Blue Bond Impact Report

BDO Unibank, Inc.

About the Report

This Blue Bond Impact Report is BDO Unibank Inc.'s first Blue Bond Impact Report outlining the environmental and social performance of financed projects from its Blue Bond proceeds from January to December 2022. This Impact Report was prepared following International Finance Corporation's (IFC) Guidelines for Blue Finance, International Capital Market Association (ICMA) Harmonized Framework for Impact Reporting, and aligned with the United Nations Sustainable Development Goals (SDGs) targets and the BDO Sustainable Finance Framework. The report was prepared by the Sustainability Office and the Sustainable Finance Desk of the Institutional Banking Group. For inquiries, you may email sustainability@bdo.com.ph.

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Introduction

BDO is a full-service universal bank in the Philippines. It provides a complete array of industry leading products and services including Lending (corporate and consumer), Deposit-taking, Foreign Exchange, Brokering, Trust and Investments, Credit Cards, Retail Cash Cards, Corporate Cash Management, and Remittances in the Philippines. Through its local subsidiaries, the Bank offers Investment Banking, Private Banking, Leasing and Finance, Rural Banking, Life Insurance, Insurance Brokerage, and Online and Traditional Stock Brokerage Services.

BDO's institutional strengths and value-added products and services hold the key to its successful business relationships with customers. Its branches remain at the forefront of setting high standards as a sales and service-oriented, customer-focused force. The Bank has the largest distribution network with 1,652 branches and banking offices and 4,655 ATMs nationwide. BDO has 16 international offices (including full-service branches in Hong Kong and Singapore) spread across Asia, Europe, North America, and the Middle East.

The Bank also offers digital banking solutions to make banking easier, faster, and more secure for its clients.

Through selective acquisitions and organic growth, BDO has positioned itself for increased balance sheet strength and continuing expansion into new markets. As of December 31, 2022, BDO is the country's largest bank in terms of total resources, customer loans, deposits, assets under management and capital, as well as branch and ATM network nationwide.

BDO is a member of the SM Group, one of the country's largest and most successful conglomerates with businesses spanning retail, mall operations, property development (residential, commercial, hotels and resorts), and financial services. Although part of a conglomerate, BDO's day-to-day operations are handled by a team of professional managers and bank officers. Further, the Bank has one of the industry's strongest Board of Directors, composed of professionals with extensive experience in various fields that include banking and finance, accounting, law, and business.

BDO's Sustainability philosophy is to achieve strategic resilience by incorporating sustainability in the way it does business. The Bank aims to embed sustainability principles when making decisions, assessing relationships, and creating products.

In May 2022, BDO issued its first Blue Bond amounting to US\$100 million, through an investment from the International Finance Corporation (IFC). The Bond proceeds will expand financing for activities that preserve clean water resources and help prevent marine pollution, while supporting the country's water sustainability and climate goals. The Blue Bond is the first private sector issuance by a commercial bank in Southeast Asia and the first financial institution to follow IFC's Guidelines for Blue Finance. BDO is the Philippines' first bank to finance projects that protect water and the ocean as critical resources, pioneering a new financial instrument to protect the environment.

Executive Summary

This report presents the environmental and social impacts of three (3) key businesses in BDO Unibank's portfolio that work on water and wastewater management, including wastewater treatment, bulk water and operations management, and bulk water distribution facility which were financed through the proceeds of the Blue Bond. The projects are located in the provinces of Bulacan, Tarlac, and Rizal which are large and densely populated areas near coastal areas in the Luzon region of the Philippines. By starting at the source, moving through use, and ending with the bodies of water, the Blue Bond-financed projects provide solutions to a systemic issue that ensure the availability of water and ocean pollution prevention for future generations.

BDO's Blue Bond issuance comes at a critical time for the Philippines. As an archipelagic country composed of 7,641 islands, water supply is unevenly distributed across the country depending on the rainfall variability, size, and features of each island. Available supply cannot keep up with fast rising demand due to the region's rapidly growing population, migration, and economic expansion.

