



Caribbean Community
Climate Change Centre

Gender Analysis & **Action Plan**



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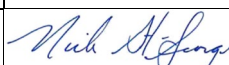


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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
BCRWSP	Barbados Climate Resilience Wastewater Systems Project
BGIS	Barbados Government Information Service
BSTP	Bridgetown Sewage Treatment Plant
BWA	Barbados Water Authority
BPfA	Beijing Platform for Action
CARICOM	Caribbean Community
CARIWN	Caribbean Water Institute
CBD	Convention on Biological Diversity
CCCCC	Caribbean Community Climate Change Centre
CDB	Caribbean Development Bank
CEDAW	Convention on the elimination of all forms of Discrimination against Women
CERMES	Centre for Resource Management and Environment Studies
CGA	Country Gender Assessment
CRF	Caribbean Resilience Facility
CRWSP	Climate-Resilient Water Safety Planning
DPR	Direct Potable Reuse
DRM	Disaster Response Management
DRR	Disaster Risk Reduction
ECLAC	Economic Commission for Latin America and the Caribbean
EIA	Environmental Impact Assessment
EPD	Environmental Protection Department
ESIA	Environmental and Social Impact Assessment
GAF	Gender Analysis Framework
GAP	Gender Action Plan

Acronym/Abbreviation	Definition
GCF	Green Climate Fund
GEF	Global Environmental Fund
GEF-CReW	Global Environment Facility Caribbean Regional Fund for Wastewater Management
GEI	Gender Equality Indicators
GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	Green House Gases
GOB	Government of Barbados
GWP	Global Water Partnership
GW21	Global Water 21
IDB	International Development Bank
IGDS	Institute of Gender Development Studies
ILO	International Labour Organization
IPR	Indirect Potable Reuse
IUCN	International Union for Conservation of Nature
KII	Key Informant Interview
LWPG	Lima Work Programme on Gender
LGBTQIA	Lesbian, Gay, Bisexual, Transgender, Queer and/or Questioning, Intersex, and Asexual and/or Ally
MCO	Multi-Country Office
MHH	Men Headed Households
MOU	Memorandum of Understanding
NGO	Non-Government Organizations
PSC	Project Steering Committee
SAMOA	SIDS Accelerated Modalities of Action
SDG	Sustainable Development Goal
SIA	Social Impact Assessment

SGBV	Sexual and Gender Based Violence
SIDS	Small Island Developing States
TOR	Terms of Reference
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-MCO	United Nations Managed Care Organization
UN-WMCO	United Nations Women Multiple Country Office
UN-SDG	United Nations Sustainable Development Goal
UWI	University of the West Indies
UWI-IGDS	University of the West Indies- Institute of Gender and Development Studies
WHH	Women Headed Household
UNEP	United Nations Environmental Programme
3R-CReWS	Reduce, Reuse and Recycle for Climate Resilience Wastewater Systems in Barbados

EXECUTIVE SUMMARY

The objectives of this report are to provide an assessment of the potential gender sensitivity issues associated with this Project and to provide the GOB with information that would influence the adoption of policies necessary to ensure men, women and LGBTQIA persons have equal opportunity to participate in the process of wastewater system development in Barbados. The issue of gender equality continues to be high on the development agenda in Barbados because gender indicators show that although more women attain higher levels of education there are still more women than men in the lower socio-economic bracket. Barbados has achieved significant human development gains, and while there have been advancements to achieve gender equality, there are still areas of pervasive inequality.

The introduction covers objectives and associated outcomes of the project and provides a background which examines the international, regional, national and wastewater sector frameworks.

Next the report clarifies issues of gender and gender analysis, by focusing on targeted areas of investigation with relevance for the conceptualized 3R-CReWs Project. In undertaking this analysis, components of the Gender Analysis Process Model were used to conduct the gender equality assessment of the project. The model comprises of four main parts, namely Gender Screening, Gender-Related Data Collection, Gender Impact Assessment and Mainstreaming Gender in the Project Cycle in conformity with the GCF standards.

Barbados has made recognizable Human Development gains and has made improvements in legislation that promote gender equality. However, societally, and institutionally, there remain recognized inequities. Linked to those, is the unequal power relationships that are often detrimental to the promotion and protection of women and girls.

Mapping of the internal stakeholders revealed that out of the ten-member BWA Board; seventy percent of directors are men and thirty percent are women. This indicates the Board decisions relating to project policy, oversight, and approval of project plans, budgets and reports are influenced more by men. At the BWA, more men are employed in technical and engineering fields. Conversely more women are employed in clerical professions. This is reflective of wider underrepresentation of women in Science, Technology, Engineering and Mathematics (STEM) fields across Barbados. Given the technical nature of the wastewater project, it is likely to attract more men than women. There is however, a need to address the gender gap that exist within the BWA, at the level of the Board of Directors, and the professional and technical support staff of the Authority: There is also a need to address the gender gap that exist with aspects related to more men than women are involved in the technical work of the Wastewater Sector Infrastructure and Services while more women serve in administrative capacities. Of note is that KII at the BWA revealed that there are no discriminatory policies in terms of recruitment and pay. A Labour union equally represents the needs of male and female employees. The

BWA's gender sensitivity training for its employees in collaboration with the UWI-IDGS is ongoing and is seen as a way to reduce the existing high percentage gender imbalance among employees. Training however, should be made mandatory for certain categories of staff, including Project staff. The project also, therefore proposes as a low hanging fruit, a STEM Internship programme over its five years of implementation at the BWA. The Project also proposes a gender balanced Project Steering Committee, PSC, to the extent possible, and the representation of the Bureau of Gender Affairs on the PSC.

