

CARIBBEAN DEVELOPMENT BANK



**TECHNICAL ASSISTANCE -WATER SECTOR ENHANCEMENT PROJECT –
GUYANA**

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Considered at the Two Hundred and Eighty-First Meeting
of the Board of Directors on May 28, 2018

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MAY 2018

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CARIBBEAN DEVELOPMENT BANK

TWO HUNDRED AND EIGHTY-FIRST MEETING OF THE BOARD OF DIRECTORS

TO BE HELD IN GRENADA

MAY 28, 2018

PAPER BD 48/18

TECHNICAL ASSISTANCE - WATER SECTOR ENHANCEMENT PROJECT – GUYANA

1. APPLICATION

1.01 By correspondence dated December 7, 2017, the Government of Guyana (GOGY) applied to the Caribbean Development Bank (CDB / the Bank) for a technical assistance (TA) loan to assist GOGY in financing the services of consultants to: (a) prepare detailed designs, drawings, cost estimates and bid documents for the construction of water treatment plants and the upgrade of water supply infrastructure; (b) conduct a study to determine the feasibility of utilising water from the Hope Canal for domestic supply; (c) prepare a national water policy and associated strategic plans; and (d) develop recommendations for institutional strengthening and capacity building for the Ministry of Communities (MoC) and the Guyana Water Inc. (GWI) with respect to their mandate for the water sector.

1.02 The Borrower will be GOGY and the project will be implemented through MoC.

2. BACKGROUND

2.01 The Cooperative Republic of Guyana (Guyana) had a population of 747,884 (375,150 females and 371,805 males in 2012). The main ethnic groups are: Indo-Guyanese (39.8%); Afro-Guyanese (29.3%); and Amerindians (10.5%) living mainly in the hinterlands. The latest estimate for 2006 showed that 36.1% of the population was poor¹. The Human Development Report (2016) however reveals steady improvement in overall living conditions. The country attained a Human Development Index value of 0.638 in 2015, increasing from 0.541 in 1990 (an increase of 17.9%). Life expectancy at birth increased by 3.0 years, mean years of schooling increased by 1.6 years, expected years of schooling increased by 0.2 years; and gross national income per capita increased by about 209.8% between 1990 and 2015. Notwithstanding the progress made, at-risk groups including women, Amerindians, persons with disabilities (PWDs), and youth, face vulnerabilities. For example, female labour force participation was 43.6% compared to 68.9% for males, and 56% for the total population in 2017 (Third Quarter). Comparatively, the female unemployment rate was 15.3%, as opposed to 9.9% for males, and 12% for the total population in 2017². Social exclusion and vulnerabilities faced impact all aspects of socioeconomic life including the ability to access water and sanitation. The socially-inclusive *no-one left behind* 2030 Sustainable Development Goals agenda requires programming to address services

¹ Poverty was more prevalent in rural areas, with the hinterland population having a prevalence of 74%, the Amerindian population 78%, and urban residents 19%. Afro-Guyanese, Indo-Guyanese and Mixed ethnic groups show similar poverty rates, about 1 in 3 are poor.

² Unemployment rates are higher for youth age cohorts and more so for females and rural dwellers: males 17.3%, females 28.0%, both males and females 21.6%; rural 24.5%, and urban 20.5%). Further, some 15% of PWDs never attend school, 40% of unemployed suffer job losses due to disability, and 79% of families face financial difficulties (Bureau of Statistics 2006).

disproportionately accessed by such groups.

2.02 Having signed on to the historic Paris Agreement in December 2015, the President of GOGY, indicated that the Government recognised the importance of battling climate change. As part of this approach, GOGY is pursuing a Green Economy, sparing no effort to ensure a sustainable future through the sustainable management of its natural resources and assets. Water resources management is a critical element in achieving the greening of the economy.

2.03 MoC is the primary government agency which links the local government agencies to the central government. It has the overarching responsibilities for water and is embarking on the re-establishment of the National Water Council under MoC. One of the key functions of the Council is to advise the Minister on the development, implementation and coordination of the National Water Policy. In order to achieve this goal it is imperative that MoC coordinate plans to develop the National Water Policy and the related strategies and plans to improve water governance.

2.04 Water resources management is in its nascent stages in Guyana. GOGY under the Green Economy Initiative, is addressing the challenges in the water sector. GOGY is presently seeking to enhance the management of Guyana's water resources, as mandated under the Water and Sewerage Act of 2002. Reviews of the current system have indicated that additional governance structures and systems are needed to facilitate the development of their Integrated Water Resources Management Plan. Key elements needed include a national water policy; greater definition of roles and responsibilities among stakeholders; improved institutional capacities, and an improved strategy for targeting access to water for the vulnerable groups such as the poor, indigenous peoples, elderly, PWDs, and single parent households including female headed households.

2.05 GWI, a company incorporated under the Companies Act of Guyana and solely owned by GOGY, falls under the purview of the MoC. It is charged with the responsibility of water production and sewage disposal in Guyana. GWI currently delivers water directly from source to 43% of the population; the remaining 57% are provided with water treated either at one of the 28 existing water treatment plants or through the use of SeaQuest[®], an additive used in potable water to control corrosion, scale, lead, iron and discoloration. Death of children due to poor water, sanitation and hygiene³ stood at 132 per 100,000 in 2015, where women tend to bear the unpaid burden of care for dependents in households. GOGY, through the GWI wishes to increase the availability of and accessibility to treated water to 66% of the population by 2021 through new and upgraded water supply infrastructure. In keeping with this mandate, the GWI conducted studies and designs which resulted in recommendations of specific interventions at key locations. The communities were selected based on their size so as to maximize the benefits of the interventions as well as to fill "gaps" in Guyana's geographical water distribution network. Recommendations included: constructing new treatment plants; metering; new storage facilities, and new transmission and distribution systems. A map indicating the location of these proposed interventions is presented at Figure 1.

3. PROPOSAL

3.01 It is proposed that CDB provide a TA loan to GOGY, in an amount not exceeding the equivalent of one million two hundred and sixty-five thousand United States dollars (USD1,265,000), from its Special Funds Resources (SFR), to assist GOGY in engaging the services of consultants to: (a) prepare detailed designs, drawings, cost estimates and bid documents for the construction of water treatment plants and the upgrade of water supply infrastructure; (b) conduct a study to determine the feasibility of utilising water from the Hope Canal for domestic supply; (c) prepare a national water policy and associated strategic plans;

³ Deaths of children under age 5 due to diarrhoea attributable to unsafe water, unimproved sanitation or poor hygiene (Human Development Report 2015)

and (d) develop recommendations for institutional strengthening and capacity building for MoC and GWI, with respect to their mandate for the water sector. The Terms of Reference (TOR) for the consultancy services for items (a), and (b), are presented at Appendix 1, and items (c) and (d) are presented in Appendix 2.

3.02 The proposed TA is consistent with:

- (a) CDB's Strategic Objective of supporting inclusive and sustainable growth and development within its Borrowing Member Countries (BMCs).
- (b) CDB's Corporate Priority of: (i) strengthening and modernising social and economic infrastructure; (ii) promoting environmental sustainability (climate change resilience, environmental management).
- (c) CDB's TA Policy and Operational Strategy of commitment to strengthening the synergies between TA operations and the Bank's investment lending.
- (d) CDB's Gender Policy and Operational Strategy.
- (e) GOGY's Strategic Plan for increasing the water treatment coverage from 57% to 66% nationally over the period 2017 – 2021.
- (f) Sustainable Development Goals (SDGs) 9 and 13⁴.

4. OUTCOME

4.01 The expected outcomes of this intervention are: (a) the enhanced capacity of GOGY through the National Water Policy and strategies, to improve governance in the water sector and; (b) enhanced capacity of GOGY to implement a technically, economically and socially gender inclusive and climate resilient solution for use of water from Hope Canal for domestic supply; and the construction of water treatment plants and the upgrade of water supply infrastructure in Regions 1, 2, 3, 5, 6 and 8. A Results Framework for the Project is presented at Appendix 3.

5. JUSTIFICATION

5.01 The TA will better position GOGY to provide more effective governance in the water sector and will provide technically viable solutions for improvement of the water supply to an estimated 16,963 households along the coastal, and in the hinterland regions. Under this TA, a national water policy will be prepared and recommendations made towards institutional strengthening at the national, local, and operational levels of the water sector

5.02 GOGY is experiencing several difficulties in the effective delivery of potable water to residents and businesses in the coastal regions. The water supply in many areas is characterised by low water pressure; high iron content; and rationalisation of services. The construction of new water treatment plants is necessary to address this ongoing problem. In addition, projected climate change impacts will result in more frequent dry periods and intense rainfall that can seriously affect the availability of potable

⁴ SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. SDG 13: Take urgent action to combat climate change and its impacts.

water. Thus this intervention will incorporate climate resilient designs for the new infrastructure as well as the strategies being developed.

5.03 Several communities in the hinterland are being negatively affected by poor water supply. This is as a results of, *inter alia*: deteriorated water supply systems; poor source-water quality; siltation in distribution lines resulting in service interruptions; and inadequate water pressure. New water treatment plants and the upgrading of the water transmission infrastructure is critical in resolving these issues.

5.04 There is a need to improve the quantity and quality of water currently available to residents along the lower part of the East Coast of Demerara. With significant volumes of water being easily accessible from the nearby Hope Canal, GOGY is keen to determine if this can be used as a sustainable and viable source of potable water to complement the existing underground well sources. The feasibility study under this project will provide GOGY with necessary information to enable a decision.

5.05 Based on CDB’s TA Performance Rating System, the Project has been assessed as highly satisfactory with a score of 3.75 (see Appendix 4). This suggests that it is likely to contribute to development effectiveness.

5.06 The Project is assessed as gender mainstreamed and has significant potential to contribute to gender equality. The Gender Marker Summary is presented at Table 5.1 and Appendix 5 shows the Gender Marker Analysis. The Project is expected to facilitate access to potable water for an estimated 16,963 households and a population of 67,990, consisting of 34,641 males and 33,349 females (Table 5.2). The Project includes a TOR for a detailed Social Impact Assessment and Gender Analysis which will inform the design of the capital project proposal with interventions geared at improving socioeconomic outcomes for women/girls and men/boys, and vulnerable groups such as PWDs and indigenous peoples. The National Youth Policy, the Draft Gender Equality and Social Inclusion Policy, and the Disability and Indigenous People’s legislation call for the recognition of vulnerable groups and the provision of programmes to ensure that no-one is left behind in national development benefits.

TABLE 5.1: GENDER MARKER SUMMARY

Gender Marker	Analysis	Design	Score	Code
	1.0	2.0	3.0	GM⁵

⁵ Gender Mainstreamed: the project has significant potential to contribute to gender equality.

TABLE 5.2: TARGETED BENEFICIARY HOUSEHOLDS AND POPULATION BY GEOGRAPHICAL AREA FOR ACCESS TO TREATED WATER⁶

Location	Number of Households	Population		
		Males	Females	Total
Region 1 – Mabaruma	1,310	2,929	2,311	5,240
Region 2 - Walton Hall to Charity	1,500	2,963	3,037	6,000
Region 3 – Wakenaam	2,300	4,753	4,447	9,200
Region 3 – Leguan Island				
Region 5 – Bush Lot,	5,888	11,689	11,861	23,550
Region 6 - Tain to No. 50 Village	5,000	9,985	10,015	20,000
Region 8 – Mahdia	965	2,323	1,677	4,000
Grand Total	16,963	34,641	33,349	67,990

6. RISK ASSESSMENT AND MITIGATION

6.01 Some risks have been identified which could have an effect on the implementation of the Project. The risks of the proposed project are presented in Table 6.1 below.

TABLE 6.1: RISK AND MITIGATION

Risks	Description	Mitigation
1. Implementation	Data not available nor submitted in a timely manner.	CDB staff will liaise with MoC and GWI personnel and other key stakeholders and country visits will facilitate access to qualitative data to augment quantitative data gaps. Also, ensure that MoC/GWI collects and stores, in a location accessible to the respective Consultants, all existing maps, reports, drawings, studies and any other relevant documentation required for the assignments.
2. Implementation	Lack of support and buy-in from the Project Advisory Committee (PAC) and National Water Council (NWC).	PAC and NWC fully involved in the decision and consultative process.
3. Operational	GOGY may not follow through on the recommendations of the relevant studies, especially as it relates to the National Water Policy.	As part of its development Strategy, GOGY has given high priority to the development of the Water and Sanitation Sector. As such, upgrading of key Water and Sanitation Sector Infrastructure and enhancing the sector’s governance framework are high priorities for GOGY.

⁶ The data was obtained from the GWI. The 2012 census was used with a projected population increase of 1% per annum and recent household count conducted by GWI.

