Meeting of the Board
25 – 28 March 2026
Songdo, Incheon, Republic of Korea
Provisional agenda item 10

GCF/B.44/02/Add.14
4 March 2026

Consideration of funding proposals – Addendum XIV

Funding proposal package for FP298

Summary

This addendum contains the following seven parts:

a) A funding proposal titled "Climate Resilience of the Water Sector in The Bahamas";
b) No-objection letter issued by the national designated authority(ies) or focal point(s);
c) Environmental and social report(s) disclosure;
d) Secretariat's assessment;
e) Independent Technical Advisory Panel's assessment;
f) Response from the accredited entity to the independent Technical Advisory Panel's assessment; and
g) Gender documentation.

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Funding Proposal

Project/Programme title:	Climate Resilience of the Water Sector in The Bahamas
Country(ies):	The Commonwealth of The Bahamas
Accredited Entity:	Caribbean Development Bank.
Date of first submission:	2025/03/20
Date of current submission	2026/01/12
Version number	V.1.9

GREEN CLIMATE FUND

Contents

Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the GCF Information Disclosure Policy, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:
fundingproposal@gcfund.org
Please use the following name convention for the file name:
"FP-[Accredited Entity Short Name]-[Country/Region]-[YYYY/MM/DD]"

List of Acronyms

ACRONYM	DEFINITION
APRs	Annual performance reports
BMC	Borrowing member countries
BNGISC	Bahamas National Geographic Information Systems Centre
BWSIP	Bahamas Water Supply Improvement Project
CAPEX	Capital expenditures
CBP	Corporate business plan
CDB	Caribbean Development Bank
CDRA	Climate and disaster risk assessment
COVID-19	Coronavirus disease 2019
CRVA	Climate risk and vulnerability assessment
DEPP	Department of Environmental Planning and Protection
DSS	Decision support system
ESMP	Environmental and social management plan
FAA	Funded activity agreement
GAP	Gender action plan
GDP	Gross domestic product
GIS	Geographical information system
GWDE	Groundwater dependent ecosystem
IDB	Inter-American Development Bank
IRR	Internal rate of return
IT	Information Technology
IWRM	Integrated water resources management
MCA	Multi-criteria analysis
MENR	Ministry of the Environment and Natural Resources
MOU	Memorandum of Understanding
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NP	New Providence
NPV	Net present value
NRW	Non-revenue water
O&M	Operations and maintenance
OCR	Ordinary capital resources
OPEX	Operating expenses
OPM	Office of the Prime Minister
OPPM	Operational Policies and Procedures Manual

PMT	Project Management Team
PSC	Project Steering Committee
RO	Reverse osmosis
SDF	Special Development Fund
SEAH	Sexual Exploitation Abuse and Harassment
SIDS	Small Island Developing States
SLR	Sea level rise
SOP	Standard operating procedure
SPEI	Standard precipitation and evaporation index
SSP	Shared Socioeconomic Pathway
TA	Technical assistance
URCA	Utilities Regulation and Competition Authority
WRMN	Water Resources Monitoring Network
WRMU	Water Resources Management Unit
WSC	Water and Sewerage Corporation

A. PROJECT/PROGRAMME SUMMARY

A.1. Project or programme	Project	**A.2. Public or private sector**	Public
A.3. Request for Proposals (RFP)	Not applicable		

A.4. Result area(s)

*Check the applicable GCF result area(s) that the overall proposed project/programme targets below. For each checked result area(s), indicate the estimated percentage of **GCF and Co-financers' contribution** devoted to it. The total of the percentages when summed should be 100% for GCF and Co-financers' contribution respectively.*

	GCF contribution	Co-financers contribution
Mitigation total	Enter number %	Enter number %
☐ Energy generation and access	Enter number %	Enter number %
☐ Low-emission transport	Enter number %	Enter number %
☐ Buildings, cities, industries and appliances	Enter number %	Enter number %
☐ Forestry and land use	Enter number %	Enter number %
Adaptation total	Enter number %	Enter number %
☐ Most vulnerable people and communities	Enter number %	Enter number %
☒ Health and well-being, and food and water security	50 %	50 %
☒ Infrastructure and built environment	50 %	50 %
☐ Ecosystems and ecosystem services	Enter number %	Enter number %

A.5. Expected mitigation outcome *(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)*	N/A	**A.6. Expected adaptation outcome** *(Core indicator 2: direct and indirect beneficiaries reached)*	*Indicate total number of direct and indirect beneficiaries 415,000* [1]	
			215,273 Direct beneficiaries (52% female)	199,727 Indirect Beneficiaries (52% female)
			Direct beneficiaries 54% of total population	Indirect beneficiaries 46% of total population
A.7. Total financing (GCF + co-finance)	USD 65.199 million	**A.9. Project size**	Medium (Up to USD 250 million)	
A.8. Total GCF funding requested	USD 50.051 million			

[1] https://www.paho.org/en/bahamas

A.10. Financial instrument(s) requested for the GCF funding	*Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.* ☒ Grant USD 37.506 million ☐ Equity Enter number ☒ Loan USD 12.546 million ☐ Results-based payment Enter number ☐ Guarantee Enter number

A.11. Implementation period	7 Years	**A.12. Total lifespan**	23 Years
A.13. Expected date of AE internal approval	Within 3 months after GCF Board approval.	**A.14. ESS category**	B
A.15. Has this FP been submitted as a CN before?	Yes ☒ No ☐	**A.16. Has Readiness or PPF support been used to prepare this FP?**	Yes ☒ No ☐
A.17. Is this FP included in the entity work programme?	Yes ☒ No ☐	**A.18. Is this FP included in the country programme?**	Yes ☒ No ☐
A.19. Complementarity and coherence	Does the project/programme complement other climate finance funding (e.g. GEF, AF, CIF, etc.)? If yes, please elaborate in section B.1. Yes ☒ No ☐		
A.20. Executing Entity information	The Water and Sewerage Corporation (WSC) of The Bahamas is the Executing Entity. WSC is a statutory corporation established under the Water and Sewerage Corporation Act as a body corporate.		
A.21. Executive summary			

1. Climate change problem

The Bahamas is a Small Island Developing State (SIDS) located in the north-east of the Caribbean Region. It is an island archipelago of 700 low-lying islands, 30 of them populated, scattered over >13,000 km^2 of the Atlantic Ocean between the USA and Haiti. It has a population of 415,000 people, 300,000 of whom are on the capital island of New Providence. Grand Bahama is the second largest island. The remainder of the islands in the Bahamas are referred to as the Family Islands, including Abaco (population 16,695); Andros (population 7,695); and Acklins (population 676). The Bahamas is heavily reliant on the tourism industry – which contributes 33% of the national gross domestic product (GDP) in 2022 and >50% of total employment. The national poverty rate is 15%.

The islands are low-lying (83% of the country is <5 metres above sea level) and are located in the North Atlantic Hurricane Belt. The Bahamas has historically been hit by a hurricane every 3 years, and major hurricanes (Category 3, 4 or 5) every 12 years. Since 2000 major hurricanes have hit the islands every 3 years, bringing extreme rainfall, high winds and storm surges (typically 5m maximum height, but recorded up to 7m height). 100% of the population is exposed to cyclone strength winds, 48% to storm surge, 24% to inland flooding and 12% to wildfire (mostly in the northern pine islands). The northern islands - Andros, Abaco and Grand Bahama - are particularly exposed to hurricanes.

As described in the Feasibility Study, the numbers of Atlantic hurricanes reaching Category 4 or 5 intensity are projected to increase by 10% with the strongest winds of tropical storms and hurricanes are projected to increase about 3%, increasing storm surge risks. The latter is further compounded by sea level rise, which is expected to increase by 0.5m to 0.6m by 2080. Intense rainfall (1 in 100 Year return period) is also projected to increase by 10%, to >300 mm/d.

Whilst annual rainfall is not increasing, temperature is at a rate of around 0.2°C per decade, with a further increase of 1.5°C to 2°C by 2070 (relative to a 1980-2010 baseline). The historical average Standard Precipitation and Evaporation Index (SPEI-12) trend has reduced from +0.3 in 1950 to -0.3 in 2020. The projected SPEI will reduce by up to -0.7 per decade by 2063. Although the southern islands (<800mm/yr) are drier than the northern islands (>1,500 mm/yr) only the northern islands rely on groundwater for public water supply – the southern islands rely on desalination. Increasing temperatures are also increasing wildlife risks in the pine forested islands.

Water supply infrastructure is therefore increasingly at risk from storm surges, hurricane winds, and to a lesser extent overland storm run-off flooding and wildfire damage, whilst the northern (and most populated islands) are also vulnerable to drought (due to reducing groundwater recharge – estimated at 10% - to the freshwater lenses), exacerbated by Sea Level Rise (SLR) reducing the areas of the freshwater lenses (estimated up to 24%).

The project has a primary focus on the remote outer islands of The Bahamas, known as the Family Islands - some of the Family Islands are more than 500km from New Providence - rather than the capital island of New Providence (NP) or the industrial freeport of Grand Bahama – due their greater vulnerability and exposure. Whilst the water supply on all islands is vulnerable to hurricane risks, the project targets South Andros, Mangrove Cay, North and Central Andros, Abaco, Acklins, due to their reliance on groundwater. New Providence will receive project infrastructure support specific to the major wellfield (Windsor) which contributes to the water security of the most populated island in the country. The national water utility, the Water and Sewerage Corporation (WSC), provides water supply to 61% of the population in New Providence (NP) and 70% of the population across the Family Islands.

2. Proposed interventions

The proposed interventions address barriers which are preventing the water sector from becoming climate resilient.

Output 1.1 mainstreams climate resilience into national and local water governance by strengthening the inclusion of climate resilience within national policy, legislation and planning frameworks. This includes: developing and implementing a climate resilient national water policy; ensuring policy harmonization with, and inclusion of, support for a climate resilient water sector in other national and sectoral governance instruments; legislating for the creation of absent but essential water governance functions – including a national water resources management unit (WRMU), an independent economic regulator (Utilities Regulation & Competition Authority - URCA) empowered to set tariffs sufficient to ensure climate resilience, and groundwater protection regulations; as well as supporting Integrated Water Resources Management reforms at national and local levels to improve inter-agency coordination to deliver a climate resilient water sector, including on water use, demand, conservation, land use and water resource protection.

Output 1.2 addresses lack of technical capacity and lack of data to enable informed management, protection and climate resilient and sustainable exploitation of the nation's fresh groundwater lenses. The output includes creation of, and extended project knowledge transfer support to, a sustainable national technical capacity to staff the new water resources management unit (WRMU). A national freshwater lens groundwater investigation and monitoring network and programme will be established and operated across 10 islands (*ca.* 15 freshwater lenses), to assess groundwater resources vulnerability to climate change, monitor climate impacts (storm surges and droughts), advise on drought warnings and inform both water utilities and other sectors on climate resilient water resource availability and regulate their protection. This will, in part, be achieved through the development and operation of a national decision support system (DSS) using a database and geographical information system (GIS) platform to capture, store, and transfer multi-sector data relevant to inform water sector decision making. The WRMU will provide training to the water sector on climate risk vulnerability assessment and how this enables systematic supply scale risk reduction measures identification. The WRMU will work specifically with the WSC to inform/support the development of a climate resilient infrastructure investment plan as well as operating procedures that promote climate resilience.

Output 2.1 supports investments in climate resilience measures on 6 islands and 27 water supply schemes operated by WSC. These include climate proofing of water supply infrastructure such as pipelines, storage tanks, pumping stations, treatment plants, and back-up power supplies, as well as specifically increasing wellfield resilience through wellfield optimization and upgrades, expansion, relocation, in some instances new wellfields altogether. Output 2.1 will also support climate exposure reduction measures e.g. storm surge barrier walls as well as improved wellfield operations. Water demand measures (pressure management and leakage reduction) will also be undertaken to reduce required wellfield yields and water storage volumes. This will have the added advantage of reducing power consumption – especially of those systems relying heavily on desalination plants – and thereby reduce CO_2 emissions.

3. Climate results/benefits

The expected results are to achieve a paradigm shift in the climate resilience of the water sector, by equipping the sector with a policy and legislative framework designed to mainstream climate resilience into sector policy, have the right organisations and sufficient capacity, data and knowledge to manage and protect water resources and water supply infrastructure to ensure their climate resilience as well as adequate tariff reforms to contribute to water service provider investment in climate resilience.

The paradigm shift also requires the public water supply sector to shift away from its reliance (81% of produced water) on expensive desalination purchases (49% of OPEX costs), which results in the national water supply utility operating at a significant deficit, necessitating government subsidies, and significantly inhibiting capital work plan investment in climate resilient infrastructure, due to limitations on the ability to service debts. In order to increase use of sustainable climate resilient groundwater resources, these have to be robustly managed by a dedicated water resources management unit (the WRMU). Combined with water demand reduction measures, the OPEX costs of desalination purchases will reduce as a percentage of OPEX, as well as increase revenue, improving the utility financial performance to fund capital expenditures (CAPEX) needs (which are likely to increase over time as climate change intensifies and adaptation needs mount) and enabling government to reduce subsidies and reallocate budgetary support to WRMU and URCA.

Water supply infrastructure planning and upgrading will move from a piecemeal approach to implementing risk reduction measures identified by supply system and inter-supply system (ie island) scale CDRAs, enabling holistic yet prioritized interventions to provide robust increases in climate resilience. The supply system and island scale CDRA approach will then be used as the modality for water supply climate resilience replication across the country.

The project will therefore indirectly benefit the entire nation's population of 415,000 people, as well as provide direct benefits (through project water supply system infrastructure climate resilience measures) to the 215,273 people supplied by these systems.

B. PROJECT/PROGRAMME INFORMATION

B.1. Climate context

Water supply systems in the Bahamas are vulnerable to climate change for two primary reasons:

1. The Bahamas relies on a single source of natural freshwater for water supply, which are shallow groundwater lenses that are extremely vulnerable to climate change risks, particularly: reduction in groundwater recharge caused by increases in temperature, sea level rise, and increases in the magnitude of storm surges caused by more intense hurricanes in the Atlantic Basin coupled with sea level rise.
2. The water supply assets of the Bahamas are at risk, being exposed to increases in wind speed and increases in the magnitude of storm surges caused by more intense hurricanes in the Atlantic Basin, and increased fire risk resulting from rising extreme temperatures.

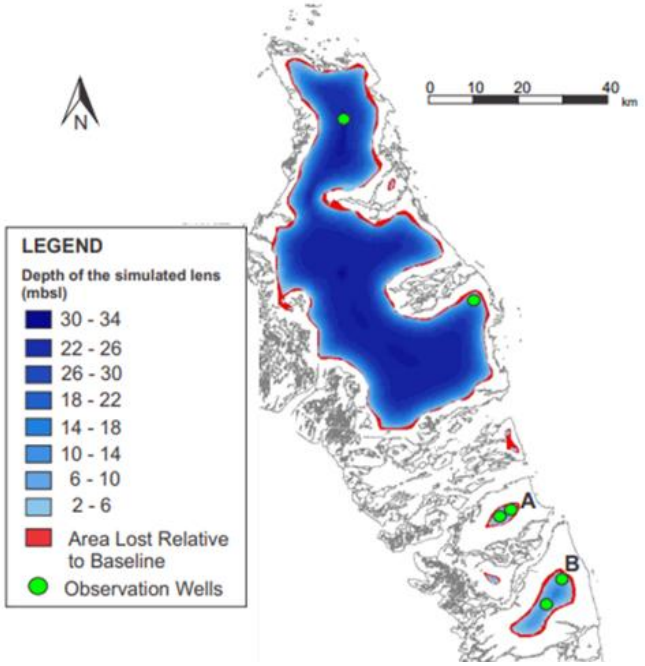


Figure 1 – Simulated freshwater lens depth for North Andros

Climate change impacts on freshwater resources[2]

The Bahamas relies on a single source of natural freshwater for water supply which is extremely vulnerable to climate change – shallow groundwater lenses. All other water is produced through expensive desalination of sea water through Reverse Osmosis (RO), which significantly increases the cost of water. The freshwater lenses result from rainfall infiltrating the underlying limestone rock, and 'floating' in a lens shaped fresh groundwater body on top of denser saline (sea) water below. The availability and distribution of fresh groundwater (the thickness of the lens/ the depth to underlying brackish water) depends on the amount of rainfall and thus groundwater recharge, the underlying geology, the size of the islands, and the elevation of the land relative to sea level. In the Bahamas, groundwater is usually encountered less than 5 feet from the ground surface. Due to the unusual topography of some of the islands, ground level elevations can fall below groundwater levels, enabling surface water bodies to exist. These are generally brackish or saline as they are exposed to evaporative processes.

Due to their nature, thin freshwater lenses are fragile and extremely vulnerable to climate change. As described in Annex 2: Feasibility Study, in the Bahamas, **increasing temperatures** will lead to greater evapotranspiration which reduces groundwater recharge. In the extended dry period 2021-2023, the salinity of particularly vulnerable wellfields on Abaco increased towards and at some borehole locations exceeded the potable drinking water limit, resulting in reduction in abstraction and water available for supply (see Annex 2: Feasibility Study, Appendix A). Historically, average temperature has been increasing at a rate of around 0.2°C per decade. By 2070 temperature is expected to increase by a further 1.5°C to 2°C depending on the Shared Socioeconomic Pathway (SSP) selected (relative to a 1980-2010 baseline). A modelling study of the largest national freshwater lenses in Andros has shown that current average annual recharge is estimated at 877mm/yr. Using monthly projections of 2090s temperature and rainfall (derived from global circulation models (GCMs) in 2009) the recharge estimate for the climate change impacted simulations was 777mm/yr, an 11.4% reduction.

Sea level rise also impacts freshwater availability, through changes in lens morphology – spatial extent, depth and therefore volume of the lens. As the sea level rises relative to the land surface, the freshwater lens is pushed upwards causing the edge of the lens to migrate back from the shoreline in low lying islands like the Bahamas. As described in Annex 2: Feasibility Study, sea level is expected to rise by around 0.5m to 0.6m by 2080, depending on SSP selected. The impact of sea level rise was also incorporated into the modelling study of the Andros freshwater lenses. Assuming a 0.6m rise in sea level, in combination with reduced groundwater recharge, the results predicted reductions in freshwater lens area of -16.8% and -4.1%, in South Andros and North Andros respectively. The predicted percent change in freshwater lens volume was -24.2% and -5.9%, in South Andros and North Andros respectively. This is illustrated in Figure 1 (to the right), where the lenses marked A and B are South Andros. This

[2] Note that the Funding Proposal provides a summarized compilation of the detailed data analysis that was undertaken to inform project design, which is further described (including all relevant sources/references) in Annex 2: Feasibility Study and its Appendices.

demonstrates that larger freshwater lenses are more resilient to climate change than smaller ones. Consequently, wellfields located at the margins of freshwater lenses or on smaller marginal freshwater lenses will be more vulnerable to the impacts of reduced groundwater recharge and sea level rise.

Wellfields in the Bahamas pump at low rates across a large surface area to minimize the possibility of saline-up-coning – pulling brackish water up from below. Based on the freshwater lens and its morphology (which is dynamic), the location, design, and operation of wellfields can overcome climate vulnerabilities. However, up to date knowledge of the spatial extent, thickness and morphology of the freshwater lenses in the Bahamas is limited.

The Bahamas is low lying. Around 83% of the country's land area is less than 5 meters (m) above average sea level. 5m is typical of the maximum height of storm surge induced wave height nationally, although extreme events have been recorded up to 7m. Wave over-wash, as a result of **storm surge**, impacts the salinity of freshwater lenses because seawater, which can pond for days or become entrapped inland, infiltrates into the freshwater lens below. This increases the salinity of the freshwater lens. 6m high storm surges due to Hurricane Dorian (2019) inundated wellfields exploiting the freshwater lens in north-western North Andros (see Annex 2: Feasibility Study, Appendix A), increasing salinity and reducing pumping rates into supply. Sea level rise as a result of climate change, along with increases in the intensity of hurricane events and associated wind speeds will increase the frequency and magnitude of wave overwash events and therefore the risk of freshwater lens salinisation. As described in Annex 2: Feasibility study, the numbers of Atlantic hurricanes reaching Category 4 or 5 intensity are projected to increase about 10% and the strongest winds of tropical storms and hurricanes are projected to increase about 3%. Hurricane intensity increases the low pressure induced storm surge and greater wind speed will impact wave production, increasing wave runup.

Climate change impacts on the assets of the national water utility, the Water and Sewerage Corporation (WSC):

The water infrastructure managed by WSC is split across 64 supply systems across 18 Islands. The key asset types include wellfields and associated infrastructure (pumps, pipelines, power supply), storage tanks (in most systems), pumping stations and associated infrastructure (pumps and controls, power supply, chlorination units, valves, meters, etc), backup generators (in some systems), pressure tanks (in some systems), distribution network pipework and meters, and booster pump stations to maintain pressure in larger networks. Note that WSC purchases RO water from private service providers under concessionaire agreements, and does not own and operate RO plants.

All above ground infrastructure is exposed to **increasing wind speeds** resulting from increasing hurricane intensity. This includes exposure to windborne debris and falling trees. Most infrastructure in wellfields is above ground, including pipelines and power supplies. Storage tanks are vulnerable to collapse due to wind loading, and pumping stations are vulnerable to structural damage.

Due to the low lying nature of The Bahamas, many of WSC's assets are exposed to **inundation** resulting from extreme **storm surge**. Mechanical / electrical equipment is particularly vulnerable to such inundation, storage tanks can be 'floated' by flooding, and distribution pipelines are vulnerable to wave action and erosion in coastal zones and where they cross bridges. The 6m high storm associated with Hurricane Dorian (2019) caused extensive damage to above ground water supply infrastructure across North Andros and Abaco (see Annex 2: Feasibility Study, Appendix A).

The specific islands on which resilience-building investments will be made under this project are described below. The baseline conditions on these islands, as well as the specific ways in which the above-described climate change challenges are negatively affecting – and are projected to continue undermining – the water resources and water system assets on these islands, is further described in Annex 2: Feasibility Study (see in particular the island-specific CRVAs that are included as Appendix A of Annex 2: Feasibility Study).

The project target areas

While the technical assistance and capacity building activities under Outputs 1.1 and 1.2 will largely be executed at the national level, the investments to be supported under Output 2.1 are focused on enhancing resilience of WSC-managed water resources and WSC's water system assets in the most vulnerable islands of the Bahamas. A muti-criteria analysis based on exposure and vulnerability was used to determine a long list of islands, then detailed climate risk assessments were used to identify the most vulnerable islands and systems and further refine the target area for investments under Output 2.1. This process is described in Annex 2: Feasibility Study (see in particular the multi-criteria analysis (MCA) report that is Appendix H of the Feasibility Study). The final target areas include South

Andros, Mangrove Cay, North and Central Andros, Abaco, Acklins, and Windsor Wellfield (which is the only groundwater source) in New Providence (NP).

Figure 2 – Overview Map of the Bahamas

New Providence has a population of 300,000 and is the most populous island of The Bahamas and the home to Nassau, the national capital. New Providence is home to more than 70% of the national population of 415,000. Grand Bahama is the second largest Island, where WSC does not supply water. Table 1 summarizes key demographic and economic data for the target islands and details the water supply systems across the islands, showing the extent of dependency on groundwater versus RO water. New Providence has the highest nominal GDP that represents 75% of the national GDP. The Family Islands contribute just 10%, while Grand Bahama accounts for the remaining 15%. The poverty rate in the Family Islands is 17%, higher than NP, although NP urban poverty is still not insignificant (12 %). Of particular importance to The Bahamas is the tourism industry – which contributes 33% of the national GDP (2022) and >50% of total employment.

Table 1. Demographic (2022), economic, and water supply overview of target Islands

	New Providence	South Andros	Mangrove Cay	North & Central Andros	Abaco	Acklins
Population	294,732	7,695			16,695	676

GDP (US$)	8,400 Million	95 Million			35 Million	80 Million
WSC Customers	51,532	3,132			5,655	196
No. Systems	1	2	1	9	10	4
No. Wellfields	1	1	1	9	8	1
Total water production 2022 (000' IG)	3,588,758	36,089	21,175	162,115	724,847	11,345
Percentage supplied by groundwater	9%	65.5%	100%	100%	98.2%	37.7%
RO water as a percentage of total production	91%	34.5%	0.0%	0.0%	1.8%	62.3%

Note: Due to annual fluctuations, the total water production and the RO water as a percentage of total production for NP is the average from 2002 to 2022.

The business-as-usual situation (without intervention):

In 2000, around 35% of water produced in the Bahamas came from RO plants. By 2022, this figure had risen to approximately 81%. This shift towards RO desalination in the Bahamas to replace wellfields for groundwater abstraction has become the default strategy, primarily due to the lack of sufficient data and understanding of the sustainable yield and morphology of freshwater lenses, but also due to recent climate impacts. It has however led to a very high cost of water and a financially unsustainable utility.

The gap in data and knowledge related to groundwater resources has impeded effective planning and investment in groundwater infrastructure, making RO the default solution to overcome groundwater management challenges.

As evapotranspiration increases (reducing groundwater recharge) and sea level continues to rise, this shift to RO may continue, or even accelerate. This risks further compounding the utility's financial difficulties, which necessitate significant annual subsidies from the central government and undermine the country's ability to invest in enhancing the resilience of the water supply system. By understanding groundwater resources and investing in climate resilient wellfields, WSC can reduce future operations and maintenance (O&M) costs, helping them transition towards sustainability in line with their recently approved Corporate Business Plan.

Furthermore, the Feasibility Study describes the impact of Hurricane Dorian (2019) on WSC's water supply assets in Abaco, and the associated reconstruction costs, estimated at USD 6m for damages to water supply assets, mainly at one system. Without investments in the resilience of water system assets, WSC's CAPEX costs will continue to increase as climate change makes these reconstruction costs greater and more frequent.

RO plants are themselves highly vulnerable to climate change hazards, particularly the loss of power during cyclonic winds and seawater inundation when located on low-lying ground. Unlike wellfields, where WSC can quickly repair physical damage to pumps and power-up from emergency generators, experience with RO plants post-cyclone is that considerable delays (weeks or even months) can occur when advanced technical repairs and replacement parts are required to be mobilized from overseas. Long water shortage periods then occur for those supply systems without access to back-up groundwater resources.

Related projects

The Hurricane Dorian reconstruction project mentioned above was financed by the Inter-American Development Bank. The water component of the project was focused on Marsh Harbour, where new tanks, climate resilient wells, and a climate resilient pumping station were installed as part of the reconstruction. This provides an example of a climate-resilient system which WSC has designed and is now operating. The remaining systems in Andros, Abaco and Acklins, as well as the Windsor Wellfield are not climate resilient and therefore the project represents an opportunity to scale up a process which was commenced during post-Dorian reconstruction.

The WSC board recently approved a new Corporate Business Plan (CBP) that identifies the need to modernise the legal and regulatory framework for the water sector of The Bahamas; set tariffs that cover the cost of service; improve operational efficiency; develop a strategy for improving wastewater coverage; finalise and implement prioritized investment plan; and, increase WSC resilience to natural hazards. The CBP provides the basis for a transition towards a financially sustainable utility but the impacts of climate change, and their costs, described above could hamper that process. The CBP also identifies the need to establish a national water policy, establish an economic regulator, and establish an environmental regulator. The project is designed to support these activities.

Significant progress has been made in reducing non-revenue water (NRW) in New Providence. In 2011 WSC executed a USD 81m project financed by the Inter-American Development Bank which, among other investments, included a NRW reduction programme. In 2012, a performance-based contract was signed with a water efficiency operator company to reduce NRW losses from over 58% to less than 25% in New Providence. The NRW reduction project led to an actual reduction in NRW to 35% by 2022. In 2022 WSC signed an agreement to extend the contract for 4.5 years as, while steady, progress was hampered during the COVID-19 pandemic.

NRW in the Family Islands is currently at 55%, which is increasing demand on wellfields and exacerbating climate risks to freshwater lenses. There is currently no formal NRW program for the Family Islands, but as described in the WSC CBP, the Inter-American Development Bank has expressed interest in providing technical and financial support for designing and implementing a strategy to reduce NRW in the Family Islands. This is expected to commence in 2025.

The Caribbean Development Bank (CDB) has recently completed implementation of the Bahamas Water Supply Improvement Project (BWSIP), which mainly focused on rehabilitating and expanding water distribution networks. While the project did not have a climate resilience focus, it contributed to NRW reduction in the Family Islands. CDB is now preparing the next phase of the BWSIP which is also expected to focus on expanding pipe networks to increase access.

Other related climate finance projects that are currently being implemented at the national level are summarised below:

- The Global Environment Facility (GEF) co-financed a USD 10.5 million project called 'Pine Islands – Forest/Mangrove Innovation and Integration (Grand Bahama, New Providence, Abaco, and Andros)' which began in 2015 and is expected to close on 30 June 2024. The project focuses on integrating biodiversity considerations and ecosystem services into forest management and land use planning.
- 'Climate Resilient Coastal Management and Infrastructure Programme' is a USD 35 million project financed through a loan agreement between the Bahamas Government and the Inter-American Development Bank (IDB). The objective of the programme is to build resilience to coastal risks and climate change through sustainable coastal protection infrastructure, natural infrastructure, and integrated coastal management. Intervention measures are being placed across 4 islands: Grand Bahama, Long Island, New Providence, and Andros. The project has a 6-year implementation period, and it is scheduled to close in June 2024.

Although these climate finance projects do not directly refer to the water resources supply or water infrastructure management, both projects contribute to climate and hazard risk reductions. An indirect benefit of these risk reductions is the decreased vulnerabilities of the freshwater lenses and water infrastructure near the project sites.

The proposed project compliments these ongoing or recently completed initiatives in the below ways:

- The Dorian reconstruction project provides lessons in building for resilience which can be scaled across the Bahamas water infrastructure through this project proposal.
- The proposed project will contribute to implementing the CBP by implementing policy and regulatory reforms, and increasing resilience of the sector and WSC assets. Increased resilience will reduce future operating costs (lower than projected dependence on RO and damage reconstruction costs) and therefore contribute to the financial sustainability of WSC.
- NRW programs being implemented will complement the proposed project as they will reduce per capita water demand, reducing stress on vulnerable groundwater resources.
- Lessons learned in designing for resilience under this proposed project can be scaled by ongoing and future investments in water supply infrastructure by regional development banks, and the sustainability and

resilience of freshwater resources in the Bahamas will be critical in delivering safe, secure water supplies under future programs.

There is no other climate investment targeting the water sector in the Bahamas, so this would represent the first of its kind, specifically seeking to enhance the climate resilience of critical water infrastructure and water resources.

Barriers:

1. **Outdated policy and legislation governing the management and coordination of water sector stakeholders [*Institutional & regulatory*]**: WSC's Corporate Business Plan, and other strategic documents before it, identifies the need for modernization of governance structures for water management. Like many other small island nations, the Bahamas faces challenges (technical, financial, political, bureaucratic) in promptly updating policies and legislation to align them with current climate science and best practices. There is no overarching Water Policy to guide this, and there is no active environmental regulator of water resources, including the enforcement of abstraction licensing, spatial policies related to water resources and source water protection. The baseline conditions that are relevant to this barrier are further elaborated in Annex 2: Feasibility Study, Appendix B (Sections 2 and 6 for Water Governance Baseline & Analysis).
2. **There is no independent economic regulator of water utilities [*Economic & financial*]**: Technical capacity to update, implement and enforce the tariff setting process means that it is not aligned with international best practices which has led to a financially unsustainable utility which has been unable to invest in high quality CAPEX programs that deliver climate resilience to their assets. The baseline conditions that are relevant to this barrier are further elaborated in ee Annex 2: Feasibility Study, Appendix B (Sections 4.1, 5.1.3 and 6).
3. **Responsibilities for groundwater protection management and regulation are unclear, distributed and uncoordinated [*Institutional & regulatory*]**: No single entity in The Bahamas has the mandate and capacity to convene and coordinate the different government entities, the numerous private sector stakeholders, and public water users, that shape water use. The current legislative mandate identifies the Department of Environmental Planning and Protection (DEPP), but their responsibilities with respect to water resources management are unclear, and their capacity to deliver this function is limited. The baseline conditions that are relevant to this barrier are further elaborated in Annex 2: Feasibility Study, Appendix B (Section 5.1, 5.1.2) as well as Appendix C and Appendix G.
4. **Inadequate and outdated water data collection and information sharing for decision making and investment planning [*Institutional & regulatory*]**: The nature and geography of the country (archipelago) and concentration of resources to the capital means there are limited resources on the Family Islands for water resources data collection, and there is insufficient infrastructure and equipment for high quality data collection. Currently the only water resources information collected is production and salinity data at WSCs pumping stations. There is limited water level and salinity data for the freshwater lenses themselves. WSC has some capacity to monitor and test water quality but does not have the financial capacity to cover recurring costs of wide-scale water resources monitoring. The lack of data and knowledge of water resources has led to strategic investment in expensive RO water rather than optimizing wellfield design and operations for sustainable and climate resilient water abstraction. The Bahamas National Geographic Information Systems Centre (BNGISC) was established under the Bahamas Spatial Data Infrastructure Act but has limited provisions to enforce and promote data sharing between agencies and water sector data is considered of little value. There is currently no knowledge management system/process in place within and across agencies with responsibility for water. The baseline conditions that are relevant to this barrier are further elaborated in Annex 2: Feasibility Study, Appendices B, C and G.
5. **Limited technical capacity, nationally in water resources management to support climate informed decision making in the water sector [*Technical*]**: In addition to the lack of technical data and information related to water resources, the sector lacks technical capacity for hydrogeological analysis to process and analyse water resources information, develop and use analytical tools to interpret hydrogeology and risks to it, including climate risks, and present / report information in useful format to decision makers and other stakeholders. There is no hydrogeology training offered at The University of The Bahamas, no roles for hydrogeologists within government agencies and therefore no on-the job training and capacity development. This is fundamental to protecting and managing water resources and climate-risk informed planning in the

water sector. The baseline conditions that are relevant to this barrier are further elaborated in Annex 2: Feasibility Study, Appendix B (Sections 5.1, 5.12), Appendix C and Appendix G.

6. **Single source of natural freshwater (shallow groundwater lens) which is extremely vulnerable to climate change – reduced recharge, sea level rise and storm surge [*Environmental*]**: This has been described above under Section B1. Further information on the baseline conditions relevant to this barrier is included in Annex 2: Feasibility Study, Appendix A.
7. **WSC financial position means it is not able to invest in resilience because tariffs do not meet CAPEX and OPEX, and climate change is increasing these costs [*Economic & financial*]**: Inadequate tariffs that do not reflect the cost of water mean that WSC is heavily subsidized by Central Government to cover increasing CAPEX costs and maintain water supply. This impacts WSC's ability to fund (or access finance for) capital projects and has led to infrastructure which is outdated and has not been designed for resilience. The baseline conditions that are relevant to this barrier are further elaborated in Annex 2: Feasibility Study, Appendix B.

B.2 (a). Theory of change narrative and diagram

The Theory of Change for the project is illustrated in diagrammatic form below.

The project goal statement and context-specific paradigm shift is: **IF** access to climate resilient freshwater resources is improved through a) better governance and management of water resources nationally and b) resilience upgrades to priority water supply systems **THEN** the national water utility can scale-up investments in resilience across The Bahamas **BECAUSE** it will become increasingly financially sustainable by reducing its exposure to climate risks and its projected dependence on expensive desalinated water.

The goal statement recognizes that both the water resources and the water supply assets of The Bahamas are currently vulnerable to climate change. This vulnerability will increase the cost of water through climate related damages to assets, disruptions in operations, and continued uptake of expensive RO desalination. This will result in greater national subsidies to WSC, the national water utility. However, by increasing the climate resilience of water resources and the most vulnerable water supply assets, WSC will move towards financial sustainability, enabling adaptation across all their water supply systems.

In order to deliver this paradigm shift, the project needs to catalyze and implement changes across water governance, water resources management and decision-making, and water supply infrastructure. Specifically, the outcomes of this change are:

Outcome 1: Improved and gender-sensitive governance and IWRM protects freshwater resources, reducing vulnerability to climate change.

Outcome 2: Climate-informed, inclusive and integrated decision making and investment planning in the water sector

Outcome 3: Water supply is less vulnerable to climate risks and impacts

In the project design, these outcomes are realized by three Outputs. While these are generally designed to deliver their respective outcomes, they are inter-related, build on each other and are all collectively, fundamental in realizing the goal statement and achieving the Theory of Change. The Outputs are:

Output 1.1: Strengthened national policy, planning, legislation and regulatory environment for a coordinated and climate resilient and gender-sensitive water sector

Output 1.2: Improved national water resources data and information, inclusive of sex-disaggregated data, is available to multi-sector stakeholders for decision making and planning

Output 2.1: Climate-resilient wellfields and water supply infrastructure and operations in 6 islands

Outputs 1.1 and 1.2 have a focus on improving the enabling environment and are delivered through primarily the provision of Technical Assistance to the Bahamian stakeholders. Gender expertise and stakeholder feedback will ensure inclusivity in policy formulation, data collection and institutional development in line with the Gender Action Plan (Annex 8). Given this similarity in objective and delivery modality, these are jointly considered to be the

Technical Assistance Component. Output 2.1 focuses on infrastructure investment and is therefore considered the Investment Component.

As described in Section B.1, apart from expensive desalinated RO water, The Bahamas relies on a single source of natural freshwater, shallow groundwater lenses, which are limited spatially and extremely vulnerable to the impacts of climate change due to – reduced groundwater recharge, sea level rise, and storm surges. This lack of alternatives is the most significant barrier to adaptation to climate change in the water sector (***barrier 7***). As such, **Outcome 1** includes the establishment of governance mechanisms for protecting and managing these limited water resources across The Bahamas, and providing a framework for adapting the water sector to climate changes. Specifically, **Outcome 1** is dependent on **Output 1.1** which is delivered by a set of activities designed to strengthen national policy, planning and IWRM, as well as the institutional, legislative and regulatory environment. The activities under **Output 1.1** therefore aim to address barriers regarding outdated and limited legislation, policy, tariffs and regulation (***barrier 1***), absence of an independent water utility regulator (***barrier 2***), and the lack of clarity and enforcement of responsibilities for groundwater protection, management and regulation (***barrier 3).***

Outcome 1 delivers the foundation of governance for improved management and protection of water resources for climate resilience. However, the protection of water resources is also dependent upon the delivery of **Output 1.2** which is a set of activities designed to improve national water resources information availability. Without up-to-date information on the status of water resources, the governance mechanisms which are established will not function – for example the enforcement of legislation and regulations for groundwater protection and abstraction requires information about the status of the resource; and, tracking progress in delivering against policy targets relies on monitoring across the sector.

Furthermore, the development of IWRM plans (under **Output 1.1)** requires up to date knowledge of water resources and its vulnerabilities resulting from climate change and other pressures. More generally, the implementation of IWRM requires better planning across the sectors – strategic planning, spatial planning, and adaptation investment planning. Fundamental to improved planning is information. **Output 1.2** provides this information required for decision making and planning related to water resources; it includes a set of activities to improve capacity for collecting, managing, analysing, sharing and interpreting climate risk and water resources data and information across sectors. The activities under **Output 1.2** therefore address barriers related to inadequate information (***barrier 4***), and limitations in technical capacity for water resources management (***barrier 5***), and will therefore make significant contributions to achieving **Outcome 2**: Climate-informed, inclusive and integrated decision making and investment planning in the water sector.

Outcome 3, is the reduction in the vulnerability of water supply to climate risks and impacts. This will require that groundwater sources are adapted to climate change and is therefore built on the combined delivery of **Output 1.1**, strengthened governance of the water sector (for water resources protection), and **Output 1.2**, improved water resources information and decision making in the sector. However, due to the current financial constraints of WSC (***barrier 7***), resulting from tariffs that do not cover the high cost of water, WSC is not currently able to invest in resilient water supply systems. This leaves them exposed to climate risks and resulting damages, adding additional reconstruction costs to WSC, which will increase as climate related disasters become more intense, and exacerbating WSC's current financial constraints. This creates the need for **Output 2.1**, which is a set of proposed CDB and GCF financed investments in the climate resilience of wellfields and water distribution assets. This support will focus on 6 priority islands which, in terms of water resources and water supply, have been identified as the most vulnerable to climate change. Specifically, **Output 1.2** includes resilience upgrades and optimization/expansion of wellfields to sustain groundwater yields in the face of reducing groundwater recharge rates; climate proofing (storm surge and extreme weather) of water distribution through resilience upgrades to pumping stations and provision of greater storage and connections between systems for redundancy; and, implementing pressure management and water loss reduction measures to preserve groundwater resources (by reducing abstraction).

The experience to be gained by WSC in implementing new climate resilient water supply infrastructure across these 6 priority islands under **Output 2.1**, coupled with improved capacity for system-wide climate risk assessment gained under **Output 1.2** as well as the complementary enabling governance and institutional environment to be advanced under **Output 1.1,** will enable WSC to scale up this investment in resilience across the Family Islands, and ultimately deliver on the goal statement.

While the investment in scaling up resilience beyond the priority islands is outside of the scope of the project outputs and activities, all three outputs support WSC by reducing future costs, which will enable sustainable reinvestment in resilience:

- improved Governance (**Output 1.1**), improved water resources information (**Output 1.2**) and improved capacity for climate-risk informed investment planning (**Output 1.2**) will enable WSC to maximise the sustainable use of fresh groundwater in the future by adapting and optimising their wellfield design and operations as the climate changes, rather than continuing to procure larger contracts for more expensive RO water. This will reduce future OPEX.
- **Output 2.1** will reduce damage reconstruction costs (CAPEX) and water losses (OPEX) in highly vulnerable systems.

These reductions in future CAPEX and OPEX will support WSC's transition towards financial sustainability, and release funds for scaling up climate resilience CAPEX across all islands, thus achieving **Outcome 3**. This is fundamental to the paradigm shift outlined in the Theory of Change and it is reliant on the following assumptions:

- Ongoing implementation of WSC's corporate business plan including its climate resilience objective

WSC has recently prepared and approved a Corporate Business Plan which outlines regulatory and tariff reforms required to deliver a financially sustainable utility within the next 10-15 years. Currently WSC is loss making due to the high cost of RO which supplies the majority of its water, which means significant subsidies are required to ensure continued water provision to WSC customers. The Business Plan also includes a CAPEX programme with climate resilience as one of its 5 strategic objectives. The Corporate Business Plan was a WSC-led initiative and illustrates their motivation for change and climate resilience. The Corporate business Plan is therefore closely aligned with the proposed activities and outputs of this project. This project will contribute to implementation of the Corporate Business Plan, but also the Corporate Business Plan contributes to and strengthens the proposal by illustrating WSC's support and alignments.

- Political will to support tariff reforms and reduce government subsidies for water supply

The delivery of the Corporate Business Plan relies on political support for tariff reforms. Due to the high cost of water production in the Bahamas, and the level of subsidy to WSC ($50m in 2022), there is a strong basis for tariff increases. These tariff reforms are fundamental to delivering a financially sustainable utility within the next 10-15 years, which will ultimately enable WSC to invest in resilience to scale up resilience measures (**Output 2.1**) across all water supply systems.

- Existing non-revenue water programme in New Providence will expand across the Family Islands

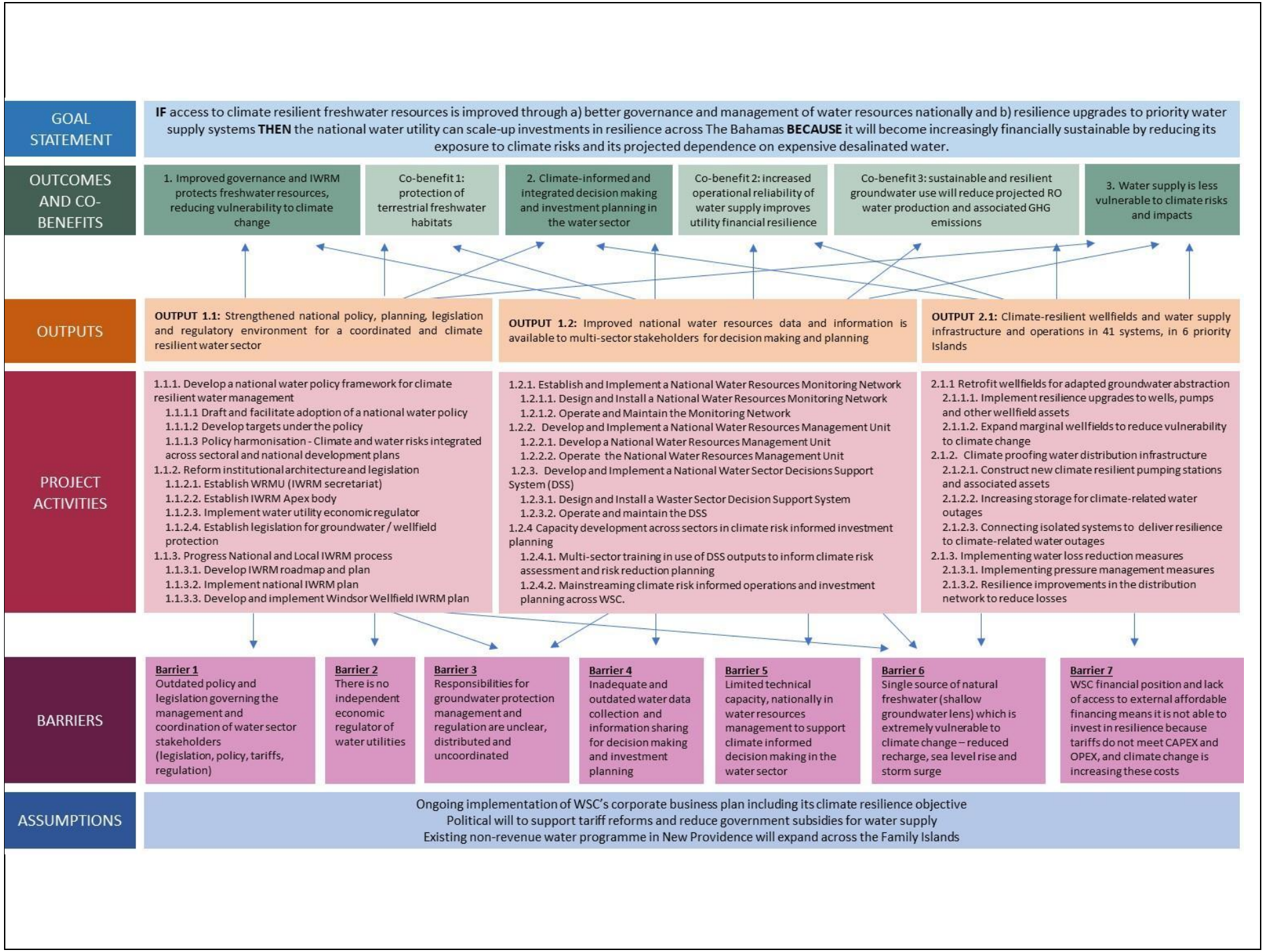
Non-revenue water reduction will contribute to reducing WSC's high OPEX costs. Significant progress has been made in New Providence in reducing NRW from 58% in 2012 to 35% in 2022 under a performance based contract with Inter-American Development Bank support. The expansion of the NRW reduction programme into the Family Islands (which is currently 55%) is expected to commence in 2025. Again, this will support the utilities financial performance and ability to scale up resilience CAPEX investment across all water supply systems.

Delivering the paradigm shift through the outlined Theory of Change, results in a number of **co-benefits**:

- Protection of water resources for water supply also has the benefit of sustaining water resources for terrestrial freshwater habitats that rely on them.
- The increased reliability of water supply increases financial resilience of WSC
- Sustainable and resilient groundwater use will reduce projected RO water production and associated greenhouse gas emissions.

Enhancing Gender Equality is a cross-cutting theme throughout the Project and is woven into the activities which are intended to deliver the outputs and outcomes. Under the Gender Action Plan, the following outputs shall aim at an overall cross-cutting outcome "Water Sector Governance and related Infrastructure Projects are more inclusive of the differentiated needs of women, men and vulnerable groups."

- Fair opportunity for both males and females to acquire employment during the construction and operational period through local recruitment plans, active advertisements, training and grievance management
- Zero tolerance environment for sexual exploitation, abuse and harassment (SEAH) through developing and enforcing a code of conduct, specialised grievance procedures and training and awareness raising.
- Increased climate resilient and inclusive water security through availability of sex-disaggregated data and the management of negative social impacts during construction
- Gender-representative and inclusive stakeholder engagement throughout project life cycle through inclusive community consultations and sensitisation of WSC staff and other project stakeholders
- Achieving gender-sensitive policy and institutional reform in The Bahamas Water Sector through incorporation of gender considerations into the national water policy development process, training of the WRMU and capacity development across sectors at the intersection of climate risk and gender equality.


GOAL STATEMENT
IF access to climate resilient freshwater resources is improved through a) better governance and management of water resources nationally and b) resilience upgrades to priority water supply systems THEN the national water utility can scale-up investments in resilience across The Bahamas BECAUSE it will become increasingly financially sustainable by reducing its exposure to climate risks and its projected dependence on expensive desalinated water.
OUTCOMES AND CO-BENEFITS
1. Improved governance and IWRM protects freshwater resources, reducing vulnerability to climate change
Co-benefit 1: protection of terrestrial freshwater habitats
2. Climate-informed and integrated decision making and investment planning in the water sector
Co-benefit 2: increased operational reliability of water supply improves utility financial resilience
Co-benefit 3: sustainable and resilient groundwater use will reduce projected RO water production and associated GHG emissions
3. Water supply is less vulnerable to climate risks and impacts
OUTPUTS
OUTPUT 1.1: Strengthened national policy, planning, legislation and regulatory environment for a coordinated and climate resilient water sector
OUTPUT 1.2: Improved national water resources data and information is available to multi-sector stakeholders for decision making and planning
OUTPUT 2.1: Climate-resilient wellfields and water supply infrastructure and operations in 41 systems, in 6 priority Islands
PROJECT ACTIVITIES
1.1.1. Develop a national water policy framework for climate resilient water management
1.1.1.1 Draft and facilitate adoption of a national water policy
1.1.1.2 Develop targets under the policy
1.1.1.3 Policy harmonisation - Climate and water risks integrated across sectoral and national development plans
1.1.2. Reform institutional architecture and legislation
1.1.2.1. Establish WRMU (IWRM secretariat)
1.1.2.2. Establish IWRM Apex body
1.1.2.3. Implement water utility economic regulator
1.1.2.4. Establish legislation for groundwater / wellfield protection
1.1.3. Progress National and Local IWRM process
1.1.3.1. Develop IWRM roadmap and plan
1.1.3.2. Implement national IWRM plan
1.1.3.3. Develop and implement Windsor Wellfield IWRM plan
1.2.1. Establish and Implement a National Water Resources Monitoring Network
1.2.1.1. Design and Install a National Water Resources Monitoring Network
1.2.1.2. Operate and Maintain the Monitoring Network
1.2.2. Develop and Implement a National Water Resources Management Unit
1.2.2.1. Develop a National Water Resources Management Unit
1.2.2.2. Operate the National Water Resources Management Unit
1.2.3. Develop and Implement a National Water Sector Decisions Support System (DSS)
1.2.3.1. Design and Install a Waster Sector Decision Support System
1.2.3.2. Operate and maintain the DSS
1.2.4 Capacity development across sectors in climate risk informed investment planning
1.2.4.1. Multi-sector training in use of DSS outputs to inform climate risk assessment and risk reduction planning
1.2.4.2. Mainstreaming climate risk informed operations and investment planning across WSC.
2.1.1 Retrofit wellfields for adapted groundwater abstraction
2.1.1.1. Implement resilience upgrades to wells, pumps and other wellfield assets
2.1.1.2. Expand marginal wellfields to reduce vulnerability to climate change
2.1.2. Climate proofing water distribution infrastructure
2.1.2.1. Construct new climate resilient pumping stations and associated assets
2.1.2.2. Increasing storage for climate-related water outages
2.1.2.3. Connecting isolated systems to deliver resilience to climate-related water outages
2.1.3. Implementing water loss reduction measures
2.1.3.1. Implementing pressure management measures
2.1.3.2. Resilience improvements in the distribution network to reduce losses
BARRIERS
Barrier 1 Outdated policy and legislation governing the management and coordination of water sector stakeholders (legislation, policy, tariffs, regulation)
Barrier 2 There is no independent economic regulator of water utilities
Barrier 3 Responsibilities for groundwater protection management and regulation are unclear, distributed and uncoordinated
Barrier 4 Inadequate and outdated water data collection and information sharing for decision making and investment planning
Barrier 5 Limited technical capacity, nationally in water resources management to support climate informed decision making in the water sector
Barrier 6 Single source of natural freshwater (shallow groundwater lens) which is extremely vulnerable to climate change – reduced recharge, sea level rise and storm surge
Barrier 7 WSC financial position and lack of access to external affordable financing means it is not able to invest in resilience because tariffs do not meet CAPEX and OPEX, and climate change is increasing these costs
ASSUMPTIONS
Ongoing implementation of WSC's corporate business plan including its climate resilience objective
Political will to support tariff reforms and reduce government subsidies for water supply
Existing non-revenue water programme in New Providence will expand across the Family Islands

B.2 (b). Outcome mapping to GCF results areas and co-benefit categorization

Outcome number	GCF Mitigation Results Area (MRA 1-4)				GCF Adaptation Results Area (ARA 1-4)			
	MRA 1 Energy generation and access	**MRA 2** Low-emission transport	**MRA 3** Building, cities, industries, appliances	**MRA 4** Forestry and land use	**ARA 1** Most vulnerable people and communities	**ARA 2** Health, well-being, food and water security	**ARA 3** Infrastructure and built environment	**ARA 4** Ecosystems and ecosystem services
Outcome 1	☐	☐	☐	☐	☐	☒	☐	☐
Outcome 2	☐	☐	☐	☐	☐	☒	☐	☐
Outcome 3	☐	☐	☐	☐	☐	☐	☒	☐

Co-benefit numbers	Co-benefit					
	Environmental	**Social**	**Economic**	**Gender**	**Adaptation**	**Mitigation**
Co-benefit 1	☒	☐	☐	☐	☐	☐
Co-benefit 2	☐	☐	☒	☐	☐	☐
Co-benefit 3	☐	☐	☐	☐	☐	☒

B.3. Project/programme description

As outlined in the Theory of Change, above, the proposed project *Climate Resilience of the Water Sector in The Bahamas* is structured across 3 complementary Outputs:

Output 1.1: Strengthened national policy, legislation and regulatory environment for a coordinated and climate-resilient and gender-sensitive water sector (funded through GCF Grant)

- Activity 1.1.1 Develop a National Water Policy Framework for Climate Resilient Water Management
- Activity 1.1.2 Reform Institutional Architecture and Legislation
- Activity 1.1.3 Progress National and Local IWRM Process

Output 1.2: Improved national water resources data and information, inclusive of sex-disaggregated data, is available to multi-sector stakeholders for decision-making planning. (funded through GCF Grant)

- Activity 1.2.1 Establish and Implement a National Water Resources Monitoring Network (WRMN)
- Activity 1.2.2 Develop and Implement a National Water Resources Management Unit (WRMU)
- Activity 1.2.3 Develop and Implement a National Water Sector Decision Support System (DSS)
- Activity 1.2.4 Capacity development across sectors in climate risk-informed investment planning

Output 2.1: Climate-resilient wellfields and water supply infrastructure and operations in six islands

- Activity 2.1.1.Retrofit wellfields for adapted groundwater abstraction (funded through CDB and GCF loan)
- Activity 2.1.2 Climate-proofing water distribution infrastructure (funded through GCF Grant)
- Activity 2.1.3 Implementing water loss reduction measures (funded through CDB and GCF loan)

The Activities are described below. The activities have been fully costed and are consistent with the proposed budget, the implementation plan and the procurement plan. The Feasibility study and its supporting Annexes provides justification for the overall adaptation approach and the prioritization of activities for the resilience of the water sector.

Output 1.1: Strengthened national policy, legislation and regulatory environment for a coordinated and climate-resilient and gender-sensitive **water sector**

Activity 1.1.1 Develop a National Water Policy Framework for Climate Resilient Water Management

The governance analysis has identified there is no national water policy in the country. Without this essential document, it is not possible to have a holistic and coordinated approach to ensure climate-resilient and sustainable water resources management. This activity will respond to this gap by helping develop a national water policy, secure political commitment and financing to implement the policy, set appropriate targets and monitor progress, and ensure harmonisation of the new policy with existing sectoral and non-sectoral policies and plans.

Sub-Activity 1.1.1.1 Draft and Facilitate Adoption of National Water Policy

This sub-activity will support the development of a national water policy. Whilst part of the WSC Corporate Business Plan, consistent with the IWRM consultation process and Cabinet ratification[3], the national water policy is expected to be a National Integrated Water Resources Management Policy, inclusive of water supply and wastewater management strategies which align with the WSC mandate.

The national water policy is expected to deliver the IWRM Vision agreed in Nassau in July 2023, after the IWRM consultation preparatory stage:

'Ensuring informed, innovative, integrated sustainable, climate and disaster resilient water and land resources management for reliable, affordable, and equitable access to water across the archipelago of The Bahamas, for the economic, social, and environmental benefits of all.' *(Nassau, July 2023)*

The details of the policy will be confirmed through a consultative process over 6 months ahead of the institutional reform and IWRM process activities, setting out the overall high-level policy elements to guide the sector. The activity will be delivered through a combination of key stakeholder inputs, consultant facilitation, and wider stakeholder engagement and verification workshops, using the multi-agency GCF Project Steering Committee as a proto-APEX coordination body.

Based upon the governance analysis and IWRM consultations the following indicative policy element areas are expected to be included:

- Sustainable water resources management
- Water demand management, water conservation and efficient use
- Climate resilient water supplies
- Effective wastewater management
- Robust policy and legislative framework
- Effective institutional framework
- Integrated spatial land and water use planning
- Integrated freshwater lens planning and protection
- Financially sustainable water management; and
- Inclusive and equitable stakeholder participation.

Sub-Activity 1.1.1.2 Develop and Monitor Targets under the Policy

This sub-activity enables the setting of policy targets and the monitoring of progress to these targets. The sub-activity will support the WRMU (to be established under Activity 1.2.1) to engage with stakeholders, capture relevant data sets, and report annually on a State of the Nation Water Sector Report, against agreed targets. The targets will initially be set in the first year by the policy development stakeholder group, and then revisited annually by the IWRM APEX bodies, with annual verification workshops to agree on annual progress.

[3] A national IWRM consultation was undertaken as part of the GCF project design and stakeholder engagement process. Co-hosted by WSC and OPM a national IWRM workshop (Nassau, 18-19 July 2023) attended by 17 agencies, formally agreed on a national IWRM Vision Statement, IWRM governance reform, an IWRM Road Map and the establishment of a Water Resources Unit. A White Paper of this workshop agreement was subsequently submitted by OPM to Parliament and formally ratified by the Government of the Bahamas.

Sub-Activity 1.1.1.3 Policy Harmonisation – Climate and water risks integrated across sectoral and national development plans

The development of a national water sector policy provides a definitive position on sector objectives, strategies and targets and the contribution of multiple agencies to deliver the policy implementation plan. In doing so these interactions with other sectors require appropriate reflection in other relevant national policies e.g. integrated land and water planning.

This sub-activity provides the resources to enable the water sector, coordinated by the WRMU, and via the APEX bodies, to engage, assess, and where applicable recommend draft text to ensure policy harmonisation with other sectoral policies and plans, as well as national policies and plans eg climate and disaster, spatial planning, infrastructure, sustainable development et al. Central to this engagement will be the mainstreaming of climate risk as a common perspective to all sectors, as well as understanding other sectoral climate resilience impacts and dependence on the water sector. This sub-activity will fund technical consultants, temporary national staff increases, workshops, and legal inputs.

Activity 1.1.2 Reform Institutional Architecture and Legislation

This activity will establish and support the initial implementation of critical water sector functions which are not yet established and/or operational in the country – including a national water resources management capacity, national inter-sectoral coordination, a water sector regulator and necessary legislative changes. These agencies have been identified from the governance analysis initiatives completed over the last 2 years as being essential to deliver a sustainable and climate-resilient water sector.

Sub-Activity 1.1.2.1 Establish WRMU (IWRM Secretariat)

The national Water Resources Management Unit (WRMU) function does not currently exist in The Bahamas. Currently, groundwater monitoring is restricted to operational monitoring of wellfields by WSC to check on groundwater salinity and to optimise pumping arrangements in each wellfield.

This sub-activity will focus on establishing the unit, including by supporting the legislative changes required to formally establish the mandate, roles and responsibilities of the WRMU, including its ministerial representation and ministry responsibilities with respect to budget allocation, and inclusion in departmental annual and corporate plans. The process of building the technical and operational capacity of the WRMU (staff, hardware, software etc) will be supported under Outcome 2, and is further elaborated in Annex 2: Feasibility Study (see in particular the WRMU and DSS Design Report which is Appendix C of the Feasibility Study).

Currently the legal mandate for oversight of water resources management resides with the Department of Environmental Planning and Protection (DEPP), and as such the WRMU is (eventually) expected to be located in DEPP, although it may first be established within WSC during the initial stage(s) of the project implementation period. The legislation to be supported under this activity will confirm the relationship between WRMU and DEPP which is the current environmental regulator (e.g. pollution control). The necessity and existence of the WRMU have been agreed and ratified by Cabinet as part of the 2022-2023 IWRM consultations that were organized when preparing this GCF project.

The WRMU will also act as the Secretariat for the IWRM APEX Body (see below), providing both dedicated administrative and logistical support to the inter-agency coordination mechanism but also impartial (non-sector specific) technical water resources and related climate risk advice and status updates.

Sub-Activity 1.1.2.2 Establish IWRM APEX Body

The necessity and approval of an IWRM APEX body has been agreed and ratified by Cabinet as part of the IWRM consultations that were organized during the GCF project design process. The Cabinet Decision identifies the formation of a National Integrated Water Coordination Mechanism (NIWCM) during the GCF project implementation period, stating specific agency membership.

This sub-activity delivers the legislation required for the creation of two APEX bodies: a ministerial (political) level coordination body which will report via the chairman to Cabinet on sector policy, planning and coordination matters, and sign-off of the State of the Nation Water Sector Report ; and a technical (director) level coordination body that

will advise on technical matters e.g. multi-sector/agency water allocation, protection, spatial planning, water demand, as well as data, analysis and assessment sharing; and prepare the State of the Nation Water Sector Report .

The legislation will identify the WRMU as the Secretariat to the APEX bodies, providing organisational and administrative support as well as technical briefs on water resources status, trends and emerging threats. The Secretariat will also be responsible for the management of the IWRM Roadmap process. The GCF project will fund the staffing of the IWRM Secretariat coordinator for 4 years, after which relevant costs are expected to be borne by the government.

Sub-Activity 1.1.2.3 Implement Water Utility, Economic Regulator

The lack of authority for WSC (Barrier 1) and/or an independent regulator (Barriers 1 and 2) to set tariffs compromises the financial sustainability of the utility and hence its ability to continue to adapt to climate change in future decades.

Under on-going IDB-funded WSC activities, legislation is currently being updated to enable URCA to officially be tasked with becoming the regulator of the water sector. This will capture WSC as the national service provider, as well as any private concessionaires contracted to WSC and private water sector providers supplied by WSC. The legislative update will determine whether Grand Bahama Utility Company requires separate legislation to be enacted.

The GCF project will support the setting up of the water sector unit inside of URCA, including personnel capacity building and training (appropriate qualifications, twinning), hardware, software and related costs, short-term consultancy support and back-stopping, and staff costs for the water sector unit (2 persons – 1 senior, 1 junior) for 3.5 years (Project Years 2.5 to 5 inclusive). The water sector regulatory unit will be self-funded by the government for Year 6 and 7.

Sub-Activity 1.1.2.4 Establish Legislation for Groundwater / Wellfield Protection

The lack of specific regulatory instruments (Barriers 1 and 3) to proactively protect the freshwater lenses, has resulted in a historical lack of confidence by the utility in groundwater quality being adequate to provide climate resilient water resources. This has resulted in prioritization of desalination in recent decades and unaffordable operational expenditure (OPEX).

This sub-activity will develop legislation that designates freshwater lenses and/or wellfields as ‘protected zones’, which constrain and limit land use and disposal activities. This will include but not be limited to: water abstraction, effluent disposal (including septic tanks), hazardous activities (e.g. landfills, hydrocarbon storage), agro-chemical use and loadings, housing, waste dumping fines, and road drainage. The legislation will promote protective land uses including forestry, recreation parks, and wildlife reserves.

The legislation will also include the management arrangements for such protection zones to establish local multi-sector and multi-stakeholder freshwater lens management committees, guidance on their governance arrangements and the formal direct regulatory and advisory roles of WRMU and DEPP at the national and local role.

Activity 1.1.3 Progress National and Local IWRM Process

The national IWRM consultations in 2023, the resulting national IWRM Vision and the subsequent Cabinet Decision commitment to develop and implement an IWRM Road Map provide the political will for The Bahamas to proceed towards national IWRM implementation. This activity facilitates the development and implementation of a national IWRM plan as well as a local integrated groundwater protection plan for a priority wellfield and freshwater lens used for public water supply on the capital island.

Sub-Activity 1.1.3.1 Develop IWRM Roadmap and IWRM Plan

This sub-activity supports the development of the IWRM Road Map for the Bahamas. Following the Global Water Partnership IWRM development model, the 9-stage IWRM process will be followed. The IWRM consultations completed as part of the GCF project design process commenced the Road Map development process:

- Process Initiation (completed under the GCF design process).
- Steering Committee Establishment (to be the GCF Project Steering Committee, until the formal APEX body is established).

- Process Management Team Establishment (the WRMU to be established earlier in the GCF project implementation under Activity 1.2.1).
- Stakeholder Involvement Plan (mapped during the GCF design process).
- Communication Plan (required).
- Situational Analysis (largely completed by the GCF design process).
- Vision Statement (completed) and Goal Articulation (required).
- Initial IWRM Plan draft prepared (required).
- IWRM Plan review, revision and costing (required).
- IWRM Plan stakeholder and political endorsement (required).

The activity will enable the IWRM Road Map to be developed during Project Year 1 (PY1), supporting the development of a stakeholder communication plan, enabling Plan goals to be agreed and the content of the Plan to be drafted and endorsed. This will be delivered through a combination of IWRM consultants and the water resources capacity within the WRMU, stakeholder inputs, and a programme of workshops and a national multi-media platform awareness raising and engagement.

Sub-Activity 1.1.3.2 Implement National IWRM Plan

The IWRM plan developed under 1.1.3.1 will be implemented over a period of 3 years (PY3-5). The first year will focus on IWRM Enabling Activities, including institutional harmonisation, policy and legislative amendments, establishing new roles and functions, training and hardware/software to support IWRM communications, partnership portals etc. – where not covered elsewhere by the GCF project activities (e.g. IWRM Secretariat and APEX Body establishment).

Whilst the content of the IWRM Plan will depend on the outcomes of the IWRM Plan development process, it will be closely aligned to the national water policy and will be the implementation plan to deliver (or contribute to delivering) both the integrated elements of the national water policy eg integrated land and water planning, but also ensuring the widest application of the national water policy to multi-sectoral and civil society and private sector stakeholders eg efficient water use, whilst ensuring adequate resourcing of the APEX body and its Secretariat.

IWRM plan implementation will be delivered by supporting the WRMU and APEX body with technical consulting resources (IWRM and prioritised technical disciplines e.g. land use planning), IT support, workshops, and a dedicated officer within the IWRM Secretariat (WRMU).

Sub-Activity 1.1.3.3 Develop and Implement Windsor Wellfield IWRM Plan

Whilst the national IWRM approach strengthens inter-sectoral planning, coordination, policy and legal harmonisation, there is a need to deliver inter-sectoral cooperation and coordination at the local scale to protect fresh groundwater lenses from pollution and over-abstraction and improve their climate resilience.

This sub-activity supports developing and implementing a local IWRM Plan for the priority freshwater lens in the country – the Windsor Wellfield on New Providence. The wellfield is capable of contributing around 10% of the WSC water supply to 190,000 people in New Providence, but is currently under-utilised. It is vulnerable to not only storm surge and drought but also: surface water run-off from the adjacent international airport; new housing sub-divisions and their domestic wells and septic tanks; as well as illegal encroachment, and resulting forest clearance, illegal housing and waste dumping – all of which have the potential to derogate the freshwater quality making it unsuitable for potable use in the capital.

The sub-activity will create a local multi-stakeholder governmental and non-governmental partnership, which (supported by consultancy and government department technical resources, including the newly formed WRMU), will assist with drafting a local freshwater lens protection strategy, delivering community guidance and awareness raising, developing and distributing knowledge materials to residents, schools and clubs, legal support to draft local bylaws, and hardware and software for inspection and monitoring of the land use over the freshwater lens in collaboration with local law enforcement agencies.

Output 1.2: Improved national water resources data and information, inclusive of sex-disaggregated data, is available to multi-sector stakeholders for decision-making planning.

Activity 1.2.1 Establish and Implement a National Water Resources Monitoring Network (WRMN)

This activity will assist in establishing, operating and maintaining a national water resources monitoring network, targeting the fresh groundwater lenses currently being exploited and those that WSC is considering to re-use or exploit for the first time, both on New Providence and The Family Islands. Monitoring is essential to determine the sustainable yields of the freshwater lenses and how these vary with climate change, as well as the vulnerability of the lenses to cyclones, storm surges and flood-mobilised contamination which may impact the short-term ability of the lenses to supply potable water after these climate change impacts, or where demonstrably not vulnerable enable climate-resilient groundwater resources to be accessed when other infrastructure is no longer operating.

Sub-Activity 1.2.1.1 Design and Install a National Water Resources Monitoring Network

This sub-activity involves the financing, procurement and construction of the necessary monitoring installations, including monitoring boreholes, tide gauges, rain gauges, water level and salinity datalogger deployment, mobile equipment provision, system testing and commissioning.

The sub-activity will include training of the WRMU staff on monitoring network design, borehole drilling campaign supervision (including contract specification and tender document preparation and bid evaluation), installation supervision, equipment training, and installation, equipment and data transfer testing.

Given the initial limited capacity of the WRMU, the design and installation of the monitoring network will be supervised by international consultants, working closely with the WRMU staff in a robust buddy-system enabling detailed knowledge transfer and capacity building throughout the installation period.

Sub-Activity 1.2.1.2 Network Operation, Maintenance and Data Analysis

This sub-activity focuses on sustaining the monitoring network after construction. In practice this activity will to some extent occur in parallel with the later stages of the monitoring network installation under 2.1.1 (given the duration of the monitoring network set-up) enabling the WRMU to best understand how the installed monitoring network will be operated and maintained. The WRMU will be trained by consultants on planning operational and maintenance schedules, testing of installations to periodically check their integrity, installation repairs, equipment calibration, monitoring and data capture techniques and in-field data quality capture control. The consultancy-led training will occur over the period of monitoring network installation and then be backstopped thereafter using a combination of remote support and occasional site visits.

During the first year or two of operational monitoring a baseline will be established. This will then require data review to enable Trigger and Action levels to be determined, which will be used to identify equipment malfunction or other maintenance requirements, reductions in water quality, and changes to the lateral extent and thicknesses of the freshwater lenses. Trigger and Action levels will be used to initiate operational and management responses such as site visits, maintenance, identify climate hazard impacts and so on. The WRMU will be trained on these activities, which will be initially supervised by supporting consultants.

Early warning action and mitigation plans will be developed by the consultants and WRMU staff to enable trigger alerts to result in operational responses, be that maintenance checks, land use and contamination inspections, discussions with WSC (or other abstractors) on required changes to abstraction rates and/or alerts to water users on drought risks and possible wellfield yield derogation risks.

Activity 1.2.2 Develop and Implement a National Water Resources Management Unit (WRMU)

The collection of water resources data whilst essential does not on its own deliver climate- resilient water resources management. It is necessary to have a dedicated and adequately trained technical capability to manage the monitoring network, analyse this information and interpret it to provide status reports on water resources conditions and impacts, inform users on sustainable or compromised resources and trends towards these conditions, develop public information products, and advise agencies on recommendations and constraints of water resources on their own activities, at the policy, planning and operational level. This reinforces the need for a well-capacitated WRMU, which will also act as the IWRM Secretariat to the IWRM APEX body (national committees).

This activity delivers a fully functional and operating WRMU. This activity is different to that in Sub-Activity 1.1.2.1 – the latter focuses on supporting the legislative reforms that are needed to legally create and mandate the WRMU with its roles and responsibilities.

Sub-Activity 1.2.2.1 Develop a National Water Resources Management Unit

This sub-activity focuses on establishing the technical capacity to develop and sustain the national WRMU. These efforts will be guided by a WRMU institutional development strategy to be prepared by the end of PY2.

As part of these institutional development efforts, the WRMU will need to be staffed with appropriately qualified individuals. 3 groundwater technical staff and 1 Geographical Information System (GIS) specialist (responsible for the DSS) are the estimated required staffing capacity. The technical staff will be trained in hydrogeology and climate risk assessment. Nationals with relevant undergraduate degrees (engineering, hydrology, climate, meteorology, environment) and ideally water sector working experience will be recruited as national consultants and sent on appropriate 1 year groundwater resources MSc courses at approved international universities with demonstrable small island (and preferably Bahamian) groundwater experienced staff – with their thesis subjects being in The Bahamas and consistent with the WRMU responsibilities, including a focus on water resources climate risk and adaptation.

In the first years of project implementation, the WRMU will be operated by international consultants, working closely with the recruited WRMU national consultants (who will become staff once the costs for these individuals are handed over from the project to the government). Attendance training sessions organized and executed by the WRMU international consultants will help to build capacity and transfer knowledge to the WRMU national consultants/staff in-country. The expectation is the international consultants will train and equip their Bahamian counterparts over an extended handover period, to sustain the WRMU.

Relationships with overseas universities specialising in hydrogeology, and especially island limestone hydrogeology, ideally with previous experience in The Bahamas, will be strengthened to provide a further modality for the WRMU to access long-term technical support and additional informal capacity and training. This will include encouraging inter-university with The University of The Bahamas (UoB) and the WRMU contributing relevant BSc content at UoB, supporting BSC theses and summer intern placements.

Sub-Activity 1.2.2.2 Operate the National Water Resources Management Unit (WRMU)

This activity focuses on enabling and supporting the routine tasks the WRMU will be undertaking after its establishment, for a 3-4 year period, prior to The Government of Bahamas taking on full responsibility for core budgetary funding.

These on-going tasks include disseminating water resources information, producing an annual report on the status of the water sector, facilitating the national and local IWRM governance, having management responsibility for the water resources monitoring network and the DSS (see below), undertaking technical and numerical analysis, being the national focal point on water resources issues, providing training to other stakeholders on water resources monitoring and risk assessment, providing policy advice to government agencies.

The sub-activity will fund necessary national air/sea/land travel, Family Island subsidence, equipment logistics and consumables, media awareness campaigns, workshops and related delegate expenses, stakeholder training costs and awareness raising materials. Consultancy support will be provided, reducing over the 3-4 year period. This sub-activity does not fund the DSS technical apparatus.

Activity 1.2.3 Develop and Implement a National Water Sector Decision Support System (DSS)

This activity establishes a national water resources sector Decision Support System (DSS). The DSS will receive, store, and share water-related data, it will also enable data analysis (by the WRMU and other third parties), some of which will be automated, and the distribution of water resources analysis and climate risk products across a multi-media platform at a range of timescales (eg annual reports, early warning alerts, real-time on-line dashboards and GIS portal maps et al). The water resources technical analysis is delivered under the WRMU operation activity, but its analysis findings, reporting, products and alerts will be delivered through the DSS.

Sub-Activity 1.2.3.1 Design and Install a Water Sector Decision Support System

This sub-activity sets up the DSS. This includes the final design, procurement, installation and testing of a system which is primarily a GIS based geospatial database system capable of hosting and disseminating information and analysis at a range of timescales, building on the initial work done at the project design stage (see Annex 2: Feasibility Study, particularly Appendix C: WRMU and DSS Report). The DSS will have multiple functions on-site and

cloud-based servers, industry standard software portfolios, with multiple security levels to enable both WRMU and stakeholders to access only approved parts of the system. The IT systems and especially the ability for third parties to input data and visualise and download WRMU analysis and products will use on-line modalities to enable Family Island stakeholder access and use. Analytical tools will be built into the DSS as add-ons or directly embedded into GIS-based systems for real time analysis and climate risk information dissemination (e.g. early warning systems).

IT and GIS consultants will lead the DSS set-up working closely with the WRMU staff as well as local IT consultants to ensure local back-up support is available post-project. The water resources consultants will develop the analytical tools which underpin the water resources and climate risk information (e.g. Mapping products, groundwater data visualisation, thresholds for early warnings, modelled/estimated freshwater lens morphology, climate projection scenarios). The water resources consultants will work with other agencies (e.g. Met) to ensure relevant data (e.g. hurricane warnings, sea level data, coastal inundation risk, socio-economic and other environmental data, are incorporated). Gender disaggregated socio-economic data captured under the project will be incorporated into the DSS.

Sub-Activity 1.2.3.2 Operate and Maintain the DSS

After initial set-up and testing, the DSS will be populated with WSC and other agency data that is readily accessible, including digitising of historical hard copy reports and surveys. Thereafter this sub-activity supports the costs incurred in data capture from other agencies, with resources committed to developing data sharing memorandums of understanding (MoUs), assisting in data formatting and transfer, facilitation and advocacy workshops, and training of stakeholder field data capture (using bespoke but also their own smartphones).

Regular user and non-user stakeholder meetings will be held to secure feedback on ease of use, barriers to access, value of products available, to inform updates of the system.

This sub-activity will also support costs associated with hardware and software IT maintenance, system updates, as well as IT consultancy back-stopping support.

Activity 1.2.4: Capacity is built across key sectors in climate risk informed investment planning

To ensure the sustainability of the DSS and its continued benefit to the climate resilience of the water sector, it is important that key stakeholders (especially WSC, DEPP, Meteorology, Public Works, DRMA, Forestry and BNGIS) are informed and engaged in the purpose of the DSS and how its functions, and understand how it can aid them in the sustainable management of water resources. This means that during the project implementation stakeholders must be trained and informed about the benefits of climate risk assessment and how to apply it to their planning, operations and investments.

Sub-Activity 1.2.4.1 Multi-sector training in use of DSS outputs to inform climate risk assessment and risk reduction planning

Once the DSS is operational, stakeholders will need to be informed about what data is held on the DSS and how it can be used for climate risk assessment and risk reduction planning. This will enable the DSS to enhance the capacity of stakeholder organisations to implement climate risk resilience across sectors.

This sub-activity will include small focused workshops and presentations to stakeholders during the project implementation period, and beyond once capacity is built within the WRMU. These workshops will provide the necessary background for why the DSS has been formed and what gaps it is designed to address. The workshops will then present frameworks for assessing climate risk and how accessing the DSS can help stakeholders carry out climate risk assessments.

Sub-Activity 1.2.4.2 Mainstreaming climate risk informed operations and investment planning across WSC

This sub-activity will deliver new capacity within WSC to operate assets and invest in new assets for climate resilience. This requires climate risk assessment and climate risk information to be mainstreamed into WSC's planning, design, implementation and operations processes. This will be delivered through a capacity development programme sustained through the duration of the project which delivers training and tools/deliverables for integrating risk assessment into planning, investment, and operational processes.

The sub-activity will build on and contribute to both the new IWRM policy planning and coordination mechanisms established under Output 1.1, as well as the water resources and climate risk information disseminated under Output 1.2.

The capacity and knowledge development will include but not be limited to:

- Training in water resources, system-scale climate risk assessment, climate adaptation programming, IWRM, GIS, hydraulics, pump controls, leakage detection, etc for relevant staff.
- New standard operating procedures (SOPs) for operating wellfields in drought.
- New SOPs for operating wellfields during storm surge.
- Updated SOPs for hurricanes across all assets (storm surge and wind).
- An updated Climate Resilient Corporate Business Plan and CAPEX plan to be prepared at the end of the project to identify the next phases in scaling up the resilience investments in WSC water supply assets with a focus on maintaining climate resilient groundwater use, and expanding it where possible. Note that this planning will also directly build on, and draw lessons from, WSC's experience investing in climate-resilient wellfields and water supply infrastructure and operations on the initial set of priority (highly vulnerable) islands under Output 2.1.
- Reviewing standard terms of concessionaire contracts for RO production to ensure climate resilience measures are integrated into the design – and training in evaluating RO operations in line with these measures.

Output 2.1: Climate-resilient wellfields and water supply infrastructure and operations in six islands

The quantities and specification of the proposed adaptation infrastructure interventions under each of the activities are provided in Annex 2: Feasibility Study (Section 16.4 and 16.5).

Table 2: Summary of Island Climate Hazard Exposure and Proposed Risk Reduction Measures

Island	No of water suppy systems	Storm Surge	Extreme Winds	Extreme Rainfall	Drought	Wildfire	Upgrade existing wellfield wellheads, pumps and	Wellfield expansion: new wells and wellfield	Additional water storage tanks	Upgrade Pumping Stations	Upgrade existing distribution networks	New inter-supply system pipelines (and booster stations)
South Andros	1						Storm Surge, Drought		All Risks	Storm Surge, Extreme Winds, Wildfires	Storm Surge	Storm Surge
Mangrove Cay	1						Storm Surge	Drought	All Risks	Storm Surge, Extreme Winds, Wildfires	Storm Surge, Wildfire	Storm Surge
North & Central Andros	9						Storm Surge (All)	Drought (Bowen Sound)	All Risks (8)	Storm Surge, Extreme Winds, Wildfires (All)	Storm Surge, Wildfire (Staniard Creek, Love Hill, Fresh Creek, Cargill Creek)	Storm Surge (Bowen Sound)
Abaco	9						Storm Surge (7)	Drought (Blackwood, Sandy Point)	All Risks (Blackwood, Cedar Harbour, Casuarinas Point, Cherokee	Storm Surge, Extreme Winds, Wildfires (7)	Storm Surge, Wildfire (Treasure Cay)	Storm Surge (Blackwood)
Acklins	5						Storm Surge, Drought (Lovely Bay)		All Risks (Lovely Bay, Snug Corner, Salina Point)	Storm Surge (All)	Storm surge (Hard Hill)	Storm Surge (Hard Hill)
Windsor Wellfield (NP)	1						Storm Surge			Extreme Rainfall (flooding)		

Activity 2.1.1. Retrofit wellfields for adapted groundwater abstraction

The ability of the freshwater lenses to provide freshwater during droughts and following cyclone and tropical storm generated storm surges and high winds, is essential to the climate resilience of islands reliant on groundwater

(Barrier 6). This activity will sustain better quality groundwater supply into WSC's water supply systems by increasing the resilience of WSC's wellfield assets to climate change both in New Providence and the Family Islands.

By increasing the resilience of the wellfields, this also enables greater groundwater yields to be safely abstracted, thereby reducing reliance on expensive desalinated water, reducing OPEX costs that are preventing climate resilience investment (Barrier 7).

Sub-Activity 2.1.1.1. Implement resilience upgrades to wells, pumps, and other wellfield assets

This sub-activity will be implemented through a design-build contract which includes the following resilience measures.

- Rehabilitation of all wells in each wellfield, including testing and flushing, to ensure that the wellfield has maximum operational flexibility for resilience and re-distributing groundwater abstraction across a greater surface area, reducing the rates of abstraction from each well.
- Installation of new resilient elevated and sealed wellheads to reduce the potential for seawater ingress during storm overwash events. Each wellhead will be supplied with a sampling point, and the ability to easily lift the suction pipe (or submersible pump) for inspection, or downhole monitoring.
- Burying all above-ground pipework in wellfields to a suitable depth to reduce exposure to storm damage, either wind, wind-borne debris or storm surge-borne debris.
- Burying all cabling from the substation to each pump to reduce exposure to storm damage, either wind, wind-borne debris or storm surge-borne debris.
- Clearance of a firebreak of 6m (each side) from all infrastructure in the wellfields.
- Construction of elevated and storm-proof pump houses at each wellfield pumping location (this is not necessary in Abaco where there is a preference for submersible pumps).
- Provision of pumps and control panels which enable automated shut-off when storage tanks are full.

Sub-Activity 2.1.1.2. Expand marginal wellfields to reduce vulnerability to climate change

This sub activity is focused on the wellfields with increasing salinity which are located on small, thin freshwater lenses or on the marginal edge of a larger freshwater lens. Expansion is not to increase the yield of the wellfield but to spread existing abstraction rates over a larger area and/or higher number of wells, or to expand the wellfield in a specific direction anticipated to yield fresher groundwater in the future (e.g. towards the centre of an island and therefore the centre of the freshwater lens). This activity will be undertaken towards the end of the project implementation period to make use of water monitoring data and updated mapping and analysis of freshwater lenses under Output 1.2.

Before wellfield expansion, the activity will require groundwater investigation and wellfield design which would be undertaken by specialist hydrogeologists experienced in evaluating freshwater lens water resources and developing appropriate designs. Design of the expanded wellfield areas will consider wells and trench/gallery solutions. The United States Army Corps of Engineers (USACE 2004) report has preliminary guidance on the design parameters of wells in Andros and Abaco, where wellfield expansions are proposed under this project. Investigations over the last few decades in Andros and more recently in Abaco provide a baseline for wellfield expansion design. This will be augmented by additional monitoring and analysis under Output 1.2.

Once investigation and design is complete, the wellfield expansion will be implemented through a design-build contract employing the same wellfield resilience measures as described above under Activity 2.1.1.1.

Activity 2.1.2. Climate-proofing water distribution infrastructure

This activity will increase the resilience of water distribution systems to minimise disruptions to WSC water supply in the project target area and avoid/minimize reconstruction costs associated with future climate change hazards. The activity will implement resilience measures at pumping stations and associated above-ground infrastructure, provide additional storage to increase resilience to more frequent outages, and connect some of the most vulnerable and/or isolated systems to provide alternative water sources into these systems.

Sub-Activity 2.1.2.1. Construct new climate-resilient pumping stations and associated assets

This sub-activity will be implemented through a design-build contract which includes the following resilience measures:

- Construction of new elevated pumping stations to house pumps, valves etc., control panels, chlorine dosing equipment and other ancillary equipment. Mechanical and electrical equipment will be further raised from the

floor and mounted on walls or suitable plinths within the pumping station. The new pumping stations will be designed to withstand structural loadings from anticipated maximum wind speeds over their design life based on worst-case climate projections and to withstand the hydrostatic pressure of water up to the window sill level without water ingress. The pumping stations will have stormproof windows and sealing flood doors. The layout of pipework, valves, meters, etc at the pumping station location will be updated for maximum efficiency and external infrastructure will be buried for resilience, with suitable access provided.

- Elevated backup generators and electricals are required to provide a backup/alternative energy supply during planned and unplanned Bahamas Power and Light (BPL) power outages.
- Elevated fuel store to provide 3 days of power, with associated pollution protection measures.

Sub-Activity 2.1.2.2. Increasing storage for climate-related water outages

This sub-activity includes the installation of additional storage at all systems in Andros, Abaco and Acklins, which currently have less than 3 days of water storage capacity. In some extremely isolated systems, 1 week of storage has been recommended by the project design team, given the time it may take to re-establish water supply after a disruption. This includes Mangrove Cay in Andros and Salinas Point in Acklins. This activity will be implemented through a design-build contract.

Sub-Activity 2.1.2.3. Connecting isolated systems to deliver resilience to climate-related water outages

This sub-activity includes the installation of pipe connections and booster pumps where necessary to connect the most vulnerable systems to provide an alternative water supply during outages or in the case of elevated salinity during drought. This includes connecting Hard Hill with Lovely Bay in Acklins; Blackwood with Cedar Harbour in Abaco; Cargill Creek with Love Hill in Central Andros; and The Bluff and Kemps Bay in South Andros. This activity will be implemented through a design-build contract.

Activity 2.1.3. Implementing water loss reduction measures

This activity will reduce water losses within the distribution systems in the project target area, reducing total water demand and therefore the abstraction pressure exerted on the fresh groundwater resources which are vulnerable to climate change.

Sub-Activity 2.1.3.1. Implementing pressure management measures

Pressure fluctuations and water hammers increase the frequency of leak occurrence and the total volume of losses in distribution systems. Under this sub-activity, each pumping station will be equipped with state-of-the-art variable frequency drive-controlled pump sets designed to supply water on an intermittent and variable basis – to reduce pressure fluctuations in the distribution system – specified based on the hydraulic parameters of the supply system. To further regulate pressure, dampen water hammer in the distribution system, and reduce the frequency of pump start/stop cycles, pressure tanks will be provided at each system. This activity will be implemented through a design-build contract.

Sub-Activity 2.1.3.2. Resilience improvements in the distribution network to reduce losses

Within the target area there are a number of locations where the distribution pipe is vulnerable to climate and other risks (traffic etc), where frequent damages increase leakage and water loss rates. The locations include bridge crossings, where pipes are vulnerable to wind, wave action and wildfires, submarine pipelines which are particularly exposed at the coastal transition zone, and pipe which has been laid above the ground at Hard Hill in Acklins. This activity will enable: relocation of pipelines to less exposed locations (e.g. island side of coastal roads); deeper burial; reinforced rip-rap concrete anti-wave erosion mattress protection caps; and elevating pipelines on bridge-crossings. This sub-activity will be implemented through a design-build contract.

B.4. Implementation arrangements

Provide a description of the project/programme implementation structure, outlining legal, contractual, institutional and financial arrangements from and between the GCF, the Accredited Entity (AE) and/or the Executing Entity(ies) (EE) or any third parties (if applicable) and beneficiaries.

- *Describe the experience and track record of the AE and EEs with respect to the activities (sector and country/region) that they are expected to undertake in the proposed project/programme.*

The Caribbean Development Bank (CDB) is the Accredited Entity for this project. CDB has been operating in the Caribbean Region for over 50 years and has a strong track record of providing financial and technical assistance to support the water sector and sustainable management of water resources. CDB has also financed projects with water

utilities and Governments throughout the region, including with the Water and Sewerage Corporation (WSC) and The Government of The Commonwealth of The Bahamas. As the Accredited Entity, CDB has led project design and appraisal, and will lead project implementation, supervision, reporting, evaluation and closure.

The Executing Entity (EE) is the Water and Sewerage Corporation (WSC). Established in 1976, WSC supplies water to 175,000 people in the capital New Providence and 45,000 people in the Family Islands, as well as providing wastewater services to 35,000 people in New Providence. WSC has a proposed 5-Year CAPEX programme (2023-2028) estimated at US$ 250 Million, and a total OPEX of US$ 83 Million in 2022. Government contributions to CAPEX were US$ 30 Million in 2022. WSC has more than 450 employees.

WSC has a strong track record of executing projects financed by CDB and other development partners (e.g. the Inter-American Development Bank or 'IDB'). The water utility is therefore familiar with (and accustomed to complying with) relevant CDB policies and procedures. CDB has also undertaken a further assessment to reconfirm WSC's capacity to serve as an Executing Entity under this project, drawing on inputs from other independent assessments, its track record on other recently financed CDB projects, as well as recent updates to its policies, procedures and capacities.

WSC is currently completing the implementation of the US$ 30 Million CDB-EIB (European Investment Bank) funded Bahamas Water Supply Improvement Project (BWSIP) and is in discussions with CDB regarding a Phase 2 valued at US$ 20-30 Million. WSC is also in discussions with IDB for access to a US$ 100 Million credit line for The Bahamas Water Supply and Sanitation Systems Upgrades Programme. WSC has a dedicated Project Management Unit monitoring WSC-donor interactions for externally funded projects, and a dedicated Engineering Planning Department for managing internal WSC and government projects.

- *Provide information on the financial flows and implementation arrangements (legal and contractual) between the AE and the EE, between the EE or any third party and beneficiaries.*

With respect to this proposal, the GCF and CDB will enter into the Funded Activity Agreement (FAA) in respect of the Funded Activity. The FAA shall be consistent in all material respects with the approved Funding Proposal, including this Term Sheet and other annexes, and any conditions approved by the GCF Board in relation to the Funded Activity, and shall set out any other terms and conditions applicable to the Funded Activity, as agreed by the Parties. The FAA will govern the provision to the CDB of the GCF Proceeds.

It is proposed that the GCF provide financing to the CDB comprising both reimbursable and non-reimbursable resources, structured respectively as a senior concessional loan and a grant. In its role as an Accredited Entity, CDB will receive the GCF proceeds and provide them (reimbursable and non-reimbursable resources) to the Water and Sewerage Corporation (WSC) of the Commonwealth of The Bahamas to support eligible project activities. The GCF proceeds will be complemented by CDB's ordinary capital resources and in-kind contributions from the Executing Entity to finance the Funded Activity.

To this end, CDB will enter into a loan agreement (the CDB Loan Agreement) with WSC pursuant to which CDB, as the Accredited Entity will provide the GCF Reimbursable Funds together with the CDB Resources (together the Loan Resources) to WSC for the purpose of financing Activities 2.1.1 and 2.1.3 of the Project. CDB will also enter into a grant agreement (the CDB Grant Agreement) with WSC pursuant to which CDB as the Accredited Entity will provide the GCF Non-Reimbursable Funds to WSC for the purpose of financing Component 1 and Activity 2.1.2 of the Project. Each of the CDB Loan Agreement and the CDB Grant Agreement shall be a "Subsidiary Agreement" as defined in the AMA. Each Subsidiary Agreement will set out WSC's responsibilities and obligations with respect to execution of the Project.

The WSC as Executing Entity will enter into contracts for the procurement of goods, works and services required for the Project. These contracts will clearly define the obligations of the respective parties in relation to the delivery of goods, works and services. All procurement activities will be carried out in accordance with the applicable CDB's procurement policy and procedures.

CDB will receive and administer the GCF proceeds, which will consist of a senior loan and a grant as outlined in Section C. These proceeds will be deposited into the GCF Account (as defined in the Accreditation Master Agreement) and will be managed in accordance with the provisions of the Term Sheet and the Funded Activity Agreement (FAA). CDB will provide both the GCF reimbursable funds and its Ordinary Capital Resources (OCR) to the Executing Entity under a single loan agreement. The loan agreement will provide for the two separate sources of funds, each with their respective financial terms.

GOCB will guarantee the payment obligations of WSC in a Guarantee Agreement between CDB and GOCB. CDB and WSC will enter into a grant agreement in respect of the grant proceeds that CDB will make available to WSC for the Project subject to the terms and conditions outlined in the Grant. The loan agreement and grant agreement will bind WSC in relation to its counterpart contributions to the project. The loan and grant proceeds will be transferred directly from GCF to CDB. WSC will be responsible for the repayment of loan to the CDB. CDB will be responsible for repaying the loan to the GCF.

Disbursement requests from WSC will be submitted to, and processed by, CDB in accordance with relevant CDB policies, procedures, and guidelines. The first disbursement of the loan will only be made once WSC have fulfilled all Conditions Precedent (CPs) as outlined in the loan and grant agreements. Subsequent disbursements will be made once other project-specific Conditions Precedent (CPs) have been satisfied.

WSC will be responsible for executing the project in line with the grant and loan agreements (in accordance with CDB policies and procedures, while also accounting for any project-specific requirements specified in the loan and grant agreements). As outlined in Annex 2: Feasibility Study, the project preparation team has already assessed and reconfirmed WSC's capacity to fulfil its Executing Entity role in line with CDB policies and procedures.

WSC will execute all technical assistance and capacity building activities under Technical Assistance Component, working in close consultation/collaboration with other relevant national counterparts – including those that will need to provide inputs to processes and systems to be set up and/or strengthened under the project, as well as those that will be institutional beneficiaries. WSC will therefore bear overall responsibility for managing the procurement and contracting of service providers under these two Components, and for directly coordinating, supervising and quality-assuring their work. WSC has been given a mandate by the government to lead the execution of these activities under the proposed project, including through the initial multi-stakeholder IWRM workshop held in July 2023 and the subsequent Cabinet paper/decision.[4] In addition, WSC will also serve EE for the Investment Component, through which the utility will lead the process of directly enhancing the resilience of its water storage and distribution infrastructure, as well as the resilience of key water resources that it manages. As the EE, WSC will be directly responsible for procuring, contracting, coordinating, supervising and quality-assuring the work of the firms/contractors that will provide the necessary goods/works and associated services. More information about the specific service providers and contractors to be procured by WSC is included in Annex 10: Procurement Plan.

To fulfil its EE responsibilities, WSC will establish a dedicated Project Management Team. This Team will be established within the existing WSC Project Management Unit (PMU). The WSC PMU comprises 7 existing staff and bears overall responsibility for executing externally-financed projects – including those financed by the Inter-American Development Bank and CDB, for which it has a strong track record – while drawing on inputs/contributions from other units within WSC. More information about the WSC PMU is available in Annex 2: Feasibility Study (see in particular Section 17.4). The Project Management Team (PMT) to be established within the WSC is expected to include a Project Coordinator who will be assigned by WSC to support the project as an in-kind contribution. Using project funds, additional specialists will be engaged by WSC to further strengthen the capacity of WSC to execute the project activities in a timely manner. This is expected to include a Chief Technical Advisor and a Technical Support Specialist, whose contributions will be vital given that WSC is expected to lead the execution of activities (particularly under Components 1 and 2) that extend beyond its standard business operations. When executing all three Components, WSC will also draw on contributions from its back-office support staff, including to assist with, *inter alia*, managing procurement processes, contracts and payments to service providers.

The establishment of URCA as the water utility regulator is to be delivered by parallel initiatives beyond the GCF project. The role of the project is to support URCA implementing their new mandate. Given this requires technical training and engagement with WSC, WSC will support URCA during this implementation period.

The Department of Environmental Planning and Protection (DEPP) is legally mandated to regulate water resources. Accordingly, DEPP is expected to host the Water Resources Management Unit (WRMU) towards the end of the project implementation period. The establishment of the WRMU will occur initially however where the greatest existing groundwater monitoring capacity exists – which is in WSC. Whilst DEPP are fully engaged with the GCF

[4] The Cabinet ratification of the national IWRM consultation (2023) outcomes, including specific commitments to IWRM committees, Secretariat, Road Map development and implementation, specifically instructs WSC to take the lead on initiating, managing and sustaining the IWRM activities, in part through the WRMU as the IWRM Secretariat. As such, execution of these activities will be managed by WSC.

project design process, WSC will oversee the establishment and operation of the WRMU as an autonomous unit within WSC until such time as it migrates (e.g. in PY6) to DEPP.

- *Provide information on governance arrangements (supervisory boards, consultative groups among others) set to oversee and guide project implementation. Provide a composition of the decision-making body and oversight function, particularly for Enhanced Direct Access (EDA) proposals.*

The outcomes of the national IWRM workshop (July 2023) – which was organized as part of the GCF project design process - included a signed delegate statement from 45 attendees and 15 ministerial departments, for the GCF project to have a Project Steering Committee (PSC) reflecting the IWRM stakeholder members of the future IWRM APEX body. The formation of the national APEX body has been ratified by Cabinet and is required to have a core mandatory group including: WSC, Department of Environmental Planning and Protection (DEPP) who have a water resources management mandate, Department of Meteorology, Department of Public Works, Disaster Risk Management Agency (DRMA), Forestry Unit (of MENR) and the Bahamas National Geographic Information Systems Centre (BNGISC), plus non-mandatory invitees.

The Project Steering Committee (PSC) is to meet monthly to provide technical oversight, guidance and recommendations to the PMT, as well as to the NDA (Office of the Prime Minister). Membership will be at departmental director level or their appointed representative. The PSC will be chaired by OPM (as the NDA) with the deputy-chair WSC. The PSC is an advisory and guidance role, it will have no authority to insist on recommendations to be followed. The WSC-assigned Project Coordinator and the project-contracted Chief Technical Advisor (both members of the PMT) will be required to report to the PSC and attend as an observer.

Provide a diagram(s) or organogram(s) that maps such arrangements including the governance structure, legal arrangements, and the flow and reflow of funds between entities.

Figure 3 – Flows of funds and support

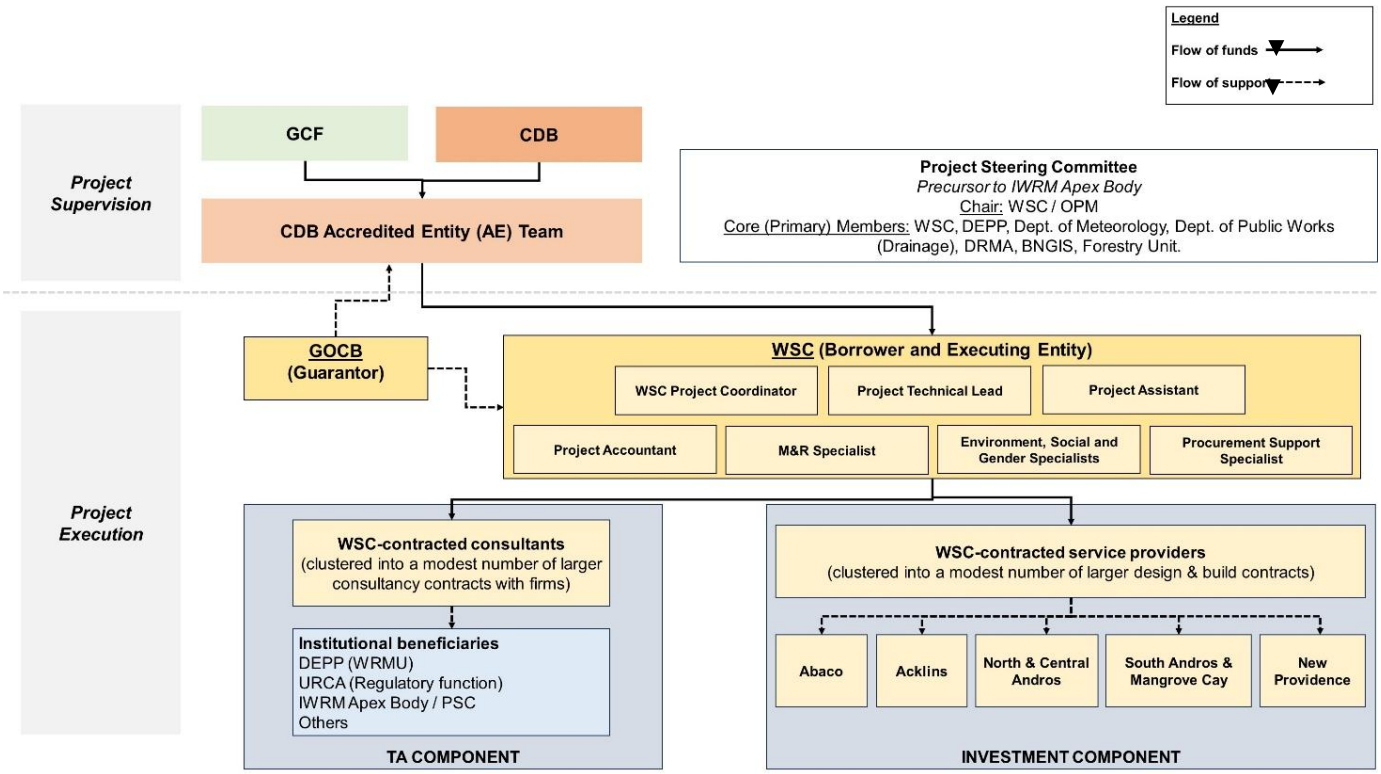
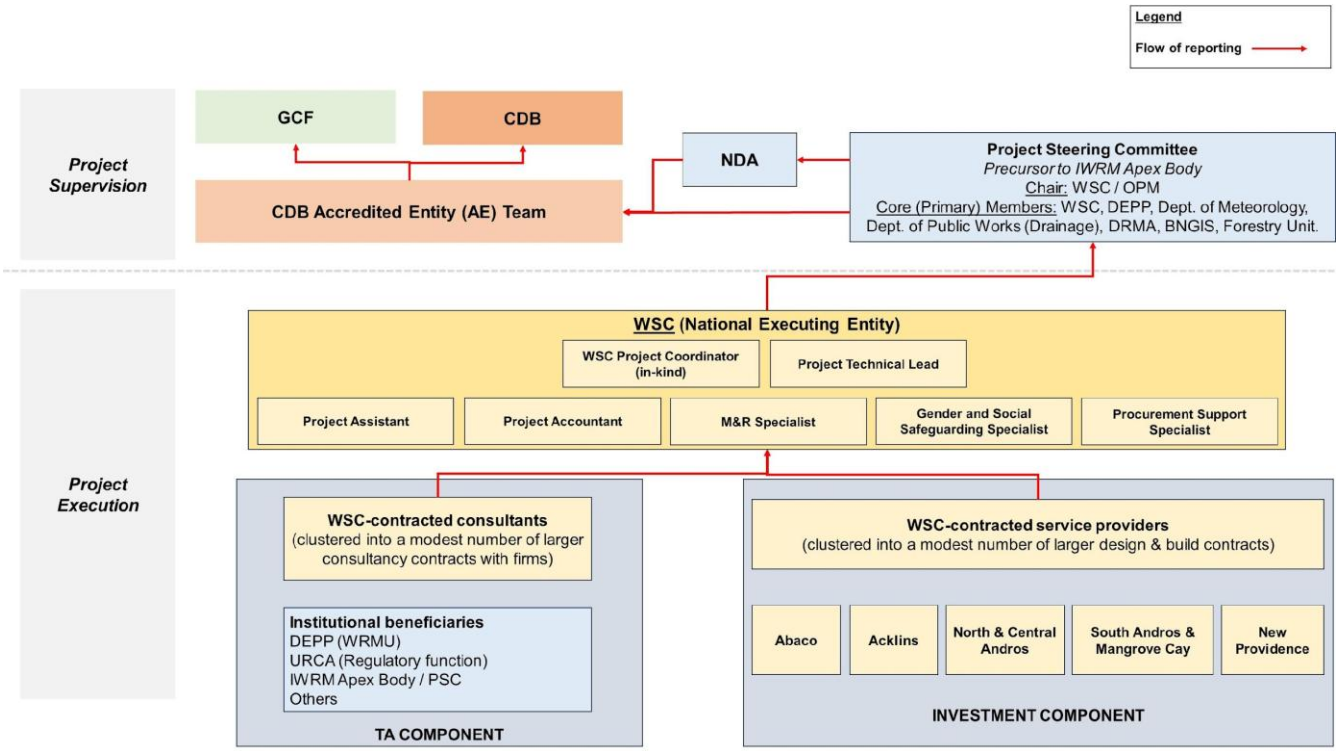


Figure 4 – Flow of reporting responsibilities



B.5. Justification for GCF funding request

Explain why the project/programme requires GCF funding to address mitigation or adaptation measures, i.e. Why is the project/programme not currently being financed by public and/or private sector? Which market failure is being addressed with GCF funding? Are there any other domestic or international sources of financing?

GCF funding is being sought to enable WSC to increase the climate resilience of its water supply operations across the country, now and in the future.

WSC has an on-going CAPEX programme that is focused entirely on expansion of current water supply systems into areas of unserved population – as per their primary legal obligation and national government priority - and does not currently include additional costs for ensuring climate resilient water supply infrastructure. WSC estimated water supply coverage in its service areas is 63%.

WSC has different sources of CAPEX funding. WSC core budget CAPEX provides for small size interventions to sustain their ongoing operation and maintenance activities. Inter-sectoral government projects from a water supply perspective, tend to be opportunistic (e.g. a government funded road upgrade will also upgrade the disturbed utility corridor beneath/adjacent to the road) – they are WSC non-prioritised CAPEX and funded directly by government. Government may in addition have prioritized water supply projects funded by the Ministry of Finance for which WSC has a supervisory role only.

Meanwhile, Multilateral Development Banks (e.g. CDB and IDB) provide loans but these have tended to focus on water supply expansion, NRW reduction and wastewater improvements in Nassau. Importantly, MDBs are generally unable to provide WSC (and The Bahamas more generally) with the volume of grant financing and concessionality of debt financing that are needed to make the envisaged types of climate resilience investments and other interventions financially and operationally viable. Similarly, the Government of The Bahamas has tended to prioritise debt obligations for expansion of water supply services – increasing the climate resilience of those communities reliant on rainwater harvesting and marginal groundwater resources, before improving the climate resilience of existing water supply systems.

Explain why the proposed financial instruments were selected in light of the proposed activities and the overall financing package. i.e. What is the coherence between activities financed by grants and those financed by reimbursable funds?

There are three project outputs. Output 1.1 is a water governance component and is intended to strengthen the national water sector governance framework, including policy, legislation and institutional reforms. These are enabling activities, delivered by technical assistance (TA) support and stakeholder engagement and capacity building and do not directly generate any revenue for the Executing Entity or government more broadly. Grant financing is therefore needed for these activities.

Output 1.2 is a water resources management component, focusing on groundwater resources investigation, monitoring, data analysis and management. As with Output 1.1, these activities will not directly generate any revenues for national counterparts and therefore require grant financing.

Output 2.1 focuses on delivering water supply resilience infrastructure improvements in six islands. The first activity (2.1.1), and all of its sub-activities, focuses on increasing the use of existing wellfields by re-configuring, relocating and expanding wellfields to reduce their climate vulnerability thereby enabling an increase in fresh groundwater production. Although this will not directly generate revenues for WSC during the project period (and thus such revenues have not been included in the financial modelling for the project), these investments will enable a reduction in Reverse Osmosis concessionaire water purchases over time, progressively reducing OPEX costs and improving WSC financial performance. The activity will therefore be financed using a concessional loan co-financed by GCF and CDB.

The second activity (2.1.2), and all of its sub-activities, focuses on climate-proofing existing water supply infrastructure. This may reduce costs of damage to WSC infrastructure and lost income. Given that the primary financial benefits associated with these investments are the potential avoidance of future climate-related loss and damage rather than directly generating increased revenues, grant financing is considered to be appropriate.

The third infrastructure activity (2.1.3), and all of its sub-activities, focuses on physical water loss reduction, using a combination of pressure management and pipe replacement, targeted in vulnerable locations. As with the first activity under Output 2.1, this activity may not directly increase WSC revenues in the short run (and thus this was not included in the financial modelling), but these investments will reduce WSC's operating costs and improve operational efficiencies over time. The activity will therefore be financed using a concessional loan co-financed by GCF and CDB.

Grant funding is proposed for Project Management activities, which will be combined with in-kind counterpart contributions from WSC.

How were co-financing amounts and prices determined?

To make the project financially viable the proposed project requires grant funding for Project Management and TA components (Outputs 1.1 and 1.2) as well as the climate-proofing elements of Output 2.1, under Activity 2.1.2. These climate proofing investments provide no opportunity for increased revenue or direct savings (from e.g. water losses) and therefore the investments will reduce the likelihood of future climate related damages to WSC assets, with indirect savings related to future avoided climate impact losses. With no increase in revenues, grant funding is considered necessary.

CDB has limited grant financing that it can provide to/for its Borrowing Member Countries (BMCs). Grants are typically allocated through CDB's multi-year Special Development Fund (SDF) cycles, which is the Bank's pool of concessional resources. Due in part to the scarce nature of highly concessional financing in each SDF cycle, CDB's Board has adopted a structure in which the most concessional resources are earmarked for lower income BMCs. CDB is therefore unable to provide TA grants as co-financing under Output 1.1 and 1.2, nor is it able to provide investment grants as co-financing under Output 2.1.

The Bank will instead provide loan co-financing under Output 2.1. This co-financing will be provided in the form of CDB's Ordinary Capital Resources (OCR), which are the Bank's market rate resources. OCR is provided as a variable-rate loan, the pricing of which is determined by CDB's Board of Directors based on, *inter alia*, the Bank's own borrowing costs on private capital markets.

CDB is proposing to provide 50% of the loan financing needed for relevant Output 2.1 activities, and that the remaining 50% be provided by GCF in the form of a concessional loan. The proposed pricing of the GCF loan, as well as the proposed 50-50 co-financing ratio between GCF and CDB, is based on the need to provide a favorable blended interest rate to make the loan-financed investments financially and operationally viable for WSC. This is

described in more detail in Annex 3: Financial and Economic Analysis. The infrastructure construction costs have been obtained through an initial costing exercise using WSC and local engineers and quantity surveyors, refined with current market rates (obtained by local quantity surveyors) once construction specifications were developed.

How does the concessionality of the GCF financing compare to that of the co-financing?

The total estimated project cost is US$65.199 million. The project will be funded through a blend of resources from CDB's Ordinary Capital Resources via a loan, WSC in in-kind contributions, and the GCF through both concessional loans and grants. CDB's OCR loan will finance US$12.55 million (19% of total financing) at a variable interest rate of 5% per annum, with a 1% commitment fee on the undisbursed balance. Similarly, the GCF concessional loan will contribute US$12.55 million (19% of total financing) at a fixed interest rate of 0.75% per annum, with a 0.75% commitment fee, and a 0.5% service fee. The GCF grant will account for US$37.506 million (58% of total financing) to support specific non-revenue generating project components. The WSC will contribute US$2.602 million (4% of total financing) in counterpart in-kind resources. This financing structure blends market-based and highly concessional terms to optimise affordability, ensure fiscal sustainability, and enable the project to leverage climate finance in support of efforts to build resilience into the water sector of The Bahamas.

Justify why the level of concessionality of the GCF financial instrument(s) is the minimum required to make the investment viable.

As outlined above, the proposed activities under Outputs 1.1 and 1.2 are non-revenue-generating interventions and are therefore only viable if supported using grant financing.

With regards to Output 2.1, the financial modelling for this project (see Annex 3) includes an alternative scenario in which the full cost of Output 2.1 (US$ 52.365 million) is financed using a concessional loan with the same 50-50 split (between GCF and CDB resources), resulting in a blended interest rate of 3.03%. Under this alternative scenario, the project would have a benefit cost ratio of less than 1 and a negative Internal rate of return. Under this scenario, the net present value (NPV) of the savings resulting from the investments in resilience (inflows) would not outweigh the NPV of loan repayments (outflows).

Under the proposed project scenario, where the loan component of the project is US$25.091M for Activity 2.1.1 and 2.1.3, the financial benefit cost ratio of the project is 1.53 (assuming the most likely climate impacts), returning a positive IRR. This illustrates the requirement for the proposed concessionality.

Additionally, how does the financial structure and the proposed pricing fit with the concept of minimum concessionality? Who benefits from concessionality?

The current financial constraints of WSC, which in essence result from tariffs that do not cover the high cost of water, means that WSC is not currently able to invest in resilient water supply systems. This leaves them exposed to climate risks and resulting damages, adding additional reconstruction costs to WSC, which will increase as climate change impacts become more intense and exacerbate WSC's current financial constraints. This creates the need for concessional finance for climate proofing. This support will focus on 6 priority islands which, in terms of water resources and water supply, have been identified as the most vulnerable to climate change, and therefore exposed to the greatest climate related damages, meaning the project will have the biggest impact in terms of supporting WSC in moving towards financial sustainability.

In accordance with WSC's Corporate Business Plan, it is anticipated that as tariffs are adjusted to account for the true cost of water, WSC will gradually move towards financial sustainability. This project will support this transition by reducing WSC's exposure to climate risks that have not been accounted for in their current costed investment plans and cost/revenue projections. It is anticipated that this concessional support will enable WSC to scale this project across all their systems in the future resulting in climate resilient water supply systems to all of their customers. The households and businesses served by WSC will therefore benefit most from the concessionality provided under Output 2.1, particularly over the medium/long term.

The grant financing of TA components to improve the governance of the sector and water resources management benefits the country as a whole and is anticipated to support reductions in the cost of water in the future as climate resilient groundwater use is optimized.

B.6. Exit strategy

Explain how the project/programme will successfully exit once implementation is completed, including how results and benefits will continue beyond the project/programme period and how the contribution to paradigm shift will be maintained.

Provide information on additional actions to be undertaken by public and private sector or civil society as part of the project/programme to ensure sustainability of the results attained.

Each of the components of the GCF project design is intended to enable a post-project exit strategy to be realized by achieving a paradigm shift in the way water resources, and water supply infrastructure management is planned, delivered and funded, with climate resilience integrated into their objectives.

Output 1.1 secures stakeholder ownership and responsibility through a combination of policy and legislative reforms, to governance instruments, mandating and enforcing government departments (DEPP) and WSC to undertake and deliver on water resources and water infrastructure management roles.

Output 1.1 also supports the establishment of national IWRM coordination mechanisms and IWRM plan delivery – already ratified by Cabinet – increasing multi-agency ownership of water sector reforms and activities, both across wider government and including civil society and the private sector. The IWRM institutions and governance mechanisms include private sector and civil society representation, ownership and oversight, as well as public awareness campaigns to advocate and encourage involvement. Legislation aimed at protecting freshwater lenses will empower and provide ownership of IWRM to local communities for local action. This will commence in New Providence Windsor Wellfield, but be used to advocate for similar local community initiatives across the Family Islands.

Long term financial stability (and the ability to sustain climate resilience OPEX and climate resilient CAPEX investment) of WSC will in large part be delivered by operationalizing URCA as the water sector economic regulator, with authority to independently set tariffs, eventually at levels which can fund climate resilience. URCA's own OPEX will be met as a core budgetary cost by the government.

Output 1.2 includes the establishment and operation of a national Water Resources Management Unit (WRMU), which also has not insignificant annual OPEX costs, to protect the nation's groundwater resources. Responsibility for recurrent costs will become the responsibility of the Government of Bahamas post-project completion. Capacity building of the WRMU is critical to long term functionality, hence the substantial effort in training, technical support and establishing technical partnerships with both internationally recognised universities with existing long-term connections to The Bahamas, and the WRMU working closely with the University of The Bahamas on supporting course content and input to BSc and MSc courses and encouraging university research and student internships.

Clearly Output 2.1 also has substantial post-project maintenance costs associated with new and upgraded water supply assets being operated and maintained at a greater level of active adaptive management reflecting climatic risks and dynamic conditions. WSC will bear overall responsibility for all O&M associated with the investments made under Output 2.1.

Recognising the increasing operational commitments across these agencies, the project uses Output 1.1 and 1.2 to enable WSC to re-align its focus away from its high dependency on expensive desalination water purchases (84% of production) to using progressively greater quantities of cheaper but now protected and well managed fresh groundwater lenses (RO purchases are 51% of WSC 2023 OPEX costs at US$42 Million), generating substantial OPEX savings and enabling government WSC subsidies to be reduced and re-allocated to URCA and WRMU, delivering a technically and financially sustainable exit strategy for these water sector functions.

The progressive OPEX savings realized by reduction in RO purchases, combined with Output 2.1 non-revenue water reduction and climate-informed tariff reforms, will enable WSC to not only sustain its OPEX more easily but also afford greater CAPEX investment to mainstream climate resilience into a rolling programme of utility wide upgrades and expansions, delivering a technically and financially sustainable exit strategy for WSC.

C. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount	Currency
	50.051	million USD ($)

GCF financial instrument	Amount	Tenor	Grace period	Pricing
(i) Senior loans	12.546	20 years	5 years	0.75 %
(ii) Subordinated loans	Enter amount	Enter years	Enter years	Enter %
(iii) Equity	Enter amount			Enter % equity return
(iv) Guarantees	Enter amount	Enter years		
(v) Reimbursable grants	Enter amount			
(vi) Grants	37.506			
(vii) Results-based payments	Enter amount			

(b) Co-financing information	Total amount	Currency
	15.147	million USD ($)

Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
Caribbean Development Bank	Senior Loans	12.546	million USD ($)	17 years 5 years	Variable	pari passu
WSC	In kind	2.602	million USD ($)	Enter years Enter years	Enter%	Options
Click here to enter text.	Options	Enter amount	Options	Enter years Enter years	Enter%	Options
Click here to enter text.	Options	Enter amount	Options	Enter years Enter years	Enter%	Options

(c) Total financing (c) = (a)+(b)	Amount	Currency
	65.199	million USD ($)

(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)

Please also explain other contributions such as in-kind contributions including tax exemptions and contributions of assets.

WSC and other IWRM stakeholders will make many in-kind contributions to support the timely execution of this project. The WSC in-kind contributions that directly relate to project management costs and can be quantified have been included as in-kind co-financing (see above). This includes a dedicated Project Coordinator whose responsibility is to liaise and enable the project to utilize WSC procurement, auditing and IT functions, as well as coordinate GCF and non-GCF project on-island and national activities to avoid duplication, look for complementary, and take advantageous of potential efficiencies, eg tender awards. WSC will also provide office space, IT network, etc. These WSC in-kind contributions are valued at US$ 2.602 Million. WSC and other IWRM stakeholders will also make additional in-kind contributions, for example by allocating staff time to participate in/support execution of some activities and contracts (e.g. WSC back-office staff), providing spaces to serve as meeting venues, providing local field transport etc.

	These are difficult to estimate and quantify and have therefore not been included as in-kind co-financing contributions.

C.2. Financing by component

Please provide an estimate of the total cost per component and output as outlined in section B.3. above and disaggregate by source of financing. More than one co-financing institution can fund a single component or output. Provide the summarised cost estimates in the table below and the detailed budget plan as annex 4.

Component	Output	Indicative cost million USD ($)	GCF financing		Co-financing		
			Amount Options	Financial Instrument	Amount Options	Financial Instrument	Name of Institutions
Technical Assistance Component	Output 1.1	1.571	1.571	Grants	0		
Technical Assistance Component	Output 1.2	7.653	6.419	Grants	1.234	In-Kind	WSC
Investment Component	Output 2.1	52.366	12.546	Senior loans	12.546	Senior loans	CDB
			27.274	Grants			
Project Management and Monitoring Reporting		3.609	2.242	Grants	1.367	In-Kind	WSC
Indicative total cost (USD)		65.199	50.051		15.147		

C.3 Capacity building and technology development/transfer

C.3.1 Does GCF funding finance capacity building activities?	Yes ☒ No ☐
C.3.2. Does GCF funding finance technology development/transfer?	Yes ☒ No ☐

If the project/programme is expected to support capacity building and technology development/transfer, please provide a brief description of these activities and quantify the total requested GCF funding amount for these activities, to the extent possible.

Capacity building is integrated across the project design. In Sub-Activity 1.1.2.3 training is to be provided to URCA to develop the capacity to regulate water supply tariffs. As the existing utility regulator, the processes of tariff assessment, review, justification and approval are well understood, but the experience to apply this to the water supply service providers does not exist. Training will be provided to ensure adequate understanding of water supply OPEX and CAPEX requirements.

Output 1.2.has capacity building across the different activities, including: training in hydrogeology, monitoring, data system management, hydrogeological data analysis, hazard evaluation, climate risk vulnerability assessment, IT hardware and software operation and maintenance, secretariat governance training, and publication.

Output 1.2 also provides technical training across all sectors: climate risk vulnerability assessment, climate risk reduction strategies, as well as specific training and support to WSC on climate resilient investment planning and SOP development and operationalisation.

Output 2.1 does on-the-job technical training across all the activities on: wellfield construction, water supply infrastructure resilience upgrades and leakage reduction.

Technology development and transfer includes: developing and operating remote island wellfield monitoring (Activity 1.2.1.), introducing and using storm surge groundwater impact assessment numerical modelling (Sub-activity 1.2.2.2); developing and operating a national IWRM data DSS (Activity 1.2.3); and climate risk reduction optimisation of wellfield operations (Activity 2.1.1).

D. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF's Initial Investment Framework.

D.1. Impact potential

Describe the potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas.

The project contributes to ARA2: Health, Well-being and **Water Security** and ARA 3: **Infrastructure** and the Built Environment: (i) by increasing the climate resilience of groundwater resources and dependent wellfields to climate risks (specifically drought and cyclonic storm surge inundation); (ii) increasing the climate-proofing of island water supply infrastructure against climatic risks (specifically storm surges, cyclonic winds and drought); (iii) reducing water demand by reducing leakage; and (iv) shifting utility dependence on expensive desalinated water purchases to greater exploitation of climate resilient (and cheaper) groundwater resources, generating a paradigm shift in utility financial performance thereby enabling long term climate resilience focussed CAPEX investment and strengthened climate risk reduction operation and maintenance, utility wide.

As applicable, describe the envisaged project/programme benefits for mitigation and/or adaptation.

The project will increase the ability of the water sector and dependent stakeholders (water service providers, water resource managers, water resource users, land users, disaster risk reduction agency) to adapt to climate change-driven increases in drought, storm surge, surface flooding, high winds and wildfire risks caused by increasing temperatures, increasing cyclone intensity (resulting in increasing wind speeds and intense short duration rainfall events) and sea level rise, thereby improving the nation's water security.

The increase in adaptation capacity is delivered through a combination of: governance, water resources and water supply infrastructure improvements, including: policy, legislation and stakeholder engagement; water resources management capacity building; data-informed decision making; water demand reduction; climate risk vulnerability assessment and risk reduction measures planning capacity building and implementation; and increasing reliance on groundwater to reduce dependence on expensive desalinated water purchases resulting in improved utility finance performance enabling mainstreaming of climate resilience into future CAPEX and OPEX.

Provide the intended outcomes for adaptation by elaborating on how the project/programme contributes to increased climate-resilient sustainable development.

The project uses a combination of two water security paradigm shifting pathways: enhancing water conservation - through leakage reduction; and strengthening IWRM and water management - through policy, legislation and planning reforms, increasing numbers and types of stakeholders involved in key decision-making using institutional IWRM governance reforms, groundwater resources management and infrastructure climate proofing.

Calculations should be provided as an annex. This should be consistent with section E.3 reporting GCF's core indicators.

Direct beneficiaries are those WSC customers who will benefit directly from infrastructure-related support under Output 2.1. These households will benefit from objectively resilience enhancing improvements in the water supply system increasing their water security to climate shocks (e.g. hurricanes and storm surge) as well as stresses (e.g. sea level rise and meteorological impacts on water resources). These benefits are delivered though through a combination of: improving wellfield design, location and operation to reduce drought and storm surge caused salinity; increasing climate proofing of water supply infrastructure (especially to cyclonic storm surges and high winds, but also drought period wildfires) and reducing water leakages which reduce wellfield abstraction and increase water storage retention times during supply outages. Across the 6 islands and 27 supply systems receiving Output 2.1 infrastructure resilience improvements these WSC-served population numbers are: New Providence (Windsor Wellfield improvements) 190,668; Abaco 15,268; Andros 8,769, and Acklins 568; giving an approximate total person count of 215,273 people, which is approximately 54% of the national population of The Bahamas.

Indirect beneficiaries are estimated at 199,727 persons. This is the remaining population of the Bahamas that do not benefit from direct infrastructure-related interventions but benefit from national water sector resilience improvements provided by: the national water governance improvements to develop and use a national policy (Activity 1.1.1), operate an independent economic water regulator (Sub-activity 1.1.2.3), establish and operate IWRM institutional arrangements (Sub-activities 1.1.2.1, 1.1.2.2 and Activity 1.1.3), establish groundwater water resources management legislation (Sub-activities 1.1.2.1 and 1.1.2.4); and the establishment and operation of a national Water Resources Management Unit and Decision Support System (Activities 1.2.1, 1.2.2 and 1.2.3).

D.2. Paradigm shift potential

Paradigm shift potential is defined as 'degree to which the proposed activity can catalyse impact beyond a one-off project or programme investment'. In this section, elaborate on the contribution to paradigm shift and how the proposed project/programme aims to contribute towards it based on the theory of change described in section B2(a).

The project delivers three outcomes which all contribute to the paradigm shift: improved and climate resilient water sector governance; improved freshwater resources protection and adaptation to climate resilience; and improved climate-proofing of water supply infrastructure to reduce water supply disruptions and financial impacts on the utility. Collectively the outcomes enable the utility to increase exploitation of the more resilient (and cheaper) groundwater resources, enabling reduction in expensive desalinated water purchases and creating a paradigm shift in utility financial performance, which will enable funding of utility climate resilient CAPEX and OPEX as well as government core budgetary support to maintain economic and environmental regulator functions.

- *Potential for scaling up and replication*

The project delivers water supply infrastructure climate-proofing upgrades to 27 water supply systems on 6 islands, providing a clear model for climate-proofing water supply systems on individual islands. WSC operates 64 water supply systems across 18 Islands, providing significant potential for this model to be replicated across the country. The project-supported training and other support to enhance WSC capacity (e.g. on climate risk assessment and risk reduction, climate proofing design and delivery, increased use of groundwater resources by WSC staff and managers, and mainstreaming climate risk reduction into both the CAPEX and OPEX programmes) will also contribute to equipping WSC to extend climate proofing measures to the systems it manages across the country.

Private water supply providers (tourist islands) and the utility on Grand Bahama will benefit from the national policy and legislative reforms, national water resources management and IWRM reforms, which will support scaling up and replication across these islands and water supply service providers.

The local IWRM groundwater lens management and protection initiative for the Windsor Wellfield on New Providence should be replicated firstly for all of the exploited and secondly potentially exploitable freshwater lenses in the country.

- *Potential for knowledge sharing and learning*

The IWRM institutional reforms will increase the involvement and access of a much wider group of governmental and non-governmental stakeholders to project deliverables. Most obviously the creation and operation of the water sector DSS, designed to capture multi-stakeholder data, develop accessible public and limited access databases, data interrogation and visualization on-line portals, knowledge products eg climate hazard vulnerability maps, drought and wildfire early warnings, groundwater resources and land use maps, etc., will directly support public and private knowledge sharing and learning.

The project also delivers critical learning in areas where knowledge and experience is currently insufficient, including hydrogeology, data management, water sector tariffs, IWRM governance and implementation support, and climate risk assessment.

In addition, the WRMU will engage with the University of The Bahamas and provide WRM and IWRM support to BSc courses as well as MSc and PhD research opportunities and student internships and placements on hydrogeology, IWRM, science communication, climate hazard assessment and risk reduction – developing a national community of practice.

- *Contribution to the creation of an enabling environment*

In addition to the policy and legislative frameworks, the project contributes to further strengthening the enabling environment by introducing and institutionalising IWRM multi-stakeholder engagement, promoting intersectoral policy and planning harmonization, integration of climate resilience into other sectoral as well as inter-sectoral national development and climate risk reduction plans. The project will also contribute to improving the financial performance/standing of WSC, which (over time) can improve its access to affordable capital that will be required to meet future CAPEX needs.

- *Contribution to the regulatory framework and policies*

The project specifically strengthens the policy and regulatory framework by developing a national water policy, revising and delivering legislative reforms on national water resources management and local freshwater lens protection, strengthening the utility economic regulator, establishing a water resources management agency and regulator, and initiating and implementing IWRM planning.

- *Overall contribution to climate-resilient development pathways consistent with relevant national climate change adaptation strategies and plans*

The project will support The Bahamas to transition toward both of the climate-resilient water security pathways – water conservation and strengthening of IWRM and water resources management – that are outlined in the GCF Sectoral Guide on Water Security. The Bahamas Updated (2nd) Nationally Determined Contribution (NDC) identifies the key vulnerability of water resources to storm surges, hurricanes and SLR and the lack of resilience of water-related infrastructure and calls for ensuring water security (as did the 1st NDC) including contingency planning, groundwater resources assessment and protection, increasing utility supply access. These are consistent with the project climate resilience pathways.

D.3. Sustainable development

Describe the wider benefits and priorities of the project/programme in relation to the Sustainable Development Goals and provide the potential in terms of:

- *Sustainable Development Goals*

The 'Climate Resilience of the Water Sector in The Bahamas' contributes directly to the following SDGs: Goal 6 - Clean Water and Sanitation; Goal 13 – Climate Action; and Goal 3 – Good Health and Well-Being; as well as indirectly to the following SDGs: Goal 1 – No Poverty; Goal 8 – Decent Work and Economic Growth; Goal 11 - Sustainable Cities and Communities; and Goal 15 – Life on Land.

- *Environmental co-benefits*

Improved groundwater resources management and IWRM will result in reduced freshwater lens vulnerability to drought, storm surges and on-land rainfall flooding risks, and their impacts on rising salinity as well as potential for flood water mobilization and ground infiltration of land use hazardous substances. This can help protect groundwater-dependent freshwater terrestrial aquatic ecosystems, including pine woodlands, coppice woodlands, wetlands and swamps, as well as terrestrial and coastal ecosystems that are dependent on brackish (freshwater and seawater blends) for their ecosystem health eg hypersaline ponds, mangroves.

- *Economic co-benefits*

The improved climate resilience of groundwater resources, their wellfields and water supply infrastructure improve the water security of all commercial businesses in the country. Of particular importance to The Bahamas is the tourism sector, which contributes 33% of the national GDP (2022) and >50% of total employment, and which requires high quality, reliable and secure water supplies that are resilient to climate change impacts. The coastal locations and high water demands of the tourism infrastructure means there are few alternatives to reticulated water supply provision.

- *Mitigation Benefits*

The project includes activities as well as strategic climate resilience utility objectives which contribute to reducing/avoiding greenhouse gas emissions. In particular, Activity 2.1.3 focuses on water loss reduction measures that will not only reduce pumping costs for WSC (and by extension, energy demand for pumping that is currently

supplied primarily by fossil fuel-powered electricity generation) but will also reduce the power generation requirements of the desalination plants operated by private concessionaires.

The broader project strategic objective is to use improved groundwater resources management coupled with instigating IWRM to reduce climate risks to the freshwater lenses and enable WSC groundwater abstraction to be increased, expanding existing wellfields, relocating others, recommencing abstraction in abandoned wellfields and developing new wellfields. This will enable WSC to reduce its dependency on desalination (currently 84% of production) which will reduce the desalination plant concessionaires' power generation required to supply WSC with potable water.

- *Gender-sensitive development benefit*

The WSC has nearly 500 employees. Less than 40% of their employees are women, and of those, approximately 65% have clerical roles. Thus, women are somewhat disengaged from the technical processes and decision-making. This gender distribution of employees is common for water utilities in the country and the broader Caribbean region, with the WSC likely having among the highest percentage of female employees. The project will support inclusive capacity building in the water sector by offering fair opportunities for hiring and training in WSC. Training will not be limited only to the WSC but will include other stakeholders. These opportunities can empower women to take on technical and leadership roles in water management and water governance, and thus, foster gender equality in the sector.

The training of workers and implementation of the Gender Action Plan (GAP) developed for the project will also address the gender disparity in the construction workforce. Additionally, the improvement in the reliability of water supply through the project's physical interventions will positively impact businesses, schools and vulnerable populations that had in the past experienced numerous water lock-offs. Further the gender-sensitive stakeholder engagement throughout project life cycle and well and sensitisation sessions recommended under the GAP will serve to increase awareness of WSC staff, contractor and the population within the locations for project intervention. Increasing awareness on real issues such as a zero-tolerance for sexual exploitation, abuse and harassment (SEAH) is a part of the approach to effective mainstreaming.

D.4. Needs of recipient

Describe the scale and intensity of vulnerability of the country and beneficiary groups and elaborate how the project/programme addresses the issue (e.g. the level of exposure to climate risks for beneficiary country and groups, overall income level, etc.). Describe how the project/programme addresses the following needs:

- *Vulnerability of the country and/or specific vulnerable groups, including gender aspects (for adaptation only)*

The Bahamas is an archipelago of 30 inhabited islands scattered over >13,000 square kilometres of ocean. The islands are low-lying and located in the North Atlantic hurricane belt. The Bahamas has historically been hit by a hurricane every 3 years, and a major hurricane (Category 3, 4 or 5) every 12 years. Since 2000 however, major hurricanes have hit the islands every 3 years, bringing extreme rainfall, high winds and storm surges. Whilst these can impact any island, those in the north - Andros, Abaco and Grand Bahama - are particularly exposed, damaging water supply infrastructure. The strength and intensity of North Atlantic hurricanes is projected to increase, at the same time as Sea Level Rise adds to storm surge risks. 100% of the population is exposed to cyclone strength winds, 48% to storm surge, 24% to inland flooding and 12% to wildfire (mostly in the northern pine islands).

The southern islands are drier than the northern islands, with the northern islands relying on groundwater resources, the southern islands mostly relying on desalination. Projected SPEI is reducing more quickly (ie getting drier more quickly) in the central and northern islands than the southern islands, increasing the risk of water insecurity for the northern islands which rely on groundwater.

The project has a primary focus on the remote outer islands of The Bahamas, known as the Family Islands - some of the Family Islands are more than 500km from NP - rather than the capital island of New Providence (NP) or the industrial freeport of Grand Bahama. NP does receive project infrastructure support specific to only a major wellfield (Windsor) which contributes to the water security of the most populated island in the country.

Using a multi-criteria analysis, CDB, WSC and the project design team were able to identify and prioritize support for the islands that are considered to be most vulnerable and in need of assistance. A national climate risk and

vulnerability assessment and island-specific climate risk and vulnerability assessments were also developed as part of the GCF project design process (see Annex 2: Feasibility Study, notably Appendices A1-A5) to ensure that the proposed activities respond to the most acute needs and vulnerabilities. In short, the project has been designed to directly respond to the most pressing water sector climate change adaptation needs in some of the most vulnerable islands in The Bahamas.

- *Economic and social development level of the country and the affected population*

NP has a nominal GDP of US$ 8,400 Million (75% of national GDP), compared to Abaco (US$ 35 Million), Andros (US$ 95 Million) and Acklins (joint income with 3 other islands) US$ 80 Million. The Family Islands combined provide only 10% of the national GDP, the balance being Grand Bahama (15%). The poverty rate in the Family Islands is 17%, higher than NP, although NP urban poverty is still not insignificant (12 %).

NP has the only tertiary level referral hospital and tertiary level education institutes – there are only health clinics spread across all of the Family Islands. In addition, access to NP national health and education infrastructure for Family Island residents is problematic given that some islands are more than 500km from the capital and inter-island transport can be prohibitively expensive.

- *Absence of alternative sources of financing (e.g. fiscal or balance of payments gap that prevents government from addressing the needs of the country; and lack of depth and history in the local capital market)*

WSC operates at a significant financial loss that is covered by government subsidies, and therefore has limited financial autonomy from the central government. The lack of financial cost-recovery is partly due to the high dependence on expensive RO water purchases from private concessionaires, but is also a function of inadequate tariffs, which in the absence of an independent regulator, have not been increased since the 1990's. WSC is therefore constrained in its ability to borrow independently.

The government's priority for WSC is to provide a safe water supply for all residents across the Family Islands. Water sector loans to the Government of Bahamas have therefore tended to focus on expansion of WSC operations and infrastructure into unserved communities. There is little appetite from the government to take on additional debt for long term climate proofing the water sector when >30% of communities currently have no WSC water supply.

The central government also has limited capacity and fiscal space to take on additional debt. In 2023, the central government's debt amounted to 83 % of GDP, with the fiscal deficit being 4.1 % of GDP. This elevated level of debt follows Hurricane Dorian (which inflicted major loss and damage) and the COVID-19 pandemic (which disrupted the tourism sector on which economic activity in The Bahamas, and thus tax revenues, are heavily dependent). As with all Caribbean countries, The Bahamas must also grapple with the fact that in any given hurricane season, the country could suffer significant damages and disruptions to economic activity, which not only compound fiscal challenges but can also reduce the appetite to lend to the central government on private capital markets and thus affect the interest rates at which it can borrow. The weighted average interest rate on external loans is 6.45%.

In this context, it is also important to reinforce that the project and its proposed investments are not viable at the lower levels of concessionality that could be provided by other development partners (e.g. CDB, IDB). As outlined in the financial analysis (see Annex 3), if Output 2.1 were to be entirely financed with concessional (below market-rate) debt financing, the project would be financially unviable, and WSC would not be able to fund the loan repayments and thus require significant central government support – assistance that (as outlined above) is simply not possible at this juncture.

D.5. Country ownership

Please describe how the beneficiary country takes ownership of and implements the funded project/programme. Describe the following:

- *Existing national climate strategy*

National Policy for the Adaptation to Climate Change (2005) includes avoiding, minimising and adapting to climate change impacts on the water sector as one of its policy goals and objectives. The 10 policy directives refer to the need for investigations and studies, increasing water storage, land use management not compromising water supplies, and tourism water conservation programmes, across multiple sectors. In addition, there is a specific directive on Water Resources which talks to (in addition to the above needs), a National Water Management Plan,

drought period water security, and water conservation. The proposed project is fully aligned with this policy and the priorities contained therein.

- *Existing GCF country programme*

Presently, no national GCF-funded projects are being implemented in The Bahamas. However, there are 8 projects in the GCF project pipeline. This project is the only one in the project preparation facility (or full project design) stage, while the other 7 are in the readiness (or pre-concept) stage. Of those projects in the readiness stage, 4 aim to strengthen the country's programme development, 2 address climate change mitigation needs, and 1 supports climate resilient health systems. Based on the focus areas of those projects, there are no overlaps or duplication of works between this project and those in the pipeline.

- *Relevance to and alignment with existing policies such as Nationally Determined Contributions (NDCs), Nationally Appropriate Mitigation Actions (NAMAs), and National Adaptation Plans (NAPs)*

The Bahamas Updated NDC (2022) identifies the key vulnerability of water resources to storm surges, hurricanes and SLR, and that these risks are increasing with climate change. The NDC also highlights the current lack of resilience of water-related infrastructure and calls for ensuring water security including contingency planning, groundwater resources assessment and freshwater lens protection, increasing utility supply access, increasing water storage, and national standards for geo-spatial for water resources. The NDC also specifically calls for GCF funding support. The proposed project, and the water sector development pathways that it supports, are fully aligned with these NDC priorities and will directly contribute to achieving its goals and targets.

- *Capacity of Accredited Entities or Executing Entities to deliver*

Kindly refer to Section B4 for more information about the capacity of CDB and WSC.

- *Role of National Designated Authority*

The NDA (in the Office of the Prime Minister or 'OPM') has been in monthly meetings with the GCF project design team, WSC (as the EE) and CDB (as Accredited Entity and co-financer) over the last 18 months. The NDA has been intimately involved in the project design process, including: leading the national IWRM consultations (2023); updating and securing Cabinet approval of the national IWRM governance reforms (as well as the WRMU and DSS); as well as providing political insight into island selection for infrastructure upgrades.

OPM will remain involved in the project implementation, including by supporting oversight as the chair of the multi-stakeholder Project Steering Committee (itself the proto-IWRM APEX body).

- *Engagement with civil society organizations and other relevant stakeholders, including indigenous peoples, women and other vulnerable groups*

The GCF project design process is an example of robust national stakeholder engagement and consultation. Continuous consultation and dialogue between all project actors/partners has been a key feature of the project design and preparation process over the past 18 months. 41 meetings have been held with CDB (on a bi-weekly basis), while 15 meetings have been held with the NDA (on a monthly basis), and 101 meetings have been held with the WSC.

In addition, 50 meetings with 28 individual agencies and organisations were held ahead of a multi-stakeholder national IWRM workshop/consultation in July 2023 – an event that was attended by 46 delegates from 12 government agencies, 2 private sector operators and 3 civil society representatives.

During the project design process, each of the 7 Family Islands that were visited by the team included a multi-stakeholder governance meeting with the island council and its civil society representatives, to discuss the project objectives and opportunities, and seek local perspectives on water supply climate risks.

A total of 207 meetings were held with Bahamian stakeholders during the project design process. Details of the stakeholder engagement are available in Annex 2: Feasibility Study (see in particular Appendix I).

D.6. Efficiency and effectiveness

Describe how the financial structure is adequate and reasonable in order to achieve the proposal's objectives, including addressing existing bottlenecks and/or barriers, and providing the minimum concessionality to ensure the project is viable without crowding out private and other public investments. Refer to section B.5 on the justification of GCF funding requested as necessary.

As outlined in Section B.5, Outputs 1.1 and 1.2 include important activities that strengthen the enabling environment and institutional capacities, thereby addressing key barriers that are inhibiting the transition toward climate-responsive and sustainable development pathways in the water sector *but will not* directly generate revenues for any of the project partners. These activities should therefore be financed using grant financing.

Meanwhile, the proposed financial structure for Output 2.1 includes concessional loans (for 2.1.1 and 2.1.3) and grants (for 2.1.2). Although the activities to be financed using blended concessional loans are not expected to *directly* generate revenue for the Executing Entity in the short run, they will support its broader revenue generation efforts and thus loan financing is considered to be appropriate. The proposed pricing of the (blended) loan financing is based on the need to ensure that this endeavour is financially and operationally viable for WSC. More information is available in Annex 3: Financial and economic analysis. By contrast, the only financial benefits that can be accrued from the activities to be financed using investment grants would be derived from the potential to avoid future climate change-related loss and damage. Grant financing is therefore appropriate for such investments.

Please describe the efficiency and effectiveness of the proposed project/programme, taking into account the total financing and mitigation/ adaptation outcome the project/programme aims to achieve, and explain how this compares to an appropriate benchmark.

The project has a total cost of US$ 65.199 Million reaching 415,000 total beneficiaries. This is a per capita cost of US$ 157 per total beneficiary. Output 1.1 and Output 1.2 combined have a total budget of US$ 9.22 Million reaching 415,000 total beneficiaries. This has a per capita cost of US$ 22 per person. Output 2.1 has a budget of US$ 52.365 Million reaching 215,000 direct beneficiaries. This is a per capita cost of US$ 243 per person.

When compared to other GCF funded SIDS water sector climate resilience projects: Barbados (FP060) US$148 per capita; Fiji (FP008) US$ 763 per capita; Grenada (FP059) US$ 423 per capita; Maldives (FP112) US$ 148 per capita; Marshall Islands (FP112) US$ 448 per capita; this project's US$ 156 per capita costs are lower, and therefore extremely efficient.

Please specify the expected economic rate of return based on a comparison of the scenarios with and without the project/programme.

EIRR is provided in the table below:

	Without Project	With Project (Economic)
Low Impact	5%	9%
Mid Impact	4%	12%
High (Dorien) Impact	2%	15%

Please specify the expected financial rate of return with and without the Fund's support to illustrate the need for GCF funding to illustrate overall cost effectiveness.

FIRR is provided in the table below:

	Without Project	With Project (Financial)
Low Impact	5%	18%
Mid Impact	4%	18%
High (Dorien) Impact	2%	18%

Please explain how best available technologies and practices have been considered and applied. If applicable, specify the innovations/modifications/adjustments that are made based on industry best practices.

The project uses best practice IWRM approaches to deliver water governance reform; a best practice water supply systemic climate risk vulnerability assessment approach to inform holistic system wide risk reduction measures being integrated into utility CAPEX programmes and OPEX procedures; and best available groundwater investigation and monitoring practices and GIS based data management and on-line public access visualisation technologies and data backup.

E. E. LOGICAL FRAMEWORK

E.1. Project/Programme Focus

Please indicate whether this proposal is for a mitigation or adaptation project/programme. For cross-cutting proposals, select both.

☐ Reduced emissions (mitigation)

☒ Increased resilience (adaptation)

E.2. GCF Impact level: Paradigm shift potential

This section of the logical framework is meant to help a project/programme monitor and assess how it contributes to the paradigm shift described in section D.2 above by applying three assessment dimensions - scale, replicability, and sustainability.

Accordingly, for each assessment dimension (see the definition per assessment in the accompanying guidance note), describe the current state (baseline) and the potential scenario (target) and rate the current state (baseline) by using the three-point-scale rating (low, medium, and high) provided in the guidance note. Also describe how the project/programme will contribute to that shift/ transformation under respective assessment dimensions (scale, replicability and sustainability). In doing so, please refer to section B.2(a) (theory of change).

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	Rating		
Scale	The country's water supply systems, which are largely dependent on desalination, are highly vulnerable to climate change risks. Poor understanding of the climate resilience of groundwater resources favours investment in desalination. Expensive desalination purchase operational costs and climate shocks are preventing funding of investment in sector wide climate resilient water resources and water supplies.	Low	Paradigm shift would involve increasing knowledge, management and protection of evidence-based climate resilient fresh groundwater resources, enabling increased exploitation of groundwater and reduction in desalination purchases. Coupled with water loss reduction, this will improve utility financial performance and result in increased ability to afford loan debt for investing in climate resilient water supply systems across the country thereby reducing climate risk impacts and their financial shocks to the utility.	The project intervention will deliver national technical capacity and governance reforms to manage and protect groundwater resources, increase multi-sector water user capacity on climate risk vulnerability assessment and risk reduction planning, and expand and focus infrastructure climate resilience capital investment and operation and maintenance – thereby enabling delivery of utility wide and sector wide climate resilient and sustainable water supplies.

Replicability	Water resources management and water supply infrastructure climate risk vulnerability assessment and risk reduction planning and investment is not being undertaken by water service providers – so replication is not possible.	Low	If profitable climate resilient water supply systems can be demonstrated, the solution can be replicated across the national utility's water supply systems, as well as to other public and private water supply service providers. The approach can also be replicated internationally across the Caribbean Region and beyond.	The project delivers: policy, legislation and planning reforms including IWRM; water resources assessment and management capacity; evidence-based climate risk vulnerability assessment capacity building; and climate resilience investment planning – which all can be replicated in other countries, especially in the Caribbean with similar climate exposure, capacity constraints and economies.
Sustainability	As part of the GCF project design process, IWRM governance climate resilience reform commitments, including establishing and sustaining a national Water Resources Management Unit, IWRM APEX body and supporting Secretariat, have been ratified by Cabinet. The GCF design process also advocated for inclusion of climate hazards in the national water supply utility's Corporate Business Plan, which was agreed by the utility and its board. These provide strong foundations from which to develop a climate resilient water sector. However these governance reforms are recent and require support to initiate, establish and sustain them. Structural, Financial base CR practices.	Medium	Paradigm shift would see sustainable government political and financial support to these structural governance reforms, including policy, legislative and institutional structural changes, which mainstream, legally obligate and provide capacity for their long term operation. Utility long term investment in climate resilient infrastructure will be sustained through improved financial performance achieved by water loss reduction, a move away from expensive desalination purchase to cheaper groundwater exploitation enabled by improved water resources assessment, monitoring and management, and already agreed tariff reforms. Reallocation of utility government subsidies will enable core budgetary funding of an independent tariff regulator, national water resources management unit and IWRM implementation.	The project delivers: (Output 1) a reformed governance framework, including national water policy, legislative changes enabling establishment of the water resources management unit, economic tariff regulator, groundwater protection and community IWRM; Output 2 delivers a functioning Water Resources Management Unit groundwater resources investigation, characterisation, protection; sharing of multi-agency data to provide climate risk warnings, as well as enable water sector stakeholders climate resilient decision making, supported by capacity building – including utility expansion of wellfield exploitation. Output 3 demonstrates climate resilient wellfield and water supply infrastructure intervention, reducing reliance on desalinated water, and also reducing water leakage losses, demonstrating improved utility financial performance.

			Climate risk reduction capacity building will ensure long term retained capacity in climate risk vulnerability assessment (CRVA), risk reduction planning, investment and operating procedural improvements.	The reduced financial subsidies to the national water supply utility enable long term government financial support to the economic regulator and water resources management unit.

E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

Select appropriate IRMF core and supplementary indicators to monitor project/programme progress. More than one IRMF (core and or supplementary) indicator may be selected as applicable for each GCF results area and project/programme outcome (as defined in the table in section B.2(b)). If IRMF indicators are unable to measure any given project/programme outcomes, project/programme-specific indicators should be developed under section E.5 (project/programme specific indicators).

GCF Result Area	IRMF Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final[5]	
Total project beneficiaries without overlap	Core Indicator 2: Direct and Indirect Beneficiaries Reached	Direct beneficiaries: - WSC water supply volumes to customers (billing); and - Construction quality assurance reports of infrastructure resilience upgrades. Indirect beneficiaries: - Policy documents, legislation, WRMU reports, IWRM APEX body meeting notes and Cabinet papers; and	0	Direct beneficiaries: 50,000 Indirect beneficiaries: 50,000	Direct beneficiaries: 215,273 (52% female) Indirect beneficiaries: 199,727 persons (52% female)	Direct Beneficiaries are estimated populations reliant on water supply systems receiving project resilience upgrades (wellfields, infrastructure, and/or leakage reduction) Direct Beneficiaries are those that receive direct infrastructure-related support through the project. These households will benefit from objectively resilience enhancing improvements in the water supply system increasing their

[5] The final target means the target at the end of project/programme implementation period. However, for core indicator 1 (GHG emission reduction), please also provide the target value at the end of the total lifespan period which is defined as the maximum number of years over which the impacts of the investment are expected to be effective.

		- Government core budgetary support to WRMU and URCA				water security to climate shocks (e.g. hurricanes and storm surge) as well as stresses (e.g. sea level rise and meteorological impacts on water resources). Direct beneficiaries will be monitored / verified during and post-implementation by tracking construction completion / or quality assurance reports (which have been included in the scope of works of the contractors) to determine which systems have been completed, and then using WSC customer data for that system to identify beneficiary numbers. Indirect Beneficiaries are estimated to be the remaining population (199,727 persons) who are not included among the direct beneficiaries, but who will benefit from the national water governance, policy, legislative and institutional reforms and

						improvements as well as the data monitoring, collection, analysis and use for informed decision making (Outputs 1.1 and 1.2). This will be verified through the deliverables and implementation reports of these outputs.
ARA2 Health, well-being, food and water security	Core Indicator 2: Direct and Indirect Beneficiaries Reached	Direct beneficiaries: - WSC water supply volumes to customers (billing); and - Construction quality assurance reports of infrastructure resilience upgrades. Indirect beneficiaries: - Policy documents, legislation, WRMU reports, IWRM APEX body meeting notes and Cabinet papers; and - Government core budgetary support to WRMU and URCA	0	Direct beneficiaries: 50,000 Indirect beneficiaries: 50,000	Direct beneficiaries: 215,273 (52% female) Indirect beneficiaries: 199,727 persons (52% female)	Direct Beneficiaries are those that receive direct infrastructure-related support through the project. These households will benefit from objectively resilience enhancing improvements in the water supply system increasing their water security to climate shocks (e.g. hurricanes and storm surge) as well as stresses (e.g. sea level rise and meteorological impacts on water resources). Direct beneficiaries will be monitored / verified during and post-implementation by tracking construction completion / or quality assurance reports (which

						have been included in the scope of works of the contractors) to determine which systems have been completed, and then using WSC customer data for that system to identify beneficiary numbers. Indirect Beneficiaries are estimated to be the remaining population (199,727 persons) who are not included among the direct beneficiaries, but who will benefit from the national water governance, policy, legislative and institutional reforms and improvements as well as the data monitoring, collection, analysis and use for informed decision making (Outputs 1.1 and 1.2). This will be verified through the deliverables and implementation reports of these outputs.
ARA2 Health, well-being, food and water security	Supplementary 2.3: Beneficiaries (female/male) with more climate-resilient water security	Direct beneficiaries: - WSC water supply volumes to customers (billing); and	0	Direct beneficiaries: 50,000	Direct beneficiaries: 215,273 (52% female)	Direct Beneficiaries are estimated populations reliant on water supply systems receiving project

		- Construction quality assurance reports of infrastructure resilience upgrades. Indirect beneficiaries: - Policy documents, legislation, WRMU reports, IWRM APEX body meeting notes and Cabinet papers; and - Government core budgetary support to WRMU and URCA		Indirect beneficiaries: 50,000	Indirect beneficiaries: 199,727 persons (52% female)	resilience upgrades (wellfields, infrastructure, and/or leakage reduction) Direct Beneficiaries are those that receive direct infrastructure-related support through the project. These households will benefit from objectively resilience enhancing improvements in the water supply system increasing their water security to climate shocks (e.g. hurricanes and storm surge) as well as stresses (e.g. sea level rise and meteorological impacts on water resources). Direct beneficiaries will be monitored / verified during and post-implementation by tracking construction completion / or quality assurance reports (which have been included in the scope of works of the contractors) to determine which systems have been completed, and then using WSC customer data for that system to

						identify beneficiary numbers. Indirect Beneficiaries are estimated to be the remaining population (199,727 persons) who are not included among the direct beneficiaries, but who will benefit from the national water governance, policy, legislative and institutional reforms and improvements as well as the data monitoring, collection, analysis and use for informed decision making (Outputs 1.1 and 1.2). This will be verified through the deliverables and implementation reports of these outputs.
ARA3 Infrastructure and built environment	Core Indicator 2: Direct and Indirect Beneficiaries Reached	Direct beneficiaries: - WSC water supply volumes to customers (billing); and - Construction quality assurance reports of infrastructure resilience upgrades. Indirect beneficiaries: - Policy documents, legislation, WRMU	0	Direct beneficiaries: 50,000 Indirect beneficiaries: 50,000	Direct beneficiaries: 215,273 (52% female) Indirect beneficiaries: 199,727 persons (52% female)	Direct Beneficiaries are estimated populations reliant on water supply systems receiving project resilience upgrades (wellfields, infrastructure, and/or leakage reduction) Direct Beneficiaries are those that receive direct infrastructure-related support through the

		reports, IWRM APEX body meeting notes and Cabinet papers; and - Government core budgetary support to WRMU and URCA				project. These households will benefit from objectively resilience enhancing improvements in the water supply system increasing their water security to climate shocks (e.g. hurricanes and storm surge) as well as stresses (e.g. sea level rise and meteorological impacts on water resources). Direct beneficiaries will be monitored / verified during and post-implementation by tracking construction completion / or quality assurance reports (which have been included in the scope of works of the contractors) to determine which systems have been completed, and then using WSC customer data for that system to identify beneficiary numbers. Indirect Beneficiaries are estimated to be the remaining population (199,727 persons) who are not included among

						the direct beneficiaries, but who will benefit from the national water governance, policy, legislative and institutional reforms and improvements as well as the data monitoring, collection, analysis and use for informed decision making (Outputs 1.1 and 1.2). This will be verified through the deliverables and implementation reports of these outputs.
ARA3 Infrastructure and built environment	Core 3: Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions	Utility physical asset capital value inventory documentation. Project procurement, disbursement and construction and commissioning sign-off reports.	Existing WSC asset value	Existing WSC asset value + US$ 10 Million	Existing WSC asset value + US$ 40.7 Million	Value includes pre-project utility physical asset value + GCF additional asset value + co-financier additional asset value (i.e. includes the increase in asset capital value attributed to the utility resulting from project delivery. Existing WSC asset value to be estimated in pre-construction phase

E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)					
Select at least two relevant IRMF core (enabling environment) indicators to monitor and elaborate the baseline context and project/programme's targeted outcome against the respective indicators. Rate the current state (baseline) vis-à-vis the target scenario and select the geographical scope of the outcome to be assessed. Describe how the project/programme will contribute towards the target scenario. Refer to a case example in the accompanying guidance to complete this section.					
Core Indicator	**Baseline context (description)**	**Rating for current state (baseline)**	**Target scenario (description)**	**How the project will contribute**	**Coverage**
Core Indicator 6: Degree to which GCF investments contribute to technology deployment, dissemination, development or transfer and innovation	No water resources management function or capacity. Very limited water resource monitoring and data management - with limited financial support.	low	National water resources monitoring, management capacity (WRMU). National public access water data storage and transfer system (DSS)	Legal reform, technical capacity building, monitoring network set-up and staffing of the WRMU. Capacity building, development and staffing of the DSS.	National level (one country)
Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards	No groundwater resources monitoring or analysis of safe yields and climate vulnerability. Limited inter-agency data sharing. Limited awareness of how to protect groundwater lenses	low	WRMU monitoring freshwater lenses, disseminating data (including on-line portals with training materials), climate resilient groundwater yield reports and drought warnings. WRMU supporting university courses.	Groundwater resources monitoring and hydrogeological knowledge generation and advanced capacity building learning. On-line data capture, storage, retrieval, analysis and report water management hub (DSS).	National level (one country)

	No infrastructure climate risk vulnerability assessment (CRVA) and risk reduction planning.		Multi-stakeholder data sharing agreements. IWRM governance supporting local community lens protection. CRVA mainstreamed into water utility infrastructure design, investment and operational procedures.	National IWRM governance reforms support IWRM good practices, including knowledge and data sharing. Public awareness campaigns as part of community level IWRM water resources protection. CRVA training and integration into WSC infrastructure investment programme and SOPs	

E.5. Project/programme specific indicators (project outcomes and outputs)

*This section should list out project/programme-specific performance indicators (outcomes and outputs) that are not covered in sections above (E.1-E.4). List down tailored indicators to monitor /track progress against relevant project/programme results (outcomes/outputs). AEs have the freedom to decide against which outcomes they would like to set project/programme specific indicators. If any co-benefits are identified in sections B.2(a)(b), and D.3, AEs are encouraged to add and monitor co-benefit indicators under the "**Project/programme co-benefit indicators**" section in table below. Add rows as needed.*

Please number each outcome and output as shown below to indicate association of outputs to the contributing outcome. The numbering for outputs under this section should correspond to the output numbering in annex 4 (detailed budget plan).

Project/programme results (outcomes/ outputs)	**Project/programme specific Indicator**	**Means of Verification (MoV)**	**Baseline**	**Target**		**Assumptions / Note**
				Mid-term	**Final**	

Outcome 1: Improved governance and IWRM protects freshwater resources, reducing vulnerability to climate change	Total increase in water supplied by freshwater lenses for WSC, relative to the business-as-usual scenario	WSC wellfield production data Vs water purchases data	1,245,000 (000 IG)	5% increase	10% increase	Willingness for land owners and land occupiers on the freshwater lenses, and groundwater abstractors from the freshwater lenses, will engage with the local IWRM initiative stakeholder group.
	Number of climate risk reduction measures being implemented - specifically identified within IWRM plans	Local IWRM partnership/committee risk measure actions reporting/surveying, auditing	0	5	10	
Output 1.1: Strengthened national policy, planning, legislation and regulatory environment for a coordinated and climate resilient and gender-sensitive water sector	Number of new policies and legislation that support IWRM.	Formal policy and legislation documentation	0	1	2	Political support continues
	Number of IWRM governance entities	Annual IWRM Committee meeting notes and records	0	1	2	IWRM stakeholder interest continues
	Number of annual IWRM status reports	WRMU and URCA annual water sector status reports	0	1	2	Local capacity exists for training
	Number of IWRM planning documents	Formal roadmaps and plans	0	1	2	The funding needs for organisations supported by the project are fulfilled by government after project support ceases in Year 6
Outcome 2: Climate-informed decision making and	Number of WSC climate resilience projects in design or	WSC Engineering and Planning Department	0	2	10	There is political support to accept additional loan(s) to scale up

investment planning in the water sector	the CAPEX investment plan	design reports with CRVAs				climate resilience in the water sector.
Output 1.2: Improved national water resources data and information, inclusive of sex-disaggregated data, is available to multi-sector stakeholder decision making and planning	Number of agencies using WRMU and DSS products	Annual WRU and DSS national water status reports, database access requests, data and DSS product downloads	0	10 agencies	20 agencies	Agency willingness to share data required by WRMU/DSS
Outcome 3: Water supply is less vulnerable to climate risk impacts	Number of project-supported WSC water supply systems that operate through climate events/hazards without water shortages	WSC drought warnings, minimum water storage volumes, post-cyclone response performance audits, customer complaints register	0	5	27	Climatic events/hazards occur during project implementation
Output 2.1: Climate resilient wellfields and water supply infrastructure and operations in 6 islands	Number of islands on which climate resilience infrastructure investments and upgrades have been completed.	Construction records, WSC staff training records. WSC pumping records, flowmeters, water quality data, damage repairs, outage day logs, customer bills, customer complaints	0	3	6	No significant climatic events to prevent delivery of the wellfield infrastructure interventions
Project/programme co-benefit indicators						

Co-benefit 1: Improved aquatic ecosystem health	Number of improved groundwater dependent eco-system (GWDE) habitats	MENR and civil society water quality and eco-system health monitoring and inventory reports	0	2	6	GWDE habitats are partially derogated and water quality improvement and its positive impact on eco-system are both measurable
Co-benefit 2: Improved financial security of water utility	Desalination concessionaire payments as percentage of OPEX	WSC OPEX accounts	0	5% reduction in OPEX desalination payments	10% reduction in OPEX desalination payments	Political commitment to reduce reliance on desalination water
Co-benefit 3: Climate change mitigation (GHG emission reduction)	Estimated accumulated GHG savings in tCO2eq as a result of reduced desalination relative to expected business as usual scenario	WSC desalinated water purchase forms, invoices, flow meter records, wellfield abstraction pumping rates	0 tCO2eq	847.5 tCO2eq cumulatively up to mid-term	1695 tCO2eq cumulatively up to project closure	Political commitment to reduce reliance on desalination water

E.6. Project/programme activities and deliverables

All project activities should be listed here with a description and sub-activities. Significant deliverables should be reflected in annex 5 implementation timetable. Add rows as needed.

Please number the activities as shown below to indicate association of activities to the related outputs provided above in section E.5. Similarly, please number sub-activities as shown below to associate to the related activity.

Activities	Description	Sub-activities	Deliverables
Activity 1.1.1 Develop a national water policy framework for climate resilient water management	Undertaking a 6-month multi-sector multi-stakeholder consultation process to draft a national water sector policy, set agreed annual targets and ensure integration with other sector plans.	Sub-activity 1.1.1.1 Draft and facilitate adoption of a national water policy Sub-activity 1.1.1.2 Develop targets under the policy	1.1.1.1 One National Water Policy 1.1.1.2 One Policy implementation plan with agreed annual targets

		Sub-activity 1.1.1.3 Policy harmonization – integrate climate and water risks across sectoral and national development plans	1.1.1.3 At least three National and other sector plans include strategies relevant to climate resilient water sector
Activity 1.1.2. Reform institutional architecture and legislation	Undertaking legal review and legislation updates and new legislation drafting for water resources management. Facilitate the formation of the multi-stakeholder national IWRM committee. Capacity building of URCA to enable regulation of the water sector.	Sub-activity 1.1.2.1 Establish WRMU (IWRM Secretariat) Sub-activity 1.1.2.2 Establish IWRM APEX Body Sub-activity 1.1.2.3 Implement water utility regulator Sub-activity 1.1.2.4 Establish legislation for groundwater & wellfield protection	1.1.2.1 One Ratified legislation forming WRMU 1.1.2.2 One IWRM APEX body formed and operational 1.1.2.3 One URCA water sector team regulating WSC operational and financial performance and evaluating WSC proposed tariff increase 1.1.2.4 Ratified legislation detailing freshwater lens and wellfield protection zone regulations, roles and responsibilities
Activity 1.1.3. Progress National and Local IWRM Process	National and local IWRM multi-stakeholder (10-stage) process facilitation, including technical support to WRMU (as IWRM Secretariat).	Sub-activity 1.1.3.1 Develop national IWRM Road Map and Plan Sub-activity 1.1.3.2 Implement the national IWRM Plan	1.1.3.1 One National IWRM Road Map and IWRM Plan 1.1.3.2 One IWRM plan delivered 1.1.3.3 One Local IWRM Plan developed and implemented

		Sub-activity 1.1.3.3 Develop and implement Windsor Wellfield IWRM Plan	
Activity 1.2.1 Establish and Implement a National Water Resources Monitoring Network (WRMN)	Design, tender, install and operate a national water resources monitoring network over a 5.5 year period to enable data-driven decision making.	Sub-activity 1.2.1.1 Design and Install a National Water Resources Monitoring Network Sub-activity 1.2.1.2 Network Operation, Maintenance and Data Analysis	1.2.1.1 National Water Resources Monitoring Network established across 10 islands 1.2.1.2 66 monitoring boreholes installed 1.2.1.3 Water Resources Models across 10 islands 1.2.1.4 One Early Warning and Mitigation Plans for climate impacted drought 1.2.1.5 One Water Resources Monitoring Database Populated
Activity 1.2.2 Develop and Implement a National Water Resources Management Unit	Establish a sustainable National Water Resources Management Unit over a 5 year period to enable the sustainable management and the climate resilience of the water sector in The Bahamas.	Sub-activity 1.2.2.1 Develop a National Water Resources Management Unit Sub-activity 1.2.2.2 Operate the National Water Resources Management Unit	1.2.2.1 One Water Resources Management Unit fully staffed, with clear mandate, and defined roles and responsibilities 1.2.2.2 Three Annual State of the Water Sector Reports

Activity 1.2.3 Develop and Implement a National Water Sector Decisions Support System (DSS)	Design, tender, install and operate a DSS over a 5-year period to support evidence-based decision-making by enabling comprehensive collection, analysis, and distribution of water resource data	Sub-activity 1.2.3.1 Design and Install a Water Sector Decision Support System Sub-activity 1.2.3.2 Operate and maintain the DSS	1.2.3.1 One functional Decision Support Platform System including data use, management policies and user guides 1.2.3.2 At least two MOUs negotiated with government agencies and other stakeholders 1.2.3.3 One functional DSS Platform at project completion
Activity 1.2.4 Capacity development across sectors in climate risk informed investment planning	Perform multi-stakeholder engagement and training of WSC staff on use of the DSS for enacting climate impact assessment and implementing the assessment results into planning, investment and operation.	Sub-activity 1.2.4.1 Multi-sector training in use of DSS outputs to inform climate risk assessment and risk reduction planning Sub-activity 1.2.4.2 Mainstreaming climate risk informed operations and investment planning across WSC.	1.2.4.1 At least three presentations to stakeholders on DSS use 1.2.4.2 Three new SOPs for climate resilient infrastructure operation during (a) hurricane – high winds and storm surge (b) wildfire (c) drought / high salinity 1.2.4.3 One updated WSC Climate Resilient Business Plan and CAPEX plan 1.2.4.4 At least three sets of training materials on integrating climate risk assessment into planning, investment

			and operation and training completion report
Activity 2.1.1 Retrofit wellfields for adapted groundwater abstraction	Design, tendering, construction and construction supervision of resilience upgrades to wellfields and expansion of marginal wellfields.	Sub-activity 2.1.1.1 Implement resilience upgrades to wells, pumps and other wellfield assets Sub-activity 2.1.1.2 Expand marginal wellfields to reduce vulnerability to climate change	2.1.1.1 Climate resilience upgrades implemented at 20 wellfields 2.1.1.2 6 well field expansion investigations 2.1.1.3 6 well field expansions
Activity 2.1.2 Climate proofing water distribution infrastructure	Design, tendering, construction and construction supervision of new climate resilient pumping stations, water storage and inter-system pipe connections.	Sub-activity 2.1.2.1 Construct new climate resilient pumping stations and associated assets Sub-activity 2.1.2.2 Increasing storage for climate-related water outages Sub-activity 2.1.2.3 Connecting isolated systems to deliver resilience to climate-related water outages	2.1.2.1 29 new climate resilient pumping stations 2.1.2.2 23 new water storage tanks 2.1.2.3 7 new inter-system connections 2.1.2.4 Upgraded submarine pipe crossings in 5 systems
Activity 2.1.3 Implementing water loss reduction measures	Design, tendering, construction and construction supervision of pressure management measures and replacement of pipes in high leakage areas.	Sub-activity 2.1.3.1 Implementing pressure management measures Sub-activity 2.1.3.2 Pipe replacement in high leakage areas	2.1.3.1 Pressure management measures implemented in 16 systems 2.1.3.2 Pipes replaced in 9 high leakage areas

E.7. Monitoring, reporting and evaluation arrangements

Monitoring

E.7.1. The implementation of this project will involve:

- Monitoring and reporting on progress in relation to the project's logical framework, as outlined section E.5;
- Monitoring and reporting on financial progress (i.e. disbursements, reflows);
- Monitoring and reporting on compliance with environmental and social risk management requirements, guided by the Environmental and Social Management Plan (ESMP);
- Monitoring and reporting on the implementation of the Gender Action Plan (GAP) that is included in Annex 8;
- The consolidation of the above information in regular progress reports;
- Mid-term evaluation to assess implementation progress and challenges, and propose corrective actions; and
- End-of-project evaluation to determine the impact, efficiency, effectiveness, relevance and sustainability of the project

E.7.2. WSC (as the Executing Entity) will be responsible for monitoring progress vis-à-vis the indicators included in the logical framework. To support these efforts, WSC will procure and contract a Monitoring and Reporting Specialist who will help ensure that the data needed for effective monitoring and reporting is collected and analysed in a timely manner. This individual will both lead efforts to collect relevant data that is either managed by WSC (e.g. water supply volumes) or can be directly sourced by WSC (e.g. documentation managed by other government entities). The Monitoring and Reporting Specialist will also work with other members of the project execution team to ensure that other WSC-managed contracts (e.g. with consultants, construction contractors, etc.) include provisions that oblige these service providers to share necessary data/information related to their assignments/activities in a timely manner, and will also be responsible for reviewing and analysing the data/information provided by those service providers, ensuring it is aligned with the contractual obligations and broader requirements of the project, and (in collaboration with the rest of the WSC project execution team) querying – and as needed, ensuring service providers address/rectify – any delays or under-delivery by the service providers. To further support the regular monitoring of progress, WSC will also procure and contract a firm (referred to in the detailed budget as the "Supplementary Data Gathering Consultancy") that is expected to directly collect additional data on project progress and results/benefits in Years 2, 5 and 7. This data will be used to complement and triangulate the other project progress data gathered by the Monitoring and Reporting Specialist and other members of the WSC project execution team, all of which will be used as inputs for regular progress reporting as well as the independent mid-term and final evaluations.

E.7.3. Further information about the monitoring and reporting frequency and distribution of roles & responsibilities is included in Annex 11: M&E Plan.

Reporting

E.7.4. *Reporting from WSC to the CDB Accredited Entity Team.* CDB will enter into a subsidiary agreement with WSC that clearly specifies the utility's reporting obligations. This will include both financial reporting (i.e. payments/disbursements to service providers, etc.) and progress reporting (i.e. information on activity execution status and progress vis-à-vis performance metrics). WSC will be required to prepare and submit these reports to the CDB Accredited Entity Team at regular intervals to be specified in the subsidiary agreement. The utility's reporting to CDB will also include information on compliance with environmental and social risk management requirements, as well as gender equality and social inclusion (GESI) requirements. WSC will be expected to gather/collect the data needed for these reports, including using the methods/processes outlined above.

E.7.5. *Reporting from CDB to GCF.* Using the data contained in the reporting provided by WSC, as well as other sources of data/information as relevant, the CDB Accredited Entity Team will provide the GCF Secretariat with:

- Annual Performance Reports (APRs) that provide detailed information on the status of the project throughout its implementation period;
- A mid-term evaluation (interim evaluation) report at the midpoint of the project implementation period, which will be prepared by an independent external evaluator contracted by CDB; and
- A final evaluation report at the end of the project implementation period, which is expected to be prepared by the same independent external evaluator as the mid-term evaluation.

Evaluation

E.7.6. In line with GCF requirements, CDB will contract an external evaluator to conduct independent evaluations halfway into the project implementation period (mid-term review) and at the end of the project (final evaluation). The CDB Accredited Entity Team will procure the evaluator using an open tender process, and will supervise and quality-assure the work of the evaluator in close collaboration with the Bank's Office of Independent Evaluation (OIE). The mid-term and final evaluations will be conducted in line with, *inter alia*, the following principles: independence; competencies and capacities; impartiality; credibility; transparency; integrity and gender equality.

E.7.7. The evaluation methods for the mid-term and final evaluations are to be determined, but are tentatively expected to include: (i) key informant interviews with institutional beneficiaries; (ii) site visits; and (iii) detailed review of relevant project documentation, including monitoring data provided by WSC, APRs and other project reports, based on an agreed list of evidence to be provided by CDB to the contracted evaluator.

F. RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures

Please describe financial, technical, operational, macroeconomic/political, money laundering/terrorist financing (ML/TF), sanctions, prohibited practices, and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures. Insert additional rows if necessary.

Selected Risk Factor 1 – Political Commitment

Category	Probability	Impact
Governance	Low	Medium

Description

Government support is required to ensure project implementation support, national policy and legislation development and adoption, IWRM institutional reform and implementation, empowerment of economic regulator, establishment of WRMU, WSC Corporate Business Plan implementation (specifically tariff reforms), WSC subsidy reallocation to fund URCA and WMRU and DSS, and supporting reduction of WSC dependency on desalination concessionaire purchase contracts. If such support is not forthcoming, it could undermine project implementation and the achievement of the desired paradigm shift and other results.

Mitigation Measure(s)

Extensive and near continuous government engagement has been undertaken throughout the GCF project design process. WSC and the NDA are fully aware of project design and required government commitments. The NDA has secured Cabinet approval of the proposed governance reform measures, which were first discussed/endorsed by water sector stakeholders during the multi-stakeholder IWRM consultation in July 2023. Regulator capacity building and climate-proofing of water supply infrastructure is aligned with the government-ratified WSC Corporate Business Plan. These stakeholders will also remain involved in the project implementation, including in an oversight role via the PSC (to become the IWRM Apex Body).

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Selected Risk Factor 2 – Beneficiary Institutional Capacity

Category	Probability	Impact
Technical and operational	Medium	Medium

Description

Other than WSC (the EE) which employs >450 people across NP and the Family Islands, the institutional capacity across other departments and agencies is limited. Indeed for URCA (utility economic regulator) they have no water sector regulatory expertise, and there is no WRMU (water resources management unit) at all – with limited technical water monitoring capacity in WSC and none in the mandated agency DEPP.

Mitigation Measure(s)

The project design process identified capacity limitations as a major barrier and therefore commits substantial project resources to capacity building, training and knowledge sharing in economic regulation and tariff setting, policy development, IWRM governance reform and implementation, hydrogeology and monitoring networks, data and IT management, and climate risk & vulnerability assessment and risk reduction planning, as well as overall project management and delivery. Capacity building modalities include short term courses, on-the-job training, and consultant support. As a result, risk probability is reduced to low.

Selected Risk Factor 3 – Data Sharing

Category	Probability	Impact
Technical and operational	Medium	Medium

Description

The GCF project design process identified an unwillingness, confidentiality concerns and lack of capacity in some agencies to share data with other agencies. While not uncommon in any country, the project requires collaborative data sharing in order to develop and sustain the DSS which enables informed water sector decision-making.

Mitigation Measure(s)

The project design process has worked extensively with a wide group of key stakeholders in developing support for IWRM governance reform of which the DSS is a tangible and immediate example. National IWRM consultations secured multi-agency and multi-sector endorsement of IWRM governance including the DSS, delegate support that was then ratified by Cabinet. The monitoring of the IWRM process progress by the IWRM APEX Body Secretariat, as well as annual national reporting on water sector status, will provide an evidence base to report to senior IWRM national committees on inadequate data sharing. The project will set up data sharing and non-disclosure agreements under the DSS and include technical assistance for identifying and translating data from each sector into the DSS. These measures are expected to reduce the probability to low.

Selected Risk Factor 4 - Financial

Category	Probability	Impact
Technical and operational	Low	High

Description

The project design requires the government to fund the URCA and WRMU from the annual recurrent Treasury budget once project support finishes. The expectation is this will be funded by larger reductions in WSC subsidies realised by reducing desalination water purchase costs by increasing groundwater abstraction, and increasing revenues by reducing leakage. Given there will be other ministries competing for funds and unforeseen emergency government priorities (eg hurricane recovery), there is a risk that financing will not be available for technical operation of the economic regulator (URCA) and/or the WRMU (and its DSS) when it is needed in the later stages of the project implementation period.

Mitigation Measure(s)

This financial risk will be managed using high level political engagement (through OPM and WSC) to raise awareness on the importance of water utility savings being re-allocated to support these other water sector functions as being pivotal to the paradigm shift in achieving a climate resilient water sector. Detailed tracking of WSC operating costs, and projected URCA and WRMU operating costs, will support the high-level advocacy to the Ministry of Finance.

Selected Risk Factor 5 Risk related to compliance, including money laundering/terrorist financing (ML/TF)

Category	Probability	Impact
ML/FT	Medium	Medium

Description

The Government of The Bahamas WSC will be procuring goods and services for the execution of the project, which could expose the WSC to firms that are non-compliant with various policies and regulations. Some compliance issues to consider include KYC due diligence, AML/CFT and environmental & social risk management, among others.

Mitigation Measure(s)

CDB and the programme preparation team have conducted a detailed assessment of the WSC policies, procedures and capacities with a view to determining/confirming their ability to serve as Executing Entities without posing unacceptable/unmanageable risks related to compliance issues. These assessments included reviews of the entities' governance and management structures, financial management and accounting systems, internal controls and policies/procedures related to prohibited practices and AML/CFT.

Risk management and compliance will be guided by CDB's own policies and procedures in this area, which were reviewed during the GCF accreditation process and found to be satisfactory and consistent with GCF standards and requirements. General information about CDB's approach to AML/CFT is available in the Bank's Compliance Policy (see here: Compliance-Policy-BdAppr18.6.15 (1).pdf), which was reviewed by both the GCF Secretariat and Accreditation Panel during CDB's accreditation and accreditation upgrade processes. This policy, along with the

broader CDB Strategic Framework for Integrity, Compliance and Accountability, were found to be consistent with the GCF's own requirements and standards.

There are several specific ways in which risks associated with AML/CFT will be mitigated and managed.

- CDB will conduct detailed Integrity Due Diligence (IDD) checks on all counterparties with which it engages. This includes IDD checks that are done by CDB staff using the Bank's IDD Toolkit (e.g. IDD Search Bot Tool), any notable findings from which can be escalated to the CDB Office of Integrity, Compliance and Accountability for Enhanced Due Diligence (EDD) review if/when potential red flags are identified. Such checks are completed for prospective Executing Entities/Agencies and Borrowers, as well as in the context of procurement processes that are directly managed by CDB, and those that are executed by national counterparts and supervised by CDB. As part of these reviews, CDB staff conduct detailed checks of the organizations/firms, including their ownership structures, key persons/experts etc, and open source information for red flags to enable CDB to identify and mitigate integrity and reputational risks.
- CDB will enter into subsidiary agreements (Loan and Grant) with the Government of The Bahamas that include provisions related to AML/CFT, as well as other compliance-related risks.
- The WSC has its own KYC and AML/CFT policies and procedures that will be applied.
- CDB's integrity and procurement guidelines requirements are such that entities are not eligible for contracts under CDB-financed projects if they are subject to sanctions invoked by the United Nations (UN) Security Council under Chapter VII of the Charter of the UN as well as sanctions imposed by other MDBs that are party to cross-debarment agreement.
- CDB has an online Conflict of Interest (CoI) Disclosure Questionnaire that all staff are required to complete on an annual basis. CDB's Procurement Framework (including its Procurement Policy and Procurement Procedures) also has robust provisions for identification, reporting and management of conflicts of interest within project operations.
- Staff of the CDB are subject to annual mandatory AML/CFT training (IDD Toolkit). The TA component of this project includes training to enhance the capacity of key stakeholders in The Bahamas to comply with key programme standards related to E&S risk management, GESI, and the management of compliance-related risks (covering topics such as KYC, AML/CFT).
- There are programme-specific mechanisms to mitigate and manage compliance-related risks. The CDB Projects Complaints Mechanism (PCM) allows for complaints to be submitted through six channels: a webform; a hotline; email; telephone; mail; and office visits. Guided by the CDB Projects Complaints Mechanism Policy, such complaints are reviewed and handled independently by the CDB ICA in accordance with its detailed PCM Procedures. Allegations may be made by a variety of sources including staff, consultants, contractors, and other persons who may consider themselves participants in, witness to or victims of wrongdoing. Complaints can be filed:
    - anonymously online through a portal from the front page and corporate governance pages of CDB's website: https://secure.ethicspoint.com/domain/media/en/gui/55678/index.html;
    - through a whistle blower hotline (770-409-5029), via telephone (246-539-1777);
    - via email (ica@caribank.org); and
    - via mail to:

      Head, Office of Integrity Compliance and Accountability
      Building A , Caribbean Development Bank, P.O. Box 408, Wildey
      St. Michael, Barbados, W. I. BB11000
    - Complaints related to the project can also be sent to anticorruption@caribank.org; Projectscomplaints@caribank.org

Selected Risk Factor 6 – Extreme Climatic Events (Environmental Risk)		
Category	**Probability**	**Impact**
Other	Medium	High
Description		
The project delivery of Outputs 1.2 (groundwater investigations and monitoring) and 2.1 (water supply infrastructure construction, and leakage reduction) require extensive and regular year-round travel and transport to the Family		

Islands – including through the hurricane season (June to November). Given the 7-year project implementation period, it is entirely possible, or even probable, for the country to be impacted by 2 or more Category 3-5 hurricanes during this period, causing not only extensive damage to land-based assets (including power and communications) which will have a recovery period, but also grounding all air and sea transport. This would have a significant impact on project implementation timelines.
Mitigation Measure(s)
This climate disaster risk is being managed in part by intentionally focussing the major infrastructure works on Andros and Abaco islands which are relatively close to NP, as well as NP itself. Acklins is at great distance from NP however – but construction periods will be scheduled for outside of the hurricane season. Construction in Andros and Abaco will be scheduled so that all inter-island trans-shipment and vulnerable construction activities (eg storage tank construction) is outside of the hurricane season, whilst hurricane season construction is restricted to primarily on NP, as well as less vulnerable construction activities on Andros and Abaco (eg pipeline replacement). This will reduce the probability from high to medium.

G. GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment

The project is assessed as a Category B project – limited adverse environmental and/or social risks and impacts that are few, largely reversible and readily addressed through mitigation measures.

The environment and social risks associated with the project are considered to be limited to the construction and operation of water resources and water supply infrastructure. While most activities will occur within existing WSC systems, the ESMP recognizes that certain works such as wellfield upgrades and road reserve improvements will introduce nontrivial new footprints. Accordingly, the project acknowledges these areas in its risk assessment and applies proportionate mitigation measures to address potential environmental and social impacts during construction and operation.

The proposed infrastructure interventions under the scope of this Project include:

- Developing submarine pipe crossings
- Connecting systems to remove isolation
- Increasing the storage capacity at key sites
- Upgrading and constructing pumping stations with effective exhaust and ventilation mechanism
- Implementing fire protection mechanisms
- Expanding wellfields

These interventions are to be undertaken on New Providence, North and Central Andros, South Andros and Mangrove Cay, Abaco and Acklins. Given the existing environmental and social considerations of these islands, although the aim of the Project would yield largely beneficial results, any disruptions to the existing conditions of the environments on these islands must be considered and safeguarded against. These disruptions include:

- Interruptions in utility services to local businesses and livelihoods
- Increase in traffic congestion
- Air, noise and water pollution
- Threats to worker and community health and safety
- Disruption to ecosystems and ecological habitats
- Introduction of waste into the environment

It is critical that the Project adopts specific measures to address the aforementioned issues, some of which are recommended in the various management plans that constitute the ESMP. These management plans include:

- Environmental Health and Safety Management Plan
- Social Management Plan
- Security Management Plan
- Workers Health and safety plan
- Emergency Response Plan
- Contractor Management Plan
- Labour Management Plan
- Stakeholder Engagement Plan (SEP)
- Grievance Redress Mechanism

These plans recommend measures such as implementing frequent wetting, rotating workers, providing adequate Personal Protective Equipment (PPE) , maintaining machinery and equipment, and maintaining communication channels with key stakeholders identified in the Stakeholder Engagement Plan (SEP). These stakeholders hold a vested interest in Project related matters and should be consulted throughout the duration of the Project. The relationship between the water sector and different social groups should be established and must be considered in terms of how different groups use, source, afford and depend on water. The effectiveness of the implementation of

each listed management plan is recommended to be measured by the monitoring of different indicators and reporting periods.

G.2. Gender assessment and action plan

Provide a summary of the gender assessment and project/programme-level gender action plan that is aligned with the objectives of GCF's Gender Policy.

The Gender Assessment and Gender Action Plan (GAP) are fully aligned to the GCF Gender Policy and speak to the collection use of gender- disaggregated data that is available for the project locations. The analysis of the data to identify gender gaps and needs that can be mainstreamed into a gender-responsive project design and implementation. This mainstreaming has been done examining the entire project cycle, involving the preconstruction, construction and operational phases of the project. Activities have been put forward to address the potentially negative gender impacts to avoid and reduce these impacts as well as promote gender equality during the intervention for equal benefit to men and women, and reduce gender disparities during each phase of the project cycle.

Confirm a gender assessment and action plan exists describing the process used to develop both documents.

The Gender Assessment and Gender Action Plan have been completed utilizing a gender-responsive approach. This included first identifying gender- disaggregated data that is available for the project locations and conducting stakeholder consultations with the locals in the areas, engaging key agencies such as the Department of Social Services to garner perspectives on the gender issues, the needs and the potential impacts or opportunities that the project possesses. In addition to this existing literature from past studies that were relevant to social issues in the Bahamas or the water sector in the Bahamas were examined to supplement the primary data. The socioeconomic assessment in the Environmental and Social Impact Assessment (ESIA) was also utilized to understand the existing socioeconomic environment as the issues are all interrelated. The review on gender-specific policies that exist at the national level as well as the institutional level utilized to determine the enabling environment for an effective gender-responsive programme intervention.

The data was analysed through the identification of gender gaps and needs and then developing recommendations that can promote gender equality and reduce gender disparities in climate action. The GAP was developed using the GCF template which takes on a monitoring framework approach outlining indicators, targets, timeline, responsibility and costs.

Provide information on the key findings (who is vulnerable and why) and key recommendations (how to address the vulnerability identified) of the gender assessment.

Gender disparity in the construction and operational workforce was an area that needed to be addressed. Recommended activities included:

(1) Establishing a fair and transparent for local worker recruitment plan
(2) Advertisement of training and employment opportunities via a wide medium to narrow the gender gap in the workforce
(3) Conduct training of both women and men to improve gender equality in the recruitment for semi-skilled positions.
(4) Establish and communicate the grievance mechanism to report any complaints associated with gender-biased or unfair treatment.

There is a need to always foster zero-tolerance for sexual exploitation, abuse and harassment (SEAH) especially where there is a male dominance. To avoid this potential issue, the following are recommended:

(1) Prepare and implement a Code of Conduct for WSC, Contractors and Workers that speak to zero tolerance of sexual exploitation, abuse and harassment (SEAH)
(2) Develop and Implement Human Resources Grievance Procedures for addressing Sexual and Gender-based Violence (SGBV) complaints
(3) Worker sensitization session on the Code of Conduct and Human Resources Grievance Procedures

Reliability of water supply in the project intervention locations was a major issue due to infrastructural deficiencies, which negatively impacted businesses, schools and vulnerable populations.

(1) The proposed project interventions are to be implemented to reduce the number of lock-offs to communities impacting critical infrastructure and educational institutions and monitoring the increase in number of households with consistent flows.

The potential for gender-sensitive stakeholder engagement throughout the project life cycle is a risk that needs to be avoided. As such the following activities are recommended:

(1) Host community consultations in all the local areas with project intervention activities with the assistance of the Department of Social Services to ensure that all avenues are explored for a gender-balanced engagement process.
(2) Conduct training session with WSC staff and Contractor to increase awareness and understanding of gender-responsive project design and implementation

Indicate if stakeholder consultations have taken place and describe the key inputs integrated into the action plan, including: how addressing the vulnerability will ensure equal participation and benefits from funds investment; key gender-related results to be expected from the project/programme with targets; implementation arrangements that the AE has put in place to ensure activities are implemented and expected outcomes will be achieved, monitored and evaluated.

Stakeholder consultations took place on all the islands for intervention during the site assessment in May 2023, following this a series of telephone interviews were conducted utilising a survey instrument appended to Annex 8. Key inputs related to:

- identifying the nature of the water supply and its uses based on the experience of the locals
- understanding there the water stressed areas lie and if there were any challenges
- identifying the unique needs of both men and women and the location of vulnerable communities
- determine if there are affordability issues and the economic status of women
- determining if there was a gender Policy in place nationally and at the institutional level with WSC
- determining if there were water access issues and how climate change related disaster events affected the distribution of water
- Identifying biases and where they may exist
- Determining if gender sensitive-programmes existed and how wastewater was handled.

The full Gender Assessment and Gender Action Plan (GAP) are included in Annex 8.

G.3. Financial management and procurement

Describe the project/programme's financial management including the financial monitoring systems, financial accounting, auditing, and disbursement structure and methods. Refer to section B.4 on implementation arrangements as necessary.

The overall financial management of the project by CDB (in its capacity as Accredited Entity) and WSC (in its capacity as Executing Entity) will be done in accordance with relevant CDB policies and procedures. These policies and procedures are consistent with international standards, as evidenced by CDB's accreditation to the Adaptation Fund and Green Climate Fund, as well as its track record of managing resources from bilateral partners (e.g. Government of Canada, Government of Italy, European Commission) and other Multilateral Development Banks (e.g. European Investment Bank, Inter-American Development Bank). Relevant CDB policies and procedures will therefore guide all aspects of financial management under the project, including disbursements.

Procurement under this project will be managed in accordance with the standards and requirements outlined in the "Procurement Policy for Projects Financed by CDB" (2019)[6] as well as the "Procurement Procedures for Projects Financed by CDB" (2021)[7]. The CDB Procurement Policy and Procedures are aligned with international standards for public procurement, and cover the procurement of Goods, Works, Non-Consulting Services and Consulting Services.

[6] The CDB Procurement Policy is publicly available here: https://www.caribank.org/sites/default/files/publication-resources/Procurement%20Policy%20for%20Projects-final.pdf

[7] The CDB Procurement Procedures are publicly available here: https://www.caribank.org/sites/default/files/publication-resources/Procurement%20Procedures%20for%20CDB%20financed%20projects_Jan%202021-final_0.pdf

WSC is already familiar with the CDB Procurement Policy and Procedures given its track record of executing other CDB-financed projects, including the recent Bahamas Water Supply Improvement Project (BWSIP). An initial procurement plan for the proposed project is included in Annex 10.

Auditing under this project will be managed in accordance with the "Financial Reports and External Audit Handbook for CDB-Financed Projects". Quality assurance of such audits will be performed by the CDB Accredited Entity Team.

Disbursement procedures/methods are discussed in Section B.4

G.4. Disclosure of funding proposal

Note: The Information Disclosure Policy (IDP) provides that the GCF will apply a presumption in favour of disclosure for all information and documents relating to the GCF and its funding activities. Under the IDP, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Information provided in confidence is one of the exceptions, but this exception should not be applied broadly to an entire document if the document contains specific, segregable portions that can be disclosed without prejudice or harm.

Indicate below whether or not the funding proposal includes confidential information.

☐ No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.

☒ With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

H. ANNEXES

H.1. Mandatory annexes

☒	Annex 1	NDA no-objection letter(s) **(template provided)**
☒	Annex 2	Feasibility study - and a market study, if applicable
☒	Annex 3	Economic and/or financial analyses in spreadsheet format
☒	Annex 4	Detailed budget plan **(template provided)**
☒	Annex 5	Implementation timetable including key project/programme milestones **(template provided)**
☒	Annex 6	E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3): **(ESS disclosure form provided)** ☒ Environmental and Social Impact Assessment (ESIA) or ☒ Environmental and Social Management Plan (ESMP) or ☐ Environmental and Social Management System (ESMS) ☐ Others (please specify – e.g. Resettlement Action Plan, Resettlement Policy Framework, Indigenous People's Plan, Land Acquisition Plan, etc.)
☒	Annex 7	Summary of consultations and stakeholder engagement plan
☒	Annex 8	Gender assessment and project/programme-level action plan **(template provided)**
☐	Annex 9	Legal due diligence (regulation, taxation and insurance)
☒	Annex 10	Procurement plan **(template provided)**
☒	Annex 11	Monitoring and evaluation plan **(template provided)**
☐	Annex 12	AE fee request **(template provided)**
☒	Annex 13	Co-financing commitment letter, if applicable **(template provided)**
☐	Annex 14	Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

☐	Annex 15	Evidence of internal approval **(template provided)**
☐	Annex 16	Map(s) indicating the location of proposed interventions
☐	Annex 17	Multi-country project/programme information **(template provided)**
☐	Annex 18	Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
☐	Annex 19	Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
☐	Annex 20	First level AML/CFT (KYC) assessment
☐	Annex 21	Operations manual (Operations and maintenance)
☐	Annex 22	Assessment of GHG emission reductions and their monitoring and reporting (for mitigation and cross cutting-projects)[8]

[8] Annex 22 is mandatory for mitigation and cross-cutting projects.

☐ Annex X Other references

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

No-objection letter issued by the national designated authority(ies) or focal

OFFICE OF THE PRIME MINISTER

Sir Cecil Wallace Whitfield Centre
Nassau, New Providence
The Bahamas
Tel: (242) 702-5500

OPM/PF/
No ... ...
In Replying Please
Quote this Number

January 16, 2025

To: Green Climate Fund

Re: Funding proposal for the GCF by the Caribbean Development Bank regarding the "Climate Resilience of the Water Sector in The Bahamas" project

Dear Madam, Sir,

We refer to the project titled "Climate Resilience of the Water Sector in The Bahamas" in which The Bahamas is included in the funding proposal submitted by the Caribbean Development Bank (CDB) to us on February 4, 2025.

The undersigned is the duly authorized representative of the Office of the Prime Minister, serving as the NDA for The Bahamas.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

By communicating our no-objection, it is implied that:

(a) The government of The Bahamas has no-objection to the project as included in the funding proposal;
(b) The project as included in the funding proposal is in conformity with the national priorities, strategies and plans of The Bahamas;
(c) In accordance with the GCF's environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the project as included in the funding proposal has been duly followed.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Rochelle Newbold
National Designated Authority
The Bahamas

Environmental and social safeguards report form pursuant to para. 17 of the IDP

Basic project or programme information	
Project or programme title	Climate Resilience of the Water Sector in The Bahamas
Existence of subproject(s) to be identified after GCF Board approval	No
Sector (public or private)	Public
Accredited entity	Caribbean Development Bank (CDB)
Environmental and social safeguards (ESS) category	Category B
Location – specific location(s) of project or target country or location(s) of programme	The Commonwealth of the Bahamas
Environmental and Social Impact Assessment (ESIA) (if applicable)	
Date of disclosure on accredited entity's website	Wednesday, February 18, 2026
Language(s) of disclosure	English
Explanation on language	English is the official language of The Bahamas.
Link to disclosure	https://www.caribank.org/publications-and-resources/resource-library/reports/climate-resilience-water-sector-bahamas-project-environmental-and-social-impact-assessment https://wsc.com.bs/wp-content/uploads/2026/02/Bahamas-CREWS_ESIA-and-ESMP_15-Jan-2026.pdf
Other link(s)	N/A
Remarks	An ESIA consistent with the requirements for a Category B project is contained in Annex 6: Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP).
Environmental and Social Management Plan (ESMP) (if applicable)	
Date of disclosure on accredited entity's website	Wednesday, February 18, 2026
Language(s) of disclosure	English
Explanation on language	English is the official language of The Bahamas.
Link to disclosure	https://www.caribank.org/publications-and-resources/resource-library/reports/climate-resilience-water-sector-bahamas-project-environmental-and-social-impact-assessment https://wsc.com.bs/wp-content/uploads/2026/02/Bahamas-CREWS_ESIA-and-ESMP_15-Jan-2026.pdf
Other link(s)	N/A
Remarks	An ESMP consistent with the requirements for a Category B project is included in Annex 6: Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan.

Environmental and Social Management System (ESMS) (if applicable)	
Date of disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Any other relevant ESS reports, e.g. Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF), Indigenous Peoples Plan (IPP), Indigenous Peoples Planning Framework (IPPF) (if applicable)	
Description of report	N/A
Date of disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Disclosure in locations convenient to affected peoples (stakeholders)	
Date	Wednesday, February 18, 2026
Place	Affected peoples may access the ESIA/ESMP at the premises of the Water and Sewerage Corporation (WSC), where they can request support to print a hard copy. 38 University Drive E. George Moss Building Nassau The Bahamas
Date of Board meeting in which the FP is intended to be considered	
Date of accredited entity's Board meeting	N/A
Date of GCF's Board meeting	Wednesday, March 25, 2026

Note: This form was prepared by the accredited entity stated above.

Secretariat's assessment of FP298

Proposal name:	Climate Resilience of the Water Sector in The Bahamas
Accredited entity:	Caribbean Development Bank (CDB)
Country/(ies):	The Bahamas
Project/programme size:	Medium

I. Overall assessment of the Secretariat

1. The funding proposal is presented to the Board for consideration with the following remarks:

Strengths	Points of caution
Strong support for the water supply sector to shift away from its heavy reliance on expensive desalination purchases (around 81% of water produced), which entails 49% of operational expenditure and results in the national water supply utility company operating at a significant deficit.	Expansion of resilient water systems that promote the shift could strand existing reverse osmosis desalination assets, risking sunk investments for private operators, government and the Water and Sewerage Corporation if existing plants are decommissioned.
Establishment of a national water policy framework and a dedicated water resources management unit will drive the paradigm shift towards an integrated, climate-resilient approach for long-term security of water resources in the Bahamas.	Although the construction of climate-resilient pumping stations can improve the reliability of water supplies for households, it introduces a risk by encouraging over-extraction from vulnerable water sources, unless the approach is accompanied by strong water demand management and long-term integrated water resource planning.
Investments in climate-resilient wellfields and the water supply systems across six islands will transform the water sector in the Bahamas from its current reactive crisis response mode to a more proactive system-wide resilience mode with strengthened service delivery by the national water utility company.	Investments in climate-resilient infrastructure will require reliable and sustained operations and maintenance oversight. The improved wellfields must be managed carefully to avoid overextraction of groundwater, which would result in salinization and long-term degradation of aquifers.

2. The Board may wish to consider approving this funding proposal in accordance with the terms listed in the term sheet agreed between the Secretariat and the accredited entity (AE), and, if considered appropriate, subject to the conditions set out in annex II to document GCF/B.44/02.

II. Summary of the Secretariat's assessment

2.1 Project background

3. The Bahamas is among the most climate-vulnerable countries in the world, facing severe and escalating climate risks. The country's entire population is exposed to extremely strong winds, with category 3–5 hurricanes approximately every 12 years. These risks are intensified by the country's low-lying geography, where 83 per cent of the land area is less than 5 metres above sea level, which leaves vital water supply infrastructure highly exposed to storm surges, coastal and overland flooding, and sea level rise. Climate change is increasing the intensity and frequency of these hazards, leading to recurring infrastructure damage, service disruptions, and growing economic and social issues.

4. Water security risks are further compounded by the country's heavy reliance on desalination, which accounts for approximately 81 per cent of water produced. Desalination plants in the Bahamas are vulnerable to the effects of climate hazards, mainly hurricanes and storm surges, which have an impact on reliable access to electricity, and quality and availability of freshwater resources, ultimately leading to water insecurity. With limited capacity to adapt to these circumstances, the Bahamas faces escalating climate risks that exceed domestic financing capacities.

5. The funding proposal, "Climate Resilience of the Water Sector in The Bahamas", is a medium-sized public sector adaptation project in environmental and social safeguards (ESS) category B. The project will be implemented over seven years in the Bahamas by the Caribbean Development Bank (CDB), a regional direct access entity.

6. The proposed project aims to strengthen climate resilience in the country's water sector by enhancing governance and building capacity and infrastructure, particularly across the remote Family Islands, to ensure sustainable freshwater management and protection. The project will provide resilience-building investments into the mechanical and electrical equipment assets of the national water utility, the Water and Sewerage Corporation (WSC) which are affected by inundation of sea water from extreme storm surge and increasing wind speeds.

7. The project aims to catalyse a transformational shift in the water sector of the Bahamas by enhancing climate resilience through improved governance, protection of freshwater resources and climate-proofing of critical water-supply infrastructure. By strengthening national policies, legislation and institutional frameworks, the project aims to ensure sustainable and climate-resilient water management practices. The protection and management of groundwater resources will reduce reliance on expensive desalinated water, thereby improving the financial performance and sustainability of the water utility. This financial stability will enable further investments in climate-resilient infrastructure and help to create a sustainable cycle of resilience and adaptation.

8. The project will deliver two key outcomes, and the theory of change presents a coherent pathway to strengthen climate resilience in the water sector. Outcome 1 focuses on providing technical assistance to strengthen the national policy, legislation and regulatory environment as well as improve water data and information for decision-making for water supply planning. Outcome 2 focuses on investment, developing climate-resilient wellfields and water supply infrastructure and operations in six islands of the Bahamas.

9. GCF categorizes the project as ESS category B.

2.2 Component-by-component analysis

10. The project is structured into two components as set out below.

Component 1: Technical Assistance Component comprising outputs 1.1 and 1.2, establishes the enabling environment required for climate-resilient integrated water resources management

11. This component addresses key systemic barriers, including outdated policies and legislation, the absence of an independent regulator, weak groundwater protection, limited technical capacity and inadequate data systems.

12. Output 1.1 focuses on strengthening the national policy, planning, legislation and regulatory environment in order to deliver a coordinated, climate-resilient and gender-sensitive water sector, as well as mainstreaming climate resilience and gender responsiveness into water governance. This output includes developing a climate-resilient national water policy and groundwater protection regulations, establishing a water resources management unit (WRMU) improving coordination across agencies and empowering the economic regulator to establish an appropriate tariff structure to ensure climate resilience.

13. Output 1.2 addresses improving national water resources data and information, inclusive of sex-disaggregated data, and ensuring it is available to multi-sector stakeholders for decision-making and planning. The project aims to build sustainable technical capacity and establish a groundwater monitoring and information system across 10 islands. Through a national decision support system and strengthened data collection, analysis and dissemination, the project supports the enforcement of groundwater protection while delivering climate-risk-informed planning and evidence-based investment decisions. These outputs address systemic governance and information gaps and establish the institutional capacity required to deliver sustainable adaptation impact.

Component 2: Investment Component comprising Output 2.1 focussing on investments in infrastructure.

14. This component entails investments in climate-resilient water supply infrastructure and focuses on reducing the physical vulnerability of water supply systems across six priority Family Islands identified as most exposed to climate risks. Due to financial constraints and tariff levels that do not fully reflect the cost of service, the WSC is currently unable to invest in climate-proofing of the infrastructure.

15. Through targeted investments in wellfields, pumping stations, storage, pipelines and backup power systems across 27 water supply schemes in six Family Islands, the project will climate-proof critical infrastructure, help to reduce water losses and optimize groundwater abstraction under declining recharge conditions.

16. These investments will contribute to lowering future reconstruction costs, reducing operational expenditure, particularly through improved efficiency and reduced reliance on expensive desalination, and demonstrating scalable resilience models for replication across the Family Islands in the Bahamas.

17. The project management budget will finance project management expenses including monitoring and evaluation, gender and social safeguards, finance and procurement.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

18. The project is primarily focused on adaptation in the water sector. Taking into consideration the potential contributions to water security under climate change, the Secretariat considers the climate impact potential to be high. The project will transform the resilience of the country's water sector, directly advancing the GCF adaptation result areas on health, well-being and water security, and infrastructure and the built environment. The project

aims to safeguard groundwater resources and dependent wellfields from drought and storm surges, climate-proofs vital water supply infrastructure against cyclonic winds, surges and wildfires, and reduces water demand through a significant reduction in leakage. By shifting the WSC's dependence from costly desalinated water to climate-resilient groundwater sources, the project improves financial sustainability, thereby facilitating sustained climate-resilient capital and operational investments.

19. Overall, the project will directly benefit approximately 215,273 people (54 per cent of the population) through infrastructure upgrades across six islands and 27 water systems, and another 199,727 people (52 per cent female) indirectly through strengthened governance, integrated water resources management, policy and legislative reforms, and institutional capacity-building. Combining water conservation, infrastructure resilience and robust institutional reforms, the project delivers a paradigm shift toward sustainable, climate-resilient water management ensuring both immediate protection from climate shocks and long-term adaptation gains.

3.2 Paradigm shift potential *Scale: High*

20. The project catalyses a fundamental transformation in the country's water sector by embedding climate resilience into governance, resource management and infrastructure operations. Through policy and legislative reforms, institutional capacity-building and climate-proofing of 27 water supply systems across six islands, it establishes a scalable and replicable model for safeguarding water security against drought, storm surges and other climate hazards. By shifting the WSC's dependence from costly desalinated water to more resilient and affordable groundwater resources, the project unlocks sustained improvements in the utility's financial performance, enabling long-term investment in climate-resilient capital and operational expenditure. This financial transformation, coupled with stronger regulatory and management frameworks, will create a sustained enabling environment for climate adaptation well beyond the project's duration.

21. The paradigm shift is reinforced by the project's potential for nationwide replication, multi-stakeholder engagement and knowledge-sharing mechanisms such as a water sector decision support system, early warning tools and integration with academic institutions to foster a national community of practice in water resources management. The reforms and capacity enhancements will benefit both public and private water providers, extend climate-proofing to all 64 WSC-operated systems, and influence sector-wide practices across all islands. By aligning directly with the priorities identified in the Bahamas' updated nationally determined contribution and the GCF Water Security Sectoral Guide's resilience pathways, the project embeds water conservation and integrated resource management into the country's development trajectory, ensuring a lasting, system-wide transition towards climate-resilient water security.

3.3 Sustainable development potential *Scale: High*

22. The project has the potential to achieve high sustainable development benefits with direct contributions to the United Nations Sustainable Development Goals SDG 6 (clean water and sanitation), SDG 13 (climate action) and SDG 3 (good health and well-being), while indirectly supporting SDG 1 (no poverty), SDG 8 (decent work and economic growth), SDG 11 (sustainable cities and communities) and SDG 15 (life on land). By strengthening groundwater resources management and IWRM, the project aims to reduce the vulnerability of freshwater

lenses[1] to drought, storm surges and flooding, while also safeguarding vital terrestrial and coastal ecosystems.

23. The climate-proofing of wellfields and water infrastructure will bolster the resilience of all commercial sectors, particularly tourism, which accounts for over 33 per cent of the country's gross domestic product (GDP) and more than half of total employment, by ensuring reliable, high-quality water supply in a climate-vulnerable island context.

24. The project aims to deliver mitigation benefits by reducing water losses and decreasing reliance on energy-intensive desalination, thereby lowering fossil fuel-based electricity demand and associated greenhouse gas emissions.

25. Robust operations and maintenance considerations are embedded in the design and deployment of the infrastructure to ensure efficiency and effectiveness of the investments, optimized lifecycle costs and long-term climate resilience for the beneficiaries.

26. The project will expand opportunities for women in technical and leadership roles in the water sector through its gender action plan, inclusive training and targeted capacity-building, while also promoting gender-sensitive stakeholder engagement and awareness on issues such as sexual exploitation, abuse and harassment (SEAH). Improving the reliability of water supplies will also benefit schools, businesses and vulnerable populations, thereby supporting equitable, climate-resilient development across the Bahamas.

3.4 Need of the Recipient *Scale: Medium to high*

27. The Bahamas is one of the world's most climate-vulnerable countries, with all 30 inhabited islands exposed to cyclone-strength winds and with a significant share of the population at risk from storm surges, flooding, drought and wildfires. Rising sea levels, increasing hurricane intensity and shifting rainfall patterns threaten both the groundwater-dependent northern islands and the desalination-reliant southern islands, with the northern islands facing particularly acute risks due to accelerating drought trends. The Family Islands are remote (some are more than 500 km from the capital) and economically disadvantaged, with limited infrastructure, higher poverty rates, and restricted access to healthcare and education. The project directly targets the most climate-vulnerable islands through interventions identified via national and island-specific climate risk and vulnerability assessments, with the aim of ensuring resources address the highest-priority adaptation needs.

28. With limited budget resources, high public debt (83 per cent of GDP) and reliance on a tourism-dependent economy, the country has a limited ability to finance long-term climate-resilient infrastructure, particularly for investments in adaptation interventions that require high upfront capital expenditure.

29. In addition, WSC operates at a significant loss, is dependent on government subsidies and is unable to secure financing independently due to outdated tariffs, heavy reliance on costly desalinated water and the absence of an independent regulator. With limited appetite or capacity for additional debt, the government prioritizes basic service expansion over climate-proofing, leaving crucial adaptation needs unfunded. Given the absence of viable alternative financing and the economic unfeasibility of delivering the proposed infrastructure on less-concessional terms, GCF grant financing is essential to enable urgent resilience-building measures in the water sector while safeguarding fiscal stability.

[1] Freshwater lenses are bodies of fresh groundwater that develop above more saline groundwater within the same host aquifer due in part to buoyancy.

3.5 Country ownership *Scale: High*

30. The Bahamas demonstrates strong ownership of this project, with full alignment to its national policy for the adaptation to climate change (2005), which prioritizes safeguarding water resources against climate change impacts. The project directly supports multiple policy directives, including the development of a national water management plan, enhancing drought resilience, protecting freshwater resources and promoting water conservation across sectors. It is also fully consistent with the country's updated nationally determined contribution (2022), which identifies water resources as highly vulnerable to climate change and explicitly calls for GCF support to strengthen water infrastructure resilience, improve utility access and safeguard groundwater resources. As the only GCF project currently in full design stage in the Bahamas, this initiative complements the national GCF pipeline without duplication, addressing urgent adaptation needs in a sector identified as crucial for the country's resilience.

31. The project has been co-designed through extensive and inclusive stakeholder engagement led by the national designated authority (NDA) in the Office of the Prime Minister, which has participated in regular coordination meetings with WSC and CDB.

32. The NDA has played a decisive role in shaping the project priorities, guiding governance reforms and selecting target islands for interventions. The preparation process included 207 stakeholder meetings nationwide, engaging government agencies, private sector operators, civil society and Family Island councils to ensure local perspectives and needs are embedded in the design. Upon implementation, the Office of the Prime Minister will chair the project steering committee, ensuring continued political support, oversight and integration into national IWRM governance structures. This deep engagement and institutional anchoring ensure that the project will be nationally driven, strategically aligned and sustainably managed.

3.6 Efficiency and effectiveness *Scale: Medium to high*

33. A total of 415,000 people, which is the entire population of the country, will benefit from this project. This includes 215,273 direct beneficiaries (52 per cent female) and 199,727 indirect beneficiaries (52 per cent female). Cost (GCF funds) per direct beneficiary is USD 232.50; and USD 120.61 person for both direct and indirect beneficiaries.

34. The co-financing ratio is 1:0.30, leveraging USD 12.54 million in co-financing from CDB and USD 2.6 million from WSC.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

35. **Environmental and social (E&S) risk category and safeguard instrument**. The AE submitted an environmental and social impact assessment (ESIA) and an environmental and social management plan (ESMP) covering the proposed climate-resilient water sector adaptation works in multiple islands of the Bahamas. The AE provided island-specific climate risk and vulnerability assessments, detailed engineering layouts and specifications, and a stakeholder mapping and consultation report. The AE classified the project as category B for E&S risk, reflecting that the potential adverse environmental and social impacts are generally site-specific and can be effectively managed through standard mitigation and supervision measures. No activities involving significant land acquisition, or impacts on Indigenous Peoples are proposed.

36. Compliance with GCF ESS standards. The following paragraphs describe how the project complies with these standards.

37. **ESS 1: Assessment and management of E&S risks and impacts**. The AE has prepared an ESIA that describes the physical and socioeconomic baseline across the target islands, including their extreme exposure to hurricanes and storm surges, flat topography, reliance on thin freshwater lenses for potable water and existing infrastructure challenges. The ESIA identifies E&S risks associated with construction and operation of wells, pipelines, pumping stations, storage tanks and associated works. Key risks include: temporary traffic disruption and utility interruptions; construction-related air, noise and water pollution; disturbance of terrestrial and coastal habitats; risks to worker and community health and safety; temporary impacts on local businesses and livelihoods; and potential stress on aquifers and water quality if abstraction is not managed sustainably. These risks have been assessed using a significance matrix that considers nature, extent, duration, likelihood and magnitude of impacts, and were then consolidated in an impact and mitigation summary matrix that references the applicable International Finance Corporation (IFC) Performance Standards. The ESMP operationalizes the findings of the ESIA through thematic management plans covering environmental health and safety, social management, security, labour, stakeholder engagement, grievance redress, contractor management, emergency response and biodiversity, each with specified mitigation measures, roles and responsibilities, indicators and monitoring frequencies. Overall, the ESIA/ESMP provides an integrated framework for risk identification, mitigation, monitoring and adaptive management in line with ESS1 expectations for a category B project. Effective ESMP implementation will require consistent contractor compliance and multi-island supervision by WSC/engineer, under AE oversight.

38. **ESS 2: Labour and working conditions**. Project works will be implemented primarily through construction contractors engaged by WSC under CDB-financed contracts, overseen by a design review and construction supervision consultant (DRCSC) and a WSC project management unit (PMU). The ESMP includes a labour management plan that requires compliance with national labour laws and relevant conventions under the International Labour Organization, explicitly prohibits child labour below nationally defined minimum ages, and references the prohibition of forced labour. All project workers, including those of contractors and subcontractors, are required to sign a code of conduct that covers safe behaviour, non-discrimination and the prohibition of SEAH, with clear disciplinary consequences for violations. Occupational health and safety risks include manual trench-building, working around heavy machinery, working at height on elevated tanks and platforms, handling fuel and chemicals, and working in a hurricane-prone environment. These are addressed through the project's environmental health and safety management plan, the worker health and safety plan and the contractor management plan, which together require job-specific occupational health and safety training; the provision and use of appropriate personal protective equipment; machinery and vehicle maintenance; safe work procedures; traffic management; and adequate preparation for emergency responses and first aid. The ESMP foresees that workers will have access to grievance mechanisms, including the project grievance redress mechanism (GRM) and internal contractor mechanisms, to raise labour-related concerns. These arrangements are broadly consistent with ESS2 for construction-focused projects of this scale.

39. **ESS 3: Resource efficiency and pollution prevention.** The primary ESS 3 issues are construction-phase pollution control and longer-term groundwater abstraction and energy use. On pollution prevention, the environmental health and safety management plan sets out mitigation measures to control dust (e.g. wetting and covering of materials), noise (e.g. equipment maintenance, work hour management), vibration, and management of solid and hazardous waste (including fuels, oils and construction debris). The ESMP requires spill prevention and response measures for fuels and chemicals, including secure storage, secondary containment and spill kits, with specific attention to sites over freshwater lenses and near coastal waters. The project includes the installation of backup generators and fuel storage at

some sites, and these are to be designed and operated with bunding, leak detection and fire protection measures, where applicable. On resource efficiency, the project's primary contribution is through more resilient, efficient distribution via interconnections and improved control, rather than large increases in production. The decision support system and National Water Resources Monitoring Network are used for monitoring groundwater levels and salinity in real time, and to define trigger and action levels for adjusting abstraction to remain within sustainable yield thresholds under evolving climate conditions. Given the relatively modest scale of civil works, no significant greenhouse gas emissions or major increases in resource consumption are anticipated. The ESMP embeds good practice pollution prevention and resource efficiency measures in line with ESS 3.

40. **ESS 4: Community health, safety and security.** Community health and safety risks are associated mainly with the construction and include increased traffic and heavy vehicle movements along narrow island roads, temporary road closures and diversions, temporary disruption of water or electricity services during tie-ins, construction hazards near residential areas and businesses, and potential incidents at marine and bridge works. The ESMP requires contractors to prepare and implement detailed traffic management plans and utility coordination plans, including providing advance notification to affected communities and businesses, signage and safety barriers; maintaining access to premises where feasible; and coordinating with utility providers to minimize service interruptions. Project activities also introduce potential risks related to construction labour interacting with local communities, including SEAH risks. For operations, the main risks relate to structural safety of elevated tanks, fire and explosion risks at generator and fuel storage areas, and potential contamination of a water supply if treatment or disinfection systems fail. The design standards and climate-resilient specifications address structural resilience, cyclone and storm surge loads, anchoring, and ventilated and secure electrical installations. Fire protection measures include firebreaks and adequate separation distances around vulnerable assets. A security management plan sets requirements for site security, fencing and lighting, while the emergency response plan defines procedures for accidents, spills, natural hazards and other incidents. These measures are consistent with ESS 4 for community health and safety.

41. **ESS 5: Land acquisition and involuntary resettlement.** The project largely involves rehabilitation, upgrading and extension of existing WSC facilities and distribution networks within existing sites and public road reserves. No permanent land acquisition or physical displacement is anticipated, and the ESIA states that ESS 5 risks are expected to be minimal. Nonetheless, the ESIA/ESMP recognizes that temporary impacts on access and livelihoods may arise from linear works (e.g. trench-building along roadways, temporary closure of access to commercial premises, disruption of informal stalls or parking) and from construction lay-down areas. To address this, the ESMP assigns the responsibility for site-level land and access screening to the DRCSC during detailed design for each work front, in coordination with local authorities, to identify any potential physical or economic displacement, including temporary impacts. Where such impacts are identified, the ESMP provides that mitigation measures will be developed and integrated into the contractor's ESMP (CESMP), which may include advanced notice, phasing of works, temporary access arrangements and, where warranted, targeted livelihood support or compensation in line with the PS5 principles of restoring pre-project conditions. Mitigation measures for businesses and access disruption are also embedded in the traffic and community health and safety plans. Given the nature of works and the reliance on existing WSC properties and rights of way, this proportionate approach is consistent with ESS5 for a category B project. No formal resettlement action plan is required, but attention to temporary economic impacts during the preparation and implementation of the CESMP will remain important.

42. **ESS 6: Biodiversity conservation and sustainable management of living natural resources**. The main biodiversity considerations relate to: (1) terrestrial habitats, particularly pine forests and scrub overlying freshwater lenses where firebreaks and access roads are to be

constructed; (2) wetlands and associated ecosystems (e.g. blue holes, tidal creeks, mangroves) near some wellfields and coastal works; and (3) marine and coastal habitats potentially affected by submarine pipeline works and coastal discharges. The ESIA includes mapping of protected and proposed protected areas and other sensitive zones, and the ESMP contains a biodiversity management plan with clear avoidance and mitigation commitments. These include avoiding clearing of wetland areas, demarcating construction footprints and "no-go" zones around priority plant species and sensitive habitats, restricting construction activities to marked areas, scheduling works to avoid critical wildlife periods (e.g. breeding seasons), implementing erosion and sediment control measures, and re-vegetating disturbed areas with appropriate native species. For submarine and bridge crossings, the contractor management plan and Environmental Health and Safety (EHS) plans require site-specific method statements to manage turbidity and sedimentation, minimize seabed disturbance, control spills of fuels and lubricants, and protect the safety of communities and workers in marine/coastal environments. Work in protected areas or other sensitive habitats must be supported by dedicated method statements in the CESMP and is subject to DRCSC and PMU review. The project does not support conversion of natural habitats to agriculture or other land uses, and the scale of physical works is limited. On this basis, ESS6 risks are assessed as moderate but manageable with the existing avoidance, minimisation and restoration measures embedded in the ESMP and CESMP requirements.

43. **GCF Indigenous Peoples Policy and ESS 7: Indigenous Peoples.** The AE confirmed that the project area does not contain any Indigenous Peoples, nor will they be affected by the project's activities.

44. **ESS 8: Cultural heritage.** The ESIA reports no known physical cultural heritage sites in the immediate vicinity of the proposed works. Most interventions are located within existing WSC compounds or along established rights of way. Given that some trench-building and other earthworks will occur, the ESMP includes a "chance-find procedure" that is applicable to all contractors and subcontractors. This requires works to be immediately suspended if artefacts or suspected heritage objects are encountered, as well as securing the find, notifying WSC and the relevant national heritage authorities, and resuming work only upon clearance. Workers are to receive induction training on heritage sensitivity and chance-find procedures. These measures are consistent with ESS 8 requirements for projects with low probability but non-zero risk of encountering unknown cultural heritage.

45. **Implementation arrangements**. CDB is the AE and will provide oversight for E&S risk management in line with its environmental and social review procedures. WSC will serve as the executing entity (EE) responsible for overall project implementation and ESMP execution. A PMU within WSC will include environmental and social specialists, including a social and gender safeguarding specialist and environmental safeguards staff. A design review and construction supervision consultant will be engaged and will have dedicated E&S risk responsibilities, including review and clearance of CESMPs, site-level risk screening and supervision of ESMP and EHS compliance on site. Contractors will be required, through contract clauses, to prepare and implement CESMPs/ Contractor's Environmental and Social, Health and Safety Management Plans (CESHSMPs) consistent with the project ESMP, to assign qualified EHS and social staff, and to report regularly on performance regarding E&S risks. The ESMP includes a budgeted implementation plan covering safeguards staffing, training, monitoring, community engagement and operation of the GRM. These arrangements are appropriate for the project's scale and complexity and aligned with ESS 1 expectations for organizational capacity and competency.

46. **Stakeholder engagement**. Stakeholder engagement has taken place at multiple levels during project preparation, including: (1) intensive engagement with WSC headquarters and island managers, the Department of Environmental Health and Safety, the Department of Environment Planning and Protection, the Office of the Prime Minister and other central government bodies; (2) a national workshop on IWRM and the decision support system,

involving multiple ministries, regulators, utilities, civil society and private sector actors; (3) technical consultations on water sector governance, tariffs, climate risks and adaptation options; and (4) local engagement with island-level WSC staff and community representatives. A dedicated stakeholder mapping and consultation report documents these processes. Building on this, the ESMP includes a stakeholder engagement plan (SEP) and a communication strategy which together set out principles (i.e. transparency, inclusiveness, cultural and gender sensitivity, accessibility); identify stakeholder groups, including vulnerable groups such as women, youth, persons with disabilities and low-income households; and define engagement objectives, channels and frequency. Island-level communication templates and a Family Islands road map are provided to guide tailoring of engagement to each island and work package. The SEP foresees public meetings, focus groups, use of local radio and print media, community notice boards, and direct engagement through community liaison officers, with monitoring indicators such as the number and diversity of participants and stakeholder satisfaction. The PMU will continue stakeholder engagement throughout implementation, as detailed in the SEP.

47. **Grievance redress mechanism.** The project will operate a project-level GRM that is accessible to all stakeholders, including community members, businesses and project workers. The GRM provides multiple intake channels, including in-person at WSC and contractor offices, written submissions via suggestion boxes, telephone/SMS and digital channels, and submissions via community liaison officers and local leaders. It allows for anonymous complaints, and commits to confidentiality and non-retaliation. The GRM outlines clear steps and indicative timeframes for registration, acknowledgement, assessment, investigation, resolution and communication of outcomes, with escalation options if complainants are not satisfied. Responsibilities are assigned to contractor-level and PMU-level focal points, including the social and gender safeguarding specialist for social and gender-related complaints. The GRM is explicitly linked to the SEP and communication activities, with plans for dissemination of GRM information in accessible formats and languages. Stakeholders retain the right to access CDB's project complaints mechanism and the GCF Independent Redress Mechanism as additional channels, and the GRM does not restrict access to judicial remedies. These arrangements are consistent with ESS 1 and the requirements of the GCF Revised Environmental and Social Policy for accessible, transparent and effective grievance mechanisms.

48. **Sexual exploitation, abuse and harassment (SEAH) safeguarding**. In line with the GCF Revised Policy on the Prevention and Protection from Sexual Exploitation, Sexual Abuse, and Sexual Harassment and the GCF Revised Environmental and Social Policy, SEAH is recognized as a relevant risk for this project, arising from interactions between construction workers and local communities, gender and power asymmetries in access to water services, and the participation of economically and socially vulnerable groups. The ESMP integrates SEAH risk mitigation across several instruments. The code of conduct for all project workers includes clear prohibitions on SEAH and outlines disciplinary measures for violations. The GRM contains special pathways for gender-based violence and SEAH complaints, providing confidential and, where preferred, anonymous reporting channels, handled separately from other grievances by trained staff following survivor-centred principles such as safety, confidentiality, informed consent and non-retaliation. The social and gender safeguarding specialist is responsible for mapping appropriate gender-based violence and SEAH service providers, including health, psychosocial, legal and protection services, in project areas and facilitating referrals with the survivor's consent. The SEP and communication strategy incorporate gender-responsive engagement approaches and envisage SEAH-related awareness-raising for communities and workers. The ESMP foresees training on SEAH prevention and response for WSC staff, contractors, community liaison officers and other relevant personnel. Overall, the approach to SEAH risk mitigation is consistent with the GCF Revised Policy on the Prevention and Protection from Sexual Exploitation, Sexual Abuse, and Sexual Harassment and good international practice, with institutional responsibilities clearly defined and SEAH considerations embedded in safeguards, gender and stakeholder engagement components.

4.2 Gender policy

49. The funding proposal demonstrates alignment with the requirements of the GCF Updated Gender Policy. The gender assessment (GA) draws on national census and labour force data, sectoral assessments and project-specific consultations to identify gender differentiated roles and vulnerabilities in the country's water sector, with particular attention to the Family Islands and female-headed households. The gender action plan (GAP) translates these findings into a set of outputs and activities for monitoring, with indicators, targets, responsibilities and budgets. The project's main gender and inclusion entry points are: (1) fair and transparent access to project-related employment and training; (2) prevention and response to SEAH in male-dominated worksites; (3) inclusive, climate-resilient water service improvements that reduce disproportionate burdens on women and vulnerable users; and (4) integration of gender in national water policy and in the new WRMU. Overall, the proposal can be characterized as gender-responsive, with potential to become more gender-transformative if implementation realizes the institutional and governance commitments set out in the funding proposal package.

50. The GA applies a mixed-method approach combining existing sex-disaggregated statistics, qualitative stakeholder consultations and a review of legal and policy frameworks. It notes that women constitute 51.9 per cent of the population and a higher share of the labour force, yet remain concentrated in professional, clerical and service occupations, while men dominate construction-relevant trades such as crafts, plant and machine operation and manual work. Within WSC, women represent less than 40 per cent of staff, with around two thirds of women in clerical positions, indicating significant underrepresentation in technical and decision-making roles. The GA highlights that 42 per cent of households are female-headed and that women bear primary responsibility for water collection, household hygiene and care, making them particularly exposed to chronic water unreliability and salinity issues in the Family Islands, with knock-on impacts on schooling and income-generating activities. It further recognizes the high prevalence of gender-based violence and sexual violence nationally and the specific risks associated with male-dominated construction workforces and women's economic dependence, as well as heightened vulnerability of children, elderly people and persons with disabilities (PWDs) to water-related disruptions and disease. Collectively, these factors are identified as key barriers to equitable participation and benefit in climate-resilient water investments.

51. Building on these findings, the GAP sets out a coherent package of measures that mainstream gender and inclusion across the project's main result areas. On employment and livelihoods, it requires contractors to adopt gender-sensitive recruitment practices, use diverse outreach channels and provide semi-skilled training with minimum female participation thresholds, supported by simple post-training feedback on knowledge gains. On SEAH, the GAP consolidates a zero-tolerance approach through mandatory codes of conduct for all workers and consultants, human resources grievance procedures for gender-based violence and SEAH, and induction and refresher sensitization covering SEAH risks, code of conduct obligations, and access to grievance channels. To address differentiated impacts of water insecurity, the GAP links construction phase management plans for temporary disconnections from water supplies with a sex-disaggregated "know-your-customer" survey on five islands, feeding social and gender variables into the DSS to inform planning and service management. Stakeholder engagement and institutional strengthening are reinforced through commitments to gender-representative consultations, gender-responsive design training for WSC and contractors, and support for integrating gender considerations into the forthcoming national water policy, WRMU staffing and cross-sector climate risk planning. Each of these strands is underpinned by time-bound indicators, with assigned institutional responsibilities placed on PMUs, contractors, the DRCSC and line ministries with associated budget lines.

52. Stakeholder engagement and data systems are designed to support inclusive participation and gender-responsive monitoring. The SEP identifies affected communities, women's groups, persons with disabilities' organizations, schools, health facilities, local government and non-governmental organizations as priority stakeholders, and acknowledges that women slightly outnumber men nationally and may face time, transport and safety constraints, particularly on the Family Islands. The SEP and GAP together commit to multiple engagement channels, flexible meeting times, efforts to ensure participation by women and persons with disabilities in consultations, and sex-disaggregated monitoring of attendance. The GRM is adapted to island realities, incorporating community radio, church networks, monthly visits by a community liaison officer and digital channels to widen access for both women and men. Beyond grievance handling, "know-your-customer" surveys and the decision support system are intended to institutionalize sex-disaggregated customer information and supplementary data on disconnections, providing a basis for monitoring differential impacts of service reliability improvements over time. Training activities under the GAP incorporate simple post-session feedback to track perceived knowledge increase and satisfaction, moving monitoring beyond participation counts.

53. Overall, the proposal demonstrates gender responsiveness, with a coherent GAP that integrates gender and SEAH considerations into governance, employment, service delivery, capacity-building and monitoring in a practical manner.

4.3 Risks

4.3.1. Overall programme assessment (medium risk)

4.3.2. Accredited entity/executing entity capability to execute the current programme (medium risk)

54. Accredited in 2016, CDB is a regional financial institution established with a mission to reduce poverty by promoting economic growth and development, regional cooperation and integration of member countries in the Caribbean. To date, the GCF Board has approved two funding proposals with CDB as AE. In July 2025, GCF approved FP275, "Scaling up Deployment of Integrated Utility Services (IUS) to support Energy Sector Transformation in the Caribbean (Phase 1) Programme". Total programme size amounted to USD 68.7 million with GCF financing (loan and grant) of USD 26.7 million. The Board also approved a USD 24 million grant for SAP 063 in October 2025 to strengthen hydrometeorological and early warning services in Belize and Trinidad and Tobago and the broader Caribbean region.

4.3.3. Programme-specific execution risks (medium risk)

55. **Long-term viability of WSC.** The project is expected to raise financial viability of WSC through avoided cost and expenditure, and the financial projections show the company attaining self-sustainable operation by 2035 (without subsidy). However, there is still concern regarding WSC's ability to implement timely tariff adjustment in the future because the issue carries social, economic and political implications for the regulator and inflation has historically outpaced tariff increases in the country.

56. **Credit risk exposure.** GCF's loan will be channelled through CDB to WSC with a guarantee from the Government of the Bahamas, and GCF will be taking credit exposure on the Government of the Bahamas. The arrangement will provide GCF with moderate credit risk exposure given the Government's credit rating of BB- from Standard &Poor's and Fitch.

4.3.4. Compliance risk (medium risk)

57. The project will be executed by WSC as the sole EE, and involves both capital works and technical assistance components across multiple procurement streams. Although the delivery model avoids common high-risk features such as community-level cash transfers, inherent risks remain material considering the volume of contracting, the geographically dispersed, multi-island implementation model involving numerous parallel works and consultancy contracts, and WSC's dual role in executing both infrastructure and technical assistance components, including procurement, contracting, and supervision. Although WSC has a positive track record in managing projects financed by multilateral development banks, scale of funding and downstream execution complexity under this engagement increases the baseline compliance risk, particularly in relation to the integrity of procurement decisions, fund flows, and the potential for circumvention of controls within a concentrated operating environment.

58. All project activities will be governed by CDB's Operational Policies and Procedures Manual (OPPM), its anti-money laundering and counter-financing of terrorism (AML/CFT) policy, and its procurement framework, which collectively provide comprehensive protections against prohibited practices and illicit financial flows. CDB will conduct Integrity Due Diligence (IDD) on all contracted entities and individuals (including beneficial owners, key management, and designated experts) using its IDD Toolkit, including real-time screening of ownership, key personnel, and compliance history. Findings are escalated to the CDB's Office of Integrity, Compliance and Accountability (ICA) for Enhanced Due Diligence where required. Procurement is subject to pre-award due diligence, mandatory declarations of beneficial ownership and milestone-based disbursements supported by certification of works by supervision consultants or acceptance of deliverables by WSC, and subject to CDB review and oversight. Whistle-blower protections and a six-channel complaints mechanism provide independent avenues for reporting misconduct. At the national level, WSC will apply its own AML/CFT and internal control frameworks, which have been reassessed during project design. Institutional capacity is being further reinforced through the deployment of a dedicated Project Management Team, construction supervision consultancy and embedded compliance training for key stakeholders.

59. Residual risks primarily relate to the potential for integrity breaches within the procurement chain, particularly in the event of collusion, coercion, or under-disclosure by contractors. Although WSC's controls have been deemed adequate, sustained performance will depend on disciplined implementation and active supervision by CDB. However, centralized procurement arrangements, the absence of devolved community-level contracting or cash transfers, and CDB's hands-on supervision reduce the likelihood and impact of such risks. The combination of WSC's strong historical performance and CDB's structured oversight framework lowers the residual compliance risk to a **Medium** rating.

4.3.5. GCF portfolio concentration risk (within monitoring threshold)

60. In case of approval, the impact of this proposal on the GCF concentration risk remains within the monitoring thresholds of the risk appetite statement in terms of results areas, single proposal or AE concentration.

4.3.6. Recommendation

61. It is recommended that the Board consider the above factors in its decision.

Summary risk assessment	
Overall project	Medium
Accredited entity (AE)/executing entity (EE) capability	Medium
Project-specific execution	Medium
Compliance	Medium

GCF portfolio concentration	Within monitoring threshold

4.4 Fiduciary

62. As the AE, CDB will have responsibility for the management and administration of GCF resources, in accordance with its policies, procedures and practices, as well as the relevant provisions of the funded activity agreement (FAA) and accreditation master agreement (AMA). The CDB will enter into agreements with the EE to make available both CDB and GCF financing for eligible investments, consistent with the provisions of the FAA.

63. The CDB will also be responsible for overall programme governance, oversight and quality assurance, including risk management, in line with its policies and procedures and any specific requirements set out in the AMA and FAA. As a GCF-accredited entity, the CDB will sign subsidiary agreements with the EE implementing activities under the programme. CDB will apply its operational systems and established processes to monitor and provide oversight to the funded activities in line with the approved funding proposal, and facilitate integrated reporting to the GCF, as well as learning across projects.

4.5 Results monitoring and reporting

64. There has been extensive engagement with the AE to ensure that project results can be effectively monitored and reported throughout implementation. The project's specific objective is to strengthen the water sector in the Bahamas, and the estimation of beneficiaries is based on improvements in water security. The theory of change is assessed to be logically robust, clearly identifying adaptation outcomes alongside a range of co-benefits. The logical framework has undergone several rounds of revision to ensure the inclusion of relevant GCF core indicators and project-specific indicators.

65. It is essential to capture genuine, measurable changes on the ground using credible data sources, such as household surveys and national statistics. For this project, a randomized sample survey has been proposed and agreed with the AE to strengthen the quality and credibility of ex post data. However, some risks remain in relation to data collection and reporting, particularly as the WRMU will be a newly established institution and other implementing agencies may have limited experience and technical capacity in areas such as monitoring and evaluation, hydrogeology and climate risk assessment. To mitigate these risks, targeted capacity-building support will be crucial, alongside close monitoring by GCF of ex post results through the annual performance reports.

4.6 Legal assessment

66. The legal arrangements for the project will be based on the accreditation master agreement between GCF and the Accredited Entity which has been signed and is effective (the "AMA"). Consequently, they will consist of a project-specific funded activity agreement which incorporates the AMA.

67. The Accredited Entity has not provided a legal opinion/certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

68. The proposed project will be implemented in the Commonwealth of The Bahamas (the "Host Country"), country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in the Host Country, which risks need to be further assessed. Moreover, the ability of GCF to undertake

redress activities and/or investigations in the Host Country may be hindered due to the absence of privileges and immunities for relevant GCF personnel.

69. Therefore, it is recommended that the Board considers whether disbursements of GCF proceeds should only be made after GCF has obtained satisfactory protection against litigation and expropriation in the Host Country, or has been provided with appropriate privileges and immunities for GCF and its personnel.

70. GCF does not hold industrial property protection for its combined logo (sphere with the words "Green Climate Fund") in the Host Country. This means that, while industrial property protection is pending, (i) GCF's combined logo could be used by other entities or individuals (including those seeking to impersonate GCF) and (ii) there could be legal claims by entities or individuals asserting their protected trademark, opposing GCF using its combined logo in the country. In both cases, this may lead to reputational risk.

71. To address the matters raised in this section and facilitate prompt implementation of the project, it is recommended that any approval by the Board is made subject to the following conditions:

(a) Submission by the Accredited Entity to GCF of a certificate or legal opinion, in form and substance satisfactory to the GCF Secretariat, within 120 days after Board approval, confirming that the Accredited Entity has obtained all final internal approvals needed by it and has the capacity and authority to implement the proposed project;

(b) Signature of the funded activity agreement in a form and substance satisfactory to the GCF Secretariat within 180 days from the date of Board approval, or the date the Accredited Entity has provided a certificate or legal opinion confirming that it has obtained all final internal approvals, whichever is later; and

(c) Completion of the legal due diligence to the satisfaction of the GCF Secretariat prior to the signature of the funded activity agreement

Independent Technical Advisory Panel's assessment of FP298

Proposal name:	Climate Resilience of the Water Sector in The Bahamas
Accredited entity:	Caribbean Development Bank (CDB)
Country/(ies):	The Bahamas
Project/programme size:	Medium

I. Assessment of the independent Technical Advisory Panel

1.1 Overview

1. The Bahamas is a low-lying archipelago in the north-east part of the Caribbean region. It comprises some 700 islands, 30 of which are inhabited, and more than 2,000 small cays (low-elevation sandy islands) and rocks. This small island developing State spans over 13,000 square kilometres. The economy of the Bahamas, which is based largely on tourism, has a high nominal gross domestic product (GDP) and is thus classified as a high-income economy. Nevertheless, there are great disparities, and the funding proposal highlights the lack of social services on many of the islands. The country has a population of approximately 415,000 people, most of them on the capital island, New Providence, and on Grand Bahama. The other inhabited islands of varying sizes are collectively referred to as the Family Islands.

2. Located in the North Atlantic hurricane belt, the Bahamas has historically been hit by a hurricane every three years, and a major one every 12 years, on average. Since the early 2000s, however, major hurricanes have become much more frequent, bringing extreme rainfall, high winds and storm surges. The strength and intensity of North Atlantic hurricanes are projected to increase. This risk is compounded by the rise in the sea level, which adds to storm surges and increases the risk of damage. In short, the Bahamas and its water systems are facing dramatically increased climate risk.

3. The proposed project sets out to improve climate resilience of the water sector. It has two main components: the technical assistance component (outputs 1.1 and 1.2) relates mostly to national-level water policy and environmental resources management; while the investment component (output 2.1) rehabilitates and climate-proofs the wellfields and water supply infrastructure on six of the Family Islands. The outputs and main activities are as follows:

(a) Output 1.1: Strengthened national policy, legislation and regulatory environment for a coordinated and climate-resilient and gender-sensitive water sector, comprising:

  (i) Activity 1.1.1 Develop a national water policy framework for climate resilient water management;

  (ii) Activity 1.1.2 Reform institutional architecture and legislation; and

  (iii) Activity 1.1.3 Progress the national and local integrated water resource management (IWRM) process;

(b) Output 1.2: Improved national water resources data and information, inclusive of sex-disaggregated data, is available to multi-sector stakeholders for decision-making planning, comprising:

(i) Activity 1.2.1 Establish and implement a national water resources monitoring network;

(ii) Activity 1.2.2 Develop and implement a national water resources management unit (WRMU);

(iii) Activity 1.2.3 Develop and implement a national water sector decision support system; and

(iv) Activity 1.2.4 Capacity development across sectors in climate risk-informed investment planning; and

(c) Output 2.1: Climate-resilient wellfields and water supply infrastructure and operations in six islands, comprising:

(i) Activity 2.1.1 Retrofit wellfields for adapted groundwater abstraction;

(ii) Activity 2.1.2 Climate-proofing water distribution infrastructure; and

(iii) Activity 2.1.3 Implementing water loss reduction measures.

4. These outputs contribute to three related outcomes and co-benefits:

(a) Outcome 1: Improved governance and an IWRM that protects freshwater resources, reducing vulnerability to climate change;

(b) Outcome 2: Climate-informed decision-making and investment planning in the water sector;

(c) Outcome 3: Water supply is less vulnerable to climate risks and impacts;

(d) Co-benefit 1: Improved aquatic ecosystem health;

(e) Co-benefit 2: Improved financial security of water utility; and

(f) Co-benefit 3: Climate change mitigation (reduction of greenhouse gas (GHG) emissions).

5. The technical assistance component is to be financed through a GCF grant amounting to USD 8 million and in-kind co-financing by the executing entity (EE) estimated at USD 1.2 million. The investment component is to be covered by a GCF grant of USD 27 million and a GCF loan of USD 12.5 million, coupled with co-financing by the accredited entity (AE) amounting to another USD 12.5 million loan. The project management and monitoring costs amount to USD 3.6 million and are to be covered through the GCF grant and EE in-kind co-financing.

6. The AE, the Caribbean Development Bank (CDB) will receive resources from the GCF to channel and on-lend to the EE, which is the national water utility of the Bahamas, the Water and Sewerage Corporation (WSC).

1.2 Impact potential *Scale: Medium to high*

7. The proposed project, which is aimed at enhancing the climate resilience of the water sector in the Bahamas, contributes primarily to the following GCF adaptation result areas (ARAs): ARA 2 on health and well-being, and food and water security; and ARA 3 on infrastructure and the built environment. The aim of enhancing adaptation capacity is to be achieved through a combination of measures related to water and environmental governance, water resources management and water supply infrastructure improvements.

8. Direct beneficiaries are those who stand to benefit directly from the water supply infrastructure improvements under output 2.1. This involves greater water security in the face of climate shocks (e.g. hurricanes and storm surge) and stresses (e.g. sea level rise and meteorological impacts on water resources). These benefits are to be produced by a combination of improved wellfield operations and climate-proofing of the water supply

infrastructure. The water loss reduction measures of activity 2.1.3 are likely to enhance overall control of water quantity and quality, and increase broader resilience against services disruption.

9. Indirect beneficiaries are the whole population of the Bahamas, which stands to benefit from the broader policy-related interventions. National water security should be enhanced through the development of a national water policy framework and reformed legislation and institutional architecture for IWRM.

10. Policy-related interventions (essentially, component 1) include setting up systems, units and entities for broader water sector governance, including economic regulation and tariff-setting procedures; and water resources management, including groundwater monitoring, data management and decision support. These functions are essential for the implementation of an improved water policy framework. The contents and direction of the policy reforms to be supported, however, are beyond the direct sphere of influence of the EE.

11. The following substantive issues may have particularly profound implications for the success of the project:

(a) Updated water tariff-setting authorities and procedures: Whether the customer tariffs – unchanged since the late 1990s – will be increased, stands to determine the utility's potential for becoming financially stable. (This central issue is discussed in sections 1.3, 1.4 and 1.7 below); and

(b) The range of quantitative checks on groundwater (over-)abstraction that may be put in place by the updated institutional and legal framework to oversee water resources management (see section 1.3 below).

12. The funding proposal (p.42) notes that the northern islands, which are mostly dependent on groundwater resources, are also the ones where climate change may have the strongest impact on this already vulnerable resource. In particular, the central and northern islands are becoming drier more quickly than the southern islands, increasing the risk of water insecurity for the northern islands, which rely on groundwater.

13. The water supply for the generally drier southern islands is mostly provided using desalination. The proposed project does not deal with desalination and is not directly concerned with the associated energy use or GHG emissions from this kind of water production. Nevertheless, co-benefit 3 of this adaptation project estimates that there will be accumulated reductions in GHG emissions as a result of "reduced desalination relative to expected business as usual scenario". The quantified targets, in tonnes of carbon dioxide equivalent (t CO_2 eq) are "847.5 t CO_2 eq cumulatively up to mid-term" and "1695 t CO_2 eq cumulatively up to project closure" according to the results framework (funding proposal, section E, p.61).

14. In this regard, the iTAP notes the following:

(a) Co-benefit 3 is described as "climate change mitigation (GHG emission reduction)" in the results framework (funding proposal p.61) but the theory of change illustration (p.17) states that "sustainable and resilient groundwater use will reduce projected RO [reverse osmosis] water production and associated GHG emissions". The assumption that sustainable and resilient groundwater use will reduce the need for desalinated water is tenuous for more than one reason:

(i) Where demand is suppressed, any additional supplies will be consumed. Hence, there is little reason to believe that augmenting supplies from one source will translate into reduced demand from another; and

(ii) Where leakage is profuse, "system demand" can be infinite. For example, with non-revenue water (NRW) in the Family Islands standing at 55 per, this

indicates not only issues with billing and collection, but also significant physical loss.

(b) Regarding the monitoring of emission reductions (owing to reduced energy consumption from reduced water production), the EE could potentially monitor and account for *all* water (i.e. groundwater as well as desalinated seawater) it uses (pumps or purchases) and compare this to a 'business as usual' scenario.

15. The iTAP notes, however, that the most important mitigation action of the project should presumably be "Implementing water loss reduction measures" (activity 2.1.3) and related resilience improvements in the distribution network to reduce losses (subactivity 2.1.3.2). Reducing leakage is the most straightforward route to reduce (water system) demand. With an effective reduction in water loss, the project may in principle serve present customers using only half of the water volumes it uses today (assuming most of the 55 per cent NRW is physical loss).

16. Recommendation 1 (see section II below): the iTAP proposes that the results monitoring framework for the project should be reviewed with the aim of finding indicators that capture the spirit of what is to be achieved more aptly. For example, for co-benefit 3 water volumes saved (i.e. less water purchased or produced by WSC) could be related to the energy (mix) of the water not purchased or pumped compared with the 'business as usual' scenario.

17. In addition, on the mitigation side, the project could take a greater interest in the types of fuel used for water production. Some opportunities for doing so are included in the capacity and knowledge development pursuits of activity 1.2.4 (funding proposal, pp.25–26). For example, subactivity 1.2.4.2 for mainstreaming climate risk informed operations and investment planning – not least the related development of standard terms of concessionaire contracts for reverse osmosis operations – provides ample opportunity for furthering climate resilience and enhancing the mitigation potential of the broader water production and distribution sector in the Bahamas.

18. Many important pursuits relating to climate resilience lie beyond the core pursuits of the proposed project, which is natural for an adaptation project. This, however, makes it all the more important that the project collaborate and coordinate with other initiatives and projects on the Bahamas to ensure that there can be concerted efforts towards higher-end goals.

19. Recommendation 2 (see chapter II below) suggests that such broader coordination could take place in a more explicitly planned manner. For example, it could be organized through the envisaged capacity-development activities, or through coordinating bodies such as the project steering committee or the eventual IWRM APEX body. In that regard, beyond the concerns for water/energy savings (climate change mitigation) discussed in preceding paragraphs, the AE is advised to make more explicit plans to reach out and work with other actors in relation to the protection of groundwater's ecological functions, nature-based solutions (NBS), and NRW. The iTAP notes the following:

(a) Groundwater that remains underground has important ecological functions in sustaining both freshwater and terrestrial ecosystems. It would be important to coordinate the project effort to develop legal protection of "in situ" function of groundwater with the relevant authorities;

(b) For the protection and restoration of catchment and infiltration areas for groundwater recharge, as well as climate-proofing water supply infrastructure, the coordination around NBS and broader environmental protection is crucial; and

(c) Related initiatives, including projects supported by the Inter-American Development Bank (IDB), work with water system expansion and efficiency enhancement (e.g. by reducing NRW). These activities – standing to enhance climate resilience in a holistic manner – were not included in the design of the present project to avoid duplication.

This is well noted, but at the same time there needs to be an assurance that the different projects will coordinate with each other. Hence, it is recommended that that the AE ensures that synergies are maximized to reduce leakage, waste and NRW to minimal levels.

20. In view of the above, the impact potential of the project is assessed to be Medium–High.

1.3 Paradigm shift potential *Scale: Medium to high*

21. Regarding paradigm shift potential, the funding proposal states:

22. The project delivers three outcomes which all contribute to the paradigm shift: improved and climate resilient water sector governance; improved freshwater resources protection and adaptation to climate resilience; and improved climate-proofing of water supply infrastructure to reduce water supply disruptions and financial impacts on the utility. *Collectively the outcomes enable the utility to increase exploitation of the more resilient (and cheaper) groundwater resources*, enabling reduction in expensive desalinated water purchases and creating a paradigm shift in utility financial performance, which will enable funding of utility climate resilient CAPEX and OPEX as well as government core budgetary support to maintain economic and environmental regulator functions. (section D.2, p.40, iTAP 's emphasis.)

23. The iTAP welcomes a paradigm shift in relation to the utility's financial performance but does not endorse the funding proposal's statement that the exploitation of a financially cheaper, potentially under-priced, groundwater resource represents a paradigm shift. On the contrary, the iTAP is concerned about the current lack of legal and institutional protection of vulnerable groundwater lenses from over-exploitation.

24. The iTAP notes that, although groundwater overexploitation is not identified as a risk in the funding proposal (section F. risk assessment and management, pp.68–71), the economic and social impact assessment (annex 6) concludes that: "The increase in national demand for water in the Bahamas has placed a strain on the nation's groundwater supplies that serve as the primary source for human consumption" (p.199). It is in any case safe to assume that groundwater resources are vulnerable to depletion unless aptly protected.

25. The threat of depletion is further exacerbated by the use of groundwater because of its lower financial cost, especially if the utility organization is cash-strapped and not able to plan strategically for long-term sustainability.

26. Subactivity 1.1.2.4 aims to establish legislation for the protection of groundwater/wellfields. The type of legislation and bylaws that are highlighted in the funding proposal (also subactivity 1.1.3.3) are pertinent for protecting aquifers from pollution and climate change effects. However, little attention is given to the risk of over-pumping, which is also important and climate related.

27. Recommendation 3 (see chapter II below) proposes that, in the execution of activity 1.1.2.4, the project encourages the relevant authorities to thoroughly consider measures that also protect groundwater quantities and consider its ecological functions.

28. Such quantitative regulatory protection could go well beyond current salinity (quality) management. As discussed in relation to the future sustainability of the WRMU (see section 1.7 below), groundwater abstraction charges can be applied to put a "resource cost" to pumping and disincentivise over-pumping, while also funding the oversight and protection of the resource.

29. Another area of policy development that is to be (indirectly) supported by the project relates to economic regulation. The description of subactivity 1.1.2.3 in the funding proposal (p.21) explains that "The lack of authority for WSC (barrier 1) and/or an independent regulator

(barriers 1 and 2) to set tariffs compromises the financial sustainability of the utility and hence its ability to continue to adapt to climate change in future decades." In this regard, the iTAP notes the following:

(a) Given that the water utility operates as an actual monopoly provider of drinking water, and that the enormous economies of scale of the distribution infrastructure also makes it a natural monopoly, there are good reasons for not allowing this de facto monopoly to set its own prices. Hence, the project's envisaged strategy, which is also supported by the IDB-funded WSC activities, is to set up a water sector unit inside the Bahamas' Utilities Regulation and Competition Authority (URCA); and

(b) As explained by the AE in the questions-and-answers exchange, "water rates in the Bahamas have not increased in real (inflation-adjusted) terms since 1999. This has negatively affected WSC's financial standing". Moreover, the iTAP's reading of the economic and financial analysis (annex 3: Integrated financial model), suggests that the average cost of production is 1.6 times higher than average income from sales.[1]

30. According to the funding proposal (p.13), "The project goal statement and context-specific paradigm shift is: IF access to climate resilient freshwater resources is improved through a) better governance and management of water resources nationally and b) resilience upgrades to priority water supply systems THEN the national water utility can scale-up investments in resilience across the Bahamas BECAUSE it will become increasingly financially sustainable by reducing its exposure to climate risks and its projected dependence on expensive desalinated water." Again, the iTAP agrees with the logic that a financially sustainable utility stands to be well-equipped to invest in climate resilience but, as explained above, the financial deficit must not be covered by exploiting vulnerable and insufficiently protected groundwater. The financial deficit of the utility needs to be addressed by deeper reforms of the water sector in the Bahamas. The project sets out to support such a process, and this – if achieved – would be a real paradigm shift. A utility that is aptly compensated for the water services it provides will be able to sustain its operations. A customer tariff that is higher than the water production cost also gives a financial incentive to care for the water and avoid leakage, waste and NRW. This would be a dramatic – and self-sustaining – change from the current persistent deficit.

31. In summary, the potential for paradigm shift is assessed to be Medium to High.

1.4 Sustainable development *Scale: Medium to high*

32. The proposed project makes important contributions to sustainable development, particularly in relation to the core pursuit of providing water services, which aligns with Sustainable Development Goal 6 on ensuring the availability and sustainable management of water. The iTAP notes that, looking at the proposal with a broader focus, taking on more environmental, social and economic concerns, the contribution to sustainable development might be even greater. It is important that the project realizes its full sustainable development potential, and for this, the iTAP reiterates its Recommendation 2 about concerted coordination and cooperation with related projects, initiatives and institutions to jointly pursue higher-order objectives.

33. On environmental co-benefits, the funding proposal (p.41) states that: "Improved groundwater resources management and IWRM will result in reduced freshwater lens vulnerability to drought, storm surges and on-land rainfall flooding risks, and their impacts on

[1] The funding proposal refers to WSC's newly approved corporate business plan, which "identifies the need to modernise the legal and regulatory framework for the water sector of the Bahamas; set tariffs that cover the cost of service; …" (p.11). However, the plan is not publicly available, does not form part of the funding proposal package and not been seen by the iTAP. Noting, again, that tariff-setting is beyond the purview of the WSC, it remains important for its chances of achieving financial sustainability and autonomy.

rising salinity as well as potential for flood water mobilization and ground infiltration of land use hazardous substances. This can help protect groundwater-dependent freshwater terrestrial aquatic ecosystems, including pine woodlands, coppice woodlands, wetlands and swamps, as well as terrestrial and coastal ecosystems that are dependent on brackish (freshwater and seawater blends) for their ecosystem health e.g. hypersaline ponds, mangroves". The iTAP notes that the protection of groundwater-dependent ecosystems could be further enhanced by quantitative legal/institutional checks against over-abstraction of groundwater. Co-benefits could also be enhanced by greater attention to NBS throughout the project.

34. Most economies depend greatly on a reliable supply of water, and the hospitality and tourism industry on the Bahamas is no exception. It is understood through the question-and-answer exchange that many of the larger hotel complexes have their own water production (i.e. desalination plants) and would thus not depend on the national water utility for their supplies. There might nonetheless be economic benefits in greater connectivity between systems and not least to have the tourism sector contribute as much as possible to the sustainability of the water supplies of all the islands of the Bahamas. Tourists may also be sensitized to contributing to a "green" and environmentally as well as economically sustainable industry; for example, through hotels engaging in water-saving practices and technologies and/or paying a fair and greater share of the costs of the islands' water supply. (The pending/potential revision of the tariff-setting on the Bahamas could enhance this environmental–economic "partnership".) While the project keeps important focus on the pursuits it sets out to achieve, there is potential for further positive economic (and environmental) spin-offs.

35. Social co-benefits accrue to the direct beneficiaries whose water services stand to be more reliable including during hurricanes. The investment component does carry some risk in relation to construction and land clearance. (The project is classified as category B under CDB's environmental and social safeguards policy, indicating moderate risk.) Notwithstanding this, the economic and social impact assessment (annex 6) anticipates that the "outcomes of this Project are expected to increase the reliability of the water sector, address inequalities, and promote fairness across genders and social/vulnerable groups".

36. The need to increase customer water tariffs, as identified in WSC's newly approved corporate business plan (see footnote 1) and the project economic/financial analysis, is well established. However, if increased without caution, it could harm vulnerable water customers. In such cases, it is important that the social security systems in place be prepared to cushion such effects. The gender assessment (annex 8, p.9) notes that "there is public assistance in the form of food vouchers, rent coverage (landlord paid directly), utility bill payments (paid to utility community) from the Department of Social Services". Such systems are important both for a better-functioning water sector and for society in general. Social security can make important contributions towards poverty alleviation and concomitant climate resilience.

37. Where social security systems are not in place or not trusted, or there is a lack of commitment to pro-poor policies, water tariffs may be kept unsustainably low for all customers – regardless of their ability to pay. Very low water rates compromise utilities' capacity to provide effective services, which typically harms the poorest and least influential segments of the population. To some extent – given that the real cost of the water tariff in the country has remained unchanged since the late 1990s, and that the utility operates with a persistent financial deficit – this seems to be the case in the Bahamas.

38. It is therefore of great importance that the Department of Social Services or relevant authorities and expertise regarding the social security system of the Bahamas be involved in the tariff reform process. Social security expertise is needed to ensure that subsidies will be used to benefit those who need them in order to be able to afford safe and reliable water services. Such demand-side subsidies, which are transferred directly to the users, are more effective than

supply-side subsidies that are paid to the service provider. Supply-side subsidies provide little incentive for water providers to actually deliver the subsidised service.[2]

39. The project – in its support to water (including tariff) reforms – may also collaborate with the social security systems and relevant authorities (Recommendation 2) to ensure to pro-poor tariff reforms.

40. More broadly, the project could use its inroads into the tariff-setting water unit at URCA to help ensure that water tariffs in the Bahamas are economically, environmentally and socially sustainable, as suggested in Recommendation 4 (see chapter II below).

41. The gender issues of most concern in the project relate to equal access to employment and professional life.[3] The project includes capacity development to address gender disparities within WSC as well as among stakeholders. The gender assessment notes that WSC does not yet have a gender policy in place. If developed, this might be a vehicle for addressing some of the barriers for women to be more effectively engaged in technical capacities and decision-making.

42. In summary, the sustainable development potential is assessed to be Medium to High.

1.5 Needs of the recipient *Scale: Medium to high*

43. The Bahamas has a high nominal GDP and is thus classified as a high-income economy. Nevertheless, there are great disparities, and the funding proposal highlights the lack of social services on many of the islands. The Bahamas is a small island developing State.

44. The Notre Dame Global Adaptation Initiative (ND-GAIN) ranks over 187 countries in terms of their vulnerability as well as readiness in relation to climate change.[4] ND-GAIN gives the Bahamas a vulnerability score of 0.458, which is considered as high (118th place in a ranking of the least vulnerable) and a readiness score of 0.433, putting it as the 87th most ready to face the challenge of climate change.

45. As presented in the funding proposal, a major issue for the water sector of the Bahamas is that the national utility operates at a significant financial loss. This is covered by central government subsidies. It is recognized that running operations with costs higher than revenues defeats any autonomy. In effect, a utility without financial autonomy cannot plan its operations, let alone climate proof them; hence, the need for external support (and water sector reforms).

46. The proposal includes activities that strengthen the enabling environment and institutional capacities, addressing key barriers that are inhibiting the transition towards climate-responsive and sustainable development pathways in the water sector. However, these will not directly generate revenues for the project partners. Even the climate-proofing of the water infrastructure will not generate much revenue, even if the improvements help to sustain operations during climate events. Similarly, a reduction in water loss should contribute to lowering the cost of water production by way of reduced water wastage, but would not generate much revenue. (Significant revenue generation may only realistically be produced by way of customer tariff reforms and improved billing and collection efficiency.)

47. As highlighted in the funding proposal (p.43), "the central government also has limited capacity and fiscal space to take on additional debt." Hence, it is noted that the annual subsidy (amounting to USD 50 million in 2022 according to the funding proposal, p. 15) is strenuous for

[2] See e.g. World Bank report Doing More with Less - Smarter Subsidies for Water Supply and Sanitation (https://www.worldbank.org/en/topic/water/publication/smarter-subsidies-for-water-supply-and-sanitation)
[3] "Gender sensitive" terms have been added to some outcomes and outputs but this is not consistently applied. The flagging of gender issues has not been matched by gender-sensitive or gender-responsive contents in the funding proposal.
[4] See https://gain.nd.edu/our-work/country-index/.

the country. The funding proposal very poignantly emphasises the need for a revised funding model of the SWC.

48. The mix of grants and concessional loans seems appropriate. The needs of the recipient criterion is assessed to be medium to high.

1.6 Country ownership *Scale: High*

49. The nationally determined contribution (NDC)[5] of the Bahamas sees the "relentless salinization" of its freshwater lenses as a threat to water security. The NDC communication identifies the country's vulnerability to climate change across multiple sectors. Adaptation priorities include "coastal and marine ecosystems, water resources, agriculture, tourism, health, human settlements, energy, and forestry, reflecting both the economic reliance on natural resources and the exposure of infrastructure and communities to climate hazards" (p.66). Commitments emphasize the need to reduce risks from sea level rise, hurricanes, storm surge, drought and salinization, while also building institutional capacity and integrating climate considerations into development planning. The proposed project is well aligned with the country's expressed climate change adaptation priorities.

50. CDB, the AE, is well integrated into the water and adaptation priorities of the Bahamas. It has supported the Bahamas Water Supply Improvement Project (BWSIP), which targeted rehabilitating and expanding water distribution networks, contributing to climate-critical NRW reduction in the Family Islands. A second phase of the BWSIP is to focus on expanding pipe networks to increase access (funding proposal, p.11). More broadly, the CDB has been operating in the Caribbean region for over 50 years and has a strong track record of providing financial and technical assistance to support the water sector and sustainable management of water resources (funding proposal, p.28).

51. WSC, the EE, was established in 1976. It supplies water to 175,000 people (61 per cent of the population) in the capital city, New Providence, and 45,000 people (70 per cent of the population) across the Family Islands. In New Providence, there are also wastewater services for 35,000 people. The WSC has nearly 500 employees. Over 60 per cent of them are men. Of the women employees, some two thirds have clerical roles, making them somewhat disengaged from the technical processes and decision-making.

52. WSC has a strong track record of executing projects financed by CDB and other development partners (e.g. IDB); as such, WSC is familiar with relevant CDB policies and procedures and has been assessed as having requisite capacity to serve as EE under this project.

53. WSC is currently completing the implementation of the USD 30 million CDB-EIB (European Investment Bank) funded BWSIP and is in discussions with CDB regarding a second phase, valued at USD 20 million to USD 30 million. WSC is also in discussions with IDB for access to a USD 100 million credit line for the Bahamas Water Supply and Sanitation Systems Upgrades Programme. WSC has a dedicated project management unit monitoring WSC-donor interactions for externally funded projects, and a dedicated engineering planning department for managing internal WSC and government projects (funding proposal, p.29).

54. The proposal describes a robust national stakeholder engagement and consultation process for the project design and preparation process, including frequent core team meetings with the CDB, the WSC and also the national designated authority (NDA) (the Office of the Prime Minister) are reported. In addition, 50 meetings with 28 individual agencies were held ahead of a multi-stakeholder national IWRM workshop in July 2023 – an event that was attended by 46 delegates from 12 government agencies, two private sector operators and three civil society

[5] The Bahamas' third NDC (October 2025) is available at https://unfccc.int/sites/default/files/2025-11/The%20Bahamas%20NDC%203.0.pdf.

representatives. Each of the seven Family Islands that were visited included a multi-stakeholder governance meeting with the island council and its civil society representatives, to discuss the project objectives and opportunities, and seek local perspectives on water supply climate risks. This amounted to a total of 207 meetings with Bahamian stakeholders during the project design process (funding proposal, p.44).

55. The IWRM workshop is extensively reported on in the funding proposal package, and it also resulted in a (draft) 'IWRM White Paper' and communication from the NDA about a Cabinet decision in support of the development of a national integrated water coordination mechanism (funding proposal, annex 2, appendix 6).

56. The country ownership is assessed to be High.

1.7 Efficiency and effectiveness *Scale: Medium*

57. The project reports very positive economic and financial rates of return. The project's total cost of USD 65 million divided by 415, 000 total beneficiaries amounts to USD 157 per beneficiary. The smaller 'policy' technical assistance component (1) costs only USD 22 per capita, while the larger investment component (2), reaching only direct beneficiaries, has a per capita cost of USD 243.

58. Whereas the relatively inexpensive policy/technical assistance part of the project has large and laudable objectives, it is to be implemented by the country's water utility which has a limited mandate in many of the areas of concern for the project. Hence, it is of utmost importance that the EE implements the project in a consultative and coordinated manner (see Recommendation 2 in chapter II below).

59. Moreover, several new functions are to be established by or with support from the project, as follows:

(a) The IWRM APEX body: this is to have a core mandatory group (as ratified by Cabinet, referring to a National Integrated Water Coordination Committee) including WSC, the Department of Environmental Planning and Protection (DEPP), the Department of Meteorology, the Department of Public Works, the Disaster Risk Management Agency, the Forestry Unit and the Bahamas National Geographic Information Systems Centre, plus non-mandatory invitees. The formation of the IWRM APEX body will be through the GCF project steering committee, serving as the "proto-IWRM APEX body" (funding proposal, p. 44). The steering committee is to meet monthly to provide technical oversight, guidance and recommendations to the project management team and the NDA (funding proposal, p.31), and thereafter transform into the IWRM APEX body;

(b) The WRMU: this will initially be set up at the WSC[6] and thereafter, towards the end of the project implementation period, transferred to DEPP, which is legally mandated to regulate water resources; and

(c) A Water Unit inside URCA: Under on-going IDB-funded WSC activities, legislation is currently being updated to enable URCA to officially be tasked with becoming the regulator of the water sector. The Water Unit will be set up with the support of the presently proposed project, including personnel capacity-building and training (appropriate qualifications, twinning), hardware, software and related costs, short-term

[6] As discussed in the question-and-answer exchange between the iTAP and the AE, the (initial) hosting of WRMU at WSC carries the risk of conflicting interests; the WSC, in its utility role, serves as the extractor of groundwater while at the same time, in its WRMU hosting capacity, serves as the overseer and protector of groundwater resources. This conflicts of interest risk is heightened by the project's stated pursuit of reducing costs by turning to low-cost groundwater.

consultancy support and back-stopping, and staff costs. Broadly, the project will support the URCA to implement its new mandate.

60. Although the plans for establishing these three new functions within or among government bodies have been developed in some detail, their funding is left for the future (after project or project year 6 or 7) assuming it will come through government core budgetary support. This is one of the risks identified by the proposal:

(a) The project design requires the government to fund the URCA and WRMU from the annual recurrent Treasury budget once project support finishes. The expectation is this will be funded by larger reductions in WSC subsidies realised by reducing desalination water purchase costs by increasing groundwater abstraction, and increasing revenues by reducing leakage. Given there will be other ministries competing for funds and unforeseen emergency government priorities (e.g. hurricane recovery), there is a risk that financing will not be available for technical operation of the economic regulator (URCA) and/or the WRMU (and its decision support system) when it is needed in the later stages of the project implementation period.
(Selected Risk Factor 4 – Financial, funding proposal p.69).

61. Whereas the probability of this happening is deemed to be low, the impact is deemed to be high. Indeed, it would be the end of the institution that the project has put in place. The project's mitigation strategy is to undertake high-level political engagement "to raise awareness on the importance of water utility savings being re-allocated to support these other water sector functions". It may be challenging to ring-fence previous subsidies, especially if the anticipated savings from the utility's reduced need for government subsidies are not obvious or clearly forthcoming.

62. To further mitigate the risk that the organizational units to be created or co-created by the project simply end at project closure, iTAP proposes that the project also develops a stakeholder-consulted financing plan that sets out the funding arrangements for the continued operations and sustainability. This could involve the development of funding models for the three units i.e. the water unit at URCA, the WRMU, and, as appropriate, the IWRM APEX body to continue to exist after the project steering committee closes. The development of this financing plan is suggested as a condition for Board approval (see chapter II below).

63. The process to develop the financing plan could explore how other countries deal with the long-term funding of these critical functions, and present existing options or new ideas to stakeholders to discuss what may fit best for the needs and aspirations – and the legal system – of the Bahamas. The iTAP further notes that:

(a) Water resources management functions, beyond central government budgets, can use abstraction levies to cover their costs. Such fees can also serve environmental objectives by motivating the monitoring (and publication) of volumes abstracted, and add a monetary cost to groundwater abstraction, thus disincentivizing possible over-extraction; and

(b) Economic/industry/utility regulatory functions, where not covered through central government budgets, often take out a regulator's tariff which the regulated services provider charges from end-users as part of the customer tariff and channels to the regulator.

64. The development of the financing plan would need to be aptly reflected in the project's documentation, including the result framework. It is recommended that the AE (see Recommendation 1, chapter II, below) review all the results and indicators to ponder and ascertain that the selected proxy indicators actually indicate progress towards the desired goal. In particular:

(a) In relation to outcome 1 (Improved governance and IWRM protects freshwater resources, reducing vulnerability to climate change), the iTAP does not find "Total increase in water supplied by freshwater lenses for WSC, relative to the business-as-usual scenario" to be a suitable proxy for improved governance. If the resource is in risk of depletion, increased abstraction could be an indication of poor governance; and

(b) In relation to co-benefit 2 (Improved financial security of water utility), similarly, "Desalination concessionaire payments as percentage of OPEX" does not seem to capture the spirit or aspiration of the co-benefit. The AE should be able to identify an indicator that more directly reflects "financial security".

65. Finally, the recurring financial deficit of the WSC is an important obstacle for its capacity to plan for climate resilience, and consequently a key concern of the proposed project. It is noted that there are several ways to address this issue: reducing costs (which is what the present project partly focuses on), increasing tariffs (as pursued indirectly by the project), and also reducing the high level of NRW. NRW reductions and other efficiency enhancements are pursued by other ongoing projects. Again, coordination with related projects and programmes is important.

66. Given the considerations above, the efficiency and effectiveness criterion is assessed to be Medium.

II. Overall remarks from the independent Technical Advisory Panel

67. The proposed project, Climate Resilience of the Water Sector in The Bahamas, seeks to address the climate vulnerability of this Small Island Developing State's water resources by way of increasing the use of groundwater relative to desalinated water. This shift is motivated primarily by the fact that groundwater resources at present can be exploited financially inexpensively, and the water utility's long-standing financial deficit.

68. The proposed project includes activities for strengthening the water resources management and groundwater monitoring capacity of the Bahamas. It also includes activities for improving infrastructure and protecting wellfields from stormwater surges and other climate-related hazards. There are, however, no institutional barriers in place to protect the vulnerable groundwater lens from potential overexploitation.

69. The iTAP sees opportunities for the project to address water and environmental resources protection as well as utility financial performance together in a climate resilient manner.

70. The iTAP recommends to the AE to undertake the following:

(a) Recommendation 1: Ensure that the selected indicators of the results monitoring framework more aptly capture the spirit of what the outcomes, outputs and activities seek to achieve. It is recommended that the AE review the whole framework of project-specific indicators (section E.5 of the funding proposal) with special attention towards finding better proxies for positive progress on the following:

  (i) Outcome 1: Improved governance and IWRM protects freshwater resources, reducing vulnerability to climate change;

  (ii) Co-benefit 2: Improved financial security of water utility; and

  (iii) Co-benefit 3: Climate change mitigation (GHG emission reduction);

(b) Recommendation 2: Recognizing that many of the more important activities for climate resilience, as well as economic, environmental and social dimensions of sustainable development, go well beyond the mandated activities of the WSC, and also what can be achieved by a project on its own, it is recommended that the project spell out the

synergies and dependencies more clearly in the project's work, to assure coordination with relevant actors, initiatives and projects. Already identified water resources coordination bodies and capacity development activities may be augmented to co-create higher-order results in relation to:

(i) Climate resilience and energy efficiency in water production and distribution – both within and beyond the WSC operations;

(ii) The ecological function of groundwater in situ, along with the use of NBS in water infrastructure climate-proofing as well as the protection and restoration of groundwater recharge areas;

(iii) Efficiency enhancements to utility operations, particularly to reduce water loss from leakage and wastage, and to reduce financial loss from inefficient billing and collection, standing to reduce overall NRW; and

(iv) Economically, environmentally and socially sustainable water governance, including the engagement of social security for achieving universal access to safe water services.

(c) Recommendation 3: In the implementation of activity 1.1.2.4 (establish legislation for groundwater / wellfield protection), it is recommended that the project supports the relevant authorities to consider not only zoning, pollution and climate impact protection of groundwater, but also direct measures to oversee and control pumping volumes. This is to protect the groundwater lens from deliberate or inadvertent overabstraction, to sustain yields in the long term and to protect the ecological functions of groundwater in sustaining groundwater-dependent ecosystems; and

(d) Recommendation 4: Subactivity 1.1.2.3. to set up a water unit within URCA may also support the government in devising a process for the continuous update and oversight of the WSC customer tariff structure and level. It is recommended that the project uses its influence in this area to ensure a "just climate transition" by devising a socially, economically and environmentally sustainable tariff that addresses:

(i) Economic concerns that customer tariffs below the cost of water production and distribution are untenable, as has been well clarified. Ways to ensure that the tourism industry becomes a more important contributor to cover costs and promote climate resiliency of the water system(s) of the Bahamas could be developed;

(ii) Environmental concerns that tariffs convey information, incentives and disincentives which can induce both the utility and its customers to cooperate to save water, reduce wastage and contribute to the cost of resource protection; and

(iii) Social concerns that the affordability of safe water services for low-income and vulnerable groups and individuals may be most cost-effectively achieved through social security measures. It is recommended that the project co-create a tariff reform with relevant authorities and experts to underpin a just transition towards climate resilience on the Bahamas.

71. The iTAP recommends that the Board approve this funding proposal with the following condition to be fulfilled prior to the third disbursement of GCF proceeds:

(a) The AE shall submit, in a form and substance satisfactory to the Secretariat, a stakeholder-consulted financing plan that sets out the funding arrangements for the continued operations and sustainability of (i) the Water Resources Management Unit (WRMU) at the Department of Environmental Planning and Protection (DEPP), and (ii) the Water Unit at the Utilities Regulation and Competition Authority (URCA).

Response from the accredited entity to the independent Technical Advisory Panel's assessment (FP298)

Proposal name:	Climate Resilience of the Water Sector in The Bahamas
Accredited entity:	Caribbean Development Bank (CDB)
Country/(ies):	The Bahamas
Project/programme size:	Medium

Impact potential

Thank you for the positive feedback.

Regarding recommendation 1, the CDB project team:

- Is open to discussing an alternative Outcome 1 indicator with the GCF Secretariat during the inception phase of the project. This should leave sufficient time to agree on a revised indicator that addresses the concerns raised by iTAP while also ensuring the updated indicator: (i) is acceptable to the GCF Secretariat; (ii) is acceptable to WSC; and (iii) can be monitored in a cost-effective manner (i.e. without requiring major changes to the monitoring and reporting budget).
- Considers that the proposed indicator for co-benefit 2 is appropriate, as it focuses on the aspect of WSC's financial standing that can directly be influenced by the project. Indicators that focus on WSC's broader financial standing would not be appropriate, as this is shaped by many different factors that are beyond the control of this climate change-focused project.
- Considers that the proposed indicator for co-benefit 3 (i.e. focusing on desalination) is appropriate, as the energy intensity of generating water from the country's reverse osmosis plants is significant whereas the energy use associated with the wellfield pumps operated by WSC is quite modest.

Regarding recommendation 2, we agree that coordination with other stakeholders and initiatives is of paramount importance. This is why the proposed project places a strong emphasis on supporting Integrated Water Resources Management (IWRM). In establishing the IWRM Apex Body, as well as supporting the development and implementation of a National IWRM Plan, the project is already designed to enhance coordination and collaboration among the stakeholders whose mandates and work/activities affect the country's water resources.

Paradigm shift potential

Thank you for the positive feedback.

Regarding recommendation 3, we maintain that the risks of overexploiting groundwater resources are modest and manageable, in part because of the measures included in the proposed GCF project. Indeed, WSC will not increase pumping in an unregulated or unsupervised manner. On the contrary, the project will support national stakeholders to put the systems and institutional structures in place to ensure groundwater is managed more

sustainably and responsibly – and only work with WSC to expand marginal wellfields after those systems and structures are operational.
Sustainable development potential
Thank you for the positive feedback and constructive ideas shared during the review process.
Needs of the recipient
Thank you for the positive feedback.
Country ownership
Thank you for the positive feedback. We fully agree that there is a high degree of country ownership, and that the stakeholder engagement process was very robust throughout the project preparation phase.
Efficiency and effectiveness
Thank you for the positive feedback. WSC will indeed execute Technical Assistance (TA) activities that are beyond its traditional mandate, but national stakeholders agreed that it was nevertheless best placed to lead these efforts. Regarding the financing plan for the WRMU, we would like to flag that this is already envisaged as part of Sub-Activity 1.2.2.1, which includes the development of a WRMU institutional development strategy by the end of Year 2.
Overall remarks from the independent Technical Advisory Panel: Thank you for the positive feedback. Responses to Recommendations 1-3 are included above. Regarding recommendation 4, CDB will advocate for social inclusion and equity considerations throughout project implementation. However, it is important to reinforce that CDB is not promoting a specific tariff level, but rather supporting the government's efforts to transition to an institutional structure in which tariffs are set independently and with greater consideration given to the actual costs incurred to provide water to the people of The Bahamas. In this context, the CDB project team expects that a tariff study (which would consider interest groups and affordability) will be done to inform the rate adjustment process once URCA has been established as the regulator responsible for the water sector. Regarding the proposed condition, we have no objection to submitting an URCA institutional development strategy to the GCF Secretariat similar to the one that will be prepared for the WRMU under Sub-Activity 1.2.2.1.

Climate Resilience of the Water Sector in the Bahamas project

Annex 8: Gender Assessment and Gender Action Plan

1 Gender Assessment

1.1 Introduction

The Gender Assessment and Gender Action Plan are fully aligned to the GCF Gender Policy and speaks to the collection and use of gender-disaggregated data that is available for the project locations. The analysis of the data has been done to identify gender gaps and needs that can be mainstreamed into a gender-responsive project design and implementation. This mainstreaming has been done examining the entire project cycle, involving the preconstruction, construction and operational phases of the project. Activities have been put forward to address the potentially negative gender impacts to avoid and reduce these impacts as well as promote gender equality during the intervention for equal benefit to men and women, and reduce gender disparities during each phase of the project cycle.

A gender impact assessment is an evaluation, analysis or assessment of a law, policy or programme that makes it possible to identify, in a preventative way, the likelihood of a given decision having negative consequences for the state of equality between women and men. To expand this definition for the purposes of this initiative, the gender assessment will seek to identify how the proposed project, including resilience upgrades to water infrastructure on the prioritized islands is likely to impact those who rely on a reliable source either to conduct business, to practice their livelihood or simply for domestic purposes. This assessment will also seek to drive policy and institutional reform in the Bahamas' Water Sector by implementing capacity building, and equality and inclusion mechanisms. The Gender Assessment builds on the preceding socio-economic baseline assessment and water sector assessment of each of the target islands as well as ensures a specific gender lens to that analysis and also an elaboration of initial gendered risks.

1.2 Methodology

1.2.1 Data Collection

The Gender Assessment and Gender Action Plan have been completed utilizing a gender-responsive approach. This included first identifying gender-disaggregated data that is available for the project locations, and subsequently conducting stakeholder consultations with the locals in the areas, engaging key agencies such as the Department of Social Services to garner perspectives on the gender issues, the needs and the potential impacts or opportunities that the project possesses.

Stakeholder consultation took place on all the islands for intervention during the site assessment in May 2023. These stakeholders were representatives from the following islands:

- Abaco
- Acklins
- Andros (North, South and Central)
- Eleuthera
- Exuma
- New Providence
- San Salvador

Following this, a series of telephone interviews were conducted utilizing a survey instrument shown in Appendix 1. Key inputs related to:

- identifying the nature of the water supply and its uses based on the experience of the locals
- understanding where the water stressed areas lie and if there were any challenges
- identifying the unique needs of both men and women and the location of vulnerable communities
- determine if there are affordability issues and the economic status of women
- determining if there was a Gender Policy in place nationally and at the institutional level with Water and Sewerage Corporation (WSC)
- Determining if there were water access issues and how climate change related disaster events affected the distribution of water
- Identifying biases and where they may exist
- Determining if gender-sensitive programmes existed and how wastewater was handled.

1.2.2 Literature review

In addition, existing literature from past studies that were relevant to social issues in the Bahamas or the water sector in the Bahamas were examined to supplement the primary data. The socioeconomic assessment in the ESIA was also utilized to understand the existing socioeconomic environment as the issues are all interrelated. The review on gender-specific policies that exist at the national level as well as the institutional level was utilized to determine the enabling environment for an effective gender-responsive programme intervention.

1.2.3 Action Planning

The data was analysed through the identification of gender gaps and needs and then developing recommendations that can promote gender equality and reduce gender disparities in climate action. The GAP was developed using the GCF template which takes on a monitoring framework approach outlining for each activity recommended appropriate indicators, targets, timeline, responsibility and costs.

1.3 The Enabling Environment

The Bahamian local policies, legislation, regulations and institutional framework provide an enabling environment for effective gender-responsive project design and implementation, as such this was examined as a part of the Gender Assessment.

1.3.1 Legal

The following are some relevant legislations.

Sexual Offences Amendment Act 2014

This Act serves to provide for a sex offender register and registry. Section 2 of the amendment act inserts sections 26A-26J into the principal Act. To establish a sex offender register and a sex offender registry.

Child Protection Amendment Act 2014

Section 3 of the Amendment allows the insertion of Part XIIIA into the principal Act. Part XIIA – establishment of guidelines for mandatory action rescuing children operation.

Persons with Disabilities (Equal Opportunities) Act 2014

Section 4 of the Act allows for the establishment of The National Commission for Persons with Disabilities. Section 10 (1) – Functions of the Commission. (1)(b) (ii) to advise the Minister on the provisions of any international treaty or agreement relating to the care of rehabilitation and habitation of persons with disabilities and its benefits to the country (iii) to recommend measures to prevent discrimination against persons with disabilities.

National Tripartite Council Act 2015

The Act establishes a tripartite forum on labour and industrial relations. Section 4 - The functions and powers of the council are (a) to practice and promote tripartism in The Bahamas through cooperation, consultation, negotiation and compromise of the social partners in order to create and shape social and economic policies and programs. (b) To also advise the government on the formulation of national policies and strategies on all aspects of labour, productivity, quality and competition.

National Health Insurance Act 2016

This Act repeals the National Health Insurance Act of 2007 and implements a National Health Insurance Plan, to establish a National Health Insurance Authority, for the establishment a National Health insurance fund. The National Health Insurance Plan is to facilitate the provision of accessible, affordable, equitable and quality health care services to all eligible persons.

1.3.2 Policy

There is a Draft National Gender Policy, but this has not been finalised for Cabinet approval and implementation. Additionally, a Draft National Strategic Action Plan on Gender Based Violence also exists, as well as a Draft Five-Year Strategic Plan on Domestic Violence. These need to be finalised and implemented in order to make effective change and facilitate proper mainstreaming of gender across government and the wider society.

Specifically with regards to the water sector, there is currently no national water policy in The Bahamas which sets out policy goals, directives and policy instruments for the water sector, nor a water resources policy nor a water supply and/or sanitation policy.

The draft of the Water and Sewerage Services Bill (2016) included a set of guiding principles which can be interpreted as constituting policy prescriptions. These included:

- Protect water as a national resource;
- Control and oversee the administration of the marketing, production, extraction and use of water in the public interest;
- Supply environmentally sustainable, safe, potable, affordable water, and efficient and reliable sewerage services to all customers;
- Enhance security in relation to the supply of potable water and sewerage services;
- Encourage competition in the supply of potable water and sewerage services;
- Facilitate the sector structure and culture best able to comply with the mandates and requirements of the independent sector regulators;
- Promote the use of modern technologies;
- Promote private investment and innovation and create incentives for private sector participation.

Whilst the draft 2016 Bill has never been ratified, it has contributed to both national and corporate (WSC) strategy and mandate guidance. Gender and social inclusion considerations do not feature prominently in this draft 2016 Bill.

In place of a single water policy document there are references to water in other policy documents, for example the 2005 National Policy for the Adaptation to Climate Change. This climate change document aims to foster the development of plans, processes and strategies to avoid, minimize, adapt to, or mitigate, the negative impacts of Climate Change on the natural environment including ecosystems, ecological processes, biotic, resources, lands and water. With specific reference to water under the section on policy directives it goes on to list specific interventions to address the impacts of Climate Change on water resources, being:

- A comprehensive inventory of all water resources,
- A long-term National Water Management Plan,
- Prepare emergency plans for water distribution during droughts,
- Provide for the utilization of storm water for groundwater recharge,
- Encourage the use of waste heat for desalination of seawater,

- Encourage the use of efficient water savings devices.

The Bahamas Updated Nationally Determined Contribution (NDC) (2022)[1] details the policy environment relevant to reducing GHG emissions by citing laws and reports which contribute to or include climate-related policies and instruments. It then goes on to detail specific areas of adaptation intervention relevant to the water sector:

- Develop contingency planning for essential systems.
- Explore new technological solutions for ensuring population's access to drinking water.
- Develop a better understanding of the risks and consequences of extreme events on water utility systems and availability of groundwater resources.
- Increase investments in desalination plants to ensure water availability.

Other areas which are of relevance and interconnected to the water sector include health, tourism, agriculture and disaster management. Currently, the government is developing climate smart policies for the health and wellness sector but there is no explicit mention of water. The tourism sector does not appear to have a specific climate related policy, the 2005 National Policy for the Adaptation to Climate Change only mentions the need for environmental impact assessments. For the agricultural sector the policy appears to be promoting the use of brackish water for trickle irrigation and the planting of saline tolerant crops. There does not appear to be a recognition of the cross-cutting aspects of water and climate resilience across sectors.

Policy Gap

The absence of a national water policy clearly means that there is a policy gap. The ambitions, goals and objectives to be used to guide the development of The Bahamas water sector are missing with respect to what the State wishes to achieve. It is not though a total policy deficit for there are policy aspects which are generally agreed on. These include but are not limited to: the need for an adequate governance structure that establishes interagency collaboration, compliance and enforcement measures; more sustainable financing of the water sector; water conservation measures, and pollution prevention and control; wastewater reuse; independent arrangements for water resources management and building capacity to enable this; opportunities for stakeholder involvement in planning and decision-making; and, Disaster Preparedness and Flood Management. It is the codification and generation of consensus that are in need of attention.

Good international practice has used the Dublin Principles[2] and Integrated Water Resources Management as a starting point in crafting water policies. The development of water policies should

[1] https://unfccc.int/sites/default/files/NDC/2022-11/Bahamas%20Updated%20Nationally%20Determined%20Contribution.pdf

[2] The Dublin Statement on Water and Sustainable Development was agreed at the International Conference on Water and the Environment (ICWE), on 26-31 January 1992, a preparatory meeting of the United Nations Conference on Environment and Development (UNCED) to be held later that year. The Dublin Statement, which included four principles on water, was submitted to the UNCED in Rio de Janeiro, 3-14 June 1992, also known as The Earth Summit. Hence the name, Dublin-Rio principles.

take account of not only of the particular circumstances of a country but also needs to reflect emerging concerns (*e.g.* climate change and gender) and priorities. The choice of how to name a water policy is for a country to decide on but irrespective of what they are called they share common elements and content. They can be expected to cover:

- Policy Goals and Objectives;
- Basic Principles;
- Allocation Priorities;
- Issues and Policy Implementation;
- Instruments for Policy Implementation, including roles and responsibilities;
- Monitoring and Evaluation; and
- Review and Revision.

Regional examples of national water policies include Jamaica's National Water Sector Policy and Implementation Plan revised in 2020 and Trinidad and Tobago's National Integrated Water Resources Management Policy 2022.

It is instructive to note that both of the above national policies were developed following extensive national stakeholder consultations and incorporate elements such as the separation of water resources management from water service provision, interagency coordination and collaboration, the use of economic instruments and participatory instruments, gender and social inclusion, among others that also recognise international best practice- all of which are in keeping with the Integrated Water Resource Management (IWRM) approach. Furthermore, the process of development took time; in the case of Trinidad and Tobago this took place more than a year, whilst Jamaica's revision took at least six months and followed on more than a year of consultation and work for the earlier version.

In order to develop a national water sector policy, which by its nature would also include policy with respect to water resources management, a national task force would have to be appointed and resourced. It could be assisted but not led by external consultants and could include representation from the private sector business community, the health sector, physical planning and land management, the finance and economic development departments, department of gender and family affairs, civil society organisations, agriculture, environment, tourism, marine affairs, welfare services, building standards authority, and statistical services.

The Gender Action Plan (GAP) for this project should therefore aim to both facilitate gender and social inclusion inputs in the process of developing the national water policy, as well as ensure that

Principle 1: Water is a finite and vulnerable resource: Fresh water is a finite and vulnerable resource, essential to sustain life, development, and the environment.
Principle 2: Participatory approach: Water development and management should be based on a participatory approach, involving users, planners, and policy-makers at all levels.
Principle 3: Role of women: Women play a central part in the provision, management and safeguarding of water.
Principle 4: Social and economic value of water: Water is a public good and has a social and economic value in all its competing uses.

technical experts are available to ensure gender and social inclusion elements are integrated in line with good international practice.

1.3.3 Institutional

Department of Gender and Family Affairs (DGFA)

The Department of Gender and Family Affairs (DGFA) was established October 2016 and is a major achievement towards gender equality and the empowerment for women in The Bahamas. This agency falls under the Ministry of Social Services, Information and Broadcasting and carries the mandate to coordinate, advocate and inform policy for and on behalf of women and girls, men and boys.

The scope of work of the Department has been expanded to ensure a comprehensive approach to address the country's social challenges, create educational programs, provide training for women and girls and to monitor the implementation of international conventions that impact women, men, boys and girls.

In December 2018, The Bahamas strengthened the DGFA by increasing the staff complement to include a Director, Senior Public Officer, Domestic Violence Specialist, Gender-Based Violence Coordinator, Male Programme Coordinator, Education Curriculum Specialist, Records Registrar, Administrative Assistant, Gender Conventions Expert and a Research Specialist. (Gender Based Task Force Strategic Plan, 2015 in The Bahamas National Review Beijing+25, 2019).

Water and Sewerage Corporation (WSC)

It was identified that the Water and Sewage Corporation does not yet have in place a gender policy. It was identified that this is an area for improvement and that given the Government of The Bahamas was looking to develop a National Gender Policy they would be on board with ensuring they integrate the commitments of the policy within their organisation.

CDB is planning to support WSC to develop its own Gender Policy through a parallel project (the Water Supply Improvement Project Phase 2), approved by CDB Board in March 2025.

1.3.4 National Gender Challenges

In The Bahamas National Review Beijing+25 (2019), the report speaks to four (4) main challenges, these are quoted:

1. ***"The geographical archipelagic landscape of The Bahamas means that many islands compete for limited national budgetary resources and continue to present the most significant challenge against the advancements of women and gender equity***. *From 2014 to 2019, the geographical reality of travelling over 100,000 square miles of water to replicate and distribute social protections, public capital, human resources, infrastructural services, utilities, and vital products in twenty-four (24) islands and several cays is*

exceptionally costly. The Bahamas made several attempts to enhance efficacy by forging new strategic corporate partnerships and engaging in numerous joint venture initiatives with other inter-agencies and regional National Machineries that promote the advancement of women and girls.

2. ***The need for technical assistance for the implementation of scientific research to gather baseline data and analyses to inform the impact of the many initiatives is a major concern.*** *Efforts are being made to address the lack of technological networking capacity needed to accurately track the clients' access to safety net programmes offered in the MOSS centres. One of the critical CEDAW recommendations was the need for The Bahamas to conduct national scientific research to obtain baseline prevalence data to obtain authentic measurements of success.*
3. ***Gender-based violence (GBV) - Intimate Partner Violence, Domestic Violence, and Sexual Assaults remain problematic in The Bahamas.*** *The Royal Bahamas Police Force GBV Crime Statistics 2023, indicate that there have been a recorded 61 instances of rape, an increase from the 55 that were recorded in 2022. Records show that 49 of the 61 (~80%) instances of rape that occurred in 2023 and 37 of the 55 instances of rape (~67%) in 2022 took place on New Providence alone. In 2023, according to the Royal Bahamas Police Force, all crimes against persons and property decreased, except for reported rape and attempted rape, which experienced a 32% and 29% increase, respectively, on the island of New Providence – Violence against women and children remain of great concern. Both intimate partner violence and rape disproportionally affect women and are underreported..*

   The Caribbean as a region has been identified by the United Nations Entity for Gender Equality and the Empowerment of Women, also known as UN Women, as housing three of the top ten recorded rape rates in the world[3] - the worldwide average for rape was 15 per 100,000, while The Bahamas had an average of 133, St. Vincent and the Grenadines 112, Jamaica 51, Dominica 34, Barbados 25 and Trinidad and Tobago 18. The UNDP Caribbean Human Development Report (2012) indicates that 30.4% women in the Caribbean report high rates of fear of sexual assault. This same report states that this fear is likely due to the decrease in conviction rates and victims being blamed for their abuse. Along with the immediate risks to the health and safety of women, their economic viability, social lives, personal development and self-worth are all at risk to GBV. In 2023, all reported crimes against people experienced a nationwide decrease from 2022, except for rape that saw an 11% increase (Royal Bahamas Police Force, 2024). For this same period, reports of sexual offences remain unchanged with 204 incidents. These offences include rape, unlawful sexual intercourse and attempted rape. Sex-disaggregated data was provided only for the cases of rape, murder and armed robbery. Males were found to be the main victims of murder and armed robbery, accounting for 95% and 60%, respectively. As it relates to rape, females accounted for 97% of victims while males accounted for 95% of suspects.

[3] GBV In The Caribbean

4. ***Insufficient non-reimbursable funding for gender mainstreaming*** *a critical chronic challenge experienced by The Bahamas with a recorded poverty rate of 12.5% and poverty line per person per year of $4,247 for 2016; and a national annual average income of B$37,716, an annual average income for New Providence of B$40,090 and Grand Bahama B$38,108. During 2014 – 2019, in various fora, The Bahamas has argued that the per capita GDP should not be the only consideration for non-reimbursable financing. Indeed, The Bahamas remains a developing country, with a high degree of vulnerability and variability in the levels of development. Notwithstanding the relatively high GDP per capita of the country, The Bahamas' geographical location and the scarcity of raw materials have resulted in a specialization of production geared towards services. Tourism is the main activity with a total direct and indirect contribution of 60% of GDP. Financial services follow in importance with a total contribution of under 20% of GDP. The national debt, which was below 40% in 2007, rose to 66.8% of GDP in 2017. This debt burden and associated costs reduced the government's ability to tackle broader issues. (Bahamas VoluntaryNationalReview.PM Minnis.2018)"*

1.4 Results and Analysis

It is important to note that the Socioeconomic Assessment of the Environmental and Social Assessment Report presented the results of the disaggregated for all the project locations. This was not repeated in this section, but relevant aspects of the data have been referenced appropriately.

1.4.1 Gender Roles and employment

The gender ratio of the Bahamian population slightly favours the females – The 2022 preliminary Census report showed that females accounted for 51.8% of the total national population. However, there is a clear disparity in the gender roles on the island. This disparity can be extrapolated to water usage and the dependence on a reliable water supply. Women are typically found to be more responsible for undertaking domestic activities while the males tend to partake in more recognized economic activities, such as fishing and farming which are two of the most primary activities practised on the island. Tourism and hospitality also play a key role in the island's economy and this industry typically comprises more females than males. The 2023 Labour Force Survey showed that the majority of the labour force were employed as either 'Professional, Technicians and Associate Professionals' (21%) or as 'Service Workers and Shop Market Sales Workers' (24%). The female dominated occupational groups were 'Professional, Technicians and Associate Professionals'. 'Clerks', and 'Service Workers and Shop Market Sales Workers', while the male dominated occupations were related to agriculture, fishery, or occupations that required knowledge of craftsmanship or the use/operation/assembly of machinery. In general, the labour force also consists of more females than males, with 54.5% being represented by females.

Consultations with locals also revealed that there is public assistance in the form of food vouchers, rent coverage (landlord paid directly), utility bill payments (paid to utility community) from the Department of Social Services and there are persons on the Family Islands assessed that were in receipt of these benefits.

1.4.2 Sectoral Water Needs

The importance of water in these different employment sectors vary. The fundamental activities in the agriculture and fishing sectors would arguably require more water than the service sector – fishermen reportedly practice the method of bringing at least a gallon of water on their fishing voyeurs for drinking and sanitation purposes, and farmers naturally require water for irrigation purposes. This, however, does not negate the water requirement in other employment sectors as water is key for sanitation, purification, maintenance and industrial purposes. The tourism sector is of particular concern as with ~9.6 million tourism arrivals in 2023, the water sector experiences added strain in accounting for this increase in tourism arrivals that would augment on-island occupancy rises. The infrastructure of the water sector would have to facilitate the load of providing clean, reliable water to both residents and tourists for sanitation and hygiene, as well as for the maintenance of tourism infrastructure and for the provision of food and beverages. Despite the differences in sectoral demands, water supply is not selective and the aim of the WSC is to ensure a reliable supply of water to all residents. It is important to note that while residents are connected to the public supply, some businesses, tourism entities and fisherfolk are not connected to public supply. Anecdotal evidence suggests that businesses and tourism operators in the areas for intervention have tapped into their own well-water supply because the WSC is considered unreliable. Farmers traditionally utilise their own well water supply and have no keen interest in connecting to the public supply. There are some households as well that have their own well water supply.

1.4.3 Gender disparity in the workforce and wider society

The institutional assessment conducted as another component of the project revealed that the WSC has nearly 500 employees, of which, less than 40% of their employees are women, and of those, approximately 65% have clerical roles. Thus, women are somewhat disengaged from the technical processes and decision-making. This gender distribution of employees is common for water utilities in the country, with the WSC likely having the highest percentage of female employees. To change this gender disparity, the project could support inclusive capacity building in the water sector by offering fair opportunities to undertake tertiary-level educational courses, technical and vocational training, and apprenticeship programmes. These opportunities need not be limited only to the WSC but will include other water utilities and other stakeholders. These opportunities can empower women to take on technical and leadership roles in water management and water governance, and thus, foster gender equality in the sector.

1.4.4 Gender and water supply

Gender disparities are not contained within the labour force, but also extend to the general role that each gender assumes in the island's culture. Women making a livelihood while also potentially serving as the sole breadwinner of a family bear additional pressures to ensure their families are taken care of. Of the 106,645 households in The Bahamas as recorded in 2019, approximately 42% (44,805 households) were headed by a female. It is important to consider the mental and physical effects that changes to the supply and availability of water could have on females. This includes having to travel outside of residential spaces to public standpipes for water, having to secure a

reliable source of water for domestic purposes (typically for cleaning, washing and cooking), and the need for water to meet feminine hygiene requirements. It is also important to consider that from a male's perspective who tends to be tasked with being his household's primary breadwinner, the lack of a reliable water source may put a strain on livelihoods, and this may also have mental and physical impacts. Along with having a reliable source of water, the quality of water being supplied may have different gender implications. The issues of low pressure and 'hardened' water that are frequent points of contention, therefore, would pose an issue to both men and women that use water for different reasons, whether it be considerably salty water being supplied to households for domestic purposes or water of low quality being used for irrigation, stunting agricultural yields and impacting income generation. During the site assessment, it was reported that there were school closures that occurred on several occasions in Mangrove Cay, which speaks to a negative impact of an unreliable water supply to school children.

1.4.5 Gender-Based Violence (GBV)

Gender-based violence (GBV) should be considered when seeking to upgrade the existing infrastructure of the country's water sector. In the most extreme cases, a project of this scale and scope tend to employ larger portions of men than women and this could lead to a level of financial dependence or vulnerability in females that threaten the possibility of sexual violence or exploitation. This is evidenced by the 2023 Labour Force Survey results that show the labour force in the sector most relevant to the implementation of this Project is dominated by males. And on that matter, it is recommended that a fair hiring process be implemented in the event that the local labour force will be tapped into for the implementation of this Project. This fair process should see females be granted a fair and equal opportunity to enhance female representation in the Project workforce, ultimately reducing the likelihood of financial vulnerability. Recognising that women are likely to be part of the work team in areas such as engineering for instance, there is also the risk of sexual harassment and assault on job sites.

1.4.6 Social networks

Social networks are important for women as they continue to balance the inequalities around domestic responsibilities and employment or income generation activities to support their families. Social networks in this instance speaks to those outside of social media, and would include churches, schools, social clubs, and community activities that serve to provide mental and emotional support, informal knowledge sharing and recreation. Dependence of family and child-care support after school, can be severely impacted by lack of access due to traffic congestion and interruptions, or due to health and hygiene issues due to interruptions or contamination of water supply. Social networks must not be overlooked as responding to more than physical need, as it is a vital part of our social well-being, and aids those dealing with anxiety, depression and similar mental health issues., all of which can be exacerbated by the stress of physical activities and impact of a project such as this.

1.4.7 Age (Youth, Adults and the Elderly)

Different ages are affected differently by issues to the water supply. The youth, especially those who attend schools, are affected during water outages as in many cases, schools are advised to close in the event of a disruption to the water supply, either by leakages, shutoffs for repair or power outages. Water outages are typically preceded by public notifications that allow residents the opportunity to collect water. In some cases, this affects workers as the times designated for water collection may coincide with workhours. These are just cursory examples of the influence that the water supply has on different age groups. Regarding the country's demographic profile, in 2023 people over 65 years of age accounted for approximately 9.3% of the total population and approximately 18.5% was represented by those under the age of 15. This indicates a dependency ratio of 38.5 potentially passive people per 100 potentially active people[4].

The availability of a reliable water supply is crucial across all age demographics, each characterized by specific needs and susceptibilities. For infants and young children, access to clean water is indispensable for drinking, hygiene, and the preparation of safe food, thereby playing a critical role in the prevention of waterborne diseases such as cholera, diarrhoea, dysentery, hepatitis A, typhoid and polio (WHO, 2023)[5], and in supporting optimal growth and development. The importance of a reliable water supply on infants can also be extended to parents as a reliable source that provide the aforementioned benefits would reduce the likelihood of parents enduring mental fatigue or stress rising from complications developed in infants due to the lack of or poor-quality water supply. Ensuring the provision of safe water is also fundamental to reducing child mortality rates. For school-aged children, an adequate water supply translates into improved sanitation facilities in educational institutions, which correlates with decreased absenteeism and enhanced learning conditions. The presence of clean water and proper sanitation facilities within schools mitigates the transmission of infectious diseases, promoting a healthier and more consistent attendance rate. There would also be a decrease in the number of water outages that have led to the temporary closure of schools across the Family Islands. For adolescents, particularly females, access to clean water and hygienic facilities is imperative for effective menstrual hygiene management, consequently reducing stigma and school absenteeism during menstruation.

For the working-age population, particularly those engaged in labor-intensive occupations, access to water is essential for maintaining hydration, productivity, and overall health. A sufficient water supply supports physical endurance, prevents heat-related illnesses, and contributes to safe and efficient working conditions. In agricultural sectors, reliable water sources are critical for irrigation purposes, thus ensuring food security and stable economic livelihoods. The elderly population, which exhibits heightened vulnerability to dehydration and waterborne illnesses, requires consistent access to safe water to maintain hydration and health. Moreover, clean water is vital for managing chronic health conditions and ensuring the effectiveness of medical treatments.

[4] The Bahamas - Country Profile | Health in the Americas (paho.org)
[5] Drinking-water (who.int)

1.4.8 Persons with Disabilities (PWDs)

The 2010 Disability Report of the Population and Housing Census indicated that there were 10,138 disabled persons in the country, 5,250 of which were males accounting for more than half (51.8%). With a total population of 351,461 in 2010, PWDs accounted for 2.9% of the total population. The most common form of disability was that of lack of mobility due to paralysis or dismemberment which was the reason for almost one quarter of the persons being disabled, with blindness and mental disorders being the next most prevalent reasons.

PWDs have more medical needs than other groups due to various physical health conditions and potential blockage of a key road and/or extended delays in movement due to increased traffic caused by the proposed water infrastructure interventions could have detrimental effects on their health care due to loss of access to health facilities, pharmacies and care professionals. In the case of women, who already experience time poverty due to bearing the majority of domestic tasks, time loss due to traffic could have cascading effects on any productive or care work women may have to do. Added to this, are women working informal sector, making their livelihoods who may experience disruptions to income generating activities as project activities occur and this will have implications on other aspects of their lives including their dependents. Ensuring access to a clean and reliable source of water would also be essential for reducing or preventing the spread of water-borne diseases among the PWD population, who likely already have compromised immune systems or other health issues.

1.4.9 Water Supply Intervention

The water supply interventions are expected to overall have a positive impact on the population on the Family Islands. The beneficiaries for the assessment will experience improved reliability for water supply resulting in reduced water lock-offs, a reduction in young girls missing school for lack of water supply, reduction in school closures and reduction in number of households relying on standpipes for water supply. Employment opportunities during the project, although mostly temporary, can help alleviate the employment issue on some of the Family Islands.

The investment component of the project focuses on utility-scale investments. The focus is on WSC-managed water supply systems (rather than, e.g., water access) as recent experiences during major hurricanes and other climate change hazards has pointed to the fact that these systems are where the vulnerabilities and risks to water security are most pronounced, and thus where resilience-enhancing investments are most urgently needed. For these same reasons, the multi-criteria analysis that was used to guide island prioritization was based primarily on indicators related to these water supply systems, as further elaborated in Appendix F of Annex 2: Feasibility Study. However, the results of the multi-criteria analysis were compared to the vulnerability ranking results from the National Disaster Preparedness Baseline Assessment for The Bahamas that was completed in 2021 (and which placed a greater emphasis on social and economic indicators when assessing vulnerability) and were found to be highly consistent in terms of the ranking of islands.

2 Gender Action Plan (GAP)

2.1 GAP Activities

The mitigation measures put forward to address the potentially negative gender impacts are recommended to avoid and reduce these impacts as well as promote gender equality and reduce gender disparities during each phase of the project cycle. The schedule below serves as a monitoring and evaluation framework to measure the outcomes and impacts of project activities on women's and men's resilience to climate change through the implementation of the gender-responsive activities.

Impact Statement: Gender inclusive project execution; increased resilience of Islands with interventions, including vulnerable groups namely women, girls and the disabled to the negative impacts of climate change on water supply; improved access to reliable, year-round water supply for all households including poor and female-headed households.

Outcome Statement: Gender-responsive project implementation for a climate resilient water sector in the Bahamas to support the climate resilient water supply for WSC customers in South Andros, Mangrove Cay, North and Central Andros, Abaco, Acklins, and New Providence.

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
Output Statement 1: Fair opportunity for both males and females to acquire employment during the construction and operational period					
1.1 Develop and implement a fair and transparent local construction worker recruitment plan that is gender-sensitive and ensures that the selection process is discrimination-free, thereby supporting greater inclusivity and equitable access to income-generating opportunities during the construction of capital works under Activities 2.1.1, 2.1.2 and 2.1.3 of the project. The implementation of such a plan will be supported by GAP aactivities 1.2 and 1.3 (described below). **Some of the measures that could be implemented to ensure a gender-sensitive and discrimination-free process include:** • **Establishing transparent and public selection criteria** • **Encouraging women to apply** • **Engaging with organisations that represent PWDs to identify individuals and skills that could be relevant for the Construction Contractors** • **Offering training programs to equip candidates with the necessary skills** • **Collaborating with different local organizations, women's groups, and schools to promote job openings**	Number of local worker recruitment plans	Develop one (1) local construction worker recruitment plan per contractor prior to start of construction Each plan contains at least one concrete measure to encourage women and PWDs apply (e.g. targeted outreach, inclusive wording, engagement with women's, PWD organisations) (Y/N)	PY2 - Pre-construction (4 weeks)	Overall: Project Management Unit of the National Executing Entity – WSC Direct: Each Construction Contractor's Gender and Social Safeguarding Specialist (to be included in each Contractor's scope of works) Oversight and validation: The Construction Supervision Consultant's Gender and Social Safeguarding Specialist and the PMU Gender and Social Safeguarding Specialist	Included in construction cost estimate **($10,000) CC** **($2,000) CSC** **($5,000) PMU**
1.2 To further support greater inclusivity during the construction of capital works under Activities 2.1.1, 2.1.2 and 2.1.3 of	Number of methods of advertisement	Using five (5) different methods of advertisements	PY2 - Pre-construction		

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
the project, aadvertise local construction jobs through various local community groups, NGOs and Government Work recruitment agencies, public and social media in line with the local worker recruitment plan(s) developed under GAP aactivity 1.1. Including the types of job opportunities that will be available through the Project may also indirectly influence the types of semi-skilled training programmes offered in the Project area during pre-construction and construction phases.				Overall: Project Management Unit of the National Executing Entity – WSC Direct: Each Construction Contractor's Gender and Social Safeguarding Specialist (to be included in each Contractor's scope of works) Oversight and validation: The Construction Supervision Consultant's Gender and Social Safeguarding Specialist and the PMU Gender and Social Safeguarding Specialist	Included in construction cost estimate **($10,000) CC** **($2,000) CSC** **($5,000) PMU**
1.3 To further support greater inclusivity during the construction of capital works under Activities 2.1.1, 2.1.2 and 2.1.3 of the project, cconduct training of both women and men to improve gender equality in the recruitment for semi-skilled positions (e.g., construction workers). **Mechanisms to be implemented to encourage the recruitment of women are outlined in GAP aactivity 1.1**	Percentage of women as beneficiaries of training Number of trainings (as measured by training logs and schedules) Participants report knowledge increase	A minimum 25% quota for females as beneficiaries of training A minimum of 2 training sessions per contractor At least 80% of training participants from 1st to last training. report knowledge increase	PY3 - Construction Phase 2 months	Overall: Project Management Unit of the National Executing Entity – WSC Direct: Each Construction Contractor's Gender and Social Safeguarding Specialist (to be included in each Contractor's scope of works) Oversight and validation: The Construction Supervision Consultant's Gender and Social Safeguarding Specialist and the PMU	Included in Construction cost estimate **($60,000) CC** **($2,000) CSC** **($5,000) PMU**

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
				Gender and Social Safeguarding Specialist	
1.4 To support fairness when executing all Activities under Outputs 1.1, 1.2 and 2.1 of the project, pprocess all complaints received via the Project-level grievance redress mechanism in a timely manner to report any complaints associated with gender-biased or unfair treatment. **The grievance mechanisms will also be accessible by members of potentially impacted communities.**	Percentage of complaints logged that are addressed (or for which redress is in progress) within 30 days of receipt (as measured by log of complaints)	100% of complaints logged are addressed within 30 days or redress is in progress	PY3-5 – Construction Phase	Overall: Project Management Unit of the National Executing Entity – WSC Direct: Each Construction Contractor's Gender and Social Safeguarding Specialist (to be included in each Contractor's scope of works) Oversight and validation: The Construction Supervision Consultant's Gender and Social Safeguarding Specialist and the PMU Gender and Social Safeguarding Specialist	Cost integrated into each CC's HR mechanisms **($10,000) CC** **($2,000) CSC** **($5,000) PMU**
Output Statement 2: Zero tolerance environment for sexual exploitation, abuse and harassment (SEAH)					
2.1 To help mitigate the risk of SEAH and SGBV throughout Outputs 1.1, 1.2 and 2.1 of the project, pprepare and implement a Code of Conduct for c,wcontractors, workers, PMU, CSC and consultants that speaks to zero tolerance of SGBV to include sexual exploitation, abuse and harassment (SEAH)	Proportion of project contractors, workers and consultants who sign the code of conduct.	100% of projectproject contractors, workers and consultantssign the code of conduct.	Code of conduct developed during PY1 Code of conduct implemented during PY2-7	Overall: Project Management Unit of the National Executing Entity – WSC Direct: A code of conduct will be developed by the PMU, particularly the Gender and Social Safeguarding Specialist. Each project contractor, worker and consultant will be required to adopt the code of conduct, and require all of	Cost of developing the code of conduct included in the cost estimates for the Gender and Social Safeguarding Specialist in the PMU. **($20,000) PMU**

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
				their workers to sign and adhere to it. Oversight and validation: The Gender and Social Safeguarding Specialist in the PMU, as well as the Gender and Social Safeguarding Specialist from the Construction Supervision Consultant, will monitor implementation of/compliance with the code of conduct.	Cost of implementing the code of conduct integrated into each CC's HR mechanisms **($20,000) CC**
2.2 To further help mitigate the risk of SEAH and SGBV throughout Outputs 1.1, 1.2 and 2.1 of the project, ddevelop and igpimplement grievance procedures for addressing SEAH and SGBV complaints relating to incidents at the worksite and between workers and communities and other users of the area. **Procedures to include the use of redress mechanism and mechanism to refer victims to services provided by the Department of Gender and Family Affairs.**	Timely resolution of complaints including on SEAH and SGBV issues	If complaints made, 100% of complaints addressed within 30 days of report made or redress is in progress.	PY1-7	Overall: Project Management Unit of the National Executing Entity – WSC Direct: Grievance procedures and project-level grievance mechanism to be developed and established by the PMU, with significant inputs from the Gender and Social Safeguarding Specialist in the PMU and the Gender and Social Safeguarding Specialist in the Construction Supervision Consultant. Each Construction Contractor (with support from their respective Gender and Social Safeguarding Specialists) will play a central role in	Budget included in cost estimates for Gender and Social Safeguarding Specialist in the PMU. **($30,000) PMU**

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
				supporting implementation of the grievance mechanism. Oversight and validation: The Construction Supervision Consultant's Gender and Social Safeguarding Specialist	
2.3 To further help mitigate the risk of SEAH and SGBV during the construction of capital works under Activities 2.1.1, 2.1.2 and 2.1.3 of the project, ddeliver worker induction / sensitization sessions on the Code of Conduct to all project-related staff, incl. PMU, CSC and other consultants, Grievance Procedures for addressing SEAH and SGBV complaints, and the transmission of STDs/STIs/HIV/AIDS, including the development of posters and signage at the site on the Code of Conduct, SGBV, SEAH prevention and reporting including the grievance redress mechanism	Number of sensitization sessions organized by each Construction Contractor Number of sensitization sessions held for project staff	A minimum of two sensitization sessions organized by each Construction Contractor (i.e. at least one at the start of construction activities, and at least one annual refresher training per contractor for each year of construction activities). All project staff will be required to complete two sensitization sessions (one in PY1 and a refresher in PY3)	For Construction Contractors: PY3-5 – Construction Phase For project staff: PY1-3	Overall: Project Management Unit of the National Executing Entity – WSC Direct: For Construction Contractor sessions: Each Construction Contractor's Gender and Social Safeguarding Specialist (to be included in each Contractor's scope of works) For project staff sessions: PMU Gender and Social Safeguarding Specialist Oversight and validation: The Construction Supervision Consultant's Gender and Social Safeguarding Specialist and the PMU Gender and Social Safeguarding Specialist	Cost integrated into Contractor's own appropriate HR mechanisms **($15,000) CC** **($2,000) CSC** **($25,000) PMU**
Output Statement 3: Increased climate resilient and inclusive water security					

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
3.1 To mitigate and manage negative social impacts on households (which would disproportionately affect poorer and more vulnerable households) associated with the construction of capital works under Activities 2.1.1, 2.1.2 and 2.1.3 of the project, ddevelop and implement a gender sensitive management plan to reduce construction-related temporary disconnections to communities, particularly for impacts to critical infrastructure, educational institutions, and other services. This is to include communication of timing and duration of disconnections and alternative water sources during the construction period.	Number of management plans developed	One (1) management plan for each water supply system in which construction will occur.	Management plan to be developed during pre-construction phase (PY1-2) and to be adhered to during construction phase (PY3-5) and during the operational phase (PY6-7)	Overall: Project Management Unit of the National Executing Entity – WSC Direct: Each Construction Contractor's Gender and Social Safeguarding Specialist (to be included in each Contractor's scope of works) Oversight and validation: The Construction Supervision Consultant's Gender and Social Safeguarding Specialist	Costs are mostly included in the ESMP. Only the incremental costs to ensure that plans are gender sensitive are included in the GAP, and integrated in the overall costs for each Construction Contractor's contract **($10,000.00) CC** **($2,000) CSC** **($5,000) PMU**
3.2 To improve the availability of gender disaggregated customer data within WSC and under the DSS under Activity 1.2.3 of the project, cconduct a "Know Your Customer" survey to collect sex-disaggregated data on customers served by the WSC. This data will be incorporated into the DSS to support gender-informed decision making.	Number of islands on which data is collected for the KYC survey	Five (5) islands	PY2 (baseline), PY5 and PY7. Thereafter, KYC survey to be integrated into the systems of the WSC.	Overall: Project Management Unit of the National Executing Entity – WSC Direct: The Project Management Unit's Gender and Social Safeguarding Specialist will design the gender-related survey	Total survey costs estimated at 96,000 per island (5 x $96,000). (accounting for the islands of New

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
Note that tthis survey will also act to collect supplementary data for wider project monitoring and data on temporary disconnections. The associated survey costs are reflected in the project's M&R budget..				questions, and support the broader PMU to procure and supervise the firm (Supplementary Data Gathering Consultancy) contracted to undertake the survey. Oversight and validation: The Project Management Unit's Gender and Social Safeguarding Specialist	Providence, South Andros, North Andros, Abaco and Acklins) **($480,000.00) Supplementary Data Gathering Consultancy** **($30,000) PMU**
Output Statement 4: Gender-representative and inclusive stakeholder engagement throughout project life cycle					
4.1 To support inclusivity and community inputs as part of the construction of capital works under Activities 2.1.1, 2.1.2 and 2.1.3 of the project, as well as ensure communities are aware of the project ESMP and GRM, hhost community consultations in all the local areas with project intervention activities[6] and promote/enable participation of females (including female-headed households) and persons with disabilities (PWDs). Community consultations to cover SGBV and SEAH awareness raising and organised at times when safety and security can be ensured and women can attend as well.	Number of community sessions held Proportion of attendees who are female	At least 3 community sessions held in each location - before during and after construction phase of project. At least 30% of attendees are female (as reflected in gender-disaggregated attendance sheets with male and	Throughout entire project lifecycle	Overall: Project Management Unit of the National Executing Entity – WSC Direct: Construction Supervision Consultant's Gender and Social Safeguarding Specialist will design, procure, and oversee the consultation process. The implementation of the consultation process will be supported by each relevant Construction Contractor's Gender and Social Safeguarding Specialist. Oversight and validation: The Project Management Unit's	Cost included in construction supervision budget. Estimated at an average of USD4,630 per community consultation **($375,000) CSC** **($40,000) PMU**

[6] Number of locations for intervention considering 1 project location in New Providence, 12 locations in Andros, 10 in Abaco and 4 in Acklins - a total of 81 community consultations will need to be held throughout the entire seven-year Project period (3 sessions for each location).

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
		females represented and PWDs)		Gender and Social Safeguarding Specialist	
4.2 To strengthen the capacity of key project stakeholders to advance gender equality efforts when executing all Activities under Outputs 1.1, 1.2 and 2.1 of the project, cconduct training session with WSC staff and Construction Contractors to increase awareness and understanding of gender-responsive project design and implementation. **The training contents will focus inter alia increase awareness and understanding about the interlinkages between infrastructure projects and gender, with a particular focus on the water sector, mitigation of adverse effects in terms of inter alia SEAH risks, importance of gender-sensitive sites, principles of non-discrimination on sites and in HR practices, importance of contractor code of conducts among workers and with communities et**	Number of training sessions on gender-responsive project design and implementation Proportion of WSC trainees who are female participants reporting knowledge increase	Execute at least two training sessions (one with WSC staff and another with Construction Contractors). At least 30% of WSC trainees should be females. At least 80% of training participants from 1st to last training.report knowledge increase	PY1-2 – Pre-construction	Overall: National Executing Entity - WSC Direct: The Project Management Unit's Gender and Social Safeguarding Specialist in collaboration with WSC's HR Director.	Included in the scope of work of the consultant **($30,000) PMU**
Output Statement 5: Achieving gender-sensitive policy and institutional reform in The Bahamas Water Sector					
5.1 Support the process of draftingthe national water policy developed under Activity 1.1.1 of the project to ensure gender aspects are incorporated and it meets national objectives/priorities in terms of gender mainstreaming, including by facilitating inputs from gender stakeholders, and by providing technical inputs during the drafting	Execution of policy review Proportion of consultees who are female	One revised national water policy documentation Consultations with at least 30% females.	PY1-2 – Pre-construction	Overall: National Executing Entity - WSC Direct: The Project Management Unit's Gender and Social Safeguarding Specialist to contribute, liaising directly with the Water	Included in the scope of work of the consultant **($30,000) PMU**

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
process with a view to aligning the policy with international good practice. Gender aspects to be considered in policy analysis and development include: differing needs and roles, access to water, gendered division of labour, health and safety risks, hygiene and sanitation, and economic empowerment.				Policy and Governance Consultancy.	
5.2 Support development and implementation of a National Water Resources Management Unit that provides equal opportunities for hiring by the WRMU, and training delivered by the WRMU (i.e. on monitoring and sampling, community engagement, data collection and research, emergency response, and equality and inclusivity) under Activity 1.2.2 of the project.	Number of CVs received from female candidates for the four (4) WRMU positions Proportion of beneficiaries of trainings delivered by the WRMU under Activity 1.2.2 of the project who are female Proportion of female beneficiaries 'satisfied' by the training (using a post training questionnaire).	At least three (3) CVs received from female candidates for the WRMU positions. At least 30% of beneficiaries of training delivered by the WRMU under Activity 1.2.2 of the project are female. Improved satisfaction % from female At least 80% of training participants from 1st to last training.report knowledge increase	PY1-5 – Pre-construction and Construction	Overall: National Executing Entity - WSC Direct: The Project Management Unit's Gender and Social Safeguarding Specialist will work with WSC's HR director to ensure equal opportunities when hiring and training the new National Water Resources Management Unit. This will require liaising directly with the International Water Resources Consultancy which is responsible for establishing and training the unit.	Included in the scope of work of the consultant **($40,000) PMU**

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
	participants reporting knowledge increase				
5.3 Support capacity development across sectors in climate risk informed investment planning by ensuring equal opportunities for training delivered under Activity 1.2.4 of the project. **Such a training can include inter alia a module on how investments can be made equitable and responsive to the different needs of and impacts of climate change on women, men, boys and girls.**	Proportion of beneficiaries of trainings delivered under Activity 1.2.4 of the project who are female Proportion of female beneficiaries 'satisfied' by the training (using a post training questionnaire).	At least 30% of beneficiaries of trainings delivered under Activity 1.2.4 are female. Improved satisfaction % from female participants from 1st to last training. At least 80% of training participants from 1st to last training.report	Throughout the life of the project.	Overall: National Executing Entity - WSC Direct: The Project Management Unit's Gender and Social Safeguarding Specialist will ensure equal opportunities for this training. This will require liaising directly with the International Water Resources Consultancy, which is responsible for delivering this training.	Included in the scope of the consultant **($30,000) PMU**

GAP Activities	Indicators	Targets	Timeline	Responsibilities	Cost (USD)
	participants reporting knowledge increase	knowledge increase			
				TOTAL	**$1,302,000**

** PY1-2 – Pre-construction Phase*
PY3-5 – Construction Phase
PY6-7 – Operations Phase

2.2 Lines of Reporting

Gender specialists will be responsible for various activities under the Project, as outlined in the Gender Action Plan Above. Lines of reporting are illustrated in the Figure below:

3 Appendix 1 – Interview Questions to Support Gender Assessment

Interview Questions for Gender Assessment per island

General Questions

1. What is the primary source of water?
    a. How is the water distributed?
    b. What is the experience with the water supply?
    c. What are the primary uses of water? Domestic, Commercial, Agricultural
        i. What is the main economic activity on the island? Fishing, tourism, etc.
            - How is water used in this sector?
        ii. What is the ratio of men and women represented in this sector?
2. What communities experience greater water stress? None specifically outside the Haitian community.
    a. Why do these communities experience greater water stress?
    b. What is the demographic profile of these communities?
        i. How are women, boys and girls and the elderly impacted by the water stress?
3. What are the current challenges with:
    a. Water distribution
    b. Water access
    c. Water quality
4. What are the current water treatment issues?

5. Does your island have a high migrant population?
    a. How do they access water resources?
    b. How do they afford water resources?
    c. How do they treat water resources?

Schedule for Social Services and Gender

1. Who are the socio-economically vulnerable groups across the islands?
    a. Do they have access to water challenges?

        i. Do women and men from vulnerable communities have equal access?
    b. What type of challenges, access, affordability, or availability?
    c. What exacerbates these challenges? Water lock-offs, disaster events? Loss of income? Etc.
    d. Who social support is offered to these groups to address these challenges?

2. What are the challenges women experience in the water sector?

3. What is the economic status of women in the Bahamas?
    a. What are commonly held beliefs, perceptions, and stereotypes related to gender on the island?
    b. What is the division of labor between women and men?
    c. What legislations in the Bahamas are used to protect women and their employment?
    d. What are women's and men's differential needs/priorities for water access?

4. Is there a gender policy?
    a. If yes, can we have access?
    b. If no is it in draft or being developed?

5. Has your organization collaborated with the WSC for training? Not aware of any
    a. If yes, is the training in water-stressed communities?
    b. If yes, is the training within the organization?
    c. What was the aim of each training activity?

Schedule for WSC and Private Water Supplier

1. What support systems are in place to provide access to water?
    a. Are there any social tariffs for water supply?
    b. Do vulnerable groups have access to decentralized water locations?

2. Is there equal access to water?
    a. What groups do not have equal access?

b. What are the current water accessibility issues in your country?

3. Do you have water restrictions?
    a. When do these occur?
    b. Which groups are targeted?
    c. Which groups are identified as priorities to receive water?

4. How is water distributed during disaster events? Which groups are prioritized?
    a. How do you think climate change will impact water distribution and quality: there is a general effect on everyone

5. What is the current quality of the water resources? Potable vs non-potable water? Please explain.
    a. What is hindering the quality of water?
    b. What can be done to improve water quality?
6. Has WSC developed specific strategies in its program implementation to address the needs of men, women and LGBTQIA persons in the organization?

7. How many men, women and LGBTQIA persons are at the management level in the organization?
    a. Are there clear policies for the recruitment of women, men and LGBTQIA persons?

8. Is the level of pay for men and women equal in the organization for the same position?

9. What challenges are the BWA facing in implementing any gender-sensitive program in the wastewater department?

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