamstra (2022), this last attribution is the most important element to consider at the moment of engaging in a WOP. Previous experiences have shown that will is even more important than a solid baseline of staff abilities.

For phase II there will be four new partners, aside from the previous 3 WD from phase I. Bayawan, Toledo and Carcar will, at the same time continue being mentees, and collaborate and extend their acquired expertise and capabilities to the new peer partners.

Mentees becoming mentors will be possible because of the success in capacity development from phase I, where several training for trainers activities took place, creating a solidarity spreading effect among water operators in neighbouring areas.

### **Relational capital and satisfaction of partners**

Both the mentor and the mentees have indicated that up until this point, the quality of the relationship between the partners has been very good. Aside from conflict which arose from friction with the GM of BWD, there have not been any major conflicts between the partners. The strength of the partnership has been largely attributed to the flexibility of all involved in the implementation of activities, as well as the ease of communication between VEI staff and both management and operational levels within the WDs.

The assignment of one local staff member to each WD has also been attributed to overall satisfaction with the WOP as the organization of trainings and webinars, as well as significantly improved day-to-day coordination. From the perspective of the local mentor staff, they too appear to have very high levels of satisfaction with the arrangement and feel they have had the opportunity to make a measured impact in the WDs where they are based.

In general, interviews with the General Managers of the partners revealed their continued enthusiasm, motivation, and pride in their involvement in the WOP.

## Effectiveness

Results indicate that the first phase of the partnership has been effective in delivering significant changes within the utilities' management and operations, particularly related to technical aspects. For example, the WOP has been able to improve the design of pumping stations and pressure management for NRW.

Additionally, as discussed throughout this report, leadership training was particularly effective. Utilizing "visioning exercises" targeted specifically at General Managers in the four partner utilities, WDs were able to effectively identify where they want their utilities to go in the future and then relatedly, what is required to get them there. Other positive outcomes from the leadership training included a shift in the organizational culture that permitted staff members to voice opinions, whether specifically related to the WOP activities or not. Stemming from this more open communication was an articulation that the "collective learning" model was not seen as effective, which prompted a reassessment of the learning model and focus on more context-specific training and implementation approaches.

A key finding in the MTR, which has been corroborated through interviews with the RPM and GMs of the partner WDs, is that the WOP approach, which requires the collection and analysis of a considerable amount of data, has also helped partner utilities realize the importance and potential of data management. The WOP has therefore developed utilities' staff ability to effectively compile and analyze data.

Interestingly, while initial reactions from the partner utilities suggested that there was some frustration about the limited opportunity to work directly with STEs, since the onset of travel restrictions due to COVID-19, the model of engagement with STEs has shifted dramatically. Over the course of the past 2 years, more consistent virtual communication with STEs has been conducted as long as in-person meetings were not possible given travel restrictions. This consistency has proven successful in two ways: 1) it has allowed for more sustained technical support, training, and opportunity for context-specific questions and concerns to be voiced and 2) it's allowed for a more organic integration of daily work tasks and WOP activities by WD staff, which in turn, for example, limited the rush to complete preparations in time for an STEs visit. There are indeed drawbacks to the lack of face-to-face interaction, both from a technical and relational standpoint. However, interviews with project partners point to the fact that the initial stages of the WOP did include in-person activities and that this was adequate in building a foundational relationship and trust between partners. Based on these preexisting relationships and levels of trust, the shift to online mediums was, therefore, more effective.

*"You cannot email a handshake."*

*Egay Nicolas, General Manager Toledo City Water District*

As noted in previous sections of this report, it is worth pointing out that the effectiveness of the WOP has been most notable in Bayawan, Carcar and Toledo WDs. Indeed, the MTR, as well as interviews with project partners, has found that buy-in from Bogo's GM has been considerably less than from other utilities, which affects the overall buy-in of the organization. For example, Bogo's GM did not prioritize the leadership training programme (a position not shared by the other GMs).

### Efficiency

Both the MTR and the interviews conducted suggest that the WOP has been implemented efficiently. Important factors that influenced the efficiency of the partnership were the level of engagement of the partner utilities, the support of PAWD, and the length and robustness of the partnership under the WWX programme. In particular, the changes to activities required following travel restrictions and social distancing were possible given the flexibility of both the WWX partnership structure and the willingness and motivation of the partners involved.

### Success factors and challenges

The critical success factors for the WOP up to this point can be categorized into four categories: flexibility, motivation, co-development, and compatibility. WOP-specific challenges have related primarily to COVID-19, management (in regard to Bogo Water District), and geographic dispersion of the WDs. Success factors and challenges are discussed in greater detail below by theme.

#### Success factors

**Flexibility.** WOP management and the flexibility built into the WWX programme and associated project design have allowed for the adaptation of approaches, shifting from a focus on collective learning and a joint training model to a more individualized model. Similarly, the shift from in-person training and workshops to an online format reflected the effective use of remote communication and training practices.