7. EXECUTION

7.01 The Project will be implemented through MoC. It will be a condition precedent to first disbursement of the loan that GOGY assign the day-to-day coordination and management of the Project to a staff member within MoC as the Project Coordinator (PC), whose qualifications and experience are acceptable to CDB. The duties and responsibilities of the PC are set out at Appendix 6. It will also be a condition precedent to first disbursement that GOGY ensure that GWI assign a member of its staff as Project Engineer (PE) to assist the PC in coordinating the consultancy services for: (a) preparation of detailed designs for water supply improvement works; and (b) feasibility study for sourcing potable water from The Hope Canal. The duties and responsibilities of the PE are set out in Appendix 7. It will be a further condition precedent to first disbursement, that GOGY establish a PAC to promote participation of, and information sharing among, major stakeholders. It is proposed that PAC comprise representatives from: (a) MoC; (b) GWI; (c) Ministry of Social Protection; and (d) Department of Environment. PAC will be chaired by the Permanent Secretary with responsibility for MoC, with PC as Secretary. The composition and functions of PAC are set out at Appendix 8. It will be a condition of the loan that by May 30, 2019, GOGY re-establish the now inactive NWC established under the Water and Sewerage Act, Chapter 30:01 of the Laws of Guyana. The Council has as its mandate, *inter alia*, to oversee and manage the coordination of the National Water Policy. A Project Organisation Chart can be found at Appendix 9.

7.02 The Project has an estimated duration of 18 calendar months. It is expected that the first disbursement from the loan will be made by January 31, 2019, and that the loan will be fully disbursed by March 31, 2020.

7.03 GOGY will be required to collect and store, in a location accessible to the consultants, all existing maps, reports, drawings, studies and any other relevant documentation required for the consultant, including data created as a result of the Project.

8. COST AND FINANCING

8.01 The total cost of the TA is estimated at one million, four hundred and thirty-seven thousand United States Dollars (USD1,437,000). CDB's contribution will be a TA loan not exceeding the equivalent of one million, two hundred and sixty-five thousand United States dollars (USD1,265,000) from CDB's SFR. Counterpart funding, the equivalent of one hundred and seventy-two thousand United States dollars (USD172,000), will be provided by GOGY.

8.02 It is proposed that the loan be paid in thirty-six (36) equal or approximately equal consecutive quarterly instalments, commencing three (3) years after the date of the Loan Agreement. The interest rate is 1% per annum (p.a) (fixed). In the event that GOGY obtains financing from CDB or other sources for a project resulting from this TA, the amount of the Loan withdrawn and outstanding, together with the interest thereon, shall be payable from the proceeds of the first disbursement of such financing.

8.03 The summarised Financing Plan is set out in Table 8.1 below and the Financing Plan can be found at Appendix 10. Funds are available within existing resources. Details are set out in the Budgets at Appendices 1 and 2.

TABLE 8.1: SUMMARISED FINANCING PLAN
(USD)

Contributors	USD	%
CDB's SFR Loan	1,265,000	88
GOGY	172,000	12
Total	1,437,000	100

8.04 CDB will fund the professional fees, accommodation, travel and other reimbursables, and part fund consultation workshops which accounts for 88% of the cost or USD1,265,000. The cost of the consultancy service is reflective of current rates for similar services. GOGY will meet the remaining 12% of the cost or the equivalent of USD172,000 in kind, which will consist of local project management, office accommodation, local transportation, and miscellaneous expenses.

8.05 CDB's contribution is eligible for financing from CDB's SFR allocated from SDF 9 resources.

9. PROCUREMENT

9.01 The procurement of consulting services, financed from the proceeds of the CDB Loan, will be in accordance with CDB's "Guidelines for the Selection and Engagement of Consultants" (October 2011). The Procurement Plan is provided at Appendix 11. Any revisions to this Plan shall require prior approval from CDB.

10. REPORTING REQUIREMENTS

10.01 The PC will be required to submit to CDB and GOGY quarterly status reports and the Consultant's Reports required by the TORs.

11. RECOMMENDATION

11.01 It is recommended that the Board of Directors approves a TA Loan to GOGY of an amount not exceeding the equivalent of one million, two hundred and sixty-five thousand United States dollars (USD1,265,000) from CDB's SFR, to assist GOGY in financing the services of consultants to: (a) prepare detailed designs, drawings, cost estimates and bid documents for the construction of water treatment plants and the upgrade of water supply infrastructure; (b) conduct a study to determine the feasibility of utilising water from the Hope Canal for domestic supply; (c) prepare a National Water Policy and associated strategic plans; and (d) develop recommendations for institutional strengthening and capacity building for MoC and GWI, with respect to their mandate for the water sector, on CDB's standard terms and conditions, and on the following terms and conditions:

No	Subject	Terms and Conditions
1	Parties	<p><u>Bank</u>: Caribbean Development Bank (CDB)</p> <p><u>Borrower</u>: Government of the Co-operative Republic of Guyana (GOGY)</p> <p><u>Implementing Agency</u>: Ministry of Communities (MoC)</p>
2	Amount of Loan	<p>The Bank agrees to lend to the Borrower an amount not exceeding the equivalent of one million, two hundred and sixty-five thousand United States dollars (USD1,265,000) from CDB's SFR (the Loan) comprising:</p> <p><u>Special Development Fund Cycle 9 (SDF 9)</u>: One million, two hundred and sixty-five thousand United States dollars (USD1,265,000)</p>
3	Purpose	<p>The purpose for which the Loan is being made is to assist the Borrower in financing: the services of consultants to: (a) prepare detailed designs, drawings, cost estimates and bid documents for the construction of water treatment plants and the upgrade of water supply infrastructure; (b) conduct a study to determine the feasibility of utilising water from the Hope Canal for domestic supply; (c) prepare a national water policy and associated strategic plans; and (d) develop recommendations for institutional strengthening and capacity building for MoC and GWI, with respect to their mandate for the water sector.</p>
4	Repayment	<p>The Borrower shall repay the Loan as follows:</p> <p><u>SDF 9 Resources:</u></p> <p><u>SDF (Loans)</u> Amortisation Period: 9 years Number of instalments: 36 Instalment period: Quarterly Grace Period: 3 years following the date of the Loan Agreement.</p>
5	Interest	<p>The Borrower shall pay interest on the amount of the Loan withdrawn and outstanding from time to time as follows:</p> <p><u>SDF 9 Resources:</u></p> <p>Interest Rate: SDF (Loans) – One percent (1%) p.a. (fixed)</p>

No	Subject	Terms and Conditions
		Interest payment period: Quarterly
6	Commitment Charge	A commitment charge shall not be payable on the amount of the Loan.
7	Withdrawal and Application of Loan	<p>Except as the Bank may otherwise agree, amounts withdrawn from the Loan Account shall be used to finance the components of the Project allocated for financing by the Bank as shown in the Financing Plan up to the respective limits specified therein.</p> <p>Except as the Bank may otherwise agree, amounts withdrawn from the Loan Account shall not exceed in the aggregate eighty-eight percent (88%) of the total cost of the Project.</p> <p>The amounts withdrawn from the Loan Account shall not be used to finance, directly or indirectly, any part of the cost of the Project which consists of identifiable taxes imposed under the laws of the Project Country.</p> <p>In the event that the Borrower obtains financing from the Bank or other sources for a project or programme resulting from the Project, the amount of the Loan withdrawn and outstanding, together with the interest thereon, shall become payable in one (1) payment from the proceeds of the first disbursement of such financing, if such payment is compatible with the operating policy of the other source of such financing. The Borrower hereby undertakes that, if any financing is made available to it from any source other than the Bank, for a project or programme resulting from the Project, the Borrower will approach the source of funding with a view to reaching agreement that the amount of the Loan withdrawn and interest thereon be included in the financing, and paid to the Bank in one (1) payment upon receipt of the first disbursement of such financing.</p>
8	Period of Disbursement	<p>The Bank shall have received an application for first disbursement of the Loan by January 31, 2019 or such later date as may be specified in writing by the Bank.</p> <p>The Loan shall be disbursed up to March 31, 2020 or such later date as may be specified in writing by the Bank.</p>
9	Procurement	The Borrower shall comply with the procurement requirements set out in the Procurement Plan . Any revisions to the Procurement Plan shall require the Bank's prior approval in writing.

No	Subject	Terms and Conditions
		<p>Any goods, works and services to be financed from the amounts withdrawn from the Loan Account shall be procured accordance with the following procedures or such other procedures as the Bank may from time to time specify in writing:</p> <p>CDB's Guidelines for the Selection and Engagement of Consultants by Recipients of CDB Financing (October 2011)</p>
10	Condition(s) Precedent to First Disbursement	<p>The Borrower shall, by the 60th day after the date of the Loan Agreement, or such later date as the Bank may agree, provide the Bank with evidence acceptable to the Bank, that the following condition/s has/have been satisfied:</p> <p>PC has been assigned.</p> <p>PE has been assigned.</p> <p>PAC has been established.</p>
11	Project Implementation	<p>Except as the Bank may otherwise agree, the Borrower shall: (i) implement the Project through the Implementing Agency; (ii) carry out the Project at all times with due diligence and efficiency, with management personnel whose qualifications and experience are acceptable to the Bank and in accordance with sound technical, environmental, administrative, financial and managerial standards and practices; and (iii) institute and maintain organisational, administrative, accounting and auditing arrangements for the Project, acceptable to the Bank.</p>
12	Project Management	<p>The Borrower shall, for the duration of the Project, assign a member of staff within MoC with qualifications and experience acceptable to the Bank, as PC, who shall be responsible for the day-to-day coordination and management of the Project and carry out the duties and responsibilities set out in the Duties and Responsibilities of the Project Coordinator.</p> <p>The Borrower shall, for the duration of the Project, ensure that GWI assigns a member of its staff with qualifications and experience acceptable to the Bank, as PE, who shall be responsible for assisting the PC in coordinating the Consultancy Services for: (1) Preparation of Detailed Designs for Water Supply Improvement Works; and (2) Conduct a Study to Determine the Feasibility of Utilising the Hope Canal as a Sustainable Potable Water Source and carry out the duties and responsibilities set out in the Duties and Responsibilities of the Project Engineer.</p>

No	Subject	Terms and Conditions
		<p>The qualifications and experience of any person(s) subsequently assigned to the position(s) referred to in this Section shall be acceptable to the Bank.</p> <p>The Borrower shall establish and, for the duration of the Project, maintain a PAC to promote participation of, and information sharing among, major stakeholders, with the composition and functions set out in the Composition and Functions of the Project Advisory Committee.</p>
13	Engagement of Consultants	<p>The Borrower shall, in accordance with the procurement procedures applicable to the Loan, select and engage consultant(s) to provide the following consultancy services:</p> <p>Consultancy Services for: (1) Preparation of Detailed Designs for Water Supply Improvement Works; and (2) Conduct a Study to Determine the Feasibility of Utilising the Hope Canal as a Sustainable Potable Water Source</p> <p>Consultancy Services for Strengthening Water Sector Governance</p> <p>The Borrower shall within a time frame acceptable to the Bank implement such recommendations arising from the abovementioned consultancy/ies, as may be acceptable to the Bank.</p>
14	Other Condition(s)	<p>The Borrower shall collect and store, in a location accessible to the consultants, all existing maps, reports, drawings, studies and any other relevant documentation required for the consultant, including data created as a result of the Project.</p> <p>The Borrower shall, by May 30, 2019 or such later date as may be specified in writing by the Bank, operationalise the National Water Council established under the Water and Sewerage Act, Chapter 30:01 of the Laws of Guyana.</p>

No	Subject	Terms and Conditions
15	Reports and Information	<p>Except as the Bank may otherwise agree, the Borrower shall furnish or cause to be furnished to the Bank: (i) quarterly status reports in such form or forms as the Bank may require; and (ii) the reports and other information required to be provided by the consultant(s) in accordance with the Consultancy Services for: (1) Preparation of Detailed Designs for Water Supply Improvement Works; and (2) Conduct a Study to Determine the Feasibility of Utilising the Hope Canal as a Sustainable Potable Water Source; and the Consultancy Services for Strengthening Water Sector Governance in the form specified therein not later than the times specified therein for so doing.</p>
16	Additional Funds	<p>The Borrower shall be responsible for meeting any amount by which the total cost of the Project exceeds one million, four hundred and thirty-seven thousand United States dollars (USD1,437,000).</p>
17	Borrower's Contribution to the Project	<p>Except as the Bank may otherwise agree, the Borrower shall contribute to the Project an amount of no less than the equivalent of one hundred and seventy-two thousand United States dollars (USD172,000).</p> <p>Except as the Bank may otherwise agree, the contribution which the Borrower is required to make to the Project shall be expended by the Borrower in a timely manner on the components of the Project allocated for financing by the Borrower as shown in the Financing Plan, up to the respective limits set out therein.</p>