Mapping of the external stakeholders also revealed that there is also a 60 % gender gap among the 30 parliamentarians, a 14% gender gap among the 21 senators, and a 60 % gender gap among the 30 Cabinet Ministers. Consequently, decisions taken at levels of the political directorate, the Cabinet of Ministers, and the BWA Board are influenced by more men.

This report includes primary data collected from sources such as a stakeholder survey and two key informant interviews as well as secondary data collection. Brief abbreviated details of the findings follow. Stakeholder responses to a survey on climate change and wastewater collection and treatment indicated that generally, there are many issues where both men and women share similar views on wastewater collection and treatment among the stakeholders in Barbados. There are, however, instances where the views of men and women differ especially when it comes to discharging untreated wastewater to the ground. Men appear to differ from women on willingness to pay for wastewater improvement, in the sense that men are seemingly more concerned with paying for wastewater improvement. Women typically need more water during their daily activities and might be willing to pay more to satisfy their needs. Note, a limited "Willingness to Pay" survey was conducted but the survey was cancelled early, due to unfavourable conditions in the country. Limited trends were examined from this data and analysed in this report. Importantly is that Barbados experiences a feminization of poverty where more female headed households are represented in poverty brackets than male headed households. Therefore, despite the results from limited stakeholder survey which are not statistically significant, the ability of women to pay for services given socio-economic challenges needs to be actively considered in project incentivisation activities as well as in rearticulating the RAFF.

As indicated in a case study on Understanding Unequal Relations of Gender in the Caribbean (Bobb, 2019), on average men spend longer hours a week doing paid work away from the home while women spend longer hours doing unpaid domestic work including cooking, gardening, collecting, and storing water for domestic use, caring for children and the elderly and the animals. Even when women spend the same number of hours a week doing paid work away from the home, they still are expected to do most of the unpaid domestic work. Stakeholder consultative processes must reflect the challenges on time availability of women to respond to surveys and to participate in community level meetings. Therefore, unique approaches including door to door consultations or carefully

selected time periods for stakeholder consultations need to be reflective of the realities of women in Project communities.

Women in the Eastern Caribbean region experience various gaps in access to health, social protection, vocational and technical education, productive resources, economic opportunities, as well as voice and agency. All of these are associated with their increased vulnerability to disasters and climate change hazards. The Analysis found that climate change impacts on the wastewater sector is a serious challenge to the national development in Barbados, including wastewater management. Drought conditions resulting from climate change are likely to cause serious water shortages in Barbados which can pose great challenges for women who are primarily care givers for children and the elderly. Women are very vulnerable in the time of disaster. However, any effort to reduce exposure to climate risk to allow speedy recovery by victims.

The review of non-potable water re-use found that while reclaimed water is not safe for drinking it can be recycled for specific non-potable purposes such as irrigation and aquifer recharge. The review also found that as the 15th most water-stressed country in the world per-capita, Barbados should consider the reuse of treated stormwater, greywater, and blackwater to tackle the issue of water scarcity. The review of Wastewater and its Relevance to Sanitation and the Environment (Witmer, 2017), found that women are more likely to be affected by lack of wastewater treatment, reuse, and poor management than men because they are more in direct contact with food, faeces, childcare, and healthcare. They are also more likely to suffer from the amount of pesticide, hormones, medication, chemicals in wastewater. This is compounded by the fact that there is a low percentage of Barbadians currently able to access the BWA wastewater collection and treatment facilities. The Legislative and Policy environment is also absent to ensure smooth implementation of the wastewater priorities. Some of the legal instruments governing the wastewater sector are outdated because they have been in force for over forty years and as such, they are likely to limit the ability of the BWA to upgrade its systems and operations and do not necessarily reflect the needs of the wastewater sector and the Project at this time. The project will provide the avenue to update the legislation, including gender responsive considerations.

The GOB has the option of offering subsidies to deprived and vulnerable groups of the society, or promoting collaboration between public and private sectors to develop innovative models for the generation of water. Vulnerable groups, which comprise of a larger percentage of women and girls, stand to benefit from opportunities that facilitate stronger and less biased decision-making.

This Gender Analysis highlights an absence of mechanisms to foster greater stakeholder participation in the design, implementation, monitoring and evaluation of project activities. Additionally, the BWA appears to lack the human resource, institutional and information capacity to identify the causes of vulnerability among women and other vulnerable groups. The project presents an opportunity to strengthen legislative framework

by also including gender equality considerations. The Project through the support of a Social and Gender Specialist will improve stakeholder engagement and provide a resource to ensure that the Project actively responds to the needs of vulnerable populations, including female headed households that are in poverty. Given the importance of water for human survival, the BWA should make every effort to secure adequate financial and human resources to provide high quality service in the water and wastewater sector.

The prevalence of SGBV, though higher in intimate partner relationships is still present outside of the private sphere in Barbados. Therefore, projects such as these need to promote a preventative approach to SGBV. This includes zero tolerance policy to SGBV and code of conduct for project staff and all personnel interacting with communities. In addition, there has to be gender responsive complaint mechanisms that prove useful for victims of SGBV, if prevention is not achieved. Gender sensitivity training is useful as well in addressing SGBV risks, however these are to be made mandatory to staff based on roles and functions.