At present, severe and extreme water scarcity exist in parts of Luzon, especially in the Greater Metro Manila Region and nearby provinces. Water availability in the Philippines is only 1,446 cubic meters (m³) per capita per year nationwide, indicating that the country is experiencing water stress- the situation when water supply is from 1,000 to 1,700 m³ per capita per year.

With financing support from the Blue Bonds financed by the International Finance Corporation (IFC), water management has improved as a result of increased wastewater treatment facilities, technologies for reducing non-revenue water (NRW), sustainable water supply infrastructure, rain water harvesting, and surface water utilization. All of which increase clean water supply, while avoiding groundwater extraction. Through the three businesses, 60,062,121 m³ of water was saved from groundwater extraction, 323,939 m³ of water loss was avoided, and an additional 4,517 m³ of wastewater was treated annually. All of these water savings are equivalent to 19,240 tonnes of CO2e emissions avoided.

In addition, the projects include technological solutions that ensure efficient water use and prevent water discharge from households to river basins and coastal areas.

Other than the environmental impacts of these projects, the financing led to direct impacts to the immediate communities. The count of households provided with clean water increased by 14% after the financing. Organizations whose wastewater was treated before water reuse or discharge to bodies of water also increased. Count of companies whose wastewater is treated increased by 52%, while count of hospitals supported increased by 16% after the financing.

BDO Sustainability Framework

The BDO Sustainability Framework defines the strategies that serve as guideposts in its journey towards sustainability, anchored on the United Nations 17 Sustainable Development Goals (SDGs):





Product Sustainability Strategy

We create products and services which anticipate the evolving needs of our customers and support sustainable development goals.

We develop our capabilities to understand our customers and reach the underserved markets with relevant products and services that meet their unique needs and ways of doing business

















Sustainability Contribution Strategy

We support the achievement of national economic goals through financial inclusion and impact financing in infrastructure, eco-friendly solutions, green facilities, and disaster resilience initiatives.







Human Capital Sustainability Strategy

We develop leaders in the sustainability movement. We aim to grow a "can lead" workforce that adopts a sustainability mindset and thrives with innovative thinking and customerfocused attitude.













Disaster Response Sustainability Strategy

We leverage our resources towards the relief, rehabilitation, and recovery of disaster-stricken communities.





Governance-Based Sustainability Strategy

We continuously enhance our corporate governance framework to sustain superior business performance anchored on the principles of accountability, transparency, integrity, and fairness, together with our partners

Blue Bond Use of Proceeds and Alignment to the SDGs

The use of proceeds for BDO's Blue Bond are based on two categories and contribute to the following SDGs and Targets:

Blue Project Category

Eligibility Criteria

Sustainable Water and Wastewater Management











Sustainable infrastructure for:

- New drinking water treatment and storage that documents at least 20% water savings (e.g. reduction of non-revenue water) per unit of service compared to a documented baseline
- Rehabilitation of existing water infrastructure that documents at least 20% water savings per unit of service compared to a documented baseline
- Desalination plants that help groundwater depletion and wetlands and avoid hypersaline pollution of environment (e.g. ISO Standard 23446)
- New or expansion of water treatment infrastructure
- Wastewater treatment, including: industrial, agribusiness, commercial, residential, or city level
- Biogas and heat exchange systems to increase efficiency and effectiveness
- Sustainable urban drainage systems
- Retrofit water supply projects and existing water treatment infrastructure
- Water recycling
- Rainwater harvesting or other forms of flooding mitigation provided that adaptation and management response plans are in place

Offshore Renewable Energy









Offshore wind energy facilities that do not harm marine ecosystems and may include fisheries' sanctuaries for juveniles of certain marines, substantial artificial reef elements and other additional measures promoting marine biodiversity

Financing from the Blue Bond helps provide solutions to a systemic issue of water scarcity and ensure the availability of water through an integrated water resource management that maximize economic, and social welfare without compromising the sustainability of water ecosystem.