SUPPORTING DOCUMENTATION

Appendix 1:	-	Draft Terms of Reference – Consultancy Services for: (1) Preparation of Detailed Designs for Water Supply Improvement Works; and (2) Conduct a Study to Determine the Feasibility of Utilising the Hope Canal as a Sustainable Potable Water Source.
Annex 1 to Appendix 1:	-	Environmental Impact Assessment - Water Treatment Plants and Infrastructure Improvement Works
Annex 2 to Appendix 1	-	Draft Terms of Reference - Social Impact Assessment and Gender Analysis
Appendix 2:	-	Draft Terms of Reference – Consultancy Services for Strengthening Water Sector Governance
Appendix 3:	-	Results Framework
Appendix 4:	-	Performance Rating System
Appendix 5:	-	Gender Marker Analysis
Appendix 6	-	Duties and Responsibilities of the Project Coordinator
Appendix 7	-	Duties and Responsibilities of the Project Engineer
Appendix 8	-	Composition and Functions of the Project Advisory Committee
Appendix 9	-	Project Organisation Chart
Appendix 10		Financing Plan
Appendix 11	-	Procurement Plan
Figure 1:	-	Project Location Map

Sector Code:	No. 14021 – Water Supply - Large Systems
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DRAFT TERMS OF REFERENCE

CONSULTANCY SERVICES FOR:

**1. PREPARATION OF DETAILED DESIGNS FOR WATER SUPPLY
IMPROVEMENT WORKS**

**2. CONDUCT OF A STUDY TO DETERMINE THE FEASIBILITY OF UTILISING
THE HOPE CANAL AS A SUSTAINABLE POTABLE WATER SOURCE**

1. INTRODUCTION

1.01 The Cooperative Republic of Guyana (Guyana) had a population of 747,884 (375,150 females and 371,805 males in 2012). The main ethnic groups are: Indo-Guyanese (39.8%); Afro-Guyanese (29.3%); and Amerindians (10.5%) living mainly in the hinterlands. The latest estimate for 2006 showed that 36.1% of the population was poor¹. The Human Development Report (2016) however reveals steady improvement in overall living conditions. The country attained a Human Development Index value of 0.638 in 2015, increasing from 0.541 in 1990 (an increase of 17.9%). Life expectancy at birth increased by 3.0 years, mean years of schooling increased by 1.6 years, expected years of schooling increased by 0.2 years; and gross national income per capita increased by about 209.8% between 1990 and 2015. Notwithstanding the progress made, at-risk groups of women, Amerindians, persons with disabilities (PWDs), and youth, face vulnerabilities. For example, female labour force participation was 43.6% compared to 68.9% for males, and 56% for the total population in 2017 (Third Quarter). Comparatively, the female unemployment rate was 15.3%, as opposed to 9.9% for males, and 12% for the total population in 2017². Social exclusion and vulnerabilities faced, impact all aspects of socioeconomic life, including ability to access to water and sanitation. The socially-inclusive *no-one left behind* 2030 Sustainable Development Goals agenda requires programming to address services disproportionately accessed by such groups.

1.02 Having signed on to the historic Paris Agreement in December 2015, the President of the Government of Guyana (GOGY), indicated that the government recognised the importance of battling climate change. As part of this approach, GOGY is pursuing a Green Economy, sparing no effort to ensure a sustainable future through the sustainable management of its natural resources and assets. Water resources management is a critical element of achieving the greening of the economy.

1.03 The Ministry of Communities (MoC) is the primary government agency which links the local government agencies to the central government. It has the overarching responsibilities for water and is embarking on the re-establishment of the National Water Council under MoC. One of the key functions of the Council is to advise the Minister on the development, implementation and coordination of the National Water Policy. In order to achieve this goal it is imperative that MoC coordinate plans to develop the National Water Policy and the related strategies and plans to improve water governance.

1.04 Water resources management is in its nascent stages in Guyana. The GOGY under the Green Economy Initiative, is addressing the challenges in the water sector, The GOGY is presently seeking to enhance the management of their water resources, as mandated under the Water and Sewerage Act of 2002. Reviews of the current system have indicated that additional governance structures and systems are needed

¹ Poverty was more prevalent in rural areas, with the hinterland population having a prevalence of 74%, the Amerindian population 78%, and urban residents 19%. Afro-Guyanese, Indo-Guyanese and Mixed ethnic groups show similar poverty rates, about 1 in 3 are poor.

² Unemployment rates are higher for youth age cohorts and more so for females and rural dwellers: males 17.3%, females 28.0%, both males and females 21.6%; rural 24.5%, and urban 20.5%). Further, some 15% of PWDs never attend school, 40% of unemployed suffer job losses due to disability, and 79% of families face financial difficulties (Bureau of Statistics 2006).

to facilitate the development of their Integrated Water Resources Management Plan. Key elements needed include a national water policy; greater definition of roles and responsibilities among stakeholders; improved institutional capacities, and improved strategy for targeting access to water for the vulnerable groups such as the poor, indigenous peoples, elderly, PWDs, and single parent households including female headed households.

1.05 The Guyana Water Inc. (GWI), a company incorporated under the Companies Act of Guyana and solely owned by the GOGY, falls under the purview of the MoC. It is charged with the responsibility of water production and sewage disposal in Guyana. GWI currently delivers water directly from source to 43% of the population; the remaining 57% are provided with water treated either at one of the 28 existing water treatment plants or through the use of SeaQuest[®], an additive used in potable water to control corrosion, scale, lead, iron and discoloration. Death of children due to poor water, sanitation and hygiene³ for Guyana stood at 132 per 100,000 in 2015, where women tend to bear the unpaid burden of care for dependents in households. GOGY, through the GWI wishes to increase the availability of and accessibility to treated water to 66% of the population by 2021 through new and upgraded water supply infrastructure. In keeping with this mandate, the GWI conducted studies and designs which resulted in recommendations of specific interventions at key locations. Recommendations included: constructing new treatment plants; metering; new storage facilities, and new transmission and distribution systems.

2. OBJECTIVE

2.01 The objective of this consultancy is: (a) to prepare detailed designs, drawings, technical specifications, cost estimates and bidding documents for upgrading select water systems in Guyana, in order to facilitate the appraisal and financing of a capital project and incorporate considerations related to the Project's technical, environmental, natural hazard, climate change and social context; and (b) determine the feasibility of utilising the Hope Canal as a potable water source.

2.02 Resilience building measures to address climate change and natural hazard impacts will be assessed as part of this analysis.

3. DESCRIPTION OF WORK

3.01 The Project consists of seven project sites (Table 1). The Project is expected to facilitate socially inclusive access to potable water for an estimated 16,963 households and a population of 67,990, consisting of 34,641 males and 33,349 females.

³ Deaths of children under age 5 due to diarrhoea attributable to unsafe water, unimproved sanitation or poor hygiene (Human Development Report 2015)

(a) **Water Treatment Plants (Component 1)**

TABLE 1: TARGETED BENEFICIARY HOUSEHOLDS AND POPULATION BY GEOGRAPHICAL AREA FOR ACCESS TO TREATED WATER⁴

Location	Number of Households	Population		
		Males	Females	Total
Region 1 – Mabaruma	1,310	2,929	2,311	5,240
Region 2 - Walton Hall to Charity	1,500	2,963	3,037	6,000
Region 3 – Wakenaam	2,300	4,753	4,447	9,200
Region 3 – Leguan Island				
Region 5 – Bush Lot,	5,888	11,689	11,861	23,550
Region 6 - Tain to No. 50 Village	5,000	9,985	10,015	20,000
Region 8 – Mahdia	965	2,323	1,677	4,000
Grand Total	16,963	34,641	33,349	67,990

Region 1 - Mabaruma

The Mabaruma water supply system is operated and maintained by GWI employees currently. It is divided into three independent service areas, each with its own spring, underground storage reservoir, diesel driven high lift pumps and water distribution network. None of the distribution networks has any interconnection with neighbouring networks. The water supplied to all three areas was untreated until recently when GWI installed chlorination systems. These areas are Mabaruma, Barabina and Wanaina. There is also a fourth service area, ‘The Settlement’, which is being served with very low pressure. This area also has a partially completed system that was originally intended to have its own water source, storage reservoir, high lift pumping station, elevated storage tank and water distribution network, and to be independent of the three existing service areas. Presently, the water supplied to the residents is limited since the only reliable source of water is the three springs within the respective water zones. The recharge rate of these springs has degraded over the years resulting in a 30% reduction in water supply during the dry season, this means that residents of “The Settlement” sometimes have little or no access to water. GWI is in the process of installing a new pumping system, transmission network and a storage tank to transmit water from the Hosororo falls to meet the needs of the community. However, from tests conducted, the water is of poor quality and cannot be supplied to the residents unless it is adequately treated.

Proposed Intervention: It is proposed that a water treatment plant (WTP) be constructed, along with storage reservoirs and transmission mains. Additionally it is proposed that new wells be drilled.

⁴ The data was obtained from the GWI. The 2012 census was used with a projected population increase of 1% per annum and recent household count conducted by GWI.

Region 2 - Walton Hall to Charity

The community of Charity which is located on the Essequibo Coast is disadvantaged by poor water service and quality. The water supplied from Walton Hall is untreated and is delivered at a pressure head of less than one (1) meter. The water has been served untreated on a sectionalised basis due to restricted capacity of one of the existing production wells in the service area and the absence of a treatment plant. The community, already relatively large, continues to expand thereby placing additional demand on the system. Currently, GWI utilises SeaQuest® to treat the water before supplying to the customers, however this attracts an extremely high operational cost.

Proposed Intervention: It is proposed that a new water treatment plant be constructed, a new well drilled, and new transmission mains and service connections installed to satisfy the needs of the residents of the community.

Region 3 - Leguan

The community at Leguan Island suffers from substandard water quality and service. Untreated water is supplied from wells at Doorn Haag and Success at a pressure head less than 0.5 m. Water is also being served on a sectionalised basis directly from the wells which are extremely high in iron concentration.

Proposed Intervention: It is proposed that two new wells be constructed along with a new WTP in addition to the installation of new transmission mains and service connection upgrades.

Region 3 - Wakenaam

Like the communities mentioned above, those at Wakenaam Island also suffer from poor water quality and service. The water currently being supplied is sourced from two deteriorated wells high in iron content and is served on a sectionalised basis. The supply pressure is less than 0.5 m.

Proposed Intervention: It is proposed that two new wells be constructed along with a new WTP in addition to the installation of new transmission mains and service connection upgrades.

Region 5 - Bush Lot

Bush Lot comprises a population of around 15,000 persons that receive water directly from the wells without any form of treatment. There is a need for a new WTP to service areas along with Bush Lot on the west coast of Berbice. These communities include Bush Lot, Brahan, Waterloo Jib, etc.

Proposed Intervention: It is proposed that a WTP be constructed along with the installation of new transmission lines, a distribution system upgrade and metering to satisfy the needs of the communities.

Region 6 - Tain to No 50 Village

The residents of the communities from No. 50 to Tain, East Berbice, have been receiving untreated water supply as long as the communities have been in existence and are in urgent need of improvement of this essential utility.

Proposed Intervention: It is proposed that a new WTP be constructed, in addition to the installation of new transmission mains and service connection upgrades to provide water to meet the needs of the communities.

Region 8 - Mahdia

The Mahdia water supply system is a gravity feed system which uses the Salbora Creek as the water source to supply residents of Mahdia with potable water. Salbora Creek is located approximately 7 km away Mahdia Village. The system operates by storing water from Salbora Creek in a reservoir. The water is then gravity fed through a transmission and distribution pipe network system. Due to the high elevation of the catchment reservoir relative to the village, the water is transmitted at high pressure which allows for residents to have individual service connections for convenient water collection. This system serves a population of approximately four thousand persons. The catchment reservoir is located in the flow path of Salbora Creek. It is natural for siltation to occur and it intensifies during the rainy season. When this occurs, the volume of water that is stored is significantly reduced. Hence, the water supply system requires regular maintenance in order to function efficiently. The maintenance of the system becomes even more critical during the rainy season as the pipe network is likely to become clogged from debris entering the system.

Mahdia water supply system has been significantly affected over the years due to leakages and clogged pipelines. This is as a result of vandalism by miners and lack of maintenance of the water system. The level of service received by the residents is reduced significantly from as much as 24 hours water supply at a head of 5m to no water.

Proposed Intervention: In order to restore the level of service for the residents of Mahdia it is proposed that a parallel transmission main be installed from the source along with the installation of pressure regulating and non-return valves. The construction of ground storage tanks is also proposed along with the upgrade of service connections. The ground storage tanks is to ensure continuity of service during maintenance of the network and the prolonged dry seasons.