A review of this project's Stakeholder Engagement Report found that it is necessary to educate the public on the positive social impacts of the project. The project's public education campaign, like the stakeholder engagement efforts needs to be carefully crafted to effectively target diverse groups on their relevant needs, reservations and expectations. Project personnel should equally ensure gender issues are mainstreamed in the implementation process. Therefore, Stakeholder Engagement processes carried out by the BWA needs to be gender responsive to adequately respond to the needs of male and female headed households.

Successful implementation of this project will be beneficial to several stakeholders, if not the entire country, including the marine environment. The Project across all its components directly targets 136,220 people in Barbados. 66,748 (49%) men and 69,472 (51%) women are likely to be direct beneficiaries from the implementation. There is a similar distribution of indirect beneficiaries Important to note is that this is reflective of the overall population of Barbados. A more detailed look at the beneficiaries of the Project by component suggest that the project is taking an approach of leave no one behind. More specifically, the Project positions that 100% of female headed households and 100% of male headed householder respectively will benefit from the installation of decentralized wastewater management systems in zone A. It is however important to identify the recurrent costs that are associated with the connection to improved wastewater services. Given that women do most of the domestic and care work, they are greater users of water and wastewater services and will benefit more than men from the implementation of the project at the Domestic Level. On the other hand, a key beneficiary group identified by the Project are farmers, in this regard, there will be higher numbers of male beneficiaries than male beneficiaries given the share participation of male to female in Agriculture. The Tariff structure for water used for irrigation should be mindful of the often-small scale agricultural activities performed by women vis-a vis larger commercialised agriculture often headed by men. Important is that the project works along with the Association of Women in Agriculture to ensure that women farmers (including for subsistence) receive information on the benefits of using reclaimed water and are also

supported with access to reclaimed water services and other by-products of treated waste water.

This report summarises the gender issues and draws specific conclusions pertaining to key areas of the project activities that require attention. It also recommends actions required to align with Project goals and stakeholder gendered needs of the project. Finally, the actions recommend to mainstream gender within all stages of the project cycle have been used to compile a Gender Action Plan. A copy of the GAP is listed as Appendix 3 to this report.

INTRODUCTION

The purpose of this report is to present a Gender Analysis and Gender Action Plan related to this “Consultancy to Produce Requisite Design, Studies and Plans for the Green Climate Fund Proposal” that examines “The 3R’s (Reduce, Reuse and Recycle) for Climate Resilience Wastewater Systems in Barbados” (the “Project”). This introduction commences with a brief background and justification to the gender analysis and action plan.

Conceptually, gender refers to the economic, social, political, and cultural attributes and opportunities associated with not only the female and male gender but also LGBTQIA persons. The social definitions of what it means to be a woman, or a man vary among cultures and has changed over time. Gender is a socio-cultural expression of characteristics and roles that are associated with certain groups of people with reference to their sex and sexuality.

“Gender analysis/assessment refers to methods used to understand relationships between men and women, their access to resources, their activities, and the constraints they face relative to each other. A comprehensive gender analysis/assessment entails the examination of the different roles, rights, needs, and opportunities of women and men, boys, and girls in a given project/program context. It is a tool that helps to promote gender – relevant entry points, policies and identify opportunities for enhancing gender equality in a particular project/program. In the case of climate change projects/programs, a well-done gender analysis/assessment helps to identify multiple causes of vulnerability, including gender inequality. It also helps to identify and build on the diverse knowledge and capacities within communities/households that can be used to make them more resilient to climate related shocks and risks.”¹¹

A gender analysis is a useful tool to identify points of intervention in a project cycle at which existing or potential disparities in gender impacts can be compensated for or eliminated. Gender analysis is a methodology that describes the existing gender relations in a particular environment, ranging from within households, or firms, to a larger scale of community, ethnic group, or nation. It involves collecting and analysing sex-disaggregated data and other qualitative and quantitative information. The analysis involves the process of organizing and interpreting, in a systematic way, information about gender relations to make clear the importance of gender differences for achieving development objectives.

2.1 Objectives and Associated Outcomes

The main objectives of this report are to provide an assessment of the gender sensitivity issues associated with this Project. Another objective is to provide the GOB with information that would influence the adoption of policies necessary to ensure men, women and vulnerable groups (including the poor, elderly, people with disabilities, LGBTQIA people etc) have equal opportunity to participate in the process of wastewater development in Barbados.

2.2 Project Background

The goal of 3R-CReWS project is to facilitate the enhancement of the health, wellbeing, and productivity of Barbadians through the use of carbon neutral and climate resilient water and energy management technologies and strategies that ensures water is protected, managed, recycled, reused, and conserved.

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Wastewater management strategies using reclaimed water will be a critical component to help mitigate impacts on groundwater levels, tightly linked to overall island water resources. Tertiary treatment of wastewater will allow for the reuse of water for non-potable sources, such as agriculture, landscaping, turf maintenance, and recharging the aquifer. The Project proposes that secondary treated sludge can be used as fertilizer for the agricultural community and activated sludge can be used in landscaping, turf maintenance of lawns, reclamation, soil erosion, and dump covering.

