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BAHAMAS

THE BAHAMAS WATER SUPPLY AND SANITATION SYSTEMS UPGRADE PROGRAM

(BH-O0014 – BH-L1061)

PROJECT PROFILE

This document was prepared by the project team consisting of: Team Leader; Gilroy Lewis, (INE/WSA); Keisuke Sasaki, Alternate Team Leader (INE/WSA); Maria Eduarda Gouvea Berto, Alternate Team Leader (INE/WSA); Kambiri Cox, Alternate Team Leader (INE/WSA); Gerard Alleng, Alternate Team Leader (CSD/CCS); Liliana Lopez, Kleber Machado, Rodrigo Riquelme, Melissa Barandiaran, Sergio Lee and Leticia Ortega (INE/WSA); Carlos Rodrigues (WSA/CSU); Wazir Browne (CCB/CCB); Jose Luis Saboin and Syreta Roberts (CCB/CBH); Janelle Natasha Christian (CSD/CCS); Horacio Mendoza Benavente and Arturo Bonilla Merino (LEG/SGO); Alessandro Farinaccio and Laura Romero (VPS/ESG); Nalda Orfilia Morales Vasquez and Derise Avione Williams (VPC/FMP).

PROJECT PROFILE

THE BAHAMAS

I. BASIC DATA

Project Name:	Conditional Credit Line for Investment Projects (CCLIP) and First Individual Operation for The Bahamas Water Supply and Sanitation Systems Upgrade Program.		
Project Number:	CCLIP BH-O0014 (First Loan Operation BH-L1061)		
Project Team:	Gilroy Lewis, Team Leader (INE/WSA); Keisuke Sasaki, Alternate Team Leader (INE/WSA); Maria Eduarda Gouvea Berto, Alternate Team Leader (INE/WSA); Kambiri Cox, Alternate Team Leader (INE/WSA); Gerard Alleng, Alternate Team Leader (CSD/CCS); Liliana Lopez, Kleber Machado, Rodrigo Riquelme, Melissa Barandiaran, Sergio Lee and Leticia Ortega (INE/WSA); Carlos Rodrigues (WSA/CSU); Wazir Browne (CCB/CCB); Jose Luis Saboin and Syreta Roberts (CCB/CBH); Janelle Natasha Christian (CSD/CCS); Horacio Mendoza Benavente and Arturo Bonilla Merino (LEG/SGO); Alessandro Farinaccio and Laura Romero (VPS/ESG); Nalda Orfilia Morales Vasquez and Derise Avione Williams (VPC/FMP).		
Borrower:	The Commonwealth of The Bahamas		
Executing Agency:	Water and Sewerage Corporation		
Financial Plan:		**CCLIP (BH-O0014)**	**First Loan Operation (BH-L1061)**
	IDB (OC):	US$100,000,000	US$50,000,000
	Total:	**US$100,000,000**	**US$50,000,000**
Safeguards:	Policies triggered:	**BH-L1061:** ESPS1, ESPS 2, ESPS 3, ESPS4, ESPS 5, ESPS 6, ESPS 9, ESPS 10	
	Classification:	B	

II. GENERAL JUSTIFICATION AND OBJECTIVES

2.1 **Country Profile.** The Bahamas is an archipelagic nation. Its geographic characteristics result in challenges that other island nations do not face as the country is managing several islands rather than a single land mass. There is variation across the islands in terms of water resources. As you move from the northern to the southern islands, there is a decrease in water availability in terms of groundwater resources as well as precipitation. Management of water resources must involve management at not only the national level, but also at the local or individual island level. The 2022 Census[1] Preliminary results show the Total Population of The Bahamas to be 399,314. New Providence with 296,522 persons accounted for 74.26% of the population. Tourists Arrivals in The Bahamas increased to 1,009,440 in December 2023. Tourists consume an estimated of

[1] Commonwealth of The Bahamas, Census of Population and Housing 2022 – Preliminary Results.

400-1,000 liters of water per person per day versus residential consumption of 150-200 liters per person per day (Bowleg, 2004).

2.2 **Macroeconomic context.** The Bahamas is a small, open and service-based economy, concentrated in a few sectors such as tourism (38.2%), real estate (13%), and financial services (7.7%), all of which accounted for 60% of the Gross Domestic Product (GDP) in 2019. The country has experienced severe economic shocks over the last decade due to external factors, particularly in 2019 and 2020, with Hurricane Dorian and the COVID-19 pandemic. After these 2 shocks real GDP fell by 21% in 2020 and unemployment peaked at around 26%. In the more recent years, fueled by a tourism boom that followed the easing of travel restrictions after the control of the pandemic, the economy has been rebounding, growing 15% in 2021 and 11% in 2022. In terms of Central Government accounts, the deficit was cut to 5.7% of GDP for FY2021/22 and to 4.0% in FY2022/23, with the Central Government debt to GDP ratio declining to 82% in December 2023 (from above 100% in 2021). It is plausible that the flow of tourist visits converges toward its historical trend, and the growth perspective is positive. The preliminary GDP growth estimate for 2023 is 2.6% (according to BNSI) and expected GDP growth rate for 2024 is 2.3% (according to the International Monetary Fund). In addition, the Government of The Commonwealth of The Bahamas (GoTB) is implementing measures to further bolster economic recovery, among them, building a resilient public services infrastructure; however, risks persist, including the uncertainty of sustaining tourist flows, high government financing needs, and the persistent threat of natural disasters.

2.3 **Water and Sanitation Sector the Bahamas.** Approximately 83% of the country's water systems are owned, operated, and managed by the Water and Sewerage Corporation (WSC) while the remaining 17% fall under private companies. WSC provides water for New Providence and 14 of the Family Islands. 90% of the water in New Providence is produced by reverse osmosis. Other water providers in the country include Grand Bahama Utility Company (GBUC) for Grand Bahama and Paradise Island Utilities for Paradise Island. New Providence Water Development Company (NPWDCO) provides water to some areas of New Providence where it (NPWDCO) has private businesses or subdivisions.

2.4 Bahamas is characterized as one of the most water-scarce Small Island Developing States in the world (OPM, 2018). With a total land area of 13,880 square kilometers, The Bahamas annual rainfall ranges from 1,000 mm (equivalent to 39.0 inches) in the northwestern islands to 600 mm (equivalent to 23.4 inches) in the dry, southeastern islands (USACE, 2004). Total renewable water per capita is 1,889 m^3/capita/year (equivalent to 0.416 million imperial gallons/capita/year) (FAO, 2014). Bowleg (2018) notes that "fresh groundwater is generally encountered 0.9 – 1.5 m (3 – 5 ft) below ground level". The total freshwater reserve for the country is estimated at 7.7 x 10^9 m^3 (equivalent to 1,694 x 10^9 imperial gallons) (USACE, 2004). The vulnerability of the sector is compounded with the impacts of Climate Change (CC) as expected reduction in rainfall amounts of 20% in some islands (e.g., New Providence) by 2050 and saltwater intrusion from sea level rise and storm surge affecting the quality and quantity of groundwater resources (GOB,2014).

2.5 **Institutional Aspects.** WSC is a state-owned utility overseen by the Office of the Prime Minister established by the WSC Act 1976 with the mandate to provide adequate supplies of water for domestic use, and agricultural purposes, urban and

industrial use and to provide adequate facilities for drainage, the safe disposal of sewage and industrial effluents. The Act also establishes WSC as sector regulator, for which it is not fully equipped to execute. There are ten separate acts that govern the water and sewerage sector in The Bahamas. The acts in place are not consistent with a modern water and sewerage sector. Furthermore, there is no independent economic regulator, nor an effective environmental regulator in the water and sewerage sector. The process for setting tariffs for the multiple service providers in the water and sewerage sector is unclear and ad hoc.

2.6 WSC shares with the Department of Environmental Health Services (DEHS), in the Ministry of Environment and Natural Resources, the responsibility for monitoring water quality. DEHS is also responsible for the protection of public health through food safety monitoring and control and conservation and maintenance of the environment through the control and prevention of contamination of the air, water and soil, and solid waste management.

2.7 The 2019 Environmental Planning and Protection Act mandates the Director of the Department of Environmental Planning and Protection (DEPP) in the Ministry of Environment and Natural Resources to develop a number of plans: Surface water management plans, groundwater management plans, Inventory of natural resources and their capabilities inclusive of water. The DEPP Director is also tasked to develop a National Water Quality Management Policy. According to the Roadmap for Implementing the Corporate Business Plan the strengthening of DEPP's capacity as environmental regulator of the water and sanitation sector is planned for 2026. The Forestry Unit in the Ministry of Environment and Natural Resources has a mandate to manage the national forest estate also plays a role in management of the groundwater resources that are found in the pine forests of The Bahamas.

2.8 The URCA Act, 2009 established the Utilities Regulation and Competition Authority (URCA) as the independent regulatory authority with responsibility for the Electronic Communications Sector (ECS) and the Electricity Sector (ES) in The Bahamas. The URCA Act does not authorize URCA to engage in economic regulation of the water and sanitation sector. Nonetheless, the enabling legislation for regulation of The Bahamas' communications sector (The Communications Act 2009), sets the legal context for how to draft legislation to enable URCA to begin regulating the water and sanitation sector. According to the Roadmap for Implementing the Corporate Business Plan the establishment of URCA as the economic regulator is planned for 2026.

2.9 **The Main Problems and Determinants.** The water and sanitation sector in The Bahamas faces several problems. The project is going focus on the following problems: (i) low coverage, and poor quality of potable water and wastewater services; (ii) low operational and financial performance of WSC; and (iii) poor governance of the sector.

2.10 **Low coverage and poor quality of potable water supply and wastewater services.** Quality of service refers to the reliability, pressure, continuity, and responsiveness of the services provided by the utility to its customers. WSC has made significant improvements to its quality of service (a recent survey shows that 97% of customers find that WSC's service is reliable). In terms of coverage, one of the contributing factors to WSC's low coverage, and poor quality of service of potable water and wastewater is that WSC has not been able to increase its

investments in infrastructure to improve access to these services. Its structural financial situation and low operational efficiency (high levels of NRW and increasing work force) and increasing reliance of expensive desalinated water have hindered the ability of the utility to generate positive cash flows and invest in infrastructure to increase coverage, as well as improve quality of water and sanitation services. Aged infrastructure coupled with existing infrastructure conditions that have declined significantly over the years, mainly due to poor maintenance and lack of infrastructure renewal, have affected service quality and the ability to expand service coverage The Corporate Business Plan sets out a number of investments to improve the coverage and quality of service. WSC's potable water and wastewater collection and treatment coverages are low compared to other utilities in the Caribbean. According to WSC Corporate Business Plan 2023-2028, in 2022 the overall estimated level of potable water supply coverage was 63%.[2] The water supply coverage for New Providence was 61% which is lower than the 70% estimate for the Family Islands.[3] Wastewater coverage was estimated to be around 13.5% for New Providence and 0.7% for Family Islands resulting in an overall coverage of 10.8%.This disparity in coverage levels is common for water utilities in the Caribbean where utilities generally have much higher levels of water coverage than wastewater coverage. The main reason for this is that the capital investments and operating expenses required for collecting and treating wastewater are high and the tariffs charged by the utilities are not able to cover those costs. Nonetheless, achieving an adequate level of wastewater collection and treatment is essential for human health, environmental stewardship, protecting ground water resources and supporting economic activities such as tourism.[4]

2.11 **Low Operational and Financial Performance.** A major factor exacerbating WSC's operational and financial performance is its low operating efficiency. In 2022 NRW stood at 35% in New Providence and 55% in the Family Islands. This is particularly concerning since 81 percent of water supplied is from desalination, leading to the cost of purchasing water accounting for 49 percent of WSC's operating expenses. According to the Corporate Business Plan, WSC needs to increase the efficiency of its staff as highlighted by an increase in the number of employees (from 411 in 2017 to 484 in 2022), a deterioration in the standard staffing efficiency indicator (8.0 employees per 1,000 water connections in 2022), an increase in staff costs (from B$19 million in 2020 to B$29 million in 2022), and the high proportion of OPEX represented by staff costs (36 percent in 2022, up from 28 percent in 2012). Revenues have remained relatively flat increasing from B$41 million in 2010 to B$51 million in 2022. As a result of the larger increase in operating expenses than revenues, WSC's EBITDA margin worsened from a negative B$13 million (equivalent to a negative 32 percent in 2010) to a negative B$31 million (equivalent to a negative 61 percent) percent in 2022. Because of its poor operating efficiency and tariffs that are not sufficient to cover costs, WSC relies heavily on increasingly greater subsidies from the Government to cover some of its operating expenses and nearly all its capital investments. Increasing

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[2] The reason for the lower coverage in New Providence is that many households draw water from private wells.