(b) The Hope Canal (Component No. 2)

The Hope Canal creates additional drainage facility for the East Demerara Water Conservancy (EDWC) close to the north eastern end of the facility. This Canal was constructed as a result of the occurrence of high intensity rainfall over the recent years which has resulted in the water levels in the EDWC rising above the maximum acceptable flood level and threatening the safety of the northern dam. Despite the opening of the Land of Canaan (LOC) flood relief structure, high water levels in the conservancy have persisted along the northern dam. This has resulted in the opening of the flood relief structures at Lama and Maduni which discharge into the Mahaica River. This additional water in the Mahaica River, has severely reduced the time available for gravity drainage of the adjacent lands. Water has also overtopped the flood protection

embankments. Both of these situations have resulted in flooding and damage to social and economic infrastructure of the area. A significant volume of water is currently being discharged to the Atlantic Ocean through the Hope Canal, therefore it is intended that some of this water can be utilised for supplying the lower part of the East Coast of Demerara.

Proposed Intervention: It is proposed that a detailed study be undertaken to determine the feasibility of using the water from the Canal to supply residents along the East Coast with treated water.

SCOPE OF WORKS

3.02 **Undertake an ESIA of the proposed works** in keeping with CDB Environment and Social Review Procedures and GOGY requirements which will be used to inform the design of the proposed works. **The report should include draft Environmental and Social management plans for each project works site as listed above.** The ESIA should include broad stakeholder consultation and a stakeholder engagement plan for the participation by residents and other stakeholders during project implementation and operation of the built system (s). *The Consultant should present to stakeholders, proposed and recommended project options and provide a report on the public hearing and stakeholder consultations.* Refer to Annex 1 and Annex 2 of Appendix 1 for details.

3.03 Following the satisfactory conclusion and acceptance of the above by GOGY, MoC, and GWI, consultants are to proceed with Components (1) and (2) as follows:

(a) **Water Treatment Plants (Component No. 1)**

- (i) Validate technical studies/interventions proposed by GWI in Section 3.01 above and recommend improvements/alternative solutions where merited.
- (ii) prepare functional engineering reports, setting out the routes for municipal services, alternate methods of construction or materials, which may be appropriate and advantageous in terms of capital costs, and land requirements. As well, present design criteria details for potable water and their appurtenances; water treatment facilities; pumping stations; water storage reservoirs; and transmission mains;
- (iii) natural hazard management and climate change parameters, which are to be defined during the functional engineering studies, shall be highlighted, identified and appropriate mitigating, adaptation and resilience-building measures incorporated into the final designs;
- (iv) prepare construction specifications for all the works shown on the drawings for which the Consultant is responsible. The specifications shall be clear and concise with a statement setting forth the general scope of work followed by a description of the various classes of work, segregated by trade and under appropriate sections and headings. The quality of the materials and workmanship required of the contractor or supplier will be described in detail;

- (v) contract documents will be prepared in accordance with CDB's standard bidding documents including: performance and maintenance bond forms; form of tender; schedule of quantities; articles of agreement; general conditions of the contract; and any special conditions that may be required;
- (vi) provide the client with a pre-tender engineer's cost estimate based on the final designs. This should indicate the anticipated division between local and foreign costs;
- (vii) submit the plans and specifications for approval to the client and the appropriate authorities, as required. Attend meetings at the offices of the client and authorities to discuss the designs and provide explanations for the purpose of furthering approvals;
- (viii) provide advice to the client during tender call, including tender evaluation and recommendation for award in accordance with CDB's "Guidelines for Procurement"; and
- (ix) preparation of a Draft Environmental and Social Management Plan (ESMP). The ESMP should include *inter alia* recommendations for: measures to avoid or mitigate negative environmental and social impacts; measures to facilitate social and gender benefits; stakeholder engagement plan; public education programmes; grievance mechanisms; monitoring arrangements /requirements, with institutional responsibilities (during implementation and the post construction periods); and the costing for all environmental, social and gender-related protection requirements.

(b) Hope Canal Feasibility Study (Component No. 2)

3.04 Undertake a feasibility study to determine viability of sourcing water from the Hope Canal to supply potable water to the nearby residents. The study will include but not be limited to the following source water assessment considering:

- (a) delineation and characterisation of the water source area;
- (b) natural processes that influence source water quality and availability;
- (c) activities and decisions in the source water area that influence the drinking water supply;
- (d) the impact that sanitary conditions and the location of potential water capture mechanisms can have on water quality;
- (e) analysis of raw water samples for possible contaminants;
- (f) a description of the biophysical and biochemical features of the source and their implications for water quality and availability;
- (g) the microbiology and microbes present in the water;
- (h) identification of hazards (if any) and potential sources of water contamination and how the threat can be mitigated; and
- (i) possible impact of climate change on water source.

3.05 The team should be acquainted with local legislation and international the World Health Organisation standards related to potable water.

3.06 A report will be prepared based on the findings and the team will recommend interventions necessary to achieve acceptable water quality standards, along with estimated associated cost.

4. IMPLEMENTATION ARRANGEMENTS

4.01 The Consultant(s) shall report to the Project Coordinator/ GWI or her/his designate. The staff of GWI and MoC will assist the Consultant(s) to coordinate activities including the planning of meetings, the stakeholders' workshop, interaction with the agencies and representatives and general administrative matters.

5. QUALIFICATIONS AND EXPERIENCE OF KEY SPECIALISTS

5.01 It is the consultant's responsibility to ensure that the team has an appropriate mix of key and non-key experts required to satisfy the full requirements of the terms of reference (TOR).

5.02 As a guide only, it is considered that the consulting team is likely to need to include the following key experts, from which a team leader (the candidate must have performed the function of Team Leader on at least two similar projects within the past five years) may be selected and proposed:

5.03 All of the members of the Consulting Team must have excellent communication, interpersonal and teamwork skills and must be fluent in English. The key experts required for the Consultant's Team and their minimum qualifications and experience are as follows:

(a) **Key Expert No. 1: Water Supply Operations Engineer /Water Network Specialist**

- (i) Education: MSc. in Water Supply Engineering/Water Network Engineering or equivalent.
- (ii) Experience: At least 15 years' experience in water supply infrastructure and construction with at least 5 years' experience in developing countries. The candidate must have been a registered professional engineer for a minimum of 10 years and be a corporate/chartered member of international civil engineering professional organisations.

(b) **Key Expert No. 2: Electro-Mechanical Engineer:**

- (i) Education: MSc. in Electrical or Mechanical Engineering.
- (ii) Experience: 10 years' experience in process electrical control system design and installation with at least 2 years' experience in developing countries. The candidate must have been a registered professional engineer for a minimum of six years and be a corporate/chartered member of international civil engineering professional organisations. The candidate must have performed this role on at least two projects of this size and complexity within the past five years.

- (c) **Key Expert No. 3: Civil Engineer:**
- (i) Education: MSc. in Civil Engineering.
 - (ii) Experience: 10 years' experience in civil engineering project design and construction, with at least 2 years' experience in developing countries. The candidate must have been a registered professional engineer for a minimum of six years and be a corporate/chartered member of international civil engineering professional organisations. The candidate must have performed this role on at least two projects of this size and complexity within the past five years.
- (d) **Key Expert No. 4: Social and Gender Specialist**
- (i) The Specialist will be responsible for assessing the social and gender conditions and the main factors affecting sustainable social development outcomes. The candidate should preferably have 10 years' experience in development projects using participatory qualitative and quantitative research methods in accordance with the policy, guidelines and requirements of major International Financial Institutions. Knowledge of vulnerable groups of youth, elderly, children, persons with disabilities, indigenous peoples, and gender issues affecting men and women, respectively is critical for this assignment. Experience with infrastructure, transportation and/or climate resilient projects will be distinct assets.
 - (ii) Education: Preferably a Master's Degree in Social Policy, Gender and Development Studies or related discipline.
- (e) **Key Expert No. 5: Environmental Management Specialist**
- (i) This Specialist will be responsible for ensuring that the project incorporates principles of environmental protection and will conduct a detailed environmental impact assessment as an input into the project. He/she will be responsible, *inter alia*, for: screening the proposed project against environmental protection criteria identifying and characterising expected impacts; the collection of relevant local data; identifying the probabilities/likelihood of specific change occurrences; conducting field investigations with local stakeholders; and, in consultation with other team members, contribute to the identification of possible environment and social mitigation options, including their costs and benefits and prioritisation. At least 7 years' work experience in the area of environmental impact assessment and in the preparation of environmental management plans. Experience in preparing ESIA/EIS is a requirement.
 - (ii) Education: Preferably a Master's Degree in environmental science from a recognised university.

Key Expert No.6: Climate Risk Management Specialist

- (i) This Specialist will be responsible for ensuring that the project incorporates principles of climate resilience and will conduct a detailed climate risk vulnerability and adaptation assessment as an input into the project. He/she will be responsible, *inter alia*, for: screening the proposed project against environmental protection criteria; identifying the climate change parameters to be assessed; the collection of relevant local historical climate data and climate change projections; identifying the probabilities of specific climate change occurrences; conducting field investigations with local stakeholders to identify existing vulnerabilities (such as areas prone to flooding); and, in consultation with other team members, contribute to the identification of adaptation options, including their costs and benefits and prioritisation. At least 7 years' work experience in the area of climate change impacts adaptation and mitigation. Experience with CVA/CRVA procedures is a requirement. The Specialist will also review existing hydromet monitoring network and propose additional weather stations and associated capacity requirements for proper monitoring and surveillance in the project areas.
- (ii) Education: Preferably a Master's Degree in a relevant field, including atmospheric science, engineering with concentration on climate related issues from a recognised university. Experience in conducting downscaled climate assessments to inform project design and risk analysis is highly preferred.

5.04 It is envisaged that part-time inputs would be required from the following other experts:

- (a) Surveyors;
- (b) CAD Technicians; and
- (c) Financial Analyst;

6. INPUTS

6.01 MoC will make available to the consultants: plans, reports and operating records of the existing facilities that might be necessary and applicable in the execution of the work required under this TOR.

6.02 The consultants will be responsible for obtaining all additional information, the execution of all studies, surveys and other services necessary for the correct execution of the work required under this TOR.

6.03 MoC will assist the consultants in obtaining from government departments and other sources, other basic data that might be necessary for the execution of the work required under this TOR.

7. REPORTING REQUIREMENTS AND DELIVERABLES

7.01 The consultants shall submit the following to MoC's satisfaction:

- (a) Stage I Report: within eight weeks of commencing the works, the consultants are required to submit an inception report related to all components. The Report shall include:
 - (i) initial findings;
 - (ii) consultants' detailed work schedule and methodology, including the schedule and scope of all surveys, investigations and test, etc., to be conducted;

- (iii) a programme for the use of resources including personnel, equipment and materials, etc.; and
 - (iv) a proposed outline for the final reports.
- (b) MoC should forward comments on the Inception Report to the consultants within four weeks of receipt.
- (c) Stage II ESIA Report: within 16 weeks of commencing the works, the consultants are required to submit an ESIA Report. This Report shall provide detailed findings in keeping with the TOR and focus on significant environmental, climate change, natural hazard and social, and gender issues. It will contain the findings, conclusions and recommended actions supported by summaries of the data collected and citations for any references used in interpreting those data. MoC should forward comments on the ESIA Report to the consultants within four weeks of receipt. The ESIA Report will be organised according to, but not necessarily limited by, the following outline:
 - (i) executive summary;
 - (ii) description of problem;
 - (iii) description of proposed project and alternatives;
 - (iv) description of the affected environment;
 - (v) environmental, social and gender impacts;
 - (vi) mitigation measures;
 - (vii) environmental and social management plan;
 - (viii) applicable environmental laws and regulations; and
 - (ix) public consultation.
- (d) The Consultant is also required to submit a Draft Climate Vulnerability Assessment within the 16 week period. This Report shall provide detailed findings in keeping with the TOR and focus on the characterisation of relevant climate change impacts and the identification and prioritisation of adaptation measures. It will contain the findings, conclusions and recommended actions supported by summaries of the data collected and citations for any references used in interpreting those data. MoC should forward comments on the CVA Report to the consultants within four weeks of receipt. The ESIA Report will be organised according to the TOR.
- (e) In addition to the above, the Consultant will submit a report on the findings of the validation exercise referenced in Section 3.03 (a) (i) along with recommendations for enhancing (or providing alternative) interventions.
- (f) Stage III Draft Design Reports: within 6 weeks of receipt of comments by MoC on the ESIA Report, the consultants are required to submit the following:
 - (i) Component 1: a Functional Engineering Report (FER), for consideration and approval by the client before the detailed designs commenced.
 - (ii) Component 2: draft report with findings and recommendation related to studies on the Hope Canal. The Report shall include analysis and summaries of all tests carried out.

- (g) MoC should forward comments/approvals on the Reports to the consultants within four weeks of receipt. Within 16 weeks of receipt of comments by MoC on the Reports, the consultants are required to submit the Draft Final Reports and policy document.
- (h) Stage IV Final Reports and Policy document: within four weeks of receipt of comments by MoC on the Draft Final Report and documents.