To this end, the main objectives of the 3R-CReWS project are to:

1. increase knowledge of wastewater generation including sources of wastewater and the quantity and quality impacts, as well as optimize treatment and minimize energy consumption and associated GHG emissions;
2. build resilience into Barbados' wastewater management systems, which results in increased water availability, production, distribution, and access thereby improving the community's resilience, health and wellbeing, and water and food security;
3. produce a treated wastewater effluent quality so that it can be reused for agricultural purposes, reducing stress on diminishing groundwater resources and potable water supplies as a result of climate change;
4. enable the use of reclaimed water for aquifer recharge thereby reducing saline intrusion and contamination of ground water resources while enhancing water security, particularly during period of droughts for Barbados;
5. reduce GHG emissions, increase self-sufficiency, contribute to the electricity grid

and to contribute to the frequency stabilisation of the electricity grid and act as a power shortfall filler;

6. Increase supply of locally sourced renewable energy that allows for a long-term source of revenue through a feed-in tariffs program;
7. provide a standard and formal guidance to regulate and promote the use of reclaimed water and obtain greater buy-in from stakeholders;
8. build capacity and re-train BWA staff, including the private sector, to conduct preventive maintenance and adopt climate-risk related adaptation strategies to increase the wastewater collection and treatment systems resiliency; and
9. promote and demonstrate actions that encourage all water users in Barbados, including tourists, to conserve and efficiently use water resources.

For achieving the goal and specific objectives, the 3R-CReWS is organised into four (4) key components. These 4 components are synonymous with the following 4 outcomes of the project:

1. Enhanced availability, management and use of tertiary level reclaimed water to improve the water sector's resilience to climate change
2. Climate resilient low carbon operations achieved at BSTP
3. Enhanced capacity and capability to support a preventative maintenance (PM) and climate resiliency programme
4. An enabling environment is created for wastewater technologies and use of reclaimed water

Collectively, these four outcomes/components are designed in consideration of the barriers that exist in achieving a paradigm shift in the adoption of wastewater treatment technologies and reuse options in Barbados. These barriers include the limited fiscal space that exist in a highly indebted country, limited technical capacities in the public and private sectors to fully maintain and advance the adoption of wastewater technologies, limited knowledge and awareness about the usefulness of reclaimed water as a resource, and the absence of comprehensively developed and mainstreamed policy and regulatory frameworks that promote the adoption of wastewater treatment technologies and reuse options, particularly at the household level.

This report assesses the gender equality challenges facing the GOB, that includes the BWA, as it pursues the development and implementation of this Project. It also examines gender sensitivity issues of a social, economic, political, and cultural nature that policy analysts and policy makers should take into consideration when planning, preparing the

following phases of this Project, including the Detailed Design and implementing the Construction of this Project. The report also describes the application of a gender responsive approach, adopted by the GCF, to assess the processes and operations of the Project. The GCF has a clear mandate to enhance a gender responsive approach in its process and operations as it seeks to maximize the impact of its funding for adaptation and mitigation in promoting environmental, social, economic development co-benefits globally. The GCF also seeks to engage with in-country driven projects that promote involvement of relevant stakeholders including vulnerable groups and addressing gender aspects.

Climate change is posing challenges to the national development of Barbados, and therefore should be considered in all aspects of development, especially in water and wastewater management. However, when considering climate change initiatives, it is imperative that we focus on issues that will result in projects being more sustainable and equitable. Gender equality plays a role in resolving problems associated with climate change in our societies. Governments and agencies should ensure that they effectively engage the broader society, including all genders, in discussions and decisions that affect them and ensure that their policies are aligned to the UN SDGs, especially SDG-5 that relates to gender equality that cuts across all the other SDGs. An objective of a government plan should be to enhance gender equality in its governing structures and operations and to foster greater stakeholder involvement in the design, implementation, and evaluation of their projects. The GOB also seeks to provide a working environment that facilitates balance and offers a safe working environment for all.

2.3 Methodology

The Gender Analysis and Gender Action Plan related to this “Consultancy to Produce Requisite Design, Studies and Plans for the Green Climate Fund Proposal” that examines “The 3R’s (Reduce, Reuse and Recycle) for Climate Resilience Wastewater Systems in Barbados” (the “Project”) seeks to provide a baseline for gender responsive action and inclusion within the Water Sector of Barbados. The Assessment and analysis will be used to inform the scale up and/or enhancement of gender-responsive interventions that seeks to address the identified gaps for achieving gender equality both from the perspective of the service provider and consumers.

The assessment included a desk review of available secondary data from Barbados and the wider Caribbean; assess the gender perceptions of wastewater stakeholders through stakeholder consultations, questionnaires and key informant interviews; and the analysis of data to determine gendered indicators baseline.

i. Desk Review

- Literature Review: This stage included literature review including existing

international, regional and national frameworks for gender equality and the extent to which national water management legislation, policies and procedures included these agreed international and regional gender equality considerations and commitments. During this stage, the review sought to identify relatable regional and international gender indicators that the project can contribute to, including the indicators aligned with SDGs 5 and 6.

- Secondary data review: Data collected from secondary sources include several reports, on the findings of case studies related to gender and research papers on various aspects of gender relations, wastewater management and climate change. These include but are not limited to:
 - GOB Records on Social, Political and Economic and Climate Change Issues
 - Understanding Unequal Relations of Gender in the Caribbean
 - Barbados Agriculture Sector on Gender, Climate Change and Water
 - Barbados Fisheries Sector on Gender, Climate Change and Water
 - Country Gender Assessment, Barbados (2017)

Additionally, the secondary data review analysed data as it relates to regional and national response to climate change, including:

- Gender Responsive Disaster Preparedness and Recovery in the Caribbean
- Non-Potable Water Generation, Distribution and Re-use
- WSRN Gender Assessment- water use and women
- Impacts of Climate Change on Women and Men in the Caribbean
- UN SDG's Related to Human Rights of Gender, Water and Sanitation

The review of secondary data provided an opportunity for a deeper situational analysis of how gender is reflected in the water sector as a comparison of the Country Gender Assessment, which has articulated some barriers and gaps to the participation of women in technical employment as well as issues of access to essential services, including water for the most vulnerable groups which includes women, children, LGBTQIA and persons with disabilities.