[3] These are Abaco, Eleuthera, Exuma, Acklins, North, Central Andros, South Andros, Bimini, Inagua, Long Island, Mayaguana, Cat Island, San Salvador, Long Cay, Great Harbor Cay, Crooked Island, and Ragged Island.

[4] Water and Sewerage Corporation (WSC) Corporate Business Plan 2023-2028.

the efficiency of collections could improve its cash flow and lessen its reliance on subsidies from the Government. Operating subsidies were US$55 million in 2022.

2.12 **High Non-Revenue Water.** Another factor that negatively affects access to quality potable water services as well as operational and financial performance is the level of NRW. The larger the physical losses the more water needs to be produced from expensive Reverse Osmosis Plants. Lowering NRW improves operating efficiency, contributes to improved financial performance as well as improved resilience and quality of service since recovered water can be distributed to new customers or production can be decreased. In New Providence, NRW decreased from 2011 to 2019 before increasing to 3.85 million imperial gallons in 2022. In the Family Islands, NRW increased from 1.66 million imperial gallons (equivalent to 41 percent) in 2019 to 2.67 million imperial gallons (equivalent to 55 percent) in 2022. It is commonly accepted that a well performing utility should have an NRW below 30%[5]. Reducing WSC's NRW and raising the productivity of its staff could lower operating expenses since water purchases and staffing accounted for 87% of operating expenses in 2022.

2.13 **Poor Governance.** The existing governance framework for the water and sanitation sector lacks provisions for adequate accountability and autonomy of the WSC. This is a result of multiple factors, including: (i) the lack of sector policies and objectives; (ii) clear governance for the WSC; and, most notably; and (iii) low tariffs which do not cover the cost of providing the services and subsidies to WSC that is neither efficient nor effective. The Bahamas does not have a water and sewerage sector policy that clearly states objectives and plans for the sector and the financial means to achieve them. The lack of an independent economic regulatory authority for the sector implies that there is no mechanism for regularly adjusting tariffs. There is no independent environmental regulator. WSC is a service provider and holds regulatory functions, a clear conflict of interest. Further, WSC has limited resources and expertise to sufficiently carry out any regulatory functions. WSC's governance practices limit autonomy to make the decisions needed to improve the service, making it essential to clarify and strengthen WSC's governance to improve the utility's operational and financial performance. Lastly, he regulatory framework on extraction and use of water from private wells and the discharge of wastewater is outdated, contributing to over-abstractions and improper sewerage discharges which contributes to sea water intrusion and pollution of the freshwater aquifer, reducing water availability and posing an urgent public health risk to the people of The Bahamas.

2.14 **Gender and Persons with Disabilities Considerations.** The Global Gender Gap Index in The Bahamas is 0.725 (where parity = 1 and disparity = 0), ranking the country 58th out of a total of 156 (WEF, 20216) When reviewing the participation of women in WSC, it is observed that out of the total staff (464 employees), 181 (39%) are women and 283 (61%) are men. In management positions, women's participation is 55%, while men's is 45%, showing a 10% gap in favor of women, whereas in executive positions, 33% are occupied by women and 67% by men, with a 34% gap in favor of men. However, combining these leadership and decision-making spaces, where there is a total of 90 positions, 48 (53%) are held by women and 42 (47%) are held by men. As can be seen, overall, the participation of women and men in WSC is equal. For now, no statistics are available regarding

[5] Janson N, Burkhard L, Jones S, Caribbean Water Study, Iner American Development Bank, (2021)

the participation of people with disabilities in WSC. The primary legislation in The Bahamas concerning the rights of Persons with Disabilities (PWD) is the Persons with Disabilities (Equal Opportunities) Act of 20147. This law ensures that PWD enjoy equal rights as other Bahamian citizens and residents. Therefore, any assistance provided to others is also extended to PWD, along with additional special support. However, it does not establish minimum quotas for the participation of persons with disabilities in public or private institutions in the country.

2.15 CC continues to threaten limited water supplies on small islands, which have limited freshwater. Changing weather patterns are changing the seasonality of regions, altering the frequency and amount of rainfall. This affects the amount of water available for domestic use, which makes it necessary to raise awareness among the population about rational use of water. On the other hand, although the improvements that the operation are expected to make would have a positive impact on the lives of women and girls (since they will have safe and constant access to water and sanitation), one possible effect is that given increased availability of water for carrying out domestic and care tasks, the costs for the service could increase considerably. As such, and given traditional gender roles where women are main users and managers of water in the home, awareness and communication campaigns will be developed and implemented, especially aimed at women, which would include: (i) rational and efficient use of water; (ii) advantages of staying up to date with payment for the service (behavioral changes); and (iii) advantages of having constant and stable access to clean water, both for health and from a gender perspective (women gain free time to dedicate to work, study or rest). Regarding institutional strengthening, the development and approval of an institutional policy to promote the inclusion of people with disabilities in WSC is considered important. By integrating a more diverse workforce into the design, operation and maintenance of water supply systems, WSC can better understand and respond to priorities and needs of customers. This approach not only would promote inclusion but also enhance efficiency and effectiveness in service delivery.

2.16 **CC and Environmental Considerations.** The Bahamas, as a Small Island Developing State (SIDS), is particularly vulnerable to the impacts of CC and sea level rise. It is considered one of the most vulnerable countries in Latin America and the Caribbean to natural hazards, considering its location in the Atlantic hurricane belt. Due to its archipelagic nature, the entire landmass of The Bahamas is considered as the coastal zone, with approximately 80% within 5ft (1.5m) of mean sea level, further most of the population and economic activity are located near the coast. The Bahamas is projected to experience an increase in the frequency and intensity of tropical cyclones and hurricanes as a result of CC and recorded four high intensity events between 2015 and 2019, namely Hurricanes Joaquin (Category 4, 2014); Matthew (Category 4, 2016), Irma (Category 5, 2017) and Dorian (Category 5, 2019), with cumulative damage of nearly US$4.4 billion, representing about 30 to 40% of Gross Domestic Product (Macro-Economic Effects of Hurricanes in The Bahamas, IDB 2021). This underscores the urgency for the prioritization of CC adaptation, increasing resilience and disaster risk management in the development agenda for The Bahamas.

2.17 The key sectors of The Bahamas which are most likely to be directly and indirectly impacted due to a changing climate include agriculture, livestock and fisheries,

tourism, health and wellbeing, human settlement including housing, design of critical infrastructure, roads, bridges, air and seaports, and water resources management including water supply services, sewage, and potable water systems (The Bahamas Updated Nationally Determined Contribution (NDC) 2022). CC affects water systems and water security in SIDS, due to extreme climate induced events, for which there has been an observed increase in adverse impacts contributing to water scarcity and insecurity which are further exacerbated by inadequate water governance. The Bahamas has articulated its CC mitigation and adaptation ambitions in its Updated NDC which sets out specific actions to achieve its 2030 target. Specifically, the country has committed to introduce and pilot appropriate technology for improved access to water, identification of hazards and assessment of risks to water resources and systems, and the prioritization of investments for improved and affordable access to potable water to adapt and increase the resilience of the water sector. In keeping with mitigation targets to transition to 30% renewable energy and reduce greenhouse gas emissions by 30% by 2030, The Bahamas will promote and pursue energy efficiency measures in the production of water.[6]

2.18 **Objectives.** The general objective of the CCLIP and the first operation is to improve WSC's efficiency, quality of service, sustainability, and resilience of potable water supply and wastewater services in The Bahamas.

2.19 The specific objectives of the first operation are to: (i) improve coverage of potable water supply and wastewater services in New Providence and the Family Islands; (ii) improve operational and financial performance by reducing Non-Revenue Water in the Family Islands and increasing smart metering in New Providence; and (iii) improve governance through institutional strengthening and supporting the modernization of the policy, legal and regulatory framework for WSC and the water and sanitation sector.

2.20 **Component 1: Non-Revenue Water Reduction and Establishing Advanced Metering Infrastructure (preliminary estimate US$33,000,000).** This component will finance an NRW Reduction Contract to address physical and commercial losses in the Family Islands. The contract's main target will be to reduce NRW in the Family Islands from a baseline of about 1.5 migd, which is subject to review and confirmation, at an average annual system pressure of 25 psi within a maximum of 5 years, focusing on Abaco, Eleuthera, and Exuma. The activities will include setting up District Metered Areas and Pressure Management Areas (DMAs/PMAs); leak detection and timely repairs; pressure management; mains and service connections replacement, hydraulic modeling, system optimization, GIS updating, SCADA, and the use of data management hardware and software among others. The NRW contractor will also build the internal capacity of WSC to maintain the target level of NRW. A co-management and shadowing approach will be used to transfer knowledge and know-how to WSC. The component will also finance the procurement, installation and change out of mechanical meters by more efficient Advanced Metering Infrastructure (AMI) in New Providence and the Family Islands, including Abaco, Eleuthera, and Exuma. This will lead to improved meter accuracy and reliability, revenue increase, transparency with customers, and staff efficiency. A digital transformation evaluation and roadmap will be prepared, in order to define the technological,

[6] As desalination is increasing in usage, and will most likely continue to increase, given that groundwater availability continues to decline, and demands grow.

human capacity, network, connectivity, software, systems and supervision requirements to effectively implement WSC's digital infrastructure.

2.21 **Component 2: Institutional Strengthening (preliminary estimate US$3,500,000).** This component will finance institutional strengthening activities of the Utilities Regulation and Competition Authority (URCA) as proposed economic regulator of the water and sewerage sector and the Department of Environmental Planning and Protection (DEPP) as proposed environmental regulator of water and sanitation. It will also support the modernization of the policy, legal and regulatory framework for the water and sanitation sector in The Bahamas. Further activities include provision of operating manuals, organizational structures, business plans, skills assessments and training plans for the proposed regulators. Other activities include providing support to improve the management and conservation of water resources and include considerations of climate resilience planning in line with instruments included in The Bahamas NDC 2022 as well as Integrated Water Resources Management.

2.22 **Component 3: Access to Potable Water Supply (preliminary estimate US$8,000,000).** This component will finance increased coverage to piped, potable water in New Providence and the Family Islands with due consideration to resilience to CC and natural hazards. Increasing coverage to piped, potable water will contribute to addressing the critical need for water infrastructure in The Bahamas Country Development Challenges (CDC).[7]

2.23 **Component 4: Wastewater Collection and Treatment**. **(preliminary estimate US$3,000,000).** This component will finance urgent investments in the sewerage system in New Providence that will improve the quality of wastewater services. These will be prioritized based on impacts to public health, environmental and groundwater pollution, the age and condition of the infrastructure, and any regulatory requirements or compliance obligations. These investments are to replace and upgrade existing lift station pumps and electrical equipment with a view to increasing energy efficiency, procuring spare inventory, and installing remote monitoring technology.

2.24 **Project Administration and Other Costs (preliminary estimate US$$2,500,000).** This component will finance administrative expenses including, support for Project Execution Unit (PEU) assigned staff, external audits, monitoring, and evaluation, communication, and implementation of an Environmental and Social Management Plan (ESMP).