7.02 Six hard copies of all reports are to be submitted (four to MoC and one each to GOGY and CDB). These are also to be submitted in editable electronic format in Microsoft Word/Excel. Drawings are to be submitted in AutoCAD.

7.03 The timing for the preparation and delivery of all the Reports should be managed in a way to ensure that the design Reports can adequately take account of the key findings and recommendations from the other Reports.

8. DURATION

8.01 It is expected that the consultancy will be completed over a ten-month period.

BUDGET
(USD '000)

Item	CDB (SFR)	GOGY	Total
Professional Fees			
Water Supply/Network Specialist Engineer	668	-	668
Electro-Mechanical Engineer		-	
Civil Engineer		-	
Social and Gender Specialist		-	
Environmental Management Specialist		-	
Climate Risk Management Specialist		-	
Sub-total	668		668
Reimbursables			
Reports and Data Collection			
Accommodation			
Per Diem	135	21	156
Air Travel			
Local Transportation and Communication			
Sub-total	135	21	156
Support Services			
Project Management	5	98	103
Administrative Support			
Office Accommodation			
Workshops, Consultations and Public Education			
Sub-total	5	98	103
Total Consultancy Cost	808	119	927
Contingency (10%)	81	-	81
Project Total	889	119	1,008
Percentage	88	12	100

ENVIRONMENTAL IMPACT ASSESSMENT

The full ESIA shall at minimum, include the following:

1. Methodology:

- (a) review of secondary data from reports, studies, hazard risk assessments, geotechnical surveys, hazard risk assessments, and relevant policy documents such as legislation, regulations, standards and policies in the related areas;
- (b) collection of primary data through participatory consultations with all categories of stakeholders in order to introduce the project, facilitate feedback, and gauge perception of the project. Information from the residents in the area on hazard history and impact, environmental impacts will guide in design and location;
- (c) field visits; and
- (d) Analysis and computation of data.

2. Description of the Environment

Assemble, evaluate and present baseline data on the environmental, natural hazard, and climate change characteristics of the study area. Include information on any changes anticipated before the Project commences. The description should include:

- (a) Physical environment: geology (general description for overall study area and details for land application sites); topography; soils (general description for overall study area and details for land application sites); monthly average temperatures, rainfall and runoff characteristics; and description of receiving waters (annual average discharge or current data by month, chemical & biological quality and existing discharges). Temporal and spatial trends in key environmental indicators should be identified, where possible.
- (b) Biological environment: terrestrial communities in areas affected by construction, facility siting, effluent and construction waste disposal; aquatic and/or marine communities in affected waters; rare or endangered species; sensitive habitats, including parks or preserves and significant natural sites.
- (c) Natural hazard and climate change vulnerability: vulnerability of area to flooding, hurricanes, storm surge, earthquakes, sea level rise, temperature and precipitation changes.
- (d) Socio-cultural environment: present and projected population; present land use; planned development activities; community structure; present and projected employment by industrial category; distribution of income, recreation; public health; cultural properties; indigenous peoples; customs; and aspirations and attitudes.

- (e) **Legislative and Regulatory Considerations:** Describe the pertinent regulations and standards governing environmental quality, pollutant discharges to surface waters and land, industrial discharges to public sewers, water reclamation and reuse, agricultural and landscape use of sludge, health and safety, protection of sensitive areas, protection of endangered species, siting, and land use control at the international, regional, national and local levels.

3. Determination of the Potential Impacts of the Proposed Project:

Conduct a detailed analysis of potential environmental, natural hazard, and climate change impacts and recommend mitigation measures and prepare a draft environmental management plan for the water supply project. Distinguish between significant positive and negative impacts, direct and indirect impacts, cumulative, immediate and long-term impacts. Identify impacts that are unavoidable or irreversible. Wherever possible, describe impacts quantitatively in terms of environmental costs and benefits. Assign economic values when feasible. Special attention should be given to:

- (a) establishing baseline water quality at selected appropriate monitoring points after discussion with Department of the Environment. Assess the extent to which receiving water quality standards and/or beneficial use of objectives will be achieved with the proposed type and level of treatment; and
- (b) potential social, gender and economic impacts related to the proposed method for laying of water distribution mains during construction.

4. Analysis of Alternatives to the Proposed Project

Describe technical alternatives and the associated significant environmental, natural hazard, climate change, social and gender impacts examined in the course of developing the proposed project and identify key environmental, natural hazard, climate change and social vulnerability reduction objectives and the options/measures for achieving these objectives. (The concept of alternatives extends to siting and design, technology selection, construction techniques and phasing, and operating and maintenance procedures).

Compare alternatives in terms of potential environmental, natural hazard, climate change and social impacts, land and energy requirements, capital and operating costs, reliability, suitability under local conditions, and institutional, training, and monitoring requirements. When describing the impacts, indicate which are irreversible or unavoidable and which can be mitigated. To the extent possible, quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures. Include the alternative of not constructing the Project, in order to demonstrate environmental conditions without it.

5. Consult with the social development and gender expert, and collectively develop an Environmental and Social Management Plan (ESMP) to mitigate negative impacts and maximise project benefits for the vulnerable.

- (a) Identify the critical issues requiring monitoring to ensure compliance to mitigation measures and present a Draft ESMP with clear environmental and social monitoring indicators.

- (b) Recommend feasible and cost-effective measures to prevent or reduce significant negative environmental, social and gender impacts to acceptable levels.
- (c) Recommended measures to maximise social and gender benefits particularly for vulnerable groups.
- (d) Identify core components of the stakeholder engagement plan with recommendations of public education programmes as appropriate; and grievance mechanisms.
- (e) Recommended monitoring arrangements/requirements, along with institutional responsibilities (during implementation and the post construction periods).
- (f) Estimate the impacts and costs of those measures and of the institutional and training requirements to implement them, including proposed work programs, budget estimates, schedules, staffing and training requirements, and any other necessary support services to implement the mitigating measures. Identify the costs of any special environmental mitigation measures to be incorporated into the ESMP.

6. Stakeholder Consultations

Identify appropriate mechanisms for providing information on progress of project preparation and implementation to stakeholders. It is anticipated that there will be considerable public interest concerning issues of viability, affordability, and the economic benefits to be derived from the Project. Public consultation work should be carried out at an early stage of the ESIA field work and once again when the draft ESIA report is available, before detailed designs commence. The results of the public consultation process should be reported in the ESIA

7. Climate Vulnerability Assessment

The consultants shall prepare CVA to identify and evaluate the effects of climate change on the project components and to identify resilience measures that should be included in the proposed project. The CVA methodology used should be consistent with recommendations from the Inter-governmental Panel on Climate Change (IPCC).

They should begin by consulting relevant stakeholders to obtain the historical experience of past climate-related events. The analysis should be quantitative and include the following:

- (a) Characterisation of the area and relevant infrastructure. Drawing on the information obtained from consultations with key stakeholders describe the proposed project area, including delineation of the coastal zone potentially affected by climate change –sea level rise, intense tropical storms, surges- (the seaward and landward extent of areas that directly influence the coast and that the coast influences), collecting any additional relevant physical, biological, environmental, economic and social characteristics of the study area. In coordination with other technical teams the consultant shall present a detailed description of proposed alternatives and the identification of the elements that are vulnerable to the impacts of climate change.
- (b) Characterisation of relevant climate variables and establishment of a climate baseline. The key climate variables would include, *inter-alia*, temperature and precipitation changes, (e.g. maximum daily precipitation as the basis for assessing the risk of floods from surface runoff); sea-level rise, tropical storms and

associated extreme wave heights, storm surge levels and wind. Both historical data and future scenarios will be required with the former being used for ground-truthing and to establish a climate baseline. The consultant should identify the hydraulic, hydrologic, topographic and bathymetric variables affecting project components and surrounding areas. The consultant will be expected to provide advice on the appropriate recurrence intervals for meteorological events impacting the proposed siting and design of the infrastructure.

- (c) Estimate Future Impacts and vulnerabilities. Once the climate change scenarios have been established the relationship between the changes in the climate parameters (such as average temperature and precipitation) and the impacts on the coastal zone and project components must be quantified. For each site, where appropriate, biophysical models such as hydrodynamic models can be used to analyse the physical interactions. The expected detail for each critical site (where impacts are likely to occur) will depend on site specific considerations. The most vulnerable sections “hotspots” should be identified, including roads, power, telecommunication linkages, water supply, etc. The impacts on communities should also be assessed. For these areas, the consultant should prepare an impacts matrix describing for each relevant climate variable: the outcome (e.g. higher intensity hurricanes leading to extreme storm surges), the impact on the physical (including community) assets and the impacts on community livelihoods, including quantification of the magnitude of these potential losses. They should also assess the adaptive capacity of the communities, i.e., their existing coping strategies and how they have been adapted to previous extreme impacts. When assessing the impacts on the community sex-disaggregated data shall be collected to infer on the differential impacts on women and men, their assets, their perception of and exposition to threats and coping strategies in times of disasters.
- (d) Adaptation assessment. The CVA Report should define the climate relevant parameters to be used for the detailed design of all works comprising the recommended alternative. All components shall include climate resilience considerations defined in terms the appropriate risk levels (return periods) as expected by mid-century, or at the end of the expected economic life of the infrastructure. The consultants shall also identify and prioritise the most appropriate adaptation options to incorporate into the project design parameters to address the potential climate impacts. The consultants should consider a range of resilience options (e.g. slope stabilisation measures, seawall design, increased maintenance, increased drainage, alternative routes in the event of flooding, river training, eco-system based approaches, institutional/policy measures, etc.). An economic and social analysis should also be conducted of each technically feasible adaptation option, showing the costs and benefits, or a cost-effectiveness analysis if the adaptation options are expected to deliver the same benefits. The Consultant is expected to comply with the technical quality requirements and the information required, including itemise costs of the recommended adaption measures in order to receive a dedicated allocation from the Department for International Development’s International Climate Fund.

- (e) Recommendations on capacity building / public education of communities in the project areas concerning climate change, extreme weather events and disasters taking into account the different roles and responsibilities, assets and coping strategies of women and men.
- (f) Expected deliverables. The CVA Report shall include:
 - (i) a characterisation of the climate variables of interest, based on available observations;
 - (ii) a characterisation of the relevant climate parameters for design incorporating climate change considerations for mid-century or for the expected economic life of the proposed infrastructure. It should include the recommended design parameters relevant to build climate resilience (including but not limited to: maximum rainfall rates, maximum temperatures, expected sea level rise, expected storms surges elevations and impacts, salinity intrusion, etc.);
 - (iii) identification and prioritisation of measures to increase resilience to the infrastructure, and measures to increase the adaptation capacity of the proposed systems, the operators and the receiving communities;
 - (iv) recommended adaptation plan of action, including costs estimates of incorporating climate change; and
 - (v) recommended capacity building activities.

DRAFT TERMS OF REFERENCE

SOCIAL IMPACT ASSESSMENT AND GENDER ANALYSIS

1.01 The Social Impact Assessment (SIA) and Gender Analysis will investigate developmental opportunities and risks related to the execution of a water project; and inform possible mitigating measures to safeguard against any risks identified, as well as other measures to support positive social impacts. It will be conducted in a highly participatory, gender-inclusive manner engaging the communities, particularly with representatives of women and men, vulnerable groups such as children, youth, elderly, indigenous peoples (Amerindians), and persons with disabilities (PWDs).

1.02 The methodology shall include, but is not be limited to the following:

- (a) Review of secondary data from reports, studies, gender assessments, poverty assessments, census reports, labour force surveys, and relevant policy documents such as legislation, regulations, standards and policies in the areas of gender and social development including: vulnerable groups of women, youth, PWDs; indigenous peoples; and human trafficking victims.
- (b) Collection of primary data through participatory consultations with all categories of stakeholders in order to introduce the project, facilitate feedback, and gauge perception of the project in order to gain and/or strengthen buy-in. Interviews, focus groups and other appropriate differential participatory methodologies may be employed for state and non-state stakeholders directly impacted by the works such as Community-Based Organisations, Non-Governmental Organisations, vulnerable groups (to include elderly, children, youth, men, women, PWDs, and indigenous peoples), private sector entities and relevant public agencies. Where applicable, focus groups may be convened for youth, PWDs, indigenous peoples, males and females, respectively. Facilitation of participation through the provision of transportation and child care as well as appropriate timing should be ensured. Data should be disaggregated by sex, age groups, disability status, indigenous groups, and race/ethnicity where feasible.
- (c) Execution of site visit exercises to verify, update and fill gaps using community maps, transect walks, snowballing, as well as photographic documentation, and other appropriate participatory approaches.
- (d) Computation and analysis of data and information collected.