While addressing sustainable water management and ocean protection (SDG 6 and 14 respectively), the Blue Bond, through the Blue Finance principles is also aligned with the Green Bond Principles of Pollution Prevention and Control, Natural Resource Conservation, Biodiversity, and Climate Change Mitigation and Adaptation.

Proceeds from the Blue Bonds are allocated to projects in water and wastewater management including wastewater treatment, bulk water and operations management, and bulk water and distribution facility that are identified through the Bank's diverse loan portfolio. The projects are located in densely populated areas near coastal areas, which thereby preventing pollution from entering the oceans.

With financing support from the Blue Bonds, water management of these projects has improved as a result of increased wastewater treatment facilities, technologies for reducing non-revenue water (NRW), sustainable water supply infrastructure, rain water harvesting, and surface water utilization, all of which increase clean water supply while avoiding groundwater extraction. In addition, the financing helps support technological solutions that ensure efficient water use and prevent water discharge from households to river basins and coastal areas.

Blue Challenges in the Philippines

The World Bank defines "natural capital" as the economic value of natural resources, such as forests and water. In its landmark report on "The Changing Wealth of Nations" 2021 edition, the World Bank stated that "we can no longer grow our economies by depleting and degrading wealth provided by nature." The report also warned that renewable natural capital is particularly important for low-income countries...and careful management of renewable natural assets is "even more critical to meet sustainable development goals and ensure the well-being of the most vulnerable people."

BDO recognizes the value of natural capital as critical to sustainable economic development and a fundamental human right. As a pioneer in Sustainable Finance in the Philippines, BDO continues to find ways to protect the environment and identify financial instruments that can contribute in sustaining the availability of the natural resources for future generations of Filipinos.

Current State of Water Resources

The Philippine Development Plan 2023 – 2028 highlights the need for expanding infrastructure to provide families access to safe and adequate water and sanitation services.

The Philippines' annual freshwater potential is estimated to be 146.0 billion m³, of which approximately 125.8 billion m³ is surface water and 20.2 billion m³ is groundwater.

Water availability in the Philippines is only 1,446 m³ per capita per year¹ nationwide indicating that the country is experiencing water stress or a decline in water scarcity per capita.

In the Philippines, MIMAROPA is experiencing water stress while Regions I, III, and V are facing water scarcity. NCR, CALABARZON, and Region VII are facing absolute scarcity or 500 m³ water supply per person per year. The values for the water availability per capita per year cover domestic water supply and water uses for other sectors (e.g., agricultural, industrial, commercial, power).

