

THE COMMONWEALTH OF THE BAHAMAS

Project Profile

I. BASIC DATA

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| Project name: | WSC Support Program – New Providence Water Supply and Sanitation Systems Upgrade |
| Project number: | BH-L1028 |
| Project Team: | Evan Cayetano (WSA/CJA), Project Team Leader; Marcello Basani (WSA/CGY); Syreta Roberts (CCB/CBH); Rodrigo Riquelme (INE/WSA); Alejandra Perroni (INE/WSA), Jorge Ducci (INE/WSA); Guillermo Eschoyez (LEG/SGO). |
| Borrower: | Water and Sewerage Corporation (WSC) |
| Guarantor: | The Commonwealth of The Bahamas (GOBH) |
| Executing Agency: | Water and Sewerage Corporation (WSC) |
| Financing Plan: | IDB (OCR): US\$71,000,000 Total: US\$71,000,000 |
| Safeguards: | Policies triggered: B.01 – OP-704, OP-102; B.02; B.03; B.06; B.07; B.07; B.11; and B.17 Classification: Category B |

II. GENERAL JUSTIFICATION AND OBJECTIVES

- 2.1 **Background.** The Water and Sewerage Corporation (WSC) is the main provider of water and sewerage services in The Bahamas. Its service base includes about 66,000 customers on 13 islands that are spread over more than 200,000 square kilometers of territory, including the main population center of New Providence. Approximately 98% of population in urban areas has access to potable water and 86% in rural areas of The Bahamas. In New Providence only 38% of properties regularly use water supplied by WSC. For a variety of reasons associated with the level of service and the lack of a regulatory regime, many customers have ceased to be customers and have made alternative arrangements for their supply.
- 2.2 With respect to sewer collection, 20% of the capital Nassau benefits from sewer connection; the remainder uses septic tanks. Past studies have reported high levels of contamination of ground water by fecal coliform in New Providence. The sewerage network is fragmented and dispersed, with several lift stations and treatment and disposal systems, that are poorly maintained and have operational problems, with environmental and health associated risks.
- 2.3 **Institutional Arrangement.** The Bahamas are served by several utility companies such as the WSC, Grand Bahama Utility Company, and Paradise Utilities, in addition to other water and sanitation utilities and a number of independent network providers. The most important of these is the WSC, which is a state-owned utility established by the WSC Act 1976 with the mandate to provide adequate supplies of water for domestic use, and agricultural purposes, urban and industrial use; as well as to provide adequate facilities for drainage the safe disposal of swage and industrial effluents. In addition the WSC has responsibilities for the management of the water resources of The Bahamas. In the

case of several tourist developments, water and sanitation services are provided by the private developers from facilities which they construct themselves. Legislation of the Bahamas, such as the Out Islands Act, provides incentive for developers to provide their water supply.

- 2.4 **Challenges.** WSC's financial performance has deteriorated significantly over the past 12 years—the Corporation has not earned an operating profit since 1997 and suffered an operating loss of over US\$ 23.6 million in 2008. This deterioration results from a failure to account for a number of key challenges, namely: fragmented service area, limited water supply; poor governance framework, lack of an integrated management information system, over-sized staff, and inadequate tariffs.
- 2.5 WSC's service area has limited availability of naturally occurring freshwater resources. Where demand for water exceeds the limits of these resources WSC expands supply through very expensive reverse osmosis and barging sources. As a result, supply from reverse osmosis has grown by over 450 percent since 2000, increasing WSC's cost of water purchase by US\$ 20 million over the same period. In this context of limited supply and high cost of expansion, the implicit cost of high levels of non-revenue water (NRW) is enormous. For example, if WSC were to reduce NRW by 29% in New Providence it would no longer need to barge any water. The estimated cost of barging water in 2008 was US\$ 7.7 million.
- 2.6 A major concern related to the sewerage system is that infrastructure conditions have declined significantly over the years, due to lack of maintenance and investments. The consequences are spills, blockages, malfunctioning and risks of major failures, with related environmental and health impacts. Investments are needed to address these issues.
- 2.7 The existing governance framework for the water and sanitation sector lacks provisions for adequate accountability and autonomy of the WSC. The three principal deficiencies in the sector's governance framework are: (i) an incomplete and inappropriate legal and regulatory framework; (ii) lack of sufficient autonomy for the management of the WSC; and (iii) a mechanism for providing subsidies to the WSC that is not efficient and effective. The poor operational performance and financial performance are linked by a feedback loop that exists due to WSC's poor governance framework.
- 2.8 **IDB Assistance.** The Bank financed three interventions in The Bahamas in recent years: (i) Water and Sanitation Strategic Sector Plan (WSSP) completed in 2009. The WSSP identified operational areas where WSC should reduce costs or improve revenues and made recommendations for WSC to move toward financial sustainability; (ii) TC BH-T1017 (2009/2010) Preparation of Legal and Regulatory Framework Update to address the legal and policy impediments afflicting the WSC and water sector of The Bahamas; (iii) In 2004 the WSC/Ministry of Works completed the implementation of Loan 1112/OC-BH titled Family Islands Potable Water Project whose objective was to improve the quality of public water service for several small settlements in the Family Islands.
- 2.9 **Link to Country Strategy and consistency with the GCI-9.** The proposed Project is in line with the Bank's Strategic Plan for the Bahamas 2010 -2015

(GN-2558-2). As stated in the Country Strategy (CS), the aim of the Project is to improve the efficiency of service provision and coverage of water supply and sanitation, within pillar to enhance economic growth through the provision of critical infrastructure. The operation will also improve directly the energy efficiency of WSC since it is going to optimize the use of electro mechanic equipment which are directly related to fuel consumption. The program is aligned with the following GCI-9 priority areas: lending to small and vulnerable countries and support climate change initiatives, renewable energy and environmental sustainability.

III. PROJECT DESIGN, EXECUTION AND SECTOR KNOWLEDGE

- 3.1 Project Design: The proposed project includes 4 components, designed to contribute to address issues described before and related to (i) operational improvements required to reduce water losses and increase revenue, (ii) WSC institutional strengthening, (iii) upgrade and rehabilitate sewerage infrastructure, and (iv) upgrade legal and regulatory framework
- 3.2 **Component 1: NRW Reduction (US\$50 million):** This component will finance a NRW Reduction Contract to address water losses in New Providence. The contract's main targets will be: (a) to reduce NRW in New Providence to 2.5Migd (million imperial gallons per day) at an average annual system pressure of 25psi within a maximum of 5 years and to maintain the savings achieved for the remainder of the project's 10- year duration, (b) training of WSC staff and (c) provision of NRW management software that integrates key existing WSC systems such as GIS, Work Order Management, customer information, and billing systems.
- 3.2 **Component 2: WSC Institutional Strengthening (US\$ 3 million):** This component will finance: (a) management information systems (MIS) integration including customer information system (CIS), supervisory control and data acquisition system (SCADA); (b) metering improvement; (c) training and implementation of the new organizational structure; and (d) preparation of a tariff study.
- 3.3 **Component 3: Minimum Wastewater Treatment Plants Upgrade and Preparation of a Wastewater Treatment Action Plan (US\$15 million).** This component will finance the rehabilitation works required to address wastewater treatments plants and other sewerage infrastructure that are malfunctioning and causing environmental and health problems. It will also finance the preparation of a wastewater treatment master plan to address the wastewater treatment needs of the WSC, and identify options for improving wastewater treatment and reuse. The action plan will also prepare the necessary technical, social, environmental and financial documents.
- 3.4 **Component 4: Upgrade legal and regulatory framework (US\$3 million).** This component will finance (i) the preparation and implementation of a multi-year performance agreement between the Government and WSC, including and HR Strategy, an Operational Strategy, and benchmark performance standards for preparation of WSC for regulation by the Utilities Regulation and Competition

Authority (URCA); and (ii) the reorganization of the institutional arrangements for water resources management and environmental protection The Bahamas

A. Execution and complementary activities required

3.5 The WSC will be the Borrower and the Executing Agency for the Project. The GOBH will guarantee the compliance with the monetary obligations and the compliance with the objectives and purpose of the loan. A specific Project Executing Unit (PEU) will be established within WSC to implement the operation. The day-to-day execution activities would be under the responsibility of the PEU which will be headed by a Project Manager reporting to the General Manager of the WSC.

3.6 The main activity for this operation is the implementation of a NRW Reduction Contract. The NRW contractor will also have responsibility to assist with the execution of Component 2 Institutional Strengthening of WSC. This will include procurement management information systems (MIS) equipment and training of WSC staff.

B. Lessons learned and sector knowledge

3.7 **Lessons learned.** Past projects indicate that in order to ensure successful project implementation, the following conditions must apply: (i) willingness to change on the part of the organization being addressed; (ii) government support for the project and the political will to implement the components as proposed; (iii) knowledgeable counterparts and a well organized project implementation team. This operation is also befitting from lessons learned from Loan 1112/OC-BH; the main one being to address the institutional problems of WSC.

3.8 **Sector Knowledge.** The Bank has extensive experience in water and sanitation in the Caribbean and has completed strategic sector plans updates for many of these countries. The Bank has also been networking with water operators and sponsoring training through the Water Operators Partnership of the Water and Sanitation Initiative.

IV. SAFEGUARDS AND FIDUCIARY SCREENING

4.1 By improving the reliability of water supply this operation will contribute to the health and well being of approximately 38% Nassau's population initially in preventing illnesses due to waterborne diseases; with a customer win-back strategy this could increase significantly. The sanitation component will address the needed rehabilitation of malfunctioning infrastructure (wastewater treatment plants, lift stations, network) and assist with improving overall environmental conditions. The Program is not expected to have any major large scale, significant and/or irreversible negative environmental or social impacts. Negative expected impacts are mainly related to wastewater treatment plant rehabilitation works; and water infrastructure construction works and operations, including construction noise, dust, waste generation, traffic inferences and occupational risks.

4.2 Key policies and directives triggered in the project include: B.01; OP-704, OP-102; B.02; B.03; B.06; B.07; B.07; B.11; and B.17 have been triggered. These pertain to natural hazards, disclosure of information, environmental assessment,

and monitoring. Positive impacts will be fostered by improving efficiency of the operations of the WSC and addressing the malfunctioning wastewater treatment plants operated by this utility.

- 4.3 According to Category “B” classification, the Environmental and Social Strategy (ESS) involves the preparation of an Environmental and Social Analysis (ESA) including an Environmental and Social Management Plan (ESMP) for the Project. Environmental and social procedures will be included in the Operational Manual.

V. OTHER ISSUES AND RISKS

- 5.1 An overriding reason for the GOBH to request this loan operation is to finance a NRW reduction contract to reduce losses, and improve services and revenues. The WSC conducted a bidding process in 2010 and has selected a consulting firm/contractor for this activity. The Bank has advised the WSC/GOBH that by the contracting of the selected firm/contractor, the Borrower undertakes advance contracting at its own risk and any “no objection” issued by the Bank with regard to the procedures, documentation, or proposal for award does not commit the Bank to make a loan for the project. Furthermore, the Bank Project Team is reviewing the Draft NRW Reduction Contract which may require renegotiations, or going to next bidder, or even redoing the procurement.
- 5.2 As agreed with the GOBH, there is need for some structural improvements to upgrade the legal and regulatory framework for the water sector, develop multiyear performance agreements between the government and WSC, and even incorporate private ownership and management. However these changes are outside the purview of the WSC and require GOBH commitment for implementation.
- 5.3 Relevant policies that apply to this operation include OP-708 (Public Utilities), and OP-745 (Basic Environmental Sanitation)

VI. RESOURCES AND TIMETABLE

- 6.1 Annex V details the Project preparation steps, milestone dates and estimated resources for project preparation. Distribution of the POD to Quality and Risk Review (QRR) is scheduled for mid September of 2011 and expected Board approval is November 09, 2011. The administrative budget for the preparation of the project provides for a total of 3 missions for an amount of US\$ 71,986 including consultant services for non revenue water, economic survey and environmental analysis.

SAFEGUARD POLICY FILTER REPORT

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| PROJECT DETAILS | IDB Sector | WATER AND SANITATION |
| | Type of Operation | Investment Loan |
| | Additional Operation Details | |
| | Investment Checklist | Infrastructure Water and Sanitation |
| | Team Leader | Cayetano, Evan Stephen (EVANC@iadb.org) |
| | Project Title | WSC Support Program |
| | Project Number | BH-L1028 |
| | Safeguard Screening Assessor(s) | Cayetano, Evan Stephen (EVANC@iadb.org) |
| | Assessment Date | 2011-06-23 |
| | Additional Comments | |

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| SAFEGUARD POLICY FILTER RESULTS | Type of Operation | Loan Operation | |
| | Safeguard Policy Items Identified (Yes) | Activities to be financed in the project area are located within a geographical area or sector exposed to natural hazards (Type 1 Disaster Risk Scenario). | (B.01) Disaster Risk Management Policy– OP-704 |
| | | The Bank will make available to the public the relevant Project documents. | (B.01) Access to Information Policy– OP-102 |
| | | The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements). | (B.02) |
| | | The operation (including associated facilities) is screened and classified according to their potential environmental impacts. | (B.03) |
| | | Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation of women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups. | (B.06) |

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| | | The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations. | (B.07) |
| | | The operation has the potential to pollute the environment (e.g. air, soil, water, greenhouse gases...). | (B.11) |
| | | Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement. | (B.17) |
| | Potential Safeguard Policy Items(?) | No potential issues identified | |
| | Recommended Action: | <p>Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.</p> <p>The project triggered the Disaster Risk Management policy (OP-704).</p> <p>A Disaster Risk Assessment (DRA), is required, as established under Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p> | |
| | Additional Comments: | | |

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| ASSESSOR DETAILS | Name of person who completed screening: | Cayetano, Evan Stephen (EVANC@iadb.org) |
| | Title: | |
| | Date: | 2011-06-23 |

SAFEGUARD SCREENING FORM

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| PROJECT DETAILS | IDB Sector | WATER AND SANITATION | |
| | Type of Operation | Investment Loan | |
| | Additional Operation Details | | |
| | Country | BAHAMAS | |
| | Project Status | | |
| | Investment Checklist | Infrastructure Water and Sanitation | |
| | Team Leader | Cayetano, Evan Stephen (EVANC@iadb.org) | |
| | Project Title | WSC Support Program | |
| | Project Number | BH-L1028 | |
| | Safeguard Screening Assessor(s) | Cayetano, Evan Stephen (EVANC@iadb.org) | |
| | Assessment Date | 2011-06-23 | |
| | Additional Comments | | |
| PROJECT CLASSIFICATION SUMMARY | Project Category: B | Override Rating: | Override Justification: |
| | | | Comments: |
| | Conditions/ Recommendations | <input type="checkbox"/> Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements). <input type="checkbox"/> The Project Team must send to ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports. <input type="checkbox"/> These operations will normally require an environmental and/or social impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary. | |
| SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS | Identified Impacts/Risks | | Potential Solutions |
| | Generation of solid waste is moderate in volume, does not include hazardous materials and follows standards recognized by multilateral development banks. | | Solid Waste Management: The borrower should monitor and report on waste reduction, management and disposal and may also need to develop a Waste Management Plan (which could be included in the ESMP). Effort should be placed on reducing and re-cycling solid wastes. Specifically (if applicable) in the case that national legislations have |

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| | | no provisions for the disposal and destruction of hazardous materials, the applicable procedures established within the Rotterdam Convention, the Stockholm Convention, the Basel Convention, the WHO List on Banned Pesticides, and the Pollution Prevention and Abatement Handbook (PPAH), should be taken into consideration. |
| | Safety issues associated with structural elements of the project (e.g. sedimentation basins, water and sewer pipes, etc), or road transport activities (e.g. increase in heavy vehicle movements, transport of hazardous materials, etc.) exist which could result in moderate health and safety risks to local communities. | Address Community Health Risks: The borrower should be required to provide a plan for managing risks which could be part of the ESMP; (including details of grievances and any independent audits undertaken during the year). Compliance with the plan should be monitored and reported. Requirements for independent audits should be considered if there are questions over borrower commitment or potential outstanding community concerns. |
| DISASTER SUMMARY | Details The Project should include the necessary measures to reduce disaster risk to acceptable levels as determined by the Bank on the basis of generally accepted standards and practices. Alternative prevention and mitigation measures that decrease vulnerability must be analyzed and included in project design and implementation as applicable. These measures should include safety and contingency planning to protect human health and economic assets. Expert opinion and adherence to international standards should be sought, where reasonably necessary. | Actions A Disaster Risk Assessment (DRA), is required, as established under Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance. |
| ASSESSOR DETAILS | Name of person who completed screening: | Cayetano, Evan Stephen (EVANC@iadb.org) |
| | Title: | |
| | Date: | 2011-06-23 |

Environmental and Social Safeguard Strategy

I. PROJECT DESCRIPTION

- 1.1 This operation will include under Component 1: NRW Reduction (US\$50 million). This component will finance a Non-revenue Water (NRW) Reduction Contract to address water losses in New Providence. The contract main target is to reduce NRW in New Providence to 2.5Migd at an average annual system pressure of 25psi within a maximum of 5 years and to maintain the achieved savings for the remainder of the 10 years of the project length, including training of WSC staff and provision of NRW management software that integrates key existing WSC systems such as GIS, Work Order Management, customer information, and billing systems.
- 1.2 **Component 2: WSC Institutional Strengthening (US\$13 million).** This component will finance management information systems (MIS) integration including customer information system (CIS), supervisory control and data acquisition system (SCADA); metering improvement; right-sizing of the WSC, training, implementation of the new organizational structure; and tariff study. It was agreed that the GOBH would finance the right-sizing of the WSC in the amount of US\$10 million.
- 1.3 **Component 3: Minimum Wastewater Treatment Plants Upgrade and Preparation of a Wastewater Treatment Action Plan (US\$18 million).** This component will finance the rehabilitation works required to address wastewater treatments plants that are malfunctioning and causing environmental and health problems. It will also finance the preparation of a wastewater treatment master plan to address the wastewater treatment needs of the Water and Sewerage Corporation (WSC), identify options for improving wastewater treatment and reuse. The action plan will also prepare the necessary technical, social, environmental and financial documents, such as relevant environmental analysis, stakeholder awareness and tariff setting mechanisms related to wastewater. It is estimated that US\$3 million would be used for the action plan and US\$15 million for the rehabilitation of the wastewater treatment plants.

II. INSTITUTIONAL AND REGULATORY CONTEXT

- 2.1 Responsibilities for managing the environmental threats in The Bahamas are not well-defined and are spread across a number of Government agencies and corporations including WSC, and various departments and sections within the Ministry of the Environment. The main entities responsible for environmental protection in The Bahamas are: the Water and Sewerage Corporation, and the Ministry of the Environment.
- 2.2 The WSC is the de jure (and non-functioning) regulator of the water and sanitation sector. The WSC was established by the Water and Sewerage Corporation Act

(WSC Act) as both a service provider and a regulator. According to Sections 5 and 6 of the WSC Act, the WSC's regulatory responsibilities are: (i) Controlling and ensuring the optimum development and use of the water resources of the Commonwealth of the Bahamas; (ii) ensuring the co-ordination of all activities which may influence the quality, quantity, distribution or use of water; (iii) ensuring the application of appropriate standards and techniques for the investigation, use, control, protection, management and administration of water; (iv) determining the allocation of available water between different users or types of use in any area within its jurisdiction; (v) prescribing and collecting rates and service fees and deposits in respect of the distribution and supply of water and the disposal of sewerage. In practice, the WSC does not perform these regulatory functions as it has neither the funding nor the regulatory expertise to do so. The WSC does not plan on performing regulatory functions in the future, and is actively seeking to have its regulatory responsibilities transferred to another entity.

- 2.3 The Ministry of Environment was created in 2007 with a broad mandate for environmental management but no statutory powers for regulating. The Government is considering a bill (the Environment Act of 2010) that would provide the Ministry with the requisite statutory powers for environmental planning and protection. In addition to responsibilities for overseeing the WSC, the Ministry of the Environment contains the following agencies with mandates relevant to the environmental regulation and protection of groundwater: (i) Department of Environmental Health Services (DEHS); (ii) Department of Physical Planning (DPP); and (iii) The Bahamas Environment, Science and Technology Commission (BEST).
- 2.4 The Department of Environmental Health Services (DEHS) was created under the Environmental Health Services Act of 1987 (Chapter 232). Through the Act, DEHS is responsible for the protection of public health through food safety monitoring and control, and the environment, and thereby public health, through the control and prevention of contamination of the air, water and soil, and solid waste management. DEHS is also responsible for setting food and environmental standards and monitoring the quality of water supplied to the public by WSC and private providers, including bottled water, sewage treatment and disposal, solid waste disposal and management including leachate, and air quality. DEHS has approximately 1,500 staff and is organized into five main divisions: (i) Health Inspectorate (Health Inspectors and Vector Control); (ii) Environmental Monitoring and Risk Assessment Division (EMRAD); (iii) Solid Waste Management; (iv) Grounds and Beautification; and (v) Vehicle Maintenance. The largest numbers of staff are in the Grounds and Beautification Division which is responsible for maintenance of public places, parks and roadsides.
- 2.5 Among the responsibilities of the Health Inspectorate Division, are liaison with the Ministry of Public Works and Transport to support the review and approval of construction permit applications and occupancy permits. The Health Inspectorate and WSC review the permit applications in the areas of sanitation (septic tank design or sewer hookups) and water supply (hookups to the WSC supply) prior to

the granting of construction permits. Post construction, they must assure that water and sanitation systems are in working order prior to sign off on occupancy permits. The house or other residential structure cannot be inhabited until an approved occupancy permit is in place.

- 2.6 The Environmental Monitoring and Risk Assessment Division (EMRAD) is the main DEHS division for food and environmental monitoring and risk management services to protect public health and the environment. EMRAD has two laboratories for monitoring food products, potable water and wastewater, and nine staff, including the assistant director and seven support staff on New Providence, and one staff person at the Grand Bahama laboratory.
- 2.7 The DEHS mandate, and in particular EMRAD's, align well with the needed groundwater resource management and protection program. However, it was found that EMRAD suffers from insufficient resources and low morale. The EMRAD main offices and laboratory on New Providence are housed in a condemned building where plumbing leaks from the second floor compromise the accuracy of bacteriological testing results in the laboratory. The laboratory has limited testing capabilities, mainly bacteriological using agar plates, and Hach kits for basic chemistry. More sophisticated tests for hydrocarbons and metals are outsourced to private labs in the U.S., delaying results and making sampling in the Family Islands challenging due to transit times for samples and chain of custody problems. As a result, EMRAD has over the years increasingly transferred responsibility for testing water quality to WSC, in particular for water quality monitoring on the Family Islands. Neither of the laboratories on New Providence nor Grand Bahama is accredited, and there is no initiative to attain accreditation given the primitive lab conditions and lack of equipment and budget.
- 2.8 The Department of Physical Planning (DPP), formerly the Department of Town Planning and recently moved from the Ministry of Public Works to the Ministry of the Environment, carries out mandates under the Public Works Act of 1964 (Chapter 26) and the Conservation and Protection of the Physical Landscape of the Bahamas Act of 1997 (Chapter 260). The Public Works Act addresses public works, building and roads, and the latter the protection of landscapes and natural resources of The Bahamas from physical and environmental degradation related to land development and resource extraction such as grading of hills, filling of wetlands, quarrying sand from beaches and dunes, and removal of trees. Specifically, the DPP is responsible for permitting land use changes, development projects and landfills.
- 2.9 Bahamas Environment, Science and Technology Commission (Best), established in 1995 and originally located in the Office of the Prime Minister, is an advisory agency without statutory or regulatory powers. BEST's role has been to develop environmental and natural resource policies and to administer the environmental impact assessment (EIA) process including overseeing technical and public reviews of EIAs and advising Cabinet on the EIA decision making process. BEST is now a part of the Ministry of Environment. If the EIA process in the Bahamas were

strengthened to require all significant developments to carry out EIAs which addressed all environmental and social impacts, including potential effects on the groundwater resources, BEST would have a major advisory role in the protection and management of groundwater resources.

III. IMPACT RISKS AND CONTROL MEASURES

- 3.1 By improving the reliability of water supply this operation will contribute to the health and well being of approximately 38% Nassau's population initially in preventing illnesses due to waterborne diseases; with a customer win-back strategy this could increase significantly. The sanitation component will address the needed rehabilitation of malfunctioning wastewater treatment plants and assist with improving overall environmental conditions. The Program is not expected to have any major large scale, significant and/or irreversible negative environmental or social impacts. Negative expected impacts are mainly related to wastewater treatment plant rehabilitation works; and water infrastructure construction works and operations, including construction noise, dust, waste generation, traffic inferences and occupational risks.
- 3.2 Key policies and directives triggered in the project include: B.01 – OP-704, OP-102; B.02; B.03; B.06; B.07; B.07; B.11; and B.17 have been triggered. These pertain to natural hazards, disclosure of information, environmental assessment, and monitoring. Positive impacts will be fostered by improving efficiency of the operations of the WSC and addressing the malfunctioning wastewater treatment plants operated by this utility.
- 3.3 In accordance with the Category "B" classification, the Environmental and Social Strategy (ESS) involves the preparation of an Environmental and Social Analysis (ESA) including an Environmental and Social Management Plan (ESMP) for the Project. Environmental and social procedures will be included in the Operational Manual.

IV. ENVIRONMENTAL STRATEGY FOR DUE DILIGENCE

- 4.1 In accordance with the Category "B" classification, the Environmental and Social Strategy (ESS) requires the preparation of an Environmental and Social Analysis (ESA) including an Environmental and Social Management Plan (ESMP) for Components 1 and 3. Environmental and social procedures will be included in the Operational Manual. The ESA / ESMP will be prepared to terms of references (TORs) agreed with the Bank, which will include the requirement for public consultation. The ESA / ESMP will be disclosed prior to the Analysis Mission.
- 4.2 The ESA / ESMP will (i) identify possible environmental and social impacts including water abstraction and quality, and wastewater treatment and disposal; (ii) define mitigation measures (e.g. environmental and social specification which will be included in the bidding documents for contractors) and the implementation

arrangements; (iii) assess the disaster risk vulnerability; and (v) define monitoring and evaluation arrangement, budget, and capacity building and training activities, and (vi) define the criteria and procedures for compensation where necessary. Environmental and social procedures for all activities will be included in the Operational Manual including standard operating procedures to undertake works for the purpose of inspecting, repairing or renewing any sewers, mains, pipes, including breaking open of any road.

- 4.3 Based on the ESA / ESMP the team will prepare an Environmental and Social Management Report (ESMR) to summarize the findings of the ESA / ESMP and assess compliance with the IADB's Safeguard requirements and national policies and legislation.

| INDEX for completed and proposed sector work BH-L1028 | | | |
|---|--|-----------------------|--|
| Issues | Description | Expected Dates | References & hyper links to Technical files |
| Analysis of project cost and economic viability | Data required to analyze economic viability of the Program Preliminary evaluation to be updated once the preliminary technical studies are completed. Initial evaluation to be reviewed and updated | August 2011 | |
| Financial management/fiduciary issues and control environment | No special fiduciary issues are anticipated. Preparation/conclusion of SECI and financial analysis. | August 2011 | |
| Institutional analysis/personnel, procedures other aspects of implementation capacity | Preparation/conclusion of institutional analysis Review of lessons learned will be included in the Program | July 2011 | |
| Stakeholders and political environment | Maintain close communication with stakeholders in the WSC and the Government on the program Consultation meetings will be held | August 2011 | |
| Social and environmental safeguards | Preparation/conclusion of ESA Review of aspects specific to the operation, additional baseline evaluation, budget | August 2011 | |
| Data collection and analysis for reporting on results | Identification of proposed indicators to measure impact of program | September 2011 | |
| Preparation of Operating Regulations | Preparation of the Operating Regulation for the operation | September 2011 | |
| Technical options and design | Feasibility study completed, design studies to be prepared as a first stage in the implementation of the operation | September 2011 | |
| Other key issues, such as donors, gender, sustainability, country/sector issues | N/A | N/A | |