ii. Exploring Perceptions

The collection of qualitative data was done through stakeholder consultations, questionnaires and key informant interviews to help the consultant to understand the extent of awareness and impact of gender inequalities on the water sector, including the extent of inclusivity within the BWA and the responsiveness of the delivery of water services for men and women. It is important to note that data collection for this Gender Study was done in tandem with the Stakeholder Engagement Report.

iii. Stakeholder Consultations:

Two (2) stakeholder workshops were held to disseminate information on baseline information identified and conceptual design of project. Stakeholders include key water and climate change agencies, private sector actors, community leaders, and representatives from CCCCC.

iv. Stakeholder Surveys:

Following a stakeholder mapping a questionnaire was designed and administered to 49 key stakeholders in Government Ministries, the private sector, community associations, the University of the West Indies Gender Studies Department and NGOs. It resulted in 24 respondents completing the questionnaire (either partially or fully).

To further substantiate the gendered perceptions as it relates to wastewater collection and management, the consultant reviewed and included data from the Willingness to Pay Survey (administered in 2020). The survey was administered to 75 respondents (19 females, 56 males) across the country representing heads of household. While all 75 respondents did not answer each question, the analysis utilized a ratio of 8:4.75 male/female to assess each question. These responses, presented a rich primary source of perceptions of males and females on key wastewater issues in Barbados.

Key Informant Interviews (KII): Interviews were conducted with representative from University of the West Indies Institute for Gender and Development Studies (UWI IGDS) to evaluate the gender perception of BWA staff. Another KII was a Senior Engineer from the BWA to capture views on progress and barriers for women within the wastewater sector.

v. Analysis

This stage of the assessment process took into consideration both primary and secondary quantitative and qualitative data to determine perceptions, trends and attitudes of the sector towards gender equality. It included a review of statistical data from the Barbados Country Gender Assessment 2016. To carry out this gender analysis, and in keeping with the GCF template, the assessment used components of the Gender Analysis Process Model which is comprised of four main elements namely: Screening, Data Collection, Gender Impact Assessment and Gender Mainstreaming of the Project cycle. Each element involves carrying out several gender-related activities in a one-step or two-step exercise. The model helped to examine the different roles, rights, needs and opportunities of women, men, and LBGTQIA persons who are key stakeholders of the project. Table A provides a description of each component of the Gender Analysis Process Model and by activities to be carried out under each step.

Table A. Description of the Gender Analysis Process Model

No	Component	Step 1	Step 2
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1	Screening	Categorization of gender dimensions of the Project goals to identify areas for in-depth analysis.	Mapping the key internal and/or institutional and external Project stakeholders.
2	Data Collection	Collection of evidence of gender differences in stakeholder interaction with existing and planned water and wastewater sector infrastructure and services.	Review of existing national and water and wastewater sector policies, strategies, and action plans for integration of gender considerations.
3	Gender Impact Assessment	Analysis of data to determine gendered needs of the wastewater sector infrastructure and services.	Assess impacts (main/ ancillary), risk perception, and equality of distribution of Project benefits.
4	Mainstreaming Gender in the Project Cycle	Recommend actions align with Project goals and stakeholder gendered needs.	

vi. Limitations

The gender analysis process had several constraints that limited the extent of the data collection and analysis processes.

- The review of secondary data was constrained from deeper gendered analysis as most data on usage collected was not disaggregated. Additionally, it was not possible to identify vulnerable groups including, LGBTQIA people and persons with disabilities from the data.
- The assessment was carried out during the peak of the COVID-19 pandemic, as a result most consultations were conducted in the virtual space, including questionnaires which limited the opportunity to assess and adjust questions and contents for clarity, especially with community representatives. It also affected the ability to adjust for greater inclusivity of vulnerable groups.
- The Willingness to Pay survey as a key data source to inform the analysis was cut short due to high level political decision making. The information gathered is analysed in this report, however there cannot be statistical significance in the analysis of data collected.

GENDER ANALYSIS

2.4 Legislative, Regulatory and Institutional Frameworks

2.4.1 International Framework

This Gender analysis looks at the international frameworks and institutions in place the administration of conventions, protocols and agreements related to gender equality and wastewater which will have bearing on the implementation with this project. A number of relevant gender equality conventions and Protocols as highlighted in Table B, have been ratified by the GOB and applied by the BWA Wastewater Division.

Table B GOB Ratified International Conventions and Protocols on Gender Equality and Wastewater

No	Convention	Purpose	Operating Practices
1	Convention on the Elimination of All Forms of Discrimination against Women 1979 ¹	Require signatory governments to take action to promote and protect the rights of women by including the principle of equality in legislation and operationalizing it in their country. Article 14, pays special attention to discrimination against rural women, and to ensure their access to rural benefits.	BWA currently promotes equity as it seeks to achieve gender sensitivity and balance between male and female staff.