2.25 **Strategic Alignment.** This CCLIP and its first operation is aligned to the IDBG Country Strategy 2024-2028 (GN-3198-1) with the Commonwealth of The Bahamas, under the Strategic Objective – 1.1 Strengthen the country's resilience to disaster and CC. Likewise, the Program is consistent with the IDB Group Institutional Strategy: Transforming for Scale and Impact (CA-631) and is aligned with the objective(s) of: (i) Biodiversity, natural capital and climate action, by including measures to increase the climate resilience of the infrastructure and reduce GHG emissions by improving potable water loss reduction and energy efficiency and sanitation (energy efficiency), it is also aligned with the Climate Change Action Plan 2021-2025 (GN-2848-8); and (ii) Sustainable, resilient and inclusive infrastructure by increasing access to and the quality of potable water

[7] IDB Country Development Challenges (CDC) Update. April 2022. pp. 31. section 2.30.

services to households in New Providence and the Family Islands. The project is aligned to the cross-cutting area of strengthening institutions under ONE Caribbean (Partnering for Caribbean Development Framework) (GN-3201-5). Specifically, the objective of the first loan operation to improve WSC's efficiency, quality, sustainability, and resilience of potable water supply and wastewater services in The Bahamas will support the realization of ONE Caribbean's thrust towards increasing the number of beneficiaries and the value of public investments of enhanced resilient infrastructure. The Program is also aligned with the operational focus area(s) of: (i) gender equality and inclusion of PWD by developing and implementing information and awareness campaigns aimed at the general public but targeting women, as they are the main users of water in households and by developing a PWD policy in WSC; and (ii) institutional capacity by strengthening activities to support the modernization of the policy, legal and regulatory framework for the water and sanitation sector in The Bahamas; and capacity building of WSC (monitoring systems and processes, and technical capacities) needed to maintain levels of NRW, as well as activities to improve the management and conservation of water resources.

2.26 Furthermore, the operation is aligned with the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Development (GN-2710-5), particularly with the priority area of "Supporting the construction and maintenance of social and environmentally sustainable infrastructure to contribute to increasing the quality of life", and consistent with the Water and Sanitation Sector Framework's Dimensions of Success (GN-2781-13) to promote universal access to quality water and sanitation services with equity, inclusion, and affordability. The operation is included in the 2024 Operational Program Report (GN-3207).

2.27 **Benefits and Potential Beneficiaries.** About 65,000 households (some 180,000 people) in New Providence and the Family Islands are expected to directly benefit with access to, or improved provision of, drinking water services. Underserved communities in New Providence and the Family Islands are expected to benefit from the expansion of access to potable water supply under the project. WSC will also benefit from institutional strengthening and improving the operational efficiency of the utility (reduction of NRW, energy efficiency, and the installation of smart meters). Indirectly, the entire Bahamian population will benefit due to the strengthening of policy-making capacities and the legal and regulatory framework of the sector and improved governance and operational efficiency of WSC.[8] Also, the population of The Bahamas will indirectly benefit by having greater resilience to the population's access to drinking water in the face of future water stress scenarios by improving water use efficiency by reducing unaccounted for water losses. Likewise, the project also contributes to a transition to low-carbon economy by reducing GHG emissions in the collection, treatment and distribution stages through the reduction of NRW, as it reduces associated energy consumption in water production (currently provided via desalination).[9] Access to Climate Change-resilient potable water services, combined with improvements in service management, generate benefits that have a positive impact on the living

[8] AMI (smart metering) will contribute to improved customer service, conservation of water, and improved billing. Operational efficiency gains will reduce upward pressure on tariffs and improve service quality.

[9] Refurbished wastewater treatment facilities in New Providence will improve energy efficiency leading to a reduction in the carbon footprint of the refurbished facilities.

conditions and well-being of the population, manifested in improvements in health conditions, as well as financial benefits for WSC.

2.28 **Bank Policies.** The proposed operation will take into consideration the Public Utilities Policy (OP-708) criteria: (i) under financial sustainability it will be verified during the analysis stage that the public service provided by WSC will generate sufficient funds to meet its financial commitments and cover the operating/maintenance costs related to the operation; and (ii) during the economic evaluation the project's economic viability will be analyzed using the cost-benefit and cost-effectiveness evaluation methodologies used by the Bank.; and its objectives: (a) Promote access: the program will contribute to increase access to service by the population including underserved communities; (b) Deliver a reliable quality of service: improved levels of service, including water quantity, quality, and reliability; (c) Deliver a service efficiently: through the reduction of physical losses and smart metering to increase its efficiency in managing and conserving water supply; improved governance, legal and regulatory framework, accountability and transparency; (d) Create suitable incentives and programs to manage customer demand: regulate user demands and conservation of water resources; and (e) Promote sustainability of public utilities through: financial, environmental and social sustainability.

2.29 **Innovation.** The NRW component considers the use of AMI and other smart water infrastructure technologies (SWIT) that will permit remote meter reading and monitoring. This digital transformation will promote conservation of water as customers will have real time access to data on their consumption and enable seamless two-way communication of information between customer and utility. This will also improve operating efficiency through improved and regular billing cycles as well as minimizing the need for physical meter reading. Refurbished sewerage lift stations will be outfitted with premium efficiency motors and controls to improve energy efficiency.

III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

3.1 **Justification for the Conditional Credit Line for Investment Projects (CCLIP).** The Board of Directors of WSC approved the WSC's Corporate Business Plan 2023 – 2028 (CBP) in 2023. The CBP will serve as a guide for driving transformational change to position WSC as a modern business enterprise providing quality water and sewerage services to the people of The Bahamas. The CBP includes significant capital investments to achieve the transformation of WSC and to undertake long term infrastructural improvements to reduce NRW, improve access to water supply and sanitation services, modernize the policy, legal and regulatory framework and strengthen sector institutions. The Bank is therefore proposing to provide financing through the CCLIP instrument. The CCLIP will allow the GOBH to access financing through two phased loan operations that provide greater flexibility to define the individual loan operations. In addition, the CCLIP will allow the Bank to support the development of water and sanitation services in the medium and long-term.

3.2 **Strategy and Project Design.** A Single Sector Modality CCLIP is proposed with Bank financing for an amount up to US$100 million from the Ordinary Capital resources to be implemented through two individual loan operations. The period of the CCLIP will be 8 years. This period is consistent with the Bank's experience

in implementing CCLIPS. Additionally, the two loan operations are expected to overlap during execution. The WSC is targeting investments funded by the IDB of US$100 Mn out of $239.4 Mn from its initial prioritized capital investment plan 2023-2028. The first operation is designed as a Specific Investment Loan for a total amount of US$50 million with disbursement period of 5 years to allow sufficient time to establish a baseline, procure and implement a performance based co--management NRW contract in the Family Islands. The design of the second loan operation is expected to begin in the fourth quarter of 2025 with the objective of presenting the loan proposal for consideration for approval by end-2026.

3.3 **CCLIP Eligibility and First Operation.** The proposed CCLIP is in compliance with the requirements of GN-2246-13, "Proposed Amendments to the Conditional Credit Line for Investment Projects (CCLIP) and the Multi-Phase Program Loans", since the objectives of the credit line are within the priorities defined in the Country Strategy with the IDB Group. The first operation is also in compliance with the eligibility criteria of the CCLIP policy (document OP-1622-3): (i) the objective of the first operation contributes to the achievement of the CCLIP sectoral objective; and (ii) the design of the operation will include actions to improve the institutional capacity of the executing agency.

3.4 **Execution arrangements.** The Commonwealth of The Bahamas will be the Borrower and WSC the Executing Agency for the Project. The existing Project Executing Unit (PEU) at WSC will be augmented and strengthened to execute the operation. The day-to-day execution activities would be under the responsibility of the PEU which will be headed by a Project Coordinator reporting to the General Manager. At a minimum, the following functions must be covered: Project Coordination, Procurement, Financial, and Environmental and Social. Notwithstanding the Bank will assess innovative execution mechanisms in order to avoid risks of delays.

3.5 **IDB's Experience in the Sector.** The Bank financed four interventions in The Bahamas. In 2004 the WSC/Ministry of Works completed the implementation of Loan 1112/OC-BH titled Family Islands Potable Water Project under which objective 3 was to improve the quality of public water service for several small settlements in the Family Islands. Between 2009/2010 the Bank financed TC ATN/WP-11596-BH (BH-T1017) Preparation of Legal and Regulatory Framework Update to address the legal and policy impediments affecting WSC and the water and sanitation sector of The Bahamas. In 2011 the Bank financed Loan 2624/OC-BH (BH-L1028) "WSC Support Program – New Providence Water Supply and Sanitation Systems Upgrade". The general objectives of the five-year operation were to improve the efficiency and quality of the potable water service, address immediate sanitation problems in the island of New Providence, prepare the WSC for implementation of economic and environmental regulation, and create and support economic and environmental regulatory entities. A Family Islands Water Development Strategy was prepared as part of the program in 2018. This new operation complements BH-L1028 because the interventions will continue to reduce NRW, improve access to potable water supply service, rehabilitate wastewater infrastructure and modernize the legal and regulatory framework. In this regard the new operation will build on the achievement of reductions in water losses (from 5.5 – 2.5 million imperial gallons day) in New Providence and will replicate the systems, processes and standard operating procedures in the Family

Islands of Abaco, Eleuthera, and Exuma. In respect of the legal and regulatory framework, draft by-laws for Economic and Environmental Regulators were prepared, reviewed and approved under BH-L1028. Not much was achieved under institutional strengthening as the planned organizational restructuring activities were not implemented. However, in its Corporate Business Plan, WSC commits to strengthening internal corporate governance and develop and implement a strategy for improving its human capital.

3.6 **Lessons Learned and Past Knowledge.** Lessons learned from past operations include the following recommendations: (i) a complete assessment of the institutional capacity of WSC will be undertaken through the Institutional Capacity Assessment Platform (ICAP) to identify gaps and technical assistance needs required for project preparation and execution to be provided; (ii) overall responsibility for execution will rest with the WSC; (iii) establishing a steering committee chaired by the Office of the Prime Minister (OPM) to provide strategic guidance, oversight, coordination, monitoring, and support in resolving challenges and coordination issues has proven to be useful in other projects; (iv) full involvement of WSC during program preparation and definition of the Results Matrix; (v) procurement planning and support in the technical evaluation of bids is essential to expedite commencement of works; and (vi) the following lessons learned under BH-L1028 through the NRW Performance Based Contract with Miya will inform the design of the NRW program in the Family Islands: (a) the NRW contractor shall start the necessary training and capacity building of the WSC staff at the beginning of the contract instead of waiting until the last years of the contract; (b) designated WSC staff will understudy and shadow the key staff of the contractor; (c) an assessment of NRW levels, causes and components will be conducted prior to procuring the NRW contractor; and (d) finally WSC shall ensure that sufficient trained human resources, systems, and financial resources are in place to take over the maintenance phase of NRW with a view to maintaining the gains made in NRW reduction.

IV. ENVIRONMENTAL SAFEGUARDS AND FIDUCIARY SCREENING

4.1 **Environmental and Social Classification.** The operation has been classified as Category B due to potential Environmental and Social (E&S) impacts of small-scale interventions in The Bahamas to enhance potable water supply and wastewater treatment services. These impacts are expected to be temporary and localized and related mainly to pollution of water, marine resources, soil and air, solid and liquid waste and health and safety of workers and communities. Mitigation measures are readily available to address these potential impacts. The operation will not finance the use of non-organic fertilizers or pesticides, however small quantities of hazardous waste may have to be disposed of adequately. During the Environmental and Social Due Diligence (E&S Due Diligence), these impacts will be confirmed, and the following impacts will be assessed: potential for physical and economic displacement, impacts on cultural heritage, exploitation and/or discrimination of workers, and impacts on traditional communities.

4.2 The Disaster Risk and Climate Change Risk (DRCCR) of the operation has been classified as moderate related to the risk of hurricanes, drought, sea level rise, precipitation, water supply scarcity, or others, including those caused or exacerbated by CC, which may moderately impact the project, and/or the project may moderately exacerbate the risk from natural hazards to human life, property,

and/or the environment. Due to the characteristics of the project, the existing risks are not expected to be exacerbated, although they will be assessed during the due diligence.

4.3 The preliminary Environmental and Social Risk Rating (ESRR) for the operation is Substantial driven by cause and contribution risks regarding potential direct, indirect, and cumulative impacts associated with accidents, injury, and disease arising from, associated with or occurring during construction activities. Considering that the exact location of the works is still to be defined, particularly for component 3 related to potable water pipelines, due diligence will assess potential impacts related to physical and economic displacement. The operation will generate moderate direct impacts generated by solid waste (hazardous and/or non-hazardous).

4.4 The Executing Agency will prepare and maintain an Environmental and Social Management System (ESMS) for the operation with specific elements related to Labor and Working Conditions under ESPS 2. The Executing Agency will prepare and operate a Grievance Redress Mechanism for all workers (direct and contracted), as well as a Grievance Redress Mechanism for communities. During project preparation, a meaningful, culturally appropriate and gender sensitive public consultation process will be conducted.