An example of this flexibility can be seen in the response to drought conditions for the Cebu WDs in 2019, which caused water shortages due to dry wells and springs as well as salt intrusion. Due to the drought, the preparation of the pro-poor project in Toledo and Bogo was delayed, because no guarantee could be given that the new connections would receive water and not affect the water supply to existing customers. Subsequent adjustments to the pro-poor project included Toledo breaking its approach into two efforts and approximately 500 of the connections (including associated budget) originally planned for Bogo being redistributed to Bayawan.

**Motivation.** A WOPs success or failure is largely determined by the degree to which the partners are motivated to participate, contribute, and jointly approach complex challenges. Aside from Bogo Water District, the partners in the PEWUP have demonstrated a sustained interest in the project activities, an eagerness to learn from one another, and continued motivation for building capacity and improving performance in the partner utilities. This motivation has been challenged in the aftermath of the COVID-19 global pandemic, as in-person activities were required to take place online. However, instead of losing interest, interviews suggest that both VEI and the partner utilities quickly adapted to the new circumstances and openly embraced this new way of working.

**Co-development.** The success of the leadership training programme and visioning exercises has been discussed throughout this report. However, it cannot be stressed enough the degree to which these exercises resulted in organic prioritization of WOP activities by WDs and provided an opportunity for staff to speak out regarding areas of improvement. Such open dialogue prompted the shift from the ‘collective learning’ model to a more context-specific approach, and in turn, provided an opportunity for mentor and mentees to jointly plan how to approach project and utility objectives and how best to adapt activities to better accommodate unique contextual characteristics of each WD.

**Compatibility.** Shared language (English) between VEI, WD staff, and experts/trainers has allowed for easier communication between partners and enabled more ad-hoc trainings, meetings, workshops, etc. as there has been no logistical translation barrier. In addition, both mentor and mentees were adept in moving interactions largely online. In some ways, this shift has enabled greater productivity and knowledge sharing between partners.

## Challenges

**COVID-19.** For certain activities, and particularly under Phase II where training for trainers workshops are envisioned to continue, relying on remote communication, which has become necessary under the circumstances imposed by COVID-19, can be challenging as the classroom context is far more effective. Other COVID-19-related challenges include, but are not limited to, limitations in energy savings activities (require in-person inspection of pumps) and the completion of water safety plans (while videos have been produced to support this effort, in-person facilitation is the preferred method of engagement).

**Geographic dispersion.** In the first two years of the WOP, the geographic distance between the WDs required extensive time dedicated to travel to attend joint workshops and trainings, and was viewed as a burden for WD staff.<sup>68</sup> A shift in the

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<sup>68</sup> Interview with VEI Resident Project Manager for WaterWorX PEWUP project. October 2020.

WOP away from the “collective learning” approach in the middle of 2019 towards a “collective growing” approach, wherein certain trainings and workshops remain jointly conducted, but individualized work plans are pursued by each WD, has been a welcome change for all partners involved in the WOP.

### What the partners say

*“I believe that VEI succeeds in its work around the world because it helps the water district improve itself in a wholesome way. The solutions provided improve all aspects of water service delivery, from source to tap, from billing to infrastructure, from people to consumers. The long-term solution of the WaterWorX program is appreciated, and learnings from peers in the industry opens windows of knowledge-sharing and inspires each one of us.”*

Alma Abrasaldo, GM Bayawan Water District

## Conclusion

### Sustainability of results

*“The focus on leadership has created commitment for the operational and financial capacity of the water districts, leading to sustainable changes.”*

VEI Resident Project Manager, Carl Kamstra

While it may be too early to assess the sustainability of the results of the WOP, it is clear from both the previous reporting and interviews conducted that the WOP is contributing to the improvement of the sustainability of the partner utilities. In particular, the partnership is helping to build technical capacity, assist in long-term planning that seeks to address impacts related to climate change, and through training and the incorporation of software, asset management as well as modern financial management practices. All of these are critical to the modernization and capacity development of the utilities, which in turn better equips them to face a myriad of challenges going forward.

The fact that mentee utilities from phase I of this WOP will move along into a role where they will be sharing knowledge and helping new water operator partners to strengthen their capacities and spread solidarity in their neighbouring areas is a great indicator of how the WOP seems to be having a lasting and sustainable effect.

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# CASE STUDY



Water Operators' Partnerships (WOPs) are peer support relationships between two or more water or sanitation operators, carried out on a not-for-profit basis in the objective of capacity development. This is one of a series of four impact-oriented case studies conducted on WOPs in Africa. It is intended for water and sanitation service providers, governments, development banks, donors, WOPs facilitators and all who are interested in gaining a better understanding of this solidarity-based approach to helping public operators improve their capacity to sustainably deliver water and sanitation services for all.

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