1.03 The scope of work shall examine and report on the following, and related developmental issues:

- (a) Describe the project areas including demographic, economic, topographical and socio-cultural data, disaggregated by sex:
 - (i) total population of the project areas (communities/villages);
 - (ii) population density of the project areas (communities/villages);
 - (iii) number of households by sex of household head;
 - (iv) labour force participation, employment and occupation; and

- (vi) prevalence of poverty.
- (b) Investigate whether and how the tariff structure would change due to the project, i.e. cost implications for consumers.
- (c) Determine the feasibility of stakeholders willingness to share cost and to connect to the water transmission/distribution mains, and how this differs by sex, ethnicity and other characteristics of vulnerability.
- (d) Assess the different economic and social as well as household activities of men and women, in particular those related to water usage.
- (e) Identify baseline access to and usage of water and customer satisfaction (if applicable) for both women and men, and vulnerable groups due to their different reproductive and productive tasks/activities in the household and the socio-economy.
- (f) Identify the effects of the project on time use in the household disaggregated by sex; in case time is freed up by the project, how men and women would use the time differently.
- (g) Identify any health impacts of the proposed would infrastructure at the community and household levels disaggregated by sex.
- (h) Identify any health, sanitation and hygiene behaviours at the household level in the project communities; if possible differentiate between practices of females and males.
- (i) Identify who pays the water bill in the household disaggregated by sex.
- (j) Assess accessibility of the project areas, determine the accessible universal design standards required for use by PWDs, and any other requirements to include the needs of PWDs.
- (k) Quantify the expected demand for water in beneficiary communities of the project areas – disaggregated by sex and vulnerable groups like the elderly, indigenous people, disabled and children – during works and after works are completed.
- (l) Assess the local labour force data and the potential of engaging communities, in particular youth and women, in the construction and maintenance and resilience building phases of the project. Give recommendations on training needs and legal requirements from a procurement perspective. Identify the number of men and women who will benefit from employment during project implementation and subsequent operation.
- (m) Identify any activity related to transactional and commercial sex in the project areas and the possible effect on the construction works.
- (n) Assess whether resettlement/replacement is necessary as an effect of the project and identify possible gender effects taking into account the distribution of male and female-headed households in the area and the distribution of land titles by sex. Identify possible gender-responsive resettlement and mitigation mechanisms.

- (o) Identify outstanding social issues and concerns in the project areas, including current deficiencies in the water supply arrangements that hinder men and women, and vulnerable groups to fully access services and markets.
- (p) Describe the potential impacts of the project at its various stages (preparation, construction, and operation) on the social context in the immediate surrounding communities. Identify any issues pertaining to the design of the Project which may have social impacts (gender, livelihood or other dimensions).
- (q) Identify measures required to mitigate any significant negative impacts and measures to enhance gender equality in the project areas:
 - (i) discuss the adequacy of proposed mitigation measures and measures to enhance gender equality and/or proposed alternative designs for the Project;
 - (ii) consider measures such as public education in the area of health, training opportunities for vulnerable people to take part in project activities, tariff adjustments, workers code of conduct and grievance mechanisms, measures to compensate for water outages; reform of workplace, human resources and customer policies and processes in GWI; etc.); and
 - (iii) estimate the cost of the measures and justify their suitability.
- (r) Prepare a detailed monitoring and evaluation plan for monitoring the implementation and evaluating the mitigating measures. Identify gender-responsive outputs and outcomes of the project activities to facilitate gender-responsive results monitoring and evaluation.
- (s) Define Community Participation Mechanisms (CPM) by identifying:
 - (i) appropriate mechanisms to engage women and men in the decision-making of the project in a gender-balanced way; and
 - (ii) appropriate gender-sensitive public education communication strategies for providing information on project activities and progress to stakeholders and for receiving timely feedback (pre-project, during implementation and post-implementation).
- (t) Convene a stakeholders' validation workshop, including community groups, representatives of vulnerable population groups (women, elderly, youth, indigenous people and PWDs), MoC, GWI and government agencies, to discuss the findings of the consultancy and to seek consensus and clarification on issues from participants for incorporation in the Draft Final and Final ESIA Reports and related ESMP. As part of the stakeholders' validation workshop, conduct a gender sensitisation training to report on the findings of the gender analysis.

DRAFT TERMS OF REFERENCE

CONSULTANCY SERVICES FOR STRENGTHENING WATER SECTOR GOVERNANCE

1. INTRODUCTION

1.01 The Cooperative Republic of Guyana (Guyana) had a population of 747,884 (375,150 females and 371,805 males in 2012). The main ethnic groups are: Indo-Guyanese (39.8%); Afro-Guyanese (29.3%); and Amerindians (10.5%) living mainly in the hinterlands. The latest estimate for 2006 showed that 36.1% of the population was poor¹. The Human Development Report (2016) however reveals steady improvement in overall living conditions. The country attained a Human Development Index value of 0.638 in 2015, increasing from 0.541 in 1990 (an increase of 17.9%). Life expectancy at birth increased by 3.0 years, mean years of schooling increased by 1.6 years, expected years of schooling increased by 0.2 years; and gross national income per capita increased by about 209.8% between 1990 and 2015. Notwithstanding the progress made, at-risk groups of women, Amerindians, persons with disabilities (PWDs), and youth, face vulnerabilities. For example, female labour force participation was 43.6% compared to 68.9% for males, and 56% for the total population in 2017 (Third Quarter). Comparatively, the female unemployment rate was 15.3%, as opposed to 9.9% for males, and 12% for the total population in 2017². Social exclusion and vulnerabilities faced, impact all aspects of socioeconomic life, including ability to access to water and sanitation. The socially-inclusive *no-one left behind* 2030 Sustainable Development Goals agenda requires programming to address services disproportionately accessed by such groups.

1.02 Having signed on to the historic Paris Agreement in December 2015, the President of the Government of Guyana (GOGY), indicated that the government recognised the importance of battling climate change. As part of this approach, GOGY is pursuing a Green Economy, sparing no effort to ensure a sustainable future through the sustainable management of its natural resources and assets. Water resources management is a critical element of achieving the greening of the economy.

1.03 The Ministry of Communities (MoC) is the primary government agency, which links the local government agencies to the central government. It has the overarching responsibilities for water, and is embarking on the re-establishment of the National Water Council under MoC. One of the key functions of the Council is to advise the Minister on the development, implementation and coordination of the National Water Policy. In order to achieve this goal it is imperative that MoC coordinate plans to develop the National Water Policy and the related strategies and plans to improve water governance.

1.04 Water resources management is in its nascent stages in Guyana. The GOGY under the Green Economy Initiative, is addressing the challenges in the water sector. GOGY is presently seeking to enhance the management of their water resources, as mandated under the Water and Sewerage Act of 2002. Reviews of the current system have indicated that additional governance structures and systems are needed to facilitate the development of their Integrated Water Resources Management Plan. Key elements needed include a national water policy; greater definition of roles and responsibilities among stakeholders; improved institutional capacities, and improved strategy for targeting access to water for the vulnerable groups such as the poor, indigenous peoples, elderly, PWDs, and single parent households including female headed households.

¹ Poverty was more prevalent in rural areas, with the hinterland population having a prevalence of 74%, the Amerindian population 78%, and urban residents 19%. Afro-Guyanese, Indo-Guyanese and Mixed ethnic groups show similar poverty rates, about 1 in 3 are poor.

² Unemployment rates are higher for youth age cohorts and more so for females and rural dwellers: males 17.3%, females 28.0%, both males and females 21.6%; rural 24.5%, and urban 20.5%). Further, some 15% of PWDs never attend school, 40% of unemployed suffer job losses due to disability, and 79% of families face financial difficulties (Bureau of Statistics 2006).

1.05 The Guyana Water Inc. (GWI), a company incorporated under the Companies Act of Guyana and solely owned by GOGY, falls under the purview of MoC. It is charged with the responsibility of water production and sewage disposal in Guyana. GWI currently delivers water directly from source to 43% of the population; the remaining 57% are provided with water treated either at one of the 28 existing water treatment plants or through the use of SeaQuest[®], an additive used in potable water to control corrosion, scale, lead, iron and discoloration. Death of children due to poor water, sanitation and hygiene³ for Guyana stood at 132 per 100,000 in 2015, where women tend to bear the unpaid burden of care for dependents in households. GOGY, through the GWI wishes to increase the availability of and accessibility to treated water to 66% of the population by 2021 through new and upgraded water supply infrastructure. In keeping with this mandate, GWI conducted studies and designs which resulted in recommendations of specific interventions at key locations. Recommendations included: constructing new treatment plants; metering; new storage facilities, and new transmission and distribution systems.

2. OBJECTIVE

2.01 The objective of the consultancy service is to identify the key issues presently confronting and expected to confront the Governance of Guyana's Water Supply and Sanitation (WSS) sector over the medium to long term, and to assist in charting the role of the key stakeholder in addressing those issues through the development of: (a) an Integrated WSS Sector Policy and Strategy for Guyana; (b) associated Operational Guidelines for the implementation of the strategy; (c) an assessment of the institutional capacities of players in the water sector at the national and local levels of government with the view providing recommendations for improving effectiveness; and (d) a review of GWI's governance manual and providing recommendations for enhancing governance .

3. METHODOLOGY

3.01 Desk Review: Analysis of the current state of WSS sector in Guyana, including national, regional and international policies/agreements, and reports.

3.02 Consultation with Key Stakeholders. The Consultant(s) will be responsible for coordinating field visits with key stakeholders and a representative communities. Priority must be given to consult with representatives of men as well as women, as beneficiaries of the urbanisation process. A list of all persons interviewed and other pertinent information must be documented.

3.03 A results-based approach is to be adopted in the conduct of the assignment, with SMART indicators (sex-disaggregated) baseline data collected, and targets established. Both primary (surveys, focus groups, interviews, etc.) and secondary research methods (literature review, desk research, etc.) are expected to be used.

4. SCOPE OF SERVICES

4.01 The scope of work for the consultancy is expected to cover all activities to accomplish the stated objective, whether or not a specific activity is cited in the terms of reference. The duties of the Consultant(s) will include, but will not be limited to:

³ Deaths of children under age 5 due to diarrhoea attributable to unsafe water, unimproved sanitation or poor hygiene (Human Development Report 2015)

- (a) **PHASE I: A Review of the Activities in the WSS**
- (i) Collect, review and analyse information on policies, strategies, plans, legislation, regulations, etc., relevant to development WSS sector. These include, but are not limited to budgets and subsidies provided, commenting on their appropriateness, efficiency and transparency; review of existing governance manual (at the operational level) towards meeting standards of good governance, transparency and good management of a water authority; development partners' country strategies and plans; asset management information including information on existing infrastructure conditions; and existing and proposed projects and programmes. Examine the challenges and opportunities to addressing the immediate need for a strategic multi-sector water resources development agenda.
 - (ii) Preliminary review of data layers and mapping available to become familiar with the existing context. In particular, the assessment of the (b) Geographical Information System (GIS) layers, in terms of level of detail, data availability and data management protocol. Identification of data assumptions, sources and any data gaps that may be necessary to address to undertake the sectoral analysis.
 - (iii) Determine lessons learned from the experience in the sector and the experience of other countries with similar economic and social conditions like Guyana.
 - (iv) Assess the laws and regulations on water rights, Laws and regulations on the provision of water supply services, Laws and regulations on wastewater disposal.
 - (v) Regulatory and Institutional framework for the Government agencies participating in WSS sector:
 - (aa) institutional mandate and capacity self-assessment of key agencies mandated with WSS sector through interviews and group discussion of preliminary survey results;
 - (bb) role of the Regulator; and
 - (cc) institutional arrangements covering ownership, management and operation of infrastructure and an assessment of user charges and cost recovery and services assessing capacities and needs of vulnerable persons like women, poor, disabled and elderly.
 - (vi) Social policy commitments and legislative framework to mainstream gender equitable and social inclusive⁴ access of water resources by vulnerable groups⁵.