4.5 **Advance Procurement.** The Borrower requested the Bank to proceed with the initial steps of procurement before signing the loan. As such, the Borrower has agreed that the procurement procedures, including advertising, will be in accordance with the Bank's Core Procurement Principles for the eventual contracts to be eligible for Bank financing, and the Bank will review the process used by the Borrower. Borrower undertakes such advance contracting at its own risk, and any concurrence by the Bank with the procedures, documentation, or proposal for award does not commit the Bank to make and/or approve a loan for the project in question (See Section 1.11, of GN-2349-15).

4.6 **Fiduciary Screening.** Procurement financed through the project will be carried out in accordance with Procurement Policies GN-2349-15 and GN-2350-15. The financial management of the program will follow provisions of Guide OP-273-12. Considering the institutional analysis and the risk matrix, the loan proposal annex (Fiduciary arrangements and requirements for the operation) will be prepared.

V. OTHER ISSUES

5.1 One of the key reasons for the GOBH to request this CCLIP and first loan operation is to finance an NRW reduction contract for the Family Islands to reduce losses, improve the quality of service, and increase revenues. For this purpose, WSC intends to hire a consultant to conduct an assessment of the NRW baseline, causes and breakdown into commercial and physical losses, and preparation of tender document package to procure an NRW contractor. In regard to the sustainability of the investments, in the short term the NRW contractor will be responsible for achieving and maintaining the targeted level of NRW reductions and progressively pass on the operations and maintenance of these to the WSC. In the long run, sustainability will the responsibility of the WSC as it will provide for the operations and maintenance of the investments, particularly the NRW and wastewater infrastructure components. For this purpose, WSC will ensure that adequately trained technical staff in the right numbers as well sufficient supplies

and spare parts are provided. The URCA will monitor service quality levels that will contribute to the sustainability of the investments and the DEPP will monitor environmental compliance. The Commonwealth of The Bahamas as a condition of the operation will be required to provide financial resources for the O&M of the facilities.

5.1 **Risks.** The following preliminary risks have been identified: (i) Project Technical Design and Sustainability: there is a risk that the assessment, preparation of tender documents and procurement of an NRW contractor may result in high cost and delays in the commencement of works in the Family Islands, to mitigate this risk, WSC is in the process of hiring a consultant to prepare an assessment of the NRW baseline, determine causes of NRW and implementation timeline to inform the preparation of the NRW bill of quantities/cost estimates, ToRs and RFP, in order to expedite the commencement of the tendering process WSC is focusing initially on three islands (Abaco, Eleuthera, and Exuma) out of the nine islands that have been prioritized for NRW reduction; (ii) Institutional and Legal Environment: the modernization of the policy, legal and regulatory framework is a long-term endeavor that has been the objective of previous Bank operations and technical assistance. There is a medium – high risk that this may not be achieved during the life of the CCLIP, to mitigate this risk, it is recommended that broad political will and public support be achieved through inter-institutional coordination; stakeholder engagements (such as government officials, community leaders, and advocacy groups) to build consensus on the importance of water and wastewater services; implementation of communication plan by WSC as part of its CBP; improve governance of WSC and service improvements; and that the implementation of the institutional strengthening component start as early as possible in the life of the first loan operation under a gradual approach, with pre-agreed priorities and milestones; (iii) Project Sustainability: as WSC's tariffs do not cover the cost of providing the service and therefore depends on subsidies from the government, there is a risk of WSC's financial insufficiency to conduct the operation of the assets of the Program effectively and adequately, to mitigate this risk, a tariff review will be carried out during the Program's execution; (iv) Natural: there is a risk of potential damage to infrastructure and equipment due to natural disasters during the construction and operation, as a mitigation, this risk will be assessed during the due diligence phase; (v) Economic and Financial – Public Finance: there is a risk of delays in Program execution due to possible limitations in GOBH's financial capacity to provide the necessary fiscal space in a timely manner and procedural delays, due to governance complexities for the release of funds, to mitigate this risk, fiduciary arrangements will be prepared including monitoring schemes; and (vi) Project Technical Designs: there is a risk of limited expected results of the NRW's contract, due to lack of institutional capacity and know-how of WSC, to mitigate this risk, a capacity building training will be implemented during the execution of the Program.

VI. RESOURCES AND TIMETABLE

6.1 An estimated budget of US$125,341 from the Bank's administrative budget will be needed to prepare this operation. In terms of timeline, the POD due date is scheduled for June 11, 2024; Operations Policy Committee scheduled for June 6, 2024; and the Loan Proposal for consideration by the IDB Board of Executive Directors scheduled for September 18, 2024. In addition, a Non-Reimbursable

Client Support TC to support the preparation of the first operation, “Support for Corporate Business Plan for the Water and Sewerage Corporation of The Bahamas” in the amount of US$150,000 has been approved (ATN/OC-20543-BH) and will finance baseline and other studies to determine the best approach to reduce NRW in the Family Islands. Another non-reimbursable Technical Cooperation, BH-T1115 in the amount of US$250,000 is being prepared to support the modernization of the policy, legal and regulatory framework for the water and sanitation sector.

CONFIDENTIAL

[1] The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank.

E&S Screening Filter

Operation Information

Operation Name	
The Bahamas Water Supply and Sanitation Systems Upgrade Program	
Operation Number	BH-L1061

Operation Details

Organizational Unit	IDB Sector/Subsector
INE/WSA	
Type of Operation & Modality	Original IDB Amount
LON / ESP	$50,000,000.00
Executing Agency	Borrower
BH-WSCMW	THE COMMONWEALTH OF THE BAHAMAS
ESG Primary Team Member	Team Leader
Alessandro Farinaccio	Gilroy Francis Lewis
Toolkit Completion Date	Author
26/03/2024	Farinaccio Alessandro
Applicable ESPSs with requirements	
ESPS 1; ESPS 2; ESPS 3; ESPS 4; ESPS 5; ESPS 6; ESPS 9; ESPS 10	

Operation E&S Classification Summary

Environmental and Social Impact Categorization (ESIC)	B

Disaster and Climate Change Risk Classification (DCCRC)	Moderate

Environmental and Social Risk Rating (ESRR)	Substantial

Summary of Impacts / Risks and Potential Solutions

There are no contextual risks associated with the project (e.g. political instability, oppression of communities, armed forces in the project area).

The operation will not have direct impacts associated with child labor or forced labor in the workforce.

The operation will not have significant indirect and/or cumulative impacts associated with child labor or forced labor in the workforce.

The Executing Agency or other relevant entity (in relation to the operation) has limited proven track record to respect and protect the fundamental principles and rights of workers (including fair treatment, commitment to non-discrimination, equal opportunity, protection of workers including workers in vulnerable situations, work accommodations, migrant workers' rights, collective bargaining and rights of association) and compliance with national employment and labor laws.

The operation will not result in the direct loss of employment (i.e. retrenchment).

The operation will not result in the indirect and/or cumulative loss of employment (i.e. retrenchment).

The Borrower will prepare and operate a Grievance Redress Mechanism for all workers (direct and contracted).

The operation will promote a sustainable use of resources including energy, water and raw materials.

The operation will not have direct adverse impacts on human health and the environment due to pollution from project activities.

The operation will not have indirect and/or cumulative adverse impacts on human health and the environment due to pollution from project activities.

The operation will not have direct negative impacts to the environment and human health and safety due to the production, procurement, use, and disposal of hazardous materials such as PCBs, Radiological Waste, Mercury, CFCs, etc.

The operation will not have indirect and/or cumulative negative impacts to the environment and human health and safety due to the production, procurement, use, and disposal of hazardous materials such as PCBs, Radiological Waste, Mercury, CFCs, etc.

The operation will not have direct negative impacts to the environment and human health and safety due to the production, procurement, use, and disposal of pesticides.

The operation will not have indirect and/or cumulative negative impacts to the environment and human health and safety due to the production, procurement, use, and disposal of pesticides.

The operation is considering alternatives to implement technically and financially feasible and cost-effective options to avoid or minimize project-related GHG emissions during the design and operation of the project.

The operation has no exposure to climate transition risks related with a loss of value of a project driven by the transition to a lower-carbon economy, result from extensive policy, legal, technology, and/or market changes to address climate change.

There are no direct health and safety risks associated with the design of structural elements or components of the operation (e.g. existing or new buildings, earthworks, bridges, drainage, roadways, power stations, transmission and distribution poles, underground utilities, and dams), and/or road transport activities (e.g. transport of heavy or over-sized equipment) which could result in health and safety impacts to third parties and project-affected people.

The project will not directly affect the public (including workers and their families) by exposing them to hazardous materials released by the project, particularly those that may be life threatening.

The project will not indirectly-cumulatively affect the public (including workers and their families) by exposing them to hazardous materials released by the project, particularly those that may be life threatening.

The project's direct impacts on priority ecosystem services will not result in adverse health and safety risks and impacts to the project-affected people.

The project's indirect and/or cumulative impacts on priority ecosystem services will not result in adverse health and safety risks and impacts to the project-affected people.

There is no potential direct impacts to workers and project-affected people related to the use or arrangement of security services to safeguard personnel and/or property.

There is no potential indirect and/or cumulative impacts to workers and project-affected people related to the use or arrangement of security services to safeguard personnel and/or property.

Vulnerable people will not be disproportionately affected by direct impacts related to land acquisition - people may be considered vulnerable by virtue of disability, state of health, indigenous status, gender identity, sexual orientation, religion, race, color, ethnicity, age, language, political or other opinion, national or social origin, property, birth, economic disadvantage, or social condition. Other vulnerable people include the elderly, children, single-headed households, refugees, internally displaced persons, natural resource dependent communities.

Vulnerable people will not be disproportionately affected by indirect and/or cumulative impacts related to land acquisition - people may be considered vulnerable by virtue of disability, state of health, indigenous status, gender identity, sexual orientation, religion, race, color, ethnicity, age, language, political or other opinion, national or social origin, property, birth, economic disadvantage, or social condition. Other vulnerable people include the elderly, children, single-headed households, refugees, internally displaced persons, natural resource dependent communities.

The operation doesn't have the potential to directly impact modified habitat that include significant biodiversity value.

The operation doesn't have the potential, including through the supply chain, to indirectly-cumulatively impact modified habitat that include significant biodiversity value.

The operation doesn't have the potential to directly convert or degrade natural habitat.

The operation doesn't have the potential, including through the supply chain, to indirectly-cumulatively convert or degrade natural habitat.

The operation is not expected, including through the supply chain, to indirectly-cumulatively impact a legally protected area or an internationally recognized area.

The project will not directly introduce (intentionally or accidentally) alien, or non-native, species of flora and fauna that have the potential for invasive behavior in areas where they are not normally found.

The project will not indirectly-cumulatively, including through the supply chain, introduce (intentionally or accidentally) alien, or non-native, species of flora and fauna that have the potential for invasive behavior in areas where they are not normally found.

The project is not likely to adversely directly impact ecosystem services.

The project is not likely to adversely indirectly-cumulatively, including through the supply chain, impact ecosystem services.

The project is not expected to cause adverse direct impact on Indigenous Peoples. FPIC is required when there will be (i) impacts on lands and natural resources subject to traditional ownership or under customary use; (ii) Relocation of Indigenous Peoples from lands and natural resources subject to traditional ownership or under customary use; or (iii) significant impact on Cultural Heritage.

The project is not expected to cause adverse indirect/cumulative impact on Indigenous Peoples.

Indigenous Peoples are not expected to be adversely impacted by direct project related land-acquisition or access restrictions. Note that all impacts on lands and natural resources subject to traditional ownership or under customary law requires FPIC.

Indigenous Peoples are not expected to be adversely impacted by indirect/cumulative project related land-acquisition or access restrictions. Note that all impacts on lands and natural resources subject to traditional ownership or under customary law requires FPIC.

The project doesn't have the potential to cause adverse direct impacts on Indigenous Peoples who live in isolation and initial contact.

The project doesn’t have the potential to cause adverse indirect and/or cumulative impacts on Indigenous Peoples who live in isolation and initial contact.