2	Beijing Platform for Action 1995 ²	The platform encourages governments to collect data on the impact of environmental degradation on women, as well as develop gender- sensitive databases. The Declaration calls for ensuring that ‘women's priorities are included in public investment programmes for economic infrastructure, such as water and sanitation.	<p>BWA will collect use dis- aggregated to cater for gender difference in the wastewater sector.</p> <p>The project will undertake gender sensitive consultations to ensure that women and men’s needs are reflected in infrastructural development. Similarly, the adjustments to RAFF should ensure that women’s needs and those of the vulnerable to inform rearticulation of the RAFF.</p>
3	Agenda 21, UN-SDG-5 2015 ³	Calls for sex-disaggregated data, and gender-sensitive databases and promotes the empowerment of women and gender equality regarding land ownership, resource stewardship, education, and employment issues.	BWA in collaboration with the UWI-IGS is currently training staff on gender sensitivity issues to create greater awareness among employees in the work environment.
4	The CBD 1993 ⁴	CBD has adopted a Gender Plan of Action and update it for the period 2015-2020. It requires countries to implement integrated actions to enhance the monitoring framework and indicator system for gender mainstreaming at national level.	A GAP (see Appendix 5) in the Project is indicative of commitment to the convention.

5	The UN Convention to Combat Desertification 1996 ⁵	Recognizes the important role and participation of women in combatting desertification and mitigating the effects of drought. Monitors whether parties have integrated gender into the implementation of the	This Project is designed to respond to conventions with Gender Analysis and a GAP.
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There are also several international institutions involved in the design and implementation of wastewater projects in the Caribbean that require gender equality issues be taken into consideration. Among them include:

1. The UN which has a mandate to implement the SDG-5 agenda which focuses on “Empowering Women and Promoting Gender Equality;”
2. IFI’s, such as the World Bank have a mandate to assist with the protection of the global environment to promote environmentally sound and sustainable economic development in member countries. The CDB has a mandate to promote economic growth and systematic reduction of poverty through social and economic development;
3. The GCF and GEF which have a mandate to support on international projects, provide new and additional grant and concessional funding for approved projects, assist developing countries by investing in projects to implement climate change adaptation and mitigation measures to strengthen national capacity to cope with the damaging effects of climate change while they overcome the fiscal constraints of COVID-19. It should also be noted that the CCCCC, supporting the GCF by providing project management services to this (and other) Project, has a mandate to implement climate change projects requiring gender-related analysis in the Caribbean; and
4. The UNEP which has a mandate to coordinate responses to environmental issues within the UN system by implementing programmes on sustainable development, climate change, disasters and conflict, ecosystem management and environmental governance.

The Sustainable Development Goals

SDG 6 Water and Sanitation

SDG 6 speaks to achieving (by 2030) access to adequate and equitable sanitation and hygiene for all, paying special attention to the needs of women and those in vulnerable situations, including LGBTQIA persons.

A safely managed central wastewater treatment facility is one where excreta is safely treated and disposed or treated on-site using soak away fields. Globally more than 80% of

wastewater, resulting from human activities, is discharged into rivers or the sea without any form of treatment, and therefore a target for this Project should be to improve the amount of wastewater that is treated and reused as reclaimed water.

The issue of water availability for hygiene proved critical during the COVID-19 pandemic. The Barbados Today Newspaper published that some residents at Boscobelle, in St. Peters, experienced conditions that had them wondering how they are to effectively sanitize with poor water service, where days go by without water coming from their taps. This further emphasizes the importance the residence attached to water in combating the spread of this pandemic. There is now a greater opportunity for Barbados to promote and implement SDG-6 on water and sanitation and all the other SDGs by 2030.

SDG-5 Achieve gender equality and empower all women and girls

Gender equality promotes basic human rights and is therefore foundational for achieving the other SDGs¹. The principle of leaving no one behind requires gender-transformative water and sanitation programmes. The 3R-CReWs project will benefit from mainstreaming SDG Targets into project activities. More particularly:

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life;

5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women and;

5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

Water and sanitation, like gender equality, are human right issues that the GOB has a responsibility to enforce for the advancement of the society. By enforcing these rights, communities, and vulnerable groups, which comprise a larger percentage of women and girls, will benefit from opportunities that facilitate stronger and less biased decision-making.

The UN standards, on access to clean water, indicated that lack of access to clean water, (at least 5 litres a day) represents one tenth of the daily average amount used by developed countries to flush toilets. Also, lactating mothers who engage in moderate physical activity use up to 7.5 litres of water per day. Ensuring safe sanitation also requires substantial hygiene education and promotion².

³ Oxfam, 2020 Achieving Sustainable Development Goals 5 and 6

⁴ www.jamaicaobserver.com/latestnews/CARICOM_developing_regional_gender_equality_strategy

² ibid

“SDG 5 speaks to gender equality and empowerment of women being a fundamental human right and calls for legislation to promote gender equality and empowerment of all women and girls.”

Therefore, the importance of water for human survival should drive the BWA to make every effort to secure adequate financial and human resources to provide high quality, gender responsive and socially inclusive service in the water and wastewater sector.

2.4.2 Regional Framework

At the regional level there are several institutions with policy and legal mandates to address gender equality issues relating to wastewater projects being implemented on behalf of Caribbean member states. Brief details of the current work of regional institutions that is relevant to this Project follow.

The mandate of the CARICOM Regional Secretariat is to implement regional plans, programs, and projects beneficial to member states. In March 2019, the Secretariat in collaboration with the UN- MCO, developed a Regional Gender Equality Strategy to accelerate the effective implementation of key priority actions that member countries have signed on to, following the BPfA conference. The strategy is designed to assist those countries which are yet to fully implement the Beijing declaration that includes women's economic empowerment and freedom from violence.³ In 2015, the CARICOM Secretariat, also developed and supported the adoption by member states of a Gender Equality Indicators model, to measure the advancement of gender equality, including the status of women, men and LGBTQIA persons, as well as a strategy for measuring these indicators at the regional and national level. Some of these relevant indicators were used to address gender equality issues related to this Project.