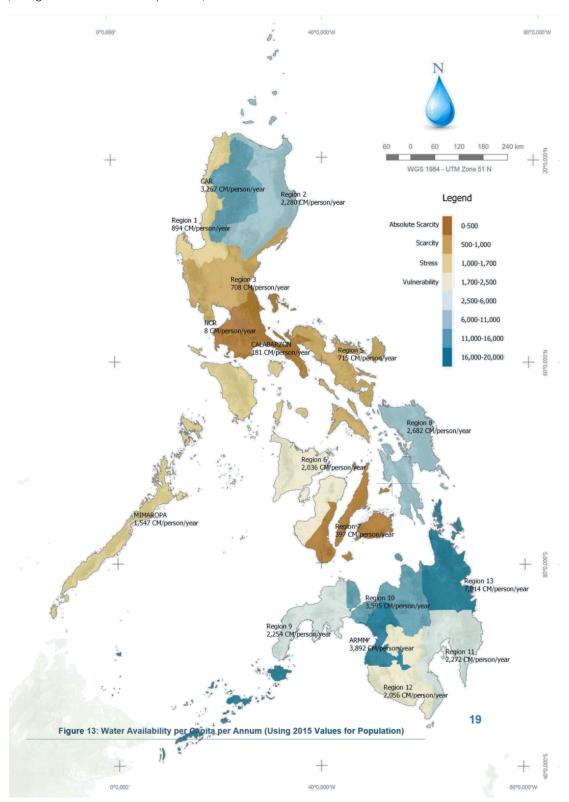
Current State of Wastewater Management

Due to increasing population and economic growth, there is an increase in water demand, generated waste and wastewater. The Clean Water Act states that significant efforts are required to develop and promote a wastewater charge system for the commercial and residential sectors. Based on the Philippine Water Supply and Sanitation Master Plan (PWSSMP), this initiative has not fully materialized. The master plan defines wastewater as waste in a liquid state that contains pollutants. As a result, there is a need for wastewater treatment so that the water can be returned to the water cycle with minimal environmental impact or used directly.

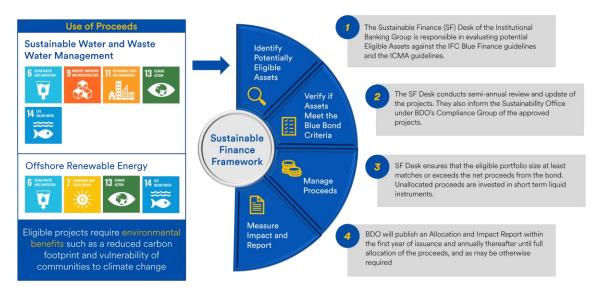
According to the Philippine Statistics Authority's latest SDG Watch for SDG 6.3, dissolved oxygen increased from 31% in 2016 to 75% in 2021 among monitored bodies of water with good ambient water quality, while biogeochemical oxygen demand increased from 37% to 73% during the same period. This reflects an improvement in the water quality discharged into bodies of water, including those previously discharged from industries. However, there is a need to improve the water quality in order to meet the target of 100% for dissolved oxygen and biogeochemical oxygen by 2030.

¹ Philippine Water Supply and Sanitation Master Plan

Figure 01. Water Availability per Capita per Annum (Using 2015 Values for Population)



Blue Bond Proceeds Management and Reporting

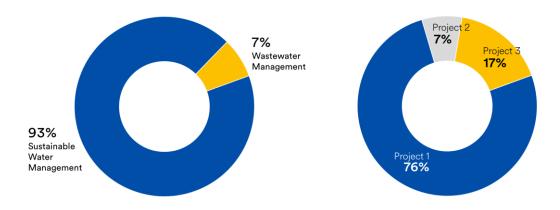


Blue Bond Portfolio

Use of Blue Bond proceeds as of December 31, 2022:

Project	Eligible Category	Allocation Amount (US\$)	Disbursement Date	Maturity Date
Project 1	Sustainable Water Management	\$38,000,000	15 Nov 2018	15 Nov 2030
Project 2	Wastewater Management	\$3,600,000	21 Jun 2019	21 Jun 2024
Project 3	Sustainable Water Management	\$8,400,000	10 Nov 2021	10 Nov 2029
Total		\$50,000,000		

Blue Bond Asset Portfolio Allocation



Impact Measurement Summary

Environmental Impact

Eligible Category	Impact	Volume in cubic meters
Wastewater	Additional volume treated annually as a result of	4,517
Management	the financing	
Sustainable Water	Groundwater extraction avoided annually through	60,062,121
Management	surface water utilization	00,002,121
Sustainable Water	Avoided water losses annually as a result of the	323,939
Management	financing	323,939
GHG emissions avoided annually due to Blue Bond financing (tonnes CO2e) 19,240		

Social Impact

Eligible Category	Impact	Count
Wastewater	Additional industries supported as a result of the	121
Management	financing	اکا
Wastewater	Additional hospitals supported as a result of the	23
Management	financing	23
Wastewater	Additional bed capacity of hospitals supported as a	0.770
Management	result of the financing	2,732
Sustainable Water	Additional households supported as a result of the	011.050
Management	financing	211,852

Definition of terms

Absolute water scarcity⁵ - Annual water supplies drop below 500 cubic meters (m³⁾ per person per year

Groundwater² –Subsurface water in which the pressure is equal to or higher than the local atmospheric pressure. In other words: water below the water table or phreatic level.