The project is not expected to directly damage or negatively impact cultural heritage.

The project is not expected to indirectly-cumulatively damage or negatively impact cultural heritage.

The project is not expected to directly damage or negatively impact critical cultural heritage.

The project is not expected to indirectly-cumulatively damage or negatively impact critical cultural heritage.

The project will not negatively directly affect people due to their gender, sexual orientation or gender identity.

The project will not negatively indirectly-cumulatively affect people due to their gender, sexual orientation or gender identity.

The project will not potentially face direct barriers to equitable gender-based participation.

The project will not potentially face indirect and/or cumulative barriers to equitable gender-based participation.

The project will not deal with a subject matter and/or be implemented in an area where the manipulation, interference, coercion, discrimination, and intimidation of stakeholders has been documented.

ESPS 1 - Assessment and Management of Environmental and Social Risks and Impacts

The Executing Agency will conduct an Environmental and Social Assessment (ESA) or Environmental and Social Impact Assessment (ESIA) process for the project during preparation.

The Executing Agency will prepare and maintain an Environmental and Social Management System (ESMS)

for the operation as defined under ESPS 1.

The Borrower/Executing Agency's has limited organizational capacity and competency for managing environmental and social issues.

ESPS 2 - Labor and Working Conditions

The Executing Agency will prepare and maintain an Environmental and Social Management System (ESMS) for the operation with specific elements related to Labor and Working Conditions under ESPS 2.

The operation has the potential to cause moderate direct impacts associated with accidents, injury, and disease arising from, associated with, or occurring in the course of work.

The operation has the potential to cause minor indirect and/or cumulative impacts associated with accidents, injury, and disease arising from, associated with, or occurring in the course of work.

ESPS 3 - Resource Efficiency and Pollution Prevention

The operation will generate minor direct impacts generated by solid waste (hazardous and/or non-hazardous).

The operation will generate minor indirect and/or cumulative impacts generated by solid waste (hazardous and/or non-hazardous).

The operation is expected to or currently produce directly GHG emissions (less than 25,000 tons of CO2 equivalent per year).

The operation is expected to or currently produce indirectly-cumulatively GHG emissions (less than 25,000 tons of CO2 equivalent per year).

ESPS 4 - Community Health, Safety, and Security

There are minor indirect and/or cumulative health and safety risks associated with the design of structural elements or components of the operation (e.g. existing or new buildings, earthworks, bridges, drainage, roadways, power stations, transmission and distribution poles, underground utilities, and dams), and/or road transport activities (e.g. transport of heavy or over-sized equipment) which could result in health and safety impacts to third parties and project-affected people.

There is minor potential for the project or project-related activities (e.g. the influx of temporary or permanent project labor, among others) to directly result in or exacerbate community exposure to water-related (i.e., waterborne, water-based, and vector-borne diseases) and/or communicable diseases (e.g. COVID).

There is minor potential for the project or project-related activities (e.g. the influx of temporary or permanent project labor, among others) to indirectly-cumulatively result in or exacerbate community exposure to water-related (i.e., waterborne, water-based, and vector-borne diseases) and/or communicable diseases (e.g. COVID).

There is moderate potential for an emergency or unanticipated event to occur in the project area of influence that demands immediate action to prevent or reduce harm to people, property, and/or the environment.

Natural hazards, such as earthquakes, droughts, landslides, floods, wildfires, or others, including those caused or exacerbated by climate change, are likely to occur in the project area, and these may moderately impact the project, and/or the project may moderately exacerbate the risk from natural hazards to human life, property, and/or the environment.

ESPS 5 - Land Acquisition and Involuntary Resettlement

The project will lead to minor direct impacts related to physical, and/or economic displacement - Impacts include, and are not limited to, relocation; expropriation; loss of shelter; loss of land; loss of assets; restrictions on land and natural resources; loss of income; loss of livelihoods; loss of social safety net.

The project will lead to minor indirect and/or cumulative impacts related to physical, and/or economic displacement - Impacts include, and are not limited to, relocation; expropriation; loss of shelter; loss of land; loss of assets; restrictions on land and natural resources; loss of income; loss of livelihoods; loss of social safety net.

ESPS 6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources

The operation has the minor direct potential to implement project activities in critical natural habitat.

The operation has the minor indirect and/or cumulative potential, including through the supply chain, to implement project activities in critical natural habitat.

The operation has the potential to minorly directly impact a legally protected area or an internationally recognized area.

ESPS 9 - Gender Equality

The project will potentially lead to minor direct risks and impacts associated with Sexual and Gender-based Violence.

The project will potentially lead to minor indirect and/or cumulative risks and impacts associated with Sexual and Gender-based Violence.

ESPS 10 - Stakeholder Engagement and Information Disclosure

The Borrower will prepare a stakeholder engagement framework/plan for the lifetime of the program (including the equal participation of women and men and also take into account Indigenous Peoples, vulnerable groups when relevant).

The Borrower will engage in meaningful consultations and engagement with stakeholders which is free of manipulation, interference, coercion, discrimination, and intimidation.

The Borrower will operate a Grievance Redress Mechanism at the Project level (direct and contracted).

ESRR Report

Operation Information

Operation		
BH-L1061 The Bahamas Water Supply and Sanitation Systems Upgrade Program		
Environmental and Social Impact Category	ESRR	
B	Substantial	
Country	Executing Agency	
Bahamas	BH-WSCMW	
Organizational Unit	IDB Sector/Subsector	
INE/WSA		
Team Leader	ESG Primary Team Member	
GILROY FRANCIS LEWIS	ALESSANDRO FARINACCIO	
Type of Operation	Original IDB Amount	% Disbursed
LON	$50,000,000.00	
Assessment Date	Author	
2024-03-26	Farinaccio Alessandro (from Toolkit)	
Operation Cycle Stage	Completion Date	
ERM	2024-03-28	
QRR	2024-05-08	
Board Approval	2024-07-31	
Current Last Disbursement Expiration	No Date	
Safeguard Performance Rating		
Rationale		

ESRR Report

Risk Assessment

Cause	**Value**
Largely related to direct impacts of project footprint, and inherent sector risk including contribution to cumulative risks	Substantial
Comments: The operation has the potential to cause minor direct and/or cumulative impacts associated with accidents, injury, and disease arising from, associated with, or occurring in the course of work. The operation will generate moderate direct and/or cumulative impacts generated by solid waste (hazardous and/or non-hazardous). The operation is expected to or currently produce indirectly-cumulatively GHG emissions (less than 25,000 tons of CO2 equivalent per year). Potential impacts related to physical and economic displacement will be assessed during due diligence.	
Contribution	**Value**
Largely related to indirect and induced impacts, third party actions, associated facilities, supply chain aspects, and indirect contribution to cumulative impacts	Moderate
Comments: The operation has the potential to cause minor indirect and/or cumulative impacts associated with accidents, injury, and disease arising from, associated with, or occurring in the course of work. The operation will generate minor indirect and/or cumulative impacts generated by solid waste (hazardous and/or non-hazardous). The operation is expected to or currently produce indirectly-cumulatively GHG emissions (less than 25,000 tons of CO2 equivalent per year). The operation has the potential, including through the supply chain, to minorly indirectly-cumulatively impact modified habitat that include significant biodiversity value.	
Context	**Value**
Largely related to influence and impacts from external operating environment on project setting, including legal framework and practice, vulnerability risk, political and social conflict, cultural context, legacy issues, etc	Moderate
Comments: There are low-moderate levels of contextual risks associated with the project (e.g. political instability, oppression of communities, armed forces in the project area). There is moderate potential for an emergency or unanticipated event to occur in the project area of influence that demands immediate action to prevent or reduce harm to people, property, and/or the environment. Natural hazards, such as earthquakes, droughts, landslides, floods, wildfires, or others, including those caused or exacerbated by climate change, are likely to occur in the project area, and these may moderately impact the project, and/or the project may moderately exacerbate the risk from natural hazards to human life, property, and/or the environment.	
Performance	**Value**
Directly related to borrower capacity and organizations, commitments, resources and overall performance during project	Substantial
Comments: The Borrower/Executing Agency's has limited organizational capacity and competency for managing environmental and social issues.	
Overall Environmental and Social Risk Rating	**Value**
Please indicate the overall ESRR of the project according to your professional judgement at this point in time	Substantial

ESRR Report

Comments: During the Due Diligence (review documents and field trip), more information on the magnitude of the interventions was made available, allowing for the review of the risk rating.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BAHAMAS

THE BAHAMAS WATER SUPPLY AND SANITATION SYSTEMS UPGRADE PROGRAM

BH-L1061

INITIAL ENVIRONMENTAL AND SOCIAL REVIEW SUMMARY (iESRS)

05/23/2024

This document was prepared by:
Alessandro Farinaccio and Laura Romero Villamizar
With the support of the Project team Leader Gilroy Francis Lewis (INE/WSA)

Initial Environmental and Social Review Summary	
Operation Data	
Operation Number	BH-L1061
IDB Sector/Subsector	Water And Sanitation / Water Supply Urban
Type of Operation & Modality	LON/ESP
Initial E&S Impact Classification (ESIC)	B
Initial E&S Risk Rating (ESRR)	Substantial
Initial Disaster and Climate Change Risk Classification (DCCRC)	Moderate
Borrower	The Commonwealth of The Bahamas.
Executing Agency	Water and Sewerage Corporation (WSC)
IDB Loan Amount (and total project cost)	$50.000,000.00 [$100.000,000.00]
Applicable ESPS's with requirements	ESPS 1; ESPS 2; ESPS 3; ESPS 4; ESPS5; ESPS 6; ; ESPS 9; ESPS 10

Executive Summary

The operation has been classified as Category B due to potential Environmental and Social (E&S) impacts of small-scale interventions in Bahamas to enhance potable water supply and wastewater treatment services. These impacts are expected to be temporary and localized and related mainly to pollution of water, marine resources, soil and air, solid and liquid waste and health and safety of workers and communities. Mitigation measures are readily available to address these potential impacts. The operation will not finance the use of non-organic fertilizers or pesticides, however small quantities of hazardous waste may have to be disposed of adequately. During the Environmental and Social Due Diligence (E&S Due Diligence), these impacts will be confirmed, and the following impacts will be assessed: potential for physical and economic displacement, impacts on cultural heritage, exploitation and/or discrimination of workers, impacts on traditional communities.

The preliminary Environmental and Social Risk Rating (ESRR) for the operation is Substantial driven by cause and contribution risks regarding potential direct, indirect, and cumulative impacts associated with accidents, injury, and disease arising from, associated with or occurring during construction activities. Considering that the exact location of the works is still to be defined, particularly for component 3 related to construction of potable water pipelines, due diligence will assess potential impacts related to physical and economic displacement. The operation will generate moderate direct impacts generated by solid waste (hazardous and/or non-hazardous). Working conditions in the selected sectors may pose risks of exploitation, to health and safety of workers and communities as well as allow for discrimination and exclusion of vulnerable group. Regarding performance risks, it is to be noted that WSC, the executing agency, has a limited operational capacity and does not have experience implementing IADB's ESPF. Regarding contextual risks, the disparity between New

Providence Island and the Family Islands in terms of infrastructure and social services may result in differentiated impacts for the interventions on each of these islands.

The Disaster Risk and Climate Change Risk (DRCCR) of the operation has been classified as moderate related to the risk of hurricanes, drought, sea level rise, water supply scarcity, precipitation, or others, including those caused or exacerbated by climate change, which may moderately impact the project, and/or the project may moderately exacerbate the risk from natural hazards to human life, property, and/or the environment. Due to the characteristics of the works, (low criticality for Drainage and Water Supply Systems) the existing risks are not expected to be exacerbated, although they will be assessed during the due diligence.

In order to meet the requirements established by the ESPF, and especially those outlined in the ten Environmental and Social Performance Standards (ESPS), the executing agency shall: (i) implement an Environmental and Social Management System (ESMS), in accordance with ESPS 1; (ii) develop a Strategic Environmental and Social Assessment (SESA) of the comprehensive project, and a Strategic Environmental and Social Management Plan (SESMP) ; (iii) prepare an Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) for each type of work or for the entire set of works; (iv) establish a Stakeholder Participation Plan (SPP) with a public consultation process for the comprehensive project, considering culturally appropriate mechanisms and the progress of studies and management plans as per ESPS 1, 6, 7, 8, 9, and 10. Preliminary versions of the project's Strategic Environmental and Social Assessment (SESA) and Strategic Environmental and Social Management Plan (SESMP) will be published before the Analysis Mission.