As part of its mandate, the UN ECLAC has developed a model Gender Equality Plan for use by member countries in Latin America and the Caribbean. According to ECLAC, the plan has been customized and adopted by most countries in the region, but Barbados is not listed as one of the countries with such a plan or policy.⁴

GWP-Caribbean also has a mandate to implement gender-related projects in the Caribbean. The institution undertakes regional case studies and maintains project databases which member states are given full access to. Barbados is a member of the GWP-Caribbean, and as such has access to databases and case studies of GWP projects in the water and wastewater sector. This partnership represents another opportunity for the BWA to access specific information that includes gender mainstreaming recommendations related to the wastewater sector.

The CCCCC has a mandate to implement climate change projects requiring gender-related analysis in the Caribbean. In keeping with its mandate, the CCCCC has adopted a Climate Change Framework, that includes a Gender Policy for the coordination of the Caribbean's response to climate change, which involves working on effective solutions and projects to combat environmental impacts and global warming.

The CDB has a mandate to promote economic growth and systematic reduction of poverty through social and economic development. The GCF has accredited the bank to provide financing for regional projects in various sectors on its behalf and in this capacity, the CDB has funded several BWA infrastructure projects which requires that the

Authority complies with provisions of the bank's gender policy to ensure consideration of projects submitted for financing (Isaacs, 2017). In 2008, the bank adopted a Gender Equality Policy and Operational and Project Strategy to support its project financing strategy. In January 2016, the CDB commissioned a CGA, for Barbados to inform the implementation of gender equality strategies of the bank and its partners in the country.⁵ According to the CGA report, several persons interviewed stated that "law and policy in Barbados facilitates equal opportunities and those institutions are gender neutral in their treatment of women and men," (Allen and Maughan, 2016).

The CGA proposed certain strategies that are relevant to this Project, such as it requires Barbados to engage in research that would generate disaggregated data to implement programmes to enable men, women and LGBTQIA persons to overcome many social issues such as poverty alleviation, gender stereotypes and on vulnerability to and impact of environmental disasters. Barbados is also expected to engage in training stakeholders through workshops to increase the capacity of women in the leadership of government department and the wastewater sector.

Finally, UWI has a mandate to spearhead the training and research efforts in the Caribbean region. To fulfil its mandate, UWI established CERMES based at UWI Cave Hill, Campus in Barbados with the capacity to undertake studies focusing on areas such as gender and climate change, and on disaster risk management in the Caribbean. CERMES can also undertake studies aimed at integrating gender concerns in water and wastewater infrastructure projects in Barbados. Additionally, UWI has also established the IGDS which conducts regular programs on gender, climate change and disaster risk reduction. The UWI IGDS recruit students to pursue post-graduate research in the fields of water and wastewater (Isaacs, 2017), and has been collaborating with the BWA, to implement gender sensitivity a training for BWA employees.

Given that Barbados is a member of all six regional institutions, the BWA can have access to the CARICOM list of GEIs and the Gender Equality strategy as well as the UN ECLAC Model Gender Equality Plan. BWA should also be able to access case study reports and project data from the GWP-Caribbean and take advantage of support provided by CCCCC on climate change adaptation and mitigation. It is also noted that BWA is already collaborating with UWI- IGDS on training and research relating to the wastewater project and is seeking financing from GCF through the CDB for the implementation of this project.

2.4.3 National Framework

At the national level, there are institutions with policy and legal mandates to address gender equality. The GOB has taken several steps to improve the framework for wastewater policy, legislative instruments, and institutional arrangements. A description of the national initiatives relevant to this Project follows, but further discussion on proposed policy reform related to this project is also included in the Conceptual Design report.

1. National Sustainable Development Policy

In 2004, the GOB adopted a National Sustainable Development Policy to guide decisions and actions at all levels in the country.

2. Draft National Gender Equality Policy

Although the GOB has a revised Draft National Gender Equality Policy, it is yet to be approved by the Cabinet of Ministers and tabled in parliament for discussion and endorsement (Isaac, 2017). While this Policy is not endorsed, Barbados has been recognized as making steps to improve legislation that fosters increased equality.

3. National Climate Change Policy

The Government of Barbados approved a National Climate Change Policy in 2012. The country's Intended Nationally Determined Contribution (now known as NDC) as communicated to the United Nations Framework Convention on Climate Change in 2015, lists 6 national plans and strategies for which climate change adaptation would be incorporated³. These include:

- Medium Term Growth and Development Strategy 2013 – 2020;
- Physical Development Plan;
- White Paper on the Development of Tourism in Barbados and National Adaptation Strategy to Address Climate Change in the Tourism Sector in Barbados;
- Coastal Zone Management Plan;
- Storm Water Management Plan;
- Other sectoral plans including for agriculture, fisheries, water and health.

While the Climate Change Policy makes mention of gender issues, there was limited presentation of strategies for mainstreaming gender in relevant sectoral climate change interventions. The Policy however states that that vulnerable groups, including women and young men, should be targeted and participate in action to address environmental threats

³ <https://www.greenclimate.fund/document/gender-assessment-fp060-water-sector-resilience-nexus-sustainability-barbados-wsrn-s>

and damage⁴.