Households – count of direct beneficiaries representing an average of 4 individuals per household, based on the 2020 Census of Population and Housing by the Philippine Statistics Authority³.

Integrated Water Resource Management (IWRM)* - a process that promotes the coordinated development and management of water, land and related resources in order to maximize economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

Non-revenue Water⁵ - Water that has been produced and is "lost" before it reaches the customer

Surface Water² - Water located on the surface of the Earth, such as in streams, rivers, and lakes.

Sustainable Water Management⁴ - includes ensuring the implementation of the Integrated Water Resource Management (IWRM).

Treatment⁴ - Any method, technique, or process designed to alter the physical, chemical or biological and radiological character or composition of any waste or wastewater to reduce or prevent pollution.

Wastewater⁵ - Waste in liquid state containing pollutants.

Wastewater Management⁶ - the collection and treatment of wastewater before discharge to either the sewer for further treatment or directly to the environment.

Water Quality⁵ - The characteristics of water which define its use in terms of physical, chemical, biological, bacteriological or radiological characteristics by which the acceptability of water is evaluated.

Water Scarcity⁵ - Annual water supplies drop below 1,000 m³ per person per year

Water Stress⁵ – Annual water supplies drop below 1,700 m³ per person per year

^{2 &}lt;u>UN-International Groundwater Resources Assessment Center</u>

³ Household Population, Number of Households, and Average Household Size of the Philippines (2020 Census of Population and Housing)

⁴ Integrated Water Resource Management | UNEP

⁵ Philippine Water Supply and Sanitation Master Plan

⁶ SDG Indicators: Metadata Repository

Blue Bond Beneficiaries

#1 Bulk water and operations management of water treatment and distribution

Location: Bulacan

The Bulacan Bulk Water Supply Project (BBWSP) is a national government Public Private Partnership (PPP) project that will supply treated bulk water to Bulacan's various water districts (WDs). Luzon Clean Water Development Corporation (LCWDC), a MWSS concessionaire, aims to improve the quality of life for residents of Bulacan by providing consistent and clean water and constantly, expanding its service area coverage, and increasing the number of households served. The Bulacan Bulk Water Supply Project produces an average volume of 160 million liters per day for around 165,000 households and has a maximum capacity of 388 million liters per day.

Compliance to Key Performance Indicators for January 2023⁷:

- KPI 1 Availability of Supply: 110.34% Compliance (supply of treated bulk water is above the required contracted volume)
- KPI 2 Water Quality: 100% Compliance
- KPI 3 Pressure: 99.70% Compliance (pressure below 20 psi was recorded in San Jose Del Monte Water District due to the utilization of San Jose Del Monte interconnection point's bypass line, as requested by the said water district, to increase their supply)
- KPI 4 Service Coverage: 100% Compliance
- KPI 5 Non-Revenue Water (NRW): 100% Compliance (allowable NRW is up to 5%; for January 2023, 3.06% NRW was recorded)

Environmental Impact: Groundwater extraction avoidance	Volume in
through surface water utilization	cubic meters
Annual groundwater extraction before Blue Bond financing	97,717,452
Annual groundwater extraction avoidance after Blue Bond financing	60,062,121
Total GHG emissions avoided annually (tonnes CO2e)	19,202
Methodology	

Impact measurement metrics for groundwater extraction avoidance was calculated using values provided by the client which pertain to actual data from the project. The share of the proceeds allocated to this project was used to calculate the prorated impact associated with this project.