Operation Description

The CCLIP aims to boost WSC's water services in The Bahamas, focusing on efficiency, quality, and resilience. Objectives include reducing non-revenue water, enhancing water and wastewater access, updating governance frameworks, and increasing climate resilience. The project consists of 4 components:

Component 1: Non-Revenue Water Reduction and Establishing Advanced Metering Infrastructure (preliminary estimate US$33,000,000). This component will finance an NRW Reduction Contract to address physical and commercial losses in the Family Islands. The contract’s main target will be to reduce NRW in the Family Islands from a baseline of about 1.5 migd, which is subject to review and confirmation, at an average annual system pressure of 25 psi within a maximum of 5 years, focusing on Abaco, Eleuthera, and Exuma. The activities will include setting up District Metered Areas and Pressure Management Areas (DMAs/PMAs); leak detection and timely repairs; pressure management; mains and service connections replacement, hydraulic modeling, system optimization, GIS updating, SCADA, and the use of data management hardware and software among others. The NRW contractor will also build the internal capacity of WSC to maintain the target level of NRW. A co-management and shadowing approach will be used to transfer knowledge and know-how to WSC. The component will also finance the procurement, installation and change out of mechanical meters by more efficient Advanced Metering Infrastructure (AMI) in New Providence and the Family Islands, including Abaco, Eleuthera, and Exuma. This will lead to improved meter accuracy and reliability, revenue increase, transparency with customers, and staff efficiency. A digital transformation evaluation and roadmap will be prepared, in order to define the technological, human capacity, network, connectivity, software, systems and supervision

requirements to effectively implement WSC's digital infrastructure. **Component 2: Institutional Strengthening (preliminary estimate US$3,500,000).** This component will finance institutional strengthening activities of the Utilities Regulation and Competition Authority (URCA) as proposed economic regulator of the water and sewerage sector and the Department of Environmental Planning and Protection (DEPP) as proposed environmental regulator of water and sanitation. It will also support the modernization of the policy, legal and regulatory framework for the water and sanitation sector in The Bahamas. Further activities include provision of operating manuals, organizational structures, business plans, skills assessments and training plans for the proposed regulators. Other activities include providing support to improve the management and conservation of water resources and include considerations of climate resilience planning in line with instruments included in The Bahamas NDC 2022 as well as Integrated Water Resources Management.

Component 3: Access to Potable Water Supply (preliminary estimate US$8,000,000). This component will finance increased coverage to piped, potable water in New Providence and the Family Islands with due consideration to resilience to CC and natural hazards. Increasing coverage to piped, potable water will contribute to addressing the critical need for water infrastructure in The Bahamas.

Component 4: Wastewater Collection and Treatment. (preliminary estimate US$3,000,000). This component will finance urgent investments in the sewerage system in New Providence that will improve the quality of wastewater services. These will be prioritized based on impacts to public health, environmental and groundwater pollution, the age and condition of the infrastructure, and any regulatory requirements or compliance obligations. These investments are to replace and upgrade existing lift station pumps and electrical equipment with a view to increasing energy efficiency, procuring spare inventory, and installing remote monitoring technology.

Project Administration and Other Costs (preliminary estimate US$$2,500,000). This component will finance administrative expenses including, support for Project Execution Unit (PEU) assigned staff, external audits, monitoring, and evaluation, communication, and implementation of an Environmental and Social Management Plan (ESMP).

The project will initially be implemented on 3 islands in the Bahamas, Abaco, Eleuthera, and Exuma (See Figure 1-Annex A), For these islands the contractor should implement a full NRW program with the objective of reducing NRW to economic levels. Before carrying out the baseline assessment, 20 percent could be a proxy value for the economic level of NRW. In year 1 of the contract, islands in this tier would be the primary focus. These islands are recognized as Marine and Terrestrial Protected Areas and Key Biodiversity Areas (KBA) (see Maps in Annex A), which will not be affected by the project. No indigenous communities have been identified. This information will be confirmed during due diligence.

Rationale for Classifications/Rating

E&S Impact Classification	The project has been classified Category B: This operation has the potential to generate local and short-term negative environmental and social impacts, and mitigation measures are known and readily available. The ESMP will be able to mitigate the impacts through its programs and measures, related principally to the pollution of water and marine resources, soil and air as well as solid and liquid waste, for which mitigation measures are readily available. The operation will generate moderate direct impacts generated by solid waste (hazardous and/or non-hazardous) and has minor direct potential to implement project

	activities in critical natural habitat. Potential impacts related to physical and economic displacement will be assessed during due diligence.
E&S Risk Rating	The Environmental and Social Risk Rating (ESRR) has been preliminarily classified as Substantial. The operation has the potential to cause moderate indirect and/or cumulative impacts associated with accidents, injury, and disease arising from, associated with, or occurring in the course of work. The operation will generate moderate indirect and/or cumulative impacts generated by solid waste (hazardous and/or non-hazardous). The operation has the potential, including through the supply chain, to have low to moderate indirect and/or-cumulatively impacts on modified habitats that include significant biodiversity value. Since the exact location of the works is still to be defined, particularly for component 3 related to construction of potable water pipelines, the potential for physical and economic displacement is still to be assessed during due diligence. Working conditions in the selected sectors may pose risks of exploitation, to health and safety of workers and communities as well as allow for discrimination and exclusion of vulnerable groups. Regarding performance risks, it is to be noted that WSC, the executing agency, has a limited operational capacity and does not have experience implementing IADB's ESPF. Regarding contextual risks, the disparity between New Providence Island and the Family Islands in terms of infrastructure and social services may result in differentiated risks and impacts for the interventions on each of these islands.
DCC Risk Classification	The DCC risk has been classified as Moderate, as natural hazards, such hurricanes, drought, sea level rise, water supply scarcity, or others, including those caused or exacerbated by climate change, are likely to occur in the project area, and these may moderately impact the project, and/or the project may moderately exacerbate the risk from natural hazards to human life, property, and/or the environment. The works present low criticality for Drainage and Water Supply Systems.

Use of Borrower E&S Framework	*No*
The operation does not consider the use of the Borrower's E&S Framework**.**	
Is a framework approach applied?	*Yes*
Since project locations have not yet been defined, the project will adopt a framework approach, for which a Strategic Environmental and Social Assessment (SESA) and a Strategic Environmental and Social Management Plan (SESP) will be conducted, considering the different typologies of works and risks associated with all project components.	
Will the operation be co-financed or is there a possibility of being co-financed?	*No*
No co-financing is foreseen for this operation.	

Environmental and Social Performance Standards (ESPSs) that apply to the proposed project	
ESPS-1. Assessment and Management of E&S Risks and Impacts	*Yes*

To meet the requirements of ESPS 1, the Program Executing Unit – PEU will be responsible for the establishment and management of an Environmental and Social Management System – ESMS appropriate to the nature and scale of the program components and proportional to the level of its environmental and social risks and impacts. This ESMS shall define the procedures, processes, and policies to be implemented for the different activities and interventions financed. It is in accordance with the entire Specific Environmental and Social Framework, which includes all applicable regulations: national and local legislation, international agreements and commitments, and the Bank's ESPF. The environmental and social risk and impact management measures that make up the ESMS must be part of the contracts and other legal documents of the operation, as well as complementary documents, and are therefore obligations of the Borrower. The ESMS should incorporate the following elements:

a. Specific Environmental and Social Framework. A comprehensive environmental and social framework will be established as a normative framework for the operation which will support the management of ESMS control and impact mitigation programs, the monitoring of licensing processes, and compliance with environmental legislation and IDB socio-environmental performance standards. This structure defines the objectives, principles and goals that guide the Program to achieve the desired environmental and social performance and describes the process, structure and overall operation of the management of the environmental and social aspects of the Program. The E&S due diligence will identify relevant environmental and social regulations within the Barbados legal framework, as well as relevant international treaties, and include them as part of the Specific Environmental and Social Framework.

b. Identification of Risks and Impacts. A Strategic Environmental and Social Assessment (SESA) will be conducted for the types of works financed by the project in order to identify the environmental and social risks and impacts that could result from each type. Once the specific location and design of the works is defined, the PEU will screen these proposed works against IADB's exclusion list, ensure that they align with the typologies assessed under the SESMP, and prepare an updated ESA for each of the proposed works which considers final location and design.

c. Environmental and Social Management Plan. A Strategic Environmental and Social Management Plan (SESP), applicable to the types of works under the project and their various areas of influence, will be developed. The SESP will be updated by the PEU once final location and design of the works is defined and will result in a specific ESMP for each of the works proposed. An Environmental and Social Action Plan (ESAP), with remaining environmental and social requirements upon closure of the Bank's due diligence, will also be developed.

D. Organizational Capability and Competence. An assessment will be conducted to identify the knowledge, skills, and experience required by the PMU for ESMS implementation, including up-to-date knowledge of relevant regulatory obligations and the requirements of applicable Performance Standards 1 to 10. An area with roles, responsibilities, and authority to coordinate ESMS implementation will be established within the organizational structure of the PMU. Within this

structure, environmental and social program experts will be designated with clear and well-defined responsibilities and roles for the implementation of ESMS.

e. Emergency Preparedness and Response. The SESA/SESMP will include specific programs, procedures for preparedness and response to accidental and emergency situations associated with the Program's interventions, sufficient to prevent and mitigate any harm to people and the environment.

f. Monitoring and review. The ESMS will include procedures to: (i) systematically monitor the implementation of socio-environmental management programs and measure their effectiveness, as well as monitor compliance with legal and contractual obligations and relevant regulatory requirements; (ii) record and report the results of monitoring and necessary corrective and preventive actions, with the issuance of reports approved by the PEU and submitted to the IDB; and (iii) plan and conduct periodic evaluations of the effectiveness of the ESMS, based on the results of systematic monitoring;

g. Stakeholder Engagement. The ESMS will include a Stakeholder Engagement Plan (SEP) to plan and implement an ongoing stakeholder engagement process, which is essential for the successful management of the social and environmental impacts of the program. This process will include the following elements: i) stakeholder analysis (mapping) and related planning; ii) information dissemination and outreach; iii) meaningful consultation and participation, grievance mechanisms, and external communication; and iv) procedure for regular communication of information to those affected by the work and other interested parties. The process should be under the requirements set out in ESPS 2 to 10. The SEP shall be published before the Analysis Mission and public consultations.

Based on the requirements of the ESMS, the process of assessing and mitigating risks and impacts of the Project will include the following instruments: a Strategic Environmental and Social Assessment (SESA) and a Strategic Environmental and Social Management Plan (SESP), and Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs) for each of the proposed works once the final locations and designs are ready. The Project's SESA is being prepared by consultants hired by the Bank to comprehensively assess all direct, indirect (including induced), and cumulative impacts, not only of specific works in isolation. This SESA will evaluate the impacts and risks of all Project components.

ESPS-2. Labor and Working Conditions	*Yes*

The installation of advanced metering infrastructure (under Component 1), expansion of water pipelines to improve water access (under Component 3) and the replacement of lift station pumps and electrical equipment (under Component 4) have the potential to cause moderate direct impacts to workers associated with accidents, injury, and disease arising from, associated with, or occurring in the course of work.

The Strategic Environmental and Social Assessment and Management Plan (SESA and SESMP), which will be part of the ESMS, will include:

- An assessment of WSC's current labor policies, procedures and code of conduct for workers who operate water distribution and water treatment infrastructure and an assessment of WSC's practices regarding freedom of association, collective bargaining, prevention of discrimination, and grievance management in relation to ESPS2 requirements. The SESMP will establish the necessary actions to close the compliance gaps identified with respect to ESPS-2.

- A proposed code of conduct and a grievance redress mechanism for contractor and subcontractors' employees, according to ESPS2 requirements, which is to be integrated into bidding documents for the proposed works.

Child Labor Risk. The employment of adolescents under 15 years of age will not be allowed, as established in ESPS 2. In the event of a difference between ESPS2 and the minimum working age in Bahamas national law, the most stringent requirement will be applied. The SESA will evaluate risks of child labor in the construction sector in Bahamas and the SESMP will include measures to prevent child labor.