⁴ Social inclusion is the process of improving the terms on which individuals and groups take part in society - improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity (<http://www.worldbank.org/en/topic/socialdevelopment/brief/social-inclusion>). This process includes those who are traditionally excluded due to inequalities associated with, *inter alia*, gender, poverty, disability, age cohort, geographic location (urban/rural/peri-urban), ethnicity, race and indigenous peoples' identity. The exclusion experienced may be evident in stereotypes, stigmas, and superstitions based on group identity and intersection of multiple identities. vulnerable groups identified versus necessary and available provisions such as for pensioners

⁵ Vulnerable groups include *inter alia*, the poor, indigenous peoples, elderly, PWDs, and single parent households including female headed household The National Youth Policy, Draft Gender Equality and Social Inclusion Policy, Disability and Indigenous People's legislations call for the recognition of vulnerable groups and provisions of programmes to ensure that no-one is left behind national development benefits. Sustainable Development Goal (SDG) 6 speaks to ensuring availability and sustainable management of water and sanitation for all. Target 1

- (vii) Level of access to WSS services by the general population, disaggregated by sex, disability status, ethnicity, geographical location, age cohort (child, youth, working age and elderly) and other relevant socioeconomic variables. Users' participation in water resources management.
 - (viii) Stakeholders willingness to share cost and to connect to the water transmission/distribution mains, and how this differs by sex, ethnicity and other characteristics of vulnerability
 - (ix) Main challenges and risk from climate change; Potential barriers to adaptation; what can constrain the ability of the Utility and other relevant organisations to adapt including: Legislation and regulation; management policies and procedures; human and financial capital; and information and science; and social and gender barriers which limit access to water. The consultant is requested to use secondary information and interviews with key stakeholders and knowledgeable individuals in the characterisation of the organisational context in which the adaptation planning must take place. Tariff structure in the water sector and its connection to social protection policies and payment schemes for vulnerable households that are poor, female headed, and households with children, the elderly, indigenous people, pensioners and PWDs.
 - (x) Based on (i) to (ix) prepare an Inception Report.
 - (xi) Meet with MoC staff and management to discuss the findings of the above review, and the implications for conducting the assignment.
- (b) **PHASE II: Consultations**
- (i) Conduct key stakeholders consultations covering the range of issues considered in Part I , specifically:
 - (aa) lessons learned and best practices in implementing WSS initiatives also with regards to enhancing gender equality and sustainable economic growth;
 - (bb) key strengths and weaknesses facing the sector;
 - (cc) environmental, natural hazards/vulnerability reduction, institutional and regulatory framework, adherence to respective country and regional codes and practices;
 - (dd) key stakeholders, socio-political, socio-economic, and gender issues;

- (ee) performance of the other key sector/sub-sectors to which WSS is linked; and
 - (ff) future development trends;
 - (ii) Based on Part I and Part II (i) prepare a report, outlining GOGY's activities in the sectors as well as major issues, constraints, opportunities and best practices, taking into consideration the major stakeholders and their contribution to the effectiveness and efficiency of the sector. The report should also include:
 - (aa) Strategy and policy options and alternatives.
 - (iii) Present Report in: (ii) and act as resource person(s) in the stakeholders' workshop as well as facilitate discussions on critical inputs into the Policy, Strategy and Operational Guidelines.
 - (iv) Revise Paper in (ii) above incorporating comments of the stakeholders' workshop and GOGY, incorporating recommended priority investment needs, strategies and policy directions.
- (c) **PHASE III: Draft WSS Policy, Strategy and Operational Guidelines and an Implementation Strategy, Revised Governance Manual**
- (i) Prepare draft Integrated WSS Sector Policy and Strategy Document incorporating comments of the stakeholders' workshop, GOGY and CDB:
 - (aa) Policy: articulating GOGY's vision and role in supporting the attainment of that vision, and the priority areas for support.
 - (bb) Implementation Strategy: which incorporates Results-Based Monitoring methodology. The Strategy should include selected indicators, targets as well as critical actions required to implement Sector Policy and Strategy.
 - (cc) Operational guidelines.
 - (ii) National consultation will be convened to review the draft policy with stakeholders to include key stakeholders in the public, private and non-governmental organisations sectors and a Stakeholders' Consultation Evaluation Report prepared to document participants' profile and feedback gleaned from the workshop. The consultant shall incorporate feedback into the policy. The workshop participants shall include, but not limited to; MoC, GWI, the Ministry of Indigenous Affairs, the Gender Affairs Bureau, the National Commission on Disability (NCD), the Ministry of Health, and the Ministry of Social Protection and other participants as may be suggested based on discussions with key stakeholders.
 - (iii) Prepare revised governance manual taking into account findings informed by Phase I and Phase II activities.

- (iv) Submit the final draft of all documents together with a summarised version of the policy document in accordance with the comments received and agreed upon by the Consultant(s) and GOGY.

5. IMPLEMENTATION ARRANGEMENTS

5.01 MoC will assign a Project Coordinator (PC). PC will facilitate the work of the consultant(s) and make available all studies, reports and data relevant to the completion of the exercise and will act as liaison between the consultant(s) and GOGY officials and stakeholders.

6. QUALIFICATIONS AND EXPERIENCE OF KEY SPECIALISTS

6.01 It is the consultant's responsibility to ensure that the team has an appropriate mix of key and non-key experts required to satisfy the full requirements of the terms of reference (TOR).

6.02 As a guide only, it is considered that the consulting team is likely to need to include the following key experts, from which a team leader (the candidate must have performed the function of Team Leader on at least two similar projects within the past five years) may be selected and proposed:

6.03 All of the members of the Consulting Team must have excellent communication, interpersonal and teamwork skills and must be fluent in English. The key experts required for the Consultant's Team and their minimum qualifications and experience are as follows:

(a) Key Expert No. 1: Water Resources Management Specialist

- (i) Education: MSc. in Water Resources Management or equivalent.
- (ii) Experience: At least 15 years' experience in water resources management with at least 5 years' experience in developing countries. The candidate must have been a registered professional engineer for a minimum of 10 years and be a corporate/chartered member of international civil engineering professional organisations.

(b) Key Expert No. 2: Social and Gender Specialist

- (i) Education: Preferably a Master's Degree in Social Policy, Gender and Development Studies or related discipline
- (ii) The Specialist will be responsible for assessing the social and gender conditions and the main factors affecting sustainable social development outcomes. The candidate should preferably have 10 years' experience in development projects using participatory qualitative and quantitative research methods in accordance with the policy, guidelines and requirements of major International Financial Institutions. Knowledge of vulnerable groups of youth, elderly, children, PWDs, indigenous peoples, and gender issues affecting men and women, respectively is critical for this assignment. Experience with policy development, will be distinct assets.

(c) Key Expert No. 3: Environmental Specialist

- (i) Education: Preferably a Master's Degree in environmental science from a recognised university.
- (ii) This Specialist will be responsible for ensuring that the project incorporates principles of environmental protection as an input into the project. He/she will be responsible, *inter alia*, for: screening the proposed project against environmental protection criteria; identifying and characterising expected impacts; the collection of relevant local data; identifying the probabilities/likelihood of specific change occurrences; conducting investigations with local stakeholders; and, in consultation with other team members, contribute to the identification of possible environmental mitigation options, including their costs and benefits and prioritisation. At least 7 years' work experience in the area of environmental assessment and in the preparation of environmental management plans.

(d) Key Expert No. 4: Legal Expert

- (i) Education: Preferably a Law Degree from a recognised university and relevant advance degree.
- (ii) This Specialist will be responsible for addressing the legal and regulatory aspects of the project.

(e) Key Expert No. 5: Institutional and Policy Support Specialist

- (i) Education: Preferably an advance degree or equivalent in Institutional Development, Business/Public Administration or other related fields; fluent in English. At least 8 years of working experience in the water sector at international level.
- (ii) The expert will have at least 3 years of specific working experience in water-related projects in developing countries as a long-term expert, expertise in WSS at policy, programme and project levels and in particular a proven experience in a reform process in the water sector and specific expertise in organisational and human resources development, gender mainstreaming, social and economic issues associated with WSS sector reform.

7. INPUTS

7.01 MoC will make available to the consultants: plans, reports and operating records of the existing facilities that might be necessary and applicable in the execution of the work required under these TOR.

7.02 The consultants will be responsible for obtaining all additional information, the execution of all studies, surveys and other services necessary for the correct execution of the work required under these TOR.

7.03 MoC will assist the consultants in obtaining from government departments and other sources, other basic data that might be necessary for the execution of the work required under these TOR.

7. REPORTING REQUIREMENTS AND DELIVERABLES

7.01 The Consultant(s) will be required to provide the following reports and deliverables:

- (a) Inception Report: Two (2) weeks of commencing the assignment, the Consultant(s) will be required to submit an Inception Report. The Report should include a detailed implementation schedule setting out the tasks, activities and resources and methodologies to be used to execute the Project component. The implementation schedule will be amended by agreement by GOGY and CDB.
- (b) Progress Report: Four (4) weeks of commencing the consultancy. The Consultant(s) must report on the work plan and progress of the work plan as laid out in the Inception Report within two weeks after commencement of the assignment. The Report should include a list of the activities conducted - target groups and participants and the status of implementation of the consultancy. The Report should also include problems encountered, and the recommended solutions. Critical problems that could affect the progress of the consultancy should be immediately reported to GOGY and CDB.
- (c) Draft Phase II Report: Ten (10) weeks of commencing the consultancy. The Consultant(s) must submit a Report which includes a detailed analysis of the findings, conclusions and recommendations in respect of the items as outlined at Phase II of the TOR. Two (2) copies of the report in hard copy one (1) in the electronic format - Microsoft Word, Excel and PowerPoint where appropriate – should be submitted for review and comments within six weeks before the end of the assignment. CDB and GOGY shall submit comments within two weeks of receipt of the Draft Phase II Report. Within two (2) weeks of receiving comments on the Draft Report, the Consultant(s) will be required to discuss with MoC's technical staff the arrangements for the Stakeholders' workshops.
- (d) Final Phase II Report: Within two (2) weeks of receiving comments on the Report at (c), the Consultant(s) will be required to submit a revised Phase II Report with comment received from GOGY and CDB.
- (e) Draft Final Report: Within four (4) weeks of receiving instructions from the GOGY to proceed with the completion of the Final Draft Report, the Consultant(s) will be required to present the first draft of the revised governance manual; WSS Policy, Strategy and Operational Guidelines and Final Report for the paper at item (d) above Key GOGY stakeholders for review and comments, convene a national consultations and incorporating feedback from the stakeholders' workshops and meeting.
- (f) Final Report: to be delivered within two (2) weeks of receipt of comments from CDB and GOGY. Two (2) copies of the Report in hard copy one (1) in the electronic format - Microsoft Word, Excel and PowerPoint where appropriate – should be submitted for review and comments within three weeks before the end of the assignment. The Final Report should take account of the comments and suggestions of CDB and GOGY.

8. DURATION

8.01 It is expected that the consultancy will be completed over a six-month period.

BUDGET
(USD'000)

Item	CDB (SFR)	GOGY	Total
Professional Fees			
Institutional and Policy Support Specialist		-	
Water Resources Engineer		-	
Legal Analyst	229	-	229
Social and Gender Specialist		-	
Environmental Specialist		-	
Sub-total	229	-	229
Reimbursables			
Reports & Data Collection		-	
Accommodation		-	
Per Diem	110	-	110
Air Travel		-	
Local Transportation and Communication		-	
Sub-total	110	-	110
Support Services			
Project Management			
Administrative Support	3	53	56
Office Accommodation			
Workshops, Consultations and Public Education			
Sub-total	3	53	56
Total Consultancy Cost	342	53	395
Contingency (10%)	34		34
Project Total	376	53	429
Percentage	88	12	100

RESULTS FRAMEWORK

Design Summary	Performance Indicators/Targets	Data Sources/Reporting Mechanisms	Critical Assumptions
1. IMPACT:			
An optimal investments made which will improve the socially inclusive and gender-responsive delivery of potable water to the users in the coastal and hinterland regions of Guyana.			
2. OUTCOME:			
1. Enhanced capacity of GOGY through the National Water Policy and strategies, to improve governance in the water sector and; 2. Enhanced capacity of GOGY to implement a technically, economically and socially gender inclusive and climate resilient solution for use of water from Hope Canal for domestic supply and; the construction of water treatment plants and the upgrade of water supply infrastructure in Regions 1, 2, 3, 5, 6 and 8.	1. Cabinet Approval of policy by September 2020. 2. Acceptance of GOGY/GWI of project proposal including climate resilience, social and gender interventions by January 31, 2020	1. Cabinet minutes 2. PC Reports	GOGY priorities remain the same.
2. OUTPUTS:			
1. Draft National Water Policy and strategies and interventions necessary to effect improved governance in the water sector; and Costed climate resilient, socially inclusive and gender-responsive recommendations for: 2. The construction of water treatment plants and upgrade of infrastructure; and 3. The use of water from the Hope Canal for domestic supply.	1. National Water Policy completed and accepted by GOGY, MoC and CDB by June 30 2019 2. Detailed Design Report accepted by GOGY, MoC and CDB by December 31 2019. 3. Feasibility Study completed and accepted by, GOGY, MoC and CDB by December 31, 2019	1. PC Reports 2. Consultants' Reports. 3. CDB Supervision reports	Recommendations of the consultants accepted by GOGY and other stakeholders.
4. ACTIVITIES / INPUTS	USD '000		
Item	CDB	GOGY	Total
1. Professional Fees, Surveys, etc.	1,130	-	1,130
2. Project Management	-	76	76
3. Administrative Support	20	96	116
4. Contingency	115	-	115
Total	1,265	172	1,437
	CDB disbursement records.		
	GOGY counterpart contribution available in a timely manner.		

PERFORMANCE RATING SYSTEM

Criteria	Score	Justification
Relevance	4	<p>TA will enable GOGY to subsequently implement an optimal capital project contributing to increased provision of potable water to communities Regions 1, 2, 3, 5, 6 and 8 which are included in the strategic objectives of GOGY.</p> <p>The TA project is consistent with CDB's Strategic Objectives of: promoting broad-based economic growth and inclusive social development; and promoting good governance within its BMCs; and CDB's Corporate Priorities of: promoting gender equality and social protection measures for vulnerable groups; promoting social partnerships; strengthening human resource capability and improving management practices; and strengthening and modernising social and economic infrastructure.</p>
Efficacy	4	<p>The objective of this TA project is expected to be fully realised. The approaches in all of the proposed consultancies are consistent with best practice. In addition, the TOR of the proposed studies, have been informed by the lessons learned from recent experiences in preparing rehabilitation projects of a similar nature.</p>
Efficiency	4	<p>The studies are expected to inform decision-making on cost-effective decision-making on capital projects in the water transport sector. The consultancy will be engaged using a competitive procurement process which is expected to yield good value for money for the services to be provided.</p>
Sustainability	3	<p>The proposed approach provides for a high degree of stakeholder consultation to ensure ownership of the outputs.</p>
Overall Score	3.75	Highly Satisfactory.

GENDER MARKER ANALYSIS

Project Cycle Stage	Criteria	Score
Analysis: Background	Sex-disaggregated data included in the background analysis, and/or baselines and indicators, or collection of sex-disaggregated data required in TOR.	1
	Socioeconomic/Sector /Institutional analysis considers gender disparities, or TOR require the identification of socioeconomic, sectoral and institutional gender issues.	0
Design: Project Proposal / Definition / Objective	TA interventions are designed, or will be identified as part of the project, that address gender disparities or enhance gender capacities.	1
	Project objective / outcome includes the enhancement of gender capacities, gender data collection, gender equality or the design of gender-responsive policies or guidelines.	1
Maximum Score:		3
Scoring Code:		
Gender mainstreamed (GM): if 3 to 4 points. The project has significant potential to contribute to gender equality.		

DUTIES AND RESPONSIBILITIES OF THE PROJECT COORDINATOR

1. The PC will have day-to-day responsibility for project coordination and management, arranging contacts with all government and other personnel, project-related discussions, and supervision of the consultants.
2. PC will be responsible for coordinating and monitoring all aspects of the implementation of the project. He/she is not expected to duplicate the role of PE but will work closely with PE to ensure that reports are submitted in a timely manner. Duties include the following where applicable:
 - (a) reviewing and finalising of the TOR for consultancy services to be undertaken in the project;
 - (b) coordinating the selection and engagement of consultants;
 - (c) collecting all relevant background studies and information;
 - (d) supervising the implementation of the consultancy;
 - (e) ensuring that social and gender considerations are incorporated in proposed interventions to:
 - (i) enhance gender equality, social inclusion¹ of vulnerable groups, and
 - (ii) promote social benefits and manage risks, as part of the TOR.
 - (f) organising stakeholder consultations;
 - (g) preparing and submitting claims to CDB for disbursement/reimbursement;
 - (h) submitting to CDB reports prepared by the consultants;
 - (i) submitting to CDB a report each quarter summarising progress, disbursement activities and forecasted expenditures to project completion;
 - (j) submission to CDB the Contract Completion Report within one month after the date of issue by the Consultants of a certificate of practical completion of each contract;
 - (k) preparation and submission to CDB a Project Completion Report, within two months after practical completion of the works. This report will focus on the project's performance on desired results as outlined in the results monitoring framework and lessons learned; and
 - (l) Updating the procurement plan as necessary and where applicable, at least annually.

¹ Social inclusion is the process of improving the terms on which individuals and groups take part in society - improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity (<http://www.worldbank.org/en/topic/socialdevelopment/brief/social-inclusion>). This process includes those who are traditionally excluded due to inequalities associated with, *inter alia*, gender, poverty, disability, age cohort, geographic location (urban/rural/peri-urban), ethnicity, race and indigenous peoples' identity. The exclusion experienced may be evident in stereotypes, stigmas, and superstitions based on group identity and intersection of multiple identities.

3. The assigned PC should have a minimum of the following qualifications:
 - (a) a Master's Degree or equivalent in Civil Engineering, Construction Management or Project Management with a minimum of ten (10) years' experience in the management and implementation of civil engineering projects; or
 - (a) a Bachelor's Degree or equivalent in Civil Engineering, Construction Management or Project Management with a minimum of twelve (12) years' experience in the management and implementation of civil engineering projects.

DUTIES AND RESPONSIBILITIES OF PROJECT ENGINEER

1. The PE will be assigned from the GWI and will liaise with the MoC on matters related to the – *Consultancy Services for (1) Preparation of Detailed Designs for Water Supply Improvement Works (2) Feasibility Study for Sourcing Potable Water from The Hope Canal* and will be responsible for monitoring the implementation of the projects. He will report to the PC. PE is a member of the established PAC and will attend and contribute to convened meetings.
2. His/her duties will include, but will not be limited to:
 - (a) keeping accounts on project-related expenditure and disbursement activities;
 - (b) planning, scheduling and coordinating activities;
 - (c) directing and supervising the day-to-day operations of the Project, guided by the project documents and the Installation Work Plans;
 - (d) advising PC on technical aspects and costs variations;
 - (e) management and administration of the implementation of the Supervision Consultancy.
 - (f) submission to the CDB via PC (within three weeks after the end of each month), the monthly reports prepared by the engineering consultants on the progress of the works;
 - (g) preparation and submission to CDB (via PC), a Project Completion Report within one month after the project has been completed, and
 - (h) any other duties assigned by PC.
 - (i) Prospective candidates must be engineers with a minimum of the following qualifications:
 - (i) Masters' Degree or equivalent in a relevant engineering discipline, Project Management, Construction Management or related subject together with a minimum of five years' experience in supervision of construction or installation works; or
 - (ii) A Bachelors' Degree in civil engineering and a minimum of eight years of suitable experience in project supervision.

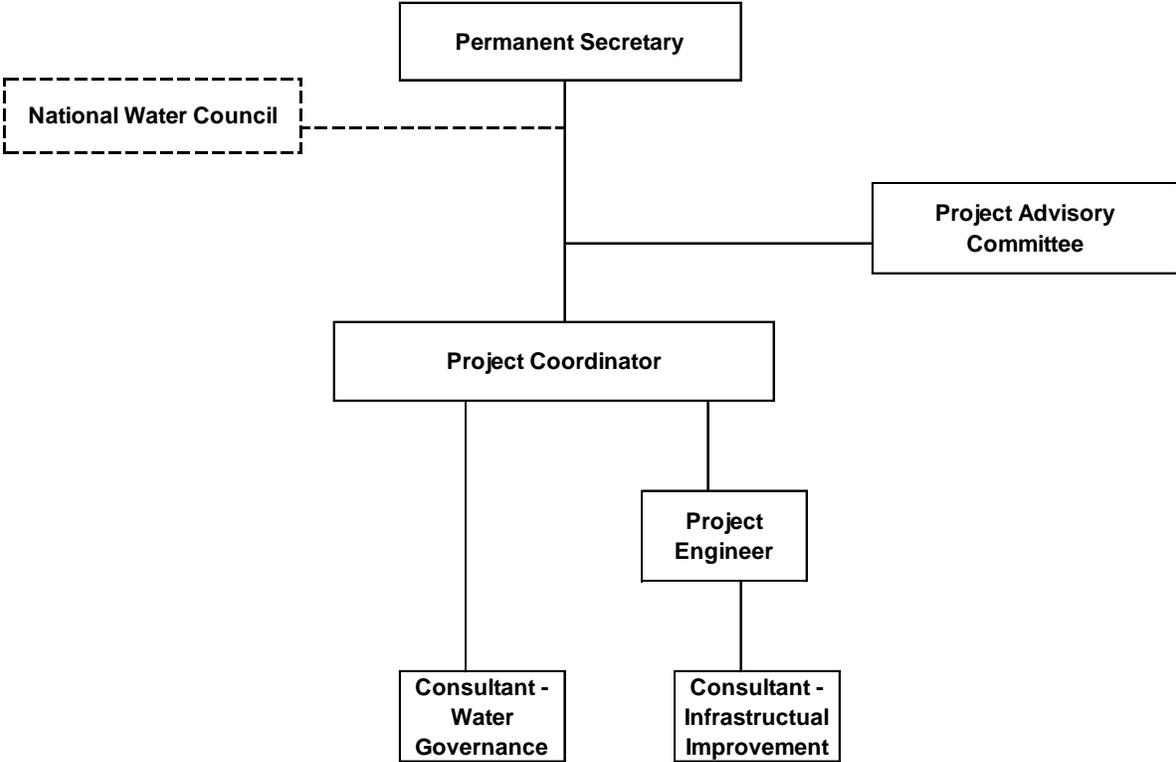
COMPOSITION AND FUNCTIONS OF THE PROJECT ADVISORY COMMITTEE

1. The main purpose of the establishment of the PAC is to provide formal mechanism for information sharing and discussion on policy and national strategic issues related to the development of the proposed Water Supply Improvement Project. PAC meetings will complement the consultations which are required to be undertaken as part of the Feasibility Studies.
2. The PAC comprises representatives of:
 - (a) The Ministry of Communities.
 - (b) The Guyana Water Services Inc.
 - (c) The Ministry of Social Protection.
 - (d) The Department of Environment.

The PAC will be chaired by the Permanent Secretary with responsibility for MoC, with PC as Secretary.

3. The PAC shall:
 - (a) meet to consider and discuss the main reports to be delivered by the consultants at the relevant stages indicated in the TORs. The time for these meeting will as agreed by the PAC;
 - (b) provide guidance to the implementing agency, MOC, on national policies, priorities and development plans, that are related to the Water Supply Improvement Project; and
 - (c) facilitate the taking of policy decisions by the relevant authorities to ensure timely completion of the consultancy.

PROJECT ORGANISATION CHART



FINANCING PLAN
(USD '000)

Item	CDB	GOGY	Total
Professional fees; accommodation. and other reimbursables (<i>Water Supply Improvement Works and Hope Canal Feasibility Study</i>)	803		803
Professional fees; accommodation. and other reimbursables (<i>Water Sector Governance</i>)	327		327
Project Management			
Communication and Local Transport	135	172	307
Public Consultation and Support Services			
Contingencies			
Total	1,265	172	1,437
Percentage	88	12	100

PROCUREMENT PLAN**I. General****1. Project Information:**

Country: Guyana
 Borrower: GOGY
 Project Name: Water Sector Enhancement Project - Guyana
 Project Executing Agency: Ministry of Communities

2. **Bank's Approval Date of the Procurement Plan:** May 2018

3. **Period Covered by this Procurement Plan:** June 2018 – November 2019

II. Goods and Works and Non-Consulting Services:

N/A

III. Consulting Services:

1. **Reference to (if any) Project Operational/Procurement Manual:** For consulting services, CDB's Guidelines for the Selection and Engagement of Consultants (October, 2011).

Procurement Packages with Methods and Time Schedule:

1	2	3	4	5	6	7
Ref No.	Assignment (Description)	Estimated Cost (USD)	Selection Method	Review by Bank (Prior/Post)	Expected Proposal Submission Date	Comments
2.	Water Treatment Plants and Infrastructure Improvements Works – Project Preparation	■	QCBS	Prior	October 2018	EOI and RFP subject to prior review.
2.	Preparation of Policy paper and associated Strategic plans to enhance Governance in Water Sector	■	QCBS	Prior	October 2018	EOI and RFP subject to prior review

IV. Implementing Agency Capacity Building:

1. A procurement e-learning module has been prepared by CDB's Procurement Unit and is accessible online to all BMCs.

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

V. Summary of Proposed Procurement Arrangement

Project Component	CDB (USD '000)										NBF (USD '000)		Total Cost (USD'000)
	Primary		Secondary		Other						Country	Institution	
	ICB	NCB	RCB	LIB	Shopping	DC	FA	QCBS	CQS	SSS			
1. Studies and Project Preparation	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Project Supervision	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Administrative Support	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Contingency (10%)	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Project Costs	-	-	-	-	-	-	-	-	-	-	-	-	-

- | | | | |
|-----|-----------------------------------|------|----------------------------------|
| CQS | Consultant Quality Selection | NCB | National Competitive Bidding |
| DC | Direct Contracting | QCBS | Quality and Cost-Based Selection |
| EOI | Expression of Interest | RCB | Regional Competitive Bidding |
| FA | Force Account | RFP | Request for Proposal |
| ICB | International Competitive Bidding | RFQ | Request for Quotation |
| IDC | Interest During Construction | SSS | Single-Source Selection |
| LIB | Limited International Bidding | | |
| NBF | Non-Bank Financed | | |

FIGURE 1

PROJECT LOCATION MAP