To calculate the greenhouse gas (GHG) emissions avoided, the carbon intensity factor for Luzon was applied to the energy saved by shifting from groundwater extraction to surface water utilization. The emission factor for Luzon was based on the National Grid Emission Factor (NGEF) of the Department of Energy, while the energy savings factor was based on the International Finance Institution's Technical Working Group on Greenhouse Gas Accounting, version 1, dated October 2020.

Social Impact: Increased households provided with good water quality	Count
Households supported with clean water as a result of the financing	203,372
Methodology	

Methodology

Impact measurement metrics for households served was calculated using values provided by the client which pertain to actual data from the project. The reported value pertains to new households served after the Blue Bond financing. The share of the proceeds allocated to this project was used to calculate the prorated impact associated with this project.

⁷ Bulacan Bulk Water Supply Project | PPP Center

#2 Technology solutions for waste and wastewater treatment

Location: Tarlac

To ensure that water systems are not polluted, an integrated and comprehensive waste and wastewater management facility is required for industrial, commercial, residential, and city wastes connected to river and coastal basin areas. Cleanway Environmental Management Solutions, Inc. (CEMSI) provides a comprehensive waste management solution through technological solutions in its plants that use physicochemical treatment as well as chemical, physical, and biological (microbial) treatment. Through the financing, CEMSI invested in thermal oxidation, which uses less diesel and water than thermoclaves. The process's byproducts are also re-used in other plant processes: steam is reused in the physico-chemical treatment plant, and ash is used to make pavers, bricks, and fence posts. The heat recovered from the treatment is also used as additional source of energy. CEMSI established a new plant which is located in Tarlac City to expand services to more industrial and hospital facilities. Through the financing of the blue bonds proceeds, the new facility provide wastewater management services to 121 new businesses and 23 new hospitals. The volume of water treated also increased by 4,517 cubic meters resulting to an overall capacity of 22,585 cubic meters. In each aspect of its operations CEMSI ensures that it monitors its key environmental and social impact and adheres to ISO 140001 Environmental aspect evaluation.

Environmental Impact: Increased volume of wastewater treated	Volume in cubic meters
Volume of water treated annually before Blue Bond financing	18,068
Volume of water treated annually after Blue Bond financing	22,585
Additional volume treated as a result of the financing	4,517
Total GHG emissions avoided (tonnes CO2e)	0.74

Methodology

Impact measurement metrics for wastewater treated was calculated using values provided by the client which pertain to actual data from the project. The share of the total project cost financed by BDO was used to calculate the prorated impact associated with this project.

To calculate the greenhouse gas (GHG) emission avoided, the total additional volume of water treated was multiplied with the emission factor per cubic meter of untreated wastewater. The share of the proceeds allocated to this project was used to calculate the prorated impact associated with this project.

Social Impact: Increased number of hospitals whose wastewater is treated	Count
Count of hospitals supported before Blue Bond financing	134
Bed capacity of hospitals supported	16,038
Count of hospitals supported after Blue Bond financing	156
Bed capacity of hospitals supported	18,770
Additional hospitals supported as a result of the financing	23
Additional bed capacity of hospitals supported	2,732

Methodology

Impact measurement metrics for hospitals served, including their bed capacity, was calculated using values provided by the client which pertain to actual data from the project. The additional hospitals supported after the Blue Bond financing did not have direct access to wastewater treatment in the years before the Blue Bond financing. The share of the proceeds allocated to this project was used to calculate the prorated impact associated with this project.

Social Impact: Increased number of industries/businesses whose wastewater is treated	Count
Count of industries/businesses supported before Blue Bond financing	234
Count of industries/businesses supported after Blue Bond financing	354
Additional industries/businesses supported as a result of the financing	121

Methodology

Impact measurement metrics for industries served was calculated using values provided by the client which pertain to actual data from the project. The additional industries supported after the Blue Bond financing did not have direct access to wastewater treatment in the years before the Blue Bond financing. The share of the proceeds allocated to this project was used to calculate the prorated impact associated with this project.

#3 Bulk water and distribution facility



Location: Rizal

The Wawa Bulk Water Supply Project (WBWSP) is an important measure taken by the Philippine government to aid in the resolution of the water crisis in Metro Manila and the province of Rizal. WBWSP also intended to address typhoon-caused flooding in downstream communities, as well as to protect the eastern part of Metro Manila and lower areas in Rizal, Marikina, and Pasig. It will be the largest water source constructed since 1967, supplying at least 518 million liters

per day and increasing Manila Water Company's water capacity by more than 30%. With the size of the Wawa project, it ensures that sustainable and innovative practices, such as environmental conservation and preservation of the reservoir from which it draws water, are integrated. WawaJVCo Inc. signed a Memorandum of Understanding (MOU) with the Department of Environment and Natural Resources (DENR) for the reforestation of a 1,800-hectare area within the Upper Marikina River Basin Protected Landscape (UMRBPL). The collaboration intends to generate carbon units based on internationally recognized voluntary carbon standards, which will allow investments in long-term social and environmental projects in the communities where WawaJVCo and Prime Infra operate. The MOU also ensures the company's commitment to its social responsibility and requires best practices in stakeholder consultations and involvement.

Environmental Impact: Avoided water losses due to pipe rehabilitation	Volume in cubic meters
Annual water losses before Blue Bond financing	1,108,044
Annual water losses after Blue Bond financing	784,105
Annual avoided losses as a result of the financing	323,939
Total GHG emissions avoided annually (tonnes CO2e)	37
Methodology	'

Impact measurement metrics for avoided water losses was calculated using values provided by the clients which pertain to actual data from the project. The share of the total project cost financed by BDO was used to calculate the prorated impact associated with this project.

Region specific carbon intensity factors were applied to the yearly energy generation data to calculate the greenhouse gas (GHG) emissions avoided from the project. The intensity factor used for water distribution is based on the national average carbon dioxide (CO2) emission factor based on the data from Climate Change Commission of the Philippines.

Impact measurement metrics for avoided water losses was calculated using values provided by the client which pertain to actual data from the project. The share of the proceeds allocated to this project was used to calculate the prorated impact associated with this project.

To calculate the greenhouse gas (GHG) emissions avoided, the carbon intensity factor for Luzon was applied to the energy saved by through improved water pressure brought about by the pipe rehabilitation. The emission factor for Luzon was based on the National Grid Emission Factor (NGEF) of the Department of Energy, while the energy savings factor was based on the International Finance Institution's Technical Working Group on Greenhouse Gas Accounting, version 1, dated October 2020.

Social Impact: Increased households provided with good water quality	Count
Households supported with clean water as a result of the financing	211,851

Methodology

Impact measurement metrics for households served was calculated using values provided by the client which pertain to actual data from the project. The reported value pertains to new households served after the Blue Bond financing. The share of the proceeds allocated to this project was used to calculate the prorated impact associated with this project.

Annexes

Annex A. Other References

BDO reports its impact using the IFC Blue Finance Guidelines. Following the guidelines, the issuer or borrower would make all reasonable efforts to gather data for the use of proceeds in an allocation report and for impact reporting and implement the relevant impact indicators included in the ICMA Handbook for Impact Reporting and related documentation.

Please refer to the links provided below for more information on the guidelines used by BDO.

Reference Document	Link
BDO's Sustainable Finance Framework	https://www.bdo.com.ph/content/dam/bdounibank/en-ph/about-bdo/sustainability/pdf/sustainable-finance/BDO-Sustainable-Finance-Framework-May2022.pdf
ICMA Harmonized Framework for Impact Reporting	https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Harmonised-Frameworkfor-Impact-Reporting-Green-Bonds_June-2022-280622.pdf
IFC's Guidelines for Blue Finance	https://www.ifc.org/wps/wcm/connect/cdbfb6c5- 2726-47a6-9374-6a6f86032dd4/IFC-guidelines-for- blue-finance.pdf?MOD=AJPERES&CVID=nWxsyxN