Forced Labor. Forced labor, which consists of any work or service that is not performed voluntarily or is required under threat of force or penalty, is also not allowed. Such requirements apply to contracts established with third parties or primary suppliers. The SESA will evaluate risks of forced labor in the construction sector in Bahamas and the SESMP will include measures to prevent and monitor such risk.

Supply Chain Risks. The civil works will use the basic direct construction inputs (cement, sand, bricks, iron, etc.) and other water treatment/disinfection equipment to be installed for the operational phase. The labor risks involved in the production of these inputs are considered low.. However, the SESA will verify that all critical inputs for the program (e.g., solar panels and other dangerous/controlled equipment, etc.) in the construction and operations phase are mapped and measures to prevent supply chain risks are implemented.

Occupational Health and Safety. In this type of project, the risks of work accidents typical of civil works are expected, such as cuts, falls, welding burns, asphyxiation in confined environments, commuting accidents, heatstroke, among other injuries. The risks inherent to the projects will be evaluated in the SESA/SESMP. The Program's interventions will ensure a safe and healthy work environment, considering the risks inherent to the project and specific classes of hazards, including physical, chemical, biological, and radiological risks and specific threats to women, people of diverse gender identity or sexual orientation, people with disabilities, children, and migrant workers. The SESA will include an assessment of worker health and safety risks and impacts associated to the project's typology of works and the SESMP will include the corresponding management programs, aligned to international best practice and the requirements of ESPS-2.

ESPS-3. Resource Efficiency and Pollution Prevention	*Yes*

Resource efficiency. A targeted Water Resources Assessment should be undertaken, which in addition to undertaking the relevant analyses, must include justification for assigning a moderate risk classification. Project activities (and any associated facilities) will be required to be constructed and operated to avoid impacts to water quality, water quantity and/or water availability.

The Program, in this phase, has not yet presented the measures or engineering design to foresee the management of natural resources seeking better efficiency. However, during the preparation of the SESA, the risks of affecting water resources should be conducted, and if necessary alternative measures should be taken. The ESAs should present, even if only preliminarily, the water demands of the project, and an evaluation of the sources of available resources. The Water Resources Management Plan should incorporate alternatives for the use of water resources that will guarantee that the population will be served while ensuring the minimum environmental water availability necessary. The Program should bring about improvements in the efficiency of energy, and other resources and material inputs

consumption. The ESMPs of each work project, shall provide for measures that will integrate the principles of cleaner production in the development of the project, with conservation of raw materials, energy and water. Due Diligence will confirm the existence of engineering measures and actions aimed at resource efficiency.

Pollution prevention. As presented in ESPS1, the program does not yet have an Environmental and Social Management Plan (ESMP). The SESMPs to be prepared for the project should include pollution prevention plans and measures based on the characteristics of the works and future operation, considering at least the following topics:

Waste. The generation of hazardous and non-hazardous waste during the implementation of the projects that make up the Program presents a risk of soil, surface water, marine resources and groundwater contamination. The ESMPs to be prepared should include plans and measures for the adequate management of waste from the construction and operation phases, following the requirements of ESPS3 of the ESPF.

Control of atmospheric emissions and noise. In the ESMPs and ESPF to be prepared, measures to control the emission of dust, smoke and noise, such as the reduction of emissions, regulation of equipment and engines, use of appropriate equipment, etc., must be presented. In addition, to protect employees and the surrounding population, the SESMP must provide measures to ensure that construction sites are adequately isolated. The Code of Conduct for workers must be defined in each ESMP, prepared by the construction companies, and approved by the UPE, and must address these aspects.

Greenhouse Gases. Associated with the operation phase, a calculation will be made to estimate GHGs using the appropriate IDB sectoral methodology. This calculation will be done during due diligence, and the final calculation will be presented in the Final ESRS. At this stage of the project, no analysis of alternatives for minimizing GHG emissions was presented, only targets for a 30% reduction by 2030. As part of the ESIA, an analysis of alternatives will be submitted to determine whether the project is minimizing GHG emissions from the planned works.

Hazardous Product Control. The project does not yet have control measures for hazardous products. The SESMP to be prepared should include measures to control hazardous products, from their conditioning (impermeable floor, covered, collection system and/or separation of oils and water) and handling (use of trays or similar, emergency kits, PPEs, etc.) to equipment that promotes soil contamination through fuel, oil and grease leaks, as will not be allowed in the works of the Program. In case of accidents, the procedures presented in a specific SESMP program must be adopted. Solvent-based paints containing products harmful to health (e.g. lead) will not be allowed.

Use of Pesticides: The program will not fund activities involving the use of pesticides.

Erosion and sedimentation. If there is a need for earthwork or soil replacement, the SESMP shall include erosion control measures and protection of the drainage system. At campsites and construction sites, measures will be used to prevent sediment loss and measures to prevent sediment from entering the drainage system. Corrective measures shall also be included if the drainage system is affected. All the risks indicated here will be confirmed during due diligence.

ESPS-4. Community Health, Safety, and Security	*Yes*

The risks and impacts on the health and safety of the people affected by the interventions of The Bahamas Water Supply and Sanitation Systems Upgrade Program, will be assessed in the SESA of each project and the mitigation measures for the risks and impacts of the implementation and operation phases of the health units will be presented in SESMP. However, based on the initial risk assessment it can already be anticipated that:

There are minor direct and indirect and/or cumulative health and safety risks associated with the design of structural elements or components of the operation as the digging of trenches for buried pipe, operation of small construction sites, use of stationary and mobile power generators, storage of dangerous goods. If the project will have pipe storage areas, all safety precautions must be taken, such as isolation, securing the pipes from rolling, locking systems, etc., which could result in health and safety impacts to third parties and project-affected people.

Potentially the project can generate health risks to the workers and neighboring populations, due to the creation of ditches, wells or low points along the pipe line or the construction site in which accumulated water, if they occur, become points of generation and proliferation of disease vectors such as mosquitoes that cause commonly known diseases, cause or exacerbate community exposure to water- related diseases (i.e., waterborne, waterborne, and vector-borne diseases) and/or communicable diseases (e.g., COVID).

Risk of impacts on ecosystem services are moderate, mainly related to increased water consumption in the project's operation to serve the population. During due diligence, the volumes and sources of water will be assessed for supply capacity.

During the construction phase the project is not expected to directly affect the public (including workers and their families) through exposure to hazardous materials released by the project, particularly those that may be life threatening. Hazardous products (chemicals) used in the operational phase for the treatment and disinfection of water have the potential to affect public health if exposed. The ESMP should take measures to isolate and properly store this type of material in the project's operational areas. During the Due Diligence, it will be confirmed what types of products will be used in the physical-chemical water treatment processes.

The project's water source volumes will be evaluated in due diligence. Mitigation measures will be included in the EAS/ESMP of the works. The use of security personal is not foreseen.

The SESA and SESMP of each project and SCA will determine measures aligned with ESPS 4. The operation is classified moderate for disaster risk climate change. Bahamas is exposed to high hurricane winds risks, and risks related to climate change such as drought, precipitation change and water scarcity as well as sea level rise and extreme weather events (see Annex A). The criticality and vulnerability will be analyzed considering the methodology for assessing and mitigating natural disasters and climate change from the IDB, considering the typologies of intervention in the program. The criticality will be analyzed for Drainage and Water Supply Systems see Figure 8).

During the due diligence, an evaluation will be conducted to determine whether the Project negatively impacts ecosystem services prioritized for local communities' provisioning.

Bahamas has a NEMA (National Emergency Management Agency), NEMA was established to provide aid in mitigation, preparedness, response and phase I of recovery. NEMA serves as a coordinating agency for the commonwealth of the Bahamas which is an archipelagic region for all natural, man-made, and technological hazards. This organization works through collaboration of 14 Emergency support functions (ESFs) that are delegated to various categories. These include Transportation, Communication, Public Works and Engineering, International Assistance, Shelter Services, Relief and Supplies & Distribution, Health & Medical Services, Marine Search & Rescue, Urban Search & Rescue, Hazardous Materials Marine, Hazardous Materials Land, Food, Tourism, Volunteers and Animal Care. In addition, NEMA has the support of over 100 NGOs that provide assistance in case of natural disaster events.

On its website (https://wsc.com.bs/natural-disaster-tips/), WSC provides guidance to the public for preparation and coping with natural disasters. The information includes orientation for hurricane preparedness and safety, emphasizing the importance of water storage, sanitation, and connection to the city water supply to mitigate risks associated with water contamination during floods. Additionally, WSC outlines steps for determining water needs, storing an adequate supply of water per person, and utilizing clean containers for water storage to ensure access to safe drinking water during emergencies.

Existing official disaster risk management instruments will be assessed during the due diligence. After obtaining further project details and information on natural disaster risks during due diligence, the need for additional assessments (qualitative or quantitative) will be evaluated. These assessments will form part of the narrative (Step 3) to be included in the Final ESRS.

The ESMS will include an Emergency and Disaster Preparedness Plan and will include specific measures for the types of works for climate change and natural disaster risks. During E&S Due Diligence the above-mentioned plans and activities will be assessed for their alignment with the IDB's Disaster and Climate Change Risk Assessment Methodology. This Plan shall be part of the ESMP and shall be consistent in all aspects of disaster risk and climate change of ESPS4. All the risks indicated here will be confirmed during due diligence.

ESPS-5. Land Acquisition and Involuntary Resettlement	*Yes*

Land acquisitions, involuntary resettlement, and physical or economic displacement are not anticipated for the project. Nonetheless, this will be confirmed through the SESA, particularly in relation to construction activities included in the project (installation of advanced metering infrastructure – Component 1, expansion of pipelines to increase water access – Component 3, and the replacement of lift station pumps and electrical equipment)

ESPS-6. Biodiversity Conservation and Sustainable Management of Living Natural Resources	*Yes*

In the Bahamas, according to IBAT (Integrated Biodiversity Assessment Tool) source (https://www.ibat-alliance.org/country_profiles/BHS) and the registry of KBAs (Key Biodiversity Areas) (https://www.keybiodiversityareas.org), 54 protected areas and 50 KBAs are recognized, which include IBAs (Important Bird Areas) (N=42) and AZEs (Alliance for Zero Extinction sites) (N=2). Tables 1 and 2 shows the overview of Protected Areas.

Table 1. Overview of Protected Areas

Designation Type	Number of Protected Areas
Total	54
National	53
Regional	0
International	1
With IUCN category count	54
With IUCN category percentage	100.0

Source: https://www.ibat-alliance.org/country_profiles/BHS

Table 2. Total number of Protected Areas designated at a national level and under international conventions and agreements.

Designation Name	Number of Protected Areas	Jurisdiction Name
Ecological Reserve	2	National
Fishery Reserve	2	National
Marine Managed Area	3	National
Marine Park	1	National
Marine Reserve	2	National
National Park	40	National
Plant Preserve	1	National
Protected Area	2	National
Ramsar Site, Wetland of International Importance	1	International

*The WDPA only includes Natural and Mixed World Heritage Sites.
Source: https://www.ibat-alliance.org/country_profiles/BHS

Table 3 presents the list of protected areas and their IUCN classification.

Table 3. Protected Areas under each IUCN Management Category

IUCN Management Category	Number of Protected Areas	% of total number Protected Areas
Ia	1	1.85%
Ib	1	1.85%
II	5	9.26%
III	1	1.85%
Not Reported*	46	85.19%

*Not reported: An IUCN category is unknown and/or the data provider has not provided any related information.
Source: https://www.ibat-alliance.org/country_profiles/BHS

The Biodiversity Map and KBA (Key Biodiversity Areas) are presented in Annex A - Figure 2.

It is not anticipated that the interventions will generate any impacts on any biodiversity values in critical habitat, natural habitat, or modified habitat. This will be confirmed during Due Diligence according to ESPS-6 criteria. This will be achieved through the elaboration of the SESA/SESMP for the project. Additionally, the SESMP will establish eligibility criteria to avoid impacts on critical habitat, as well as mitigation measures in case unexpected impacts are generated. The IDB will not finance any activities within critical habitat except under the following criteria: 1) After having demonstrated that there is no alternative to intervening in critical habitat; 2) After having demonstrated that there will be no

quantifiable adverse impact; and 3) Upon presenting a Biodiversity Action Plan to achieve a net gain in biodiversity values.