4. Wastewater Tariff Policy

In July 2009, BGIS reported that the GOB had approved a new tariff policy and structure for the BWA in which the minimum charge moving from \$20.00BBD (US\$10) to \$32.00BBD (US\$16) for both domestic and commercial metered customers. However, it is noted that there was no change in the rate for the sewage tariffs which remained at 1/3 of the water bill for domestic customers and 2/3 of the water bill for commercial customers.⁵ Given that the tariff policy and structure has been in place for twelve years, it is recommended that the GOB consider engaging key stakeholders with a view to examine cost recovery challenges and measures needed to update this policy. The GOB should update the tariff policy to support a BWA cost recovery for its wastewater services taking into consideration gender equality issues affecting the poor and vulnerable. Such a consideration may include reduced rates for identified vulnerable persons.

5. National Legal Instruments

In October 1980, the GOB enacted the **Barbados Water Authority Act** as the primary legal instrument to govern the operations of water and wastewater services in Barbados. The Act is accompanied by the BWA (Sewerage Regulations), 1980, (S.I. No. 151 of 1980), to regulate sewage, effluent wastewater, discharge, water charges, authorization, permit, equipment, and inspection; including the sewerage treatment plants, packaged plants of hotels and businesses, or household's septic tanks and suck-wells (Isaac, p-100). In 1985, the GOB enacted the Barbados Authority Act, 274a, L.R.O., with Part IV of the Act making provision for the establishment of a Water and Sewage Division to be responsible for wastewater management. In 2009, the GOB also enacted the BWA Act (Validation of Water and Sewerage Rates), to validate the increase in water and sewerage rates levied and collected by the BWA from 1st January 2005 to the date of the BWA (Water and Sewerage Rates) Regulations, 2009, (S.I. No. 69 of 2009).

The BWA Act of October 1980, is the primary legislation governing the provision of water and wastewater services in Barbados. The Act is supported by the BWA (Sewerage Regulations), (S.I. No. 151 of 1980), introduced to regulate sewage, effluent wastewater, discharge, water charges, authorization, permit, equipment, and inspection including the sewage treatment plants, packaged plants of hotels and businesses, and household septic systems and suck-wells (Isaacs, 2017).⁶ This legal instrument should be placed high on the BWA agenda for revision since it has been implemented for over forty years and the BWA should improve its efforts to lobby the GOB to amend the Act, as the current instrument does not reflect present day gender issues.

In 2020, the Government of Barbados enacted the **Employment (Prevention of**

⁴ ibid

⁵ <https://gisbarbados.gov.bb/blog/new-watertariff>

⁶ <https://www.ecolex.org/details/legislation/barbados-water-authority-act-1980-lex-faoc>

Discrimination) Act, 2020⁷. This Act prevents discrimination in an employment context in over fifteen (15) areas⁸. Including sexual orientation, gender, family responsibility, age and physical features. The Act prevents discrimination in recruitment and selection; even where these functions are executed by recruitment agencies⁹. The Act identifies that an act of discrimination can occur, “directly or indirectly, whether intentionally or not, makes a distinction, creates an exclusion or shows a preference, the intent or effect of which is to subject the other person to any disadvantage, restriction or other detriment.” The Act also identifies an act of discrimination may occur where “the person, directly or indirectly, whether intentionally or not, subjects the other person to any disadvantage, restriction or other detriment” ... in identified circumstances. This legislation has identified a tribunal where complaints of discrimination can be made.

In 2017, The Government of Barbados enacted the **Employment Sexual Harassment (Prevention) Act, 2017**¹⁰. The Act makes provision for the protection of employees in both the public sector and private sector from sexual harassment at their workplace; provides a framework for the reporting of sexual harassment cases by employees and a method of resolving such cases; establishes a procedure for the hearing and determination of matters related to sexual harassment; and provide for related matters.

6. National Collaborating Institutions

As indicated earlier, in 1985, the GOB in keeping with Part IV of the of the Barbados Authority Act, 274a, established the Water and Sewage Division within the BWA to be responsible for wastewater sector management. Currently, in addition to the BWA Wastewater Division, Barbados has several public institutions with mandates that have a direct impact on gender equality issues relating to the wastewater sector. They are as follows:

1. The Barbados Poverty Alleviation Bureau and the Office of the Director of Poverty established in 1998 with a responsibility to examine and report on the living conditions of the poor and vulnerable¹¹;
2. The Bureau of Gender Affairs, Ministry of Youth, and Family and Sports responsible for monitoring and evaluating gender equality policies, plans and programs of government. The Bureau is responsible for the integration of gender in all national development policies and programs to achieve gender equity and equality.; and
3. The Environmental Protection Department (EPD), has completed a wastewater reuse policy to facilitate the treatment of wastewater for reuse in drip irrigation, toilet

⁷ https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=110880 Accessed: September 5, 2022

⁸ <https://barbadostoday.bb/2021/03/18/btcolumn-discrimination-in-the-workplace-can-be-covert/> Accessed: September 5, 2022

⁹ Ibid.

¹⁰ chrome-

extension://efaidnbmnnnibpcajpcgclefindmkaj/https://oig.cepal.org/sites/default/files/2017_brb_employmentsexualharassmentpreventionact.pdf
Accessed: September 5, 2022

¹¹ <https://www.gov.bb/State-Bodies/poverty-alleviation>

flushing, decentralized sanitation systems including septic tanks, sewage packaged plants and suck-wells (Isaacs, 2017).

The above-mentioned institutions collaborate with each other to bring greater synergy between gender equality and wastewater issues.

Overall data collected from government records indicates that the GOB has made some progress on social, political, and economic issues relating to gender equality. However, during the implementation of the Project it is necessary that the BWA ensures compliance with provisions of relevant conventions, policies, agreements, and laws. Where there are gaps identified, BWA needs to lobby the government authorities to make the appropriate improvements.

Gender Equality Indicators