ESPS-7. Indigenous Peoples	No
According to the initial screening, no Indigenous Peoples have been identified in Bahamas. Due diligence will confirm this finding.	

ESPS-8. Cultural Heritage	Unknown
Impacts on cultural heritage are not anticipated for the project. The SESA will confirm the existence of tangible and/or non-tangible cultural heritage in the project area which could be directly impacted by project activities and, if required, the SESMP will include the corresponding management plans for their protection. Considering that the expansion of potable water pipelines included in Component 2 may require excavation, the SESMP will include a chance find procedure to be activated in case of eventual archeological finds.	

ESPS-9. Gender Equality	*Yes*
The SESA will include a gender assessment to identify potential gender gaps that could be reinforced by the project or disproportionate risks and impacts in relation to gender, such as gender-based violence, sexually-transmitted diseases resulting from the influx of workers to the project area, gender discrimination in the workforce, and unequal access to project benefits. The SESMP will include actions to enhance gender equality and prevent risks and impacts in relation to gender, including: • Measures to enhance gender representation in the workforce and promote gender-equality in all aspects of the labor relationship. • Guidelines for a Code of Conduct for employees and contractors, which includes the prohibition of sexual and gender-based violence and steps to take to respond and help victims in cases when it takes place. • Guidelines for training programs addressed to project employees and contractors to raise awareness on gender-equality and prevent sexual and gender-based violence. • Grievance Redress Mechanism (GRM) for project workers and GRM for communities which can channel grievances related to sexual and gender-based violence. The GRM will include measures to raise complaints anonymously and ensure confidentiality. • As necessary, specific measures as part of the SEP to promote equitable participation in the process. The project will also include an institutional gender and disability diagnosis for the WSC and the design and implementation of a corresponding Gender and Disability Action Plan for the agency.	

ESPS-10. Stakeholder Engagement and Information Disclosure	*Yes*
The SESA will include stakeholder mapping and the SESMP will include a Stakeholder Engagement Plan (SEP) aligned to ESPS-1 and ESPS-10, which will be implemented by WSC. The SEP will include a Consultations Plan with one round of meaningful, culturally appropriate and gender sensitive public consultations prior to project approval, which will inform project design and the definition of E&S mitigation measures. The Consultation will ensure the presentation, in an easy and accessible language, of the following aspects: i) The Bahamas Water Supply and Sanitation Systems Upgrade Program objectives and activities; ii) Project benefits and environmental and social risks and impacts, iii)	

Proposed environmental and social management measures. The consultations will be documented through reports which will be published on IDB's website prior to Board distribution (June 2024).

The SEP will also include actions for continuous engagement of project beneficiaries and affected people throughout the duration of project execution. Moreover, the program will establish a culturally adequate and gender sensitive project grievance mechanism to channel and process channel stakeholder questions, concerns, or claims.

In compliance with the ESPF, a fit for disclosure version of the E&S documents, including the SEP, will be disclosed prior to analysis mission and their final versions will be disclosed prior to approval of the operation.

IDB Environmental and Social Due Diligence

Strategy for Due Diligence

In the following table, the environmental and social assessment requirements to be conducted during the preparation of the operation are presented to address the previously identified gaps based on the information provided by the WSC.

E&S Assessment requirement	*Status of development*	*Estimated resources to finalize (specify Bank or Borrower cost)*	*Estimated timeline to finalize (inc. consultation)*
Strategic Environmental and Social Assessment (SESA) of the Project:	Not yet initiated.	Hiring of consultant with resources from the IDB.	Execution: 2 months. Planned start: late March 2024. Consultation: late May 2024.
Strategic Environmental and Social Management Plan (SESP). This could be part of the ESIA or a separate document	Not yet prepared	Hiring of consultant with resources from the IDB	Execution: 2 months. Planned start: late March 2024. Consultation: late May 2024.
Consultation and Stakeholder Engagement Plan	Not yet prepared	Hiring of consultant with resources from the IDB	Execution: 1 month. Planned start: Beginning April. Will be published before the Analysis Mission.

Environmental and Social Management System (Synthesis Document)	Not yet prepared	Hiring of consultant with resources from the IDB	Execution: 2 months. Planned start: late March 2024. Consultation: late May 2024.

Annexes	
Annex A.	E&S Maps

Annex A. E&S Maps

Name, explain and paste all the graphical information needed. (Maps generated from the ESG ARC -GIS Platform).

Figure 1- Study Area

Figure 2-Protect Areas and KBA`s

Figure 3 - Hurricane Hazard

Figure 4 -Sea Level Rise

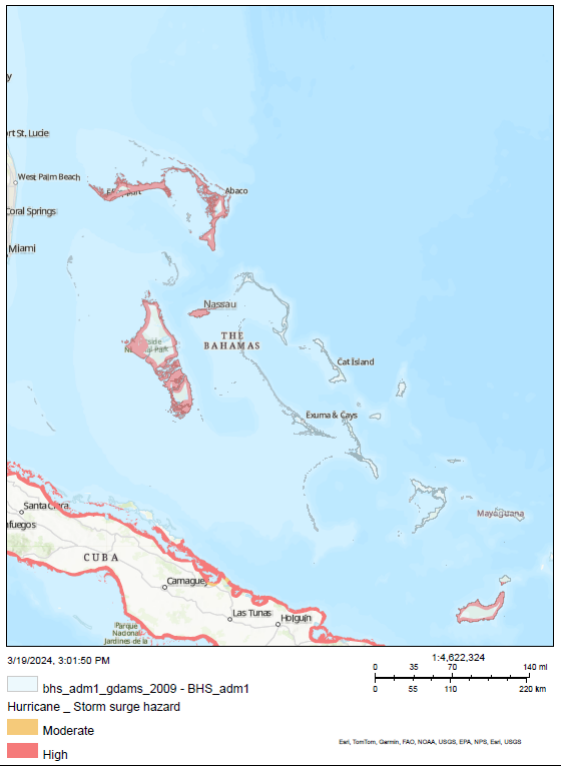


Figure 5: Precipitation

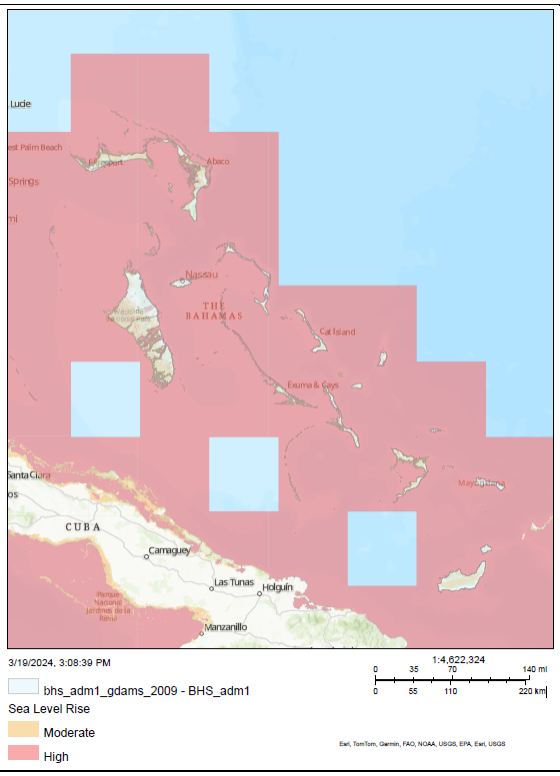
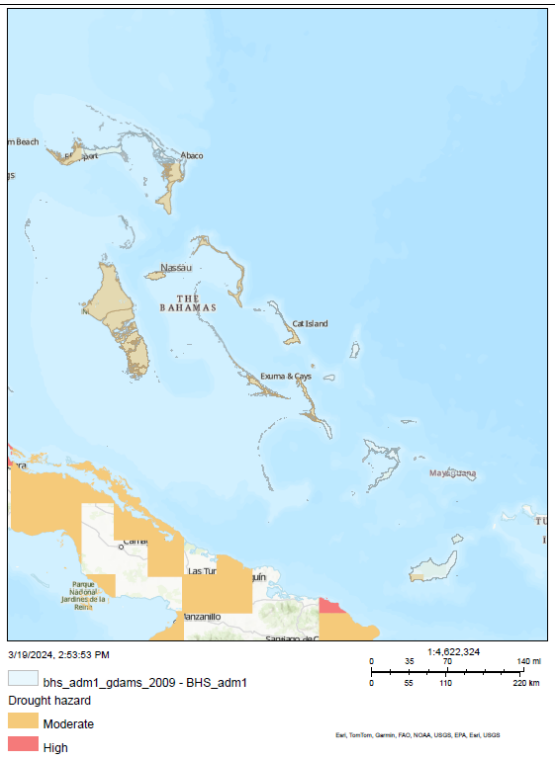
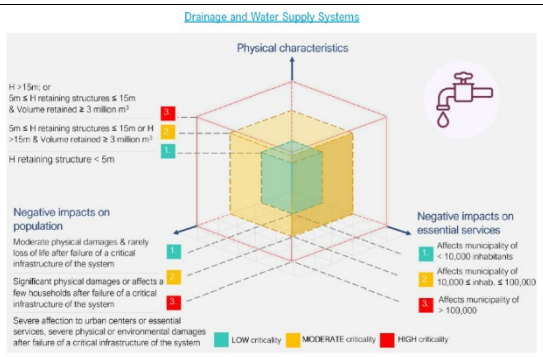


Figure 6: Heatwave

Figure 7-Drought

Figure 8- Criticality Cube for Drainage and Water Supply Systems


Abaco
Nassau
THE BAHAMAS
Cat Island
Exuma & Cays
Las Tur
Parque Nacional Jardines de la Reina
Manzanillo
3/19/2024, 2:53:53 PM
1:4,622,324
0 35 70 140 mi
0 55 110 220 km
bhs_adm1_gdams_2009 - BHS_adm1
Drought hazard
Moderate
High
Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, Esri, USGS


Drainage and Water Supply Systems
Physical characteristics
H >15m; or
5m ≤ H retaining structures ≤ 15m
& Volume retained ≥ 3 million m³
5m ≤ H retaining structures ≤ 15m or H
>15m & Volume retained ≥ 3 million m³
H retaining structure < 5m
3.
2.
1.
Negative impacts on population
Moderate physical damages & rarely loss of life after failure of a critical infrastructure of the system
Significant physical damages or affects a few households after failure of a critical infrastructure of the system
Severe affection to urban centers or essential services, severe physical or environmental damages after failure of a critical infrastructure of the system
Negative impacts on essential services
Affects municipality of < 10,000 inhabitants
Affects municipality of 10,000 ≤ inhab. ≤ 100,000
Affects municipality of > 100,000
LOW criticality
MODERATE criticality
HIGH criticality

INDEX FOR COMPLETED AND PROPOSED SECTOR WORK

Issues	Description	Source	Expected Dates
Institutional Capacity Assessment; Results Matrix, and Project Operating Manual; the detailed consolidated budget of the Program; the disbursement schedule; the Pluriannual Program Execution Plan (PEP); the detailed Annual Operational Plan (AOP); and the Procurement Plan (PP).	Institutional Capacity Assessment of BWA as Executing Agency using IDB's ICAP methodology. Development of the Strengthening Plan for WSC as Executing Agency. Evaluation of potential risks associated with the operations (Risk Matrix). Development of Project Operating Manual for the operation.	Transactional	December – March 2024
Environmental and Social Studies (ESA, ESMP, ESMF, ESMS)	Development of Environmental and Social Analysis (ESA) and Environmental and Social Management Plan (ESMP) for Project. Development of Environmental and Social Management Framework (ESMF). Development of Environmental and Social Management System (ESMS).	Transactional	January – April 2024
Economic Analysis	Economic Feasibility Analysis using cost benefit analysis, sensitivity analysis and analysis of beneficiaries.	Transactional	December – March 2024
Technical Analysis	Development of technical Analysis	Transactional	December – March 2024
Financial Analysis	Development of WSC's financial analysis to identify the company's financial sustainability and its capacity to operate and maintain the assets of the Program.	Transactional	December – March 2024

CONFIDENTIAL

[1] The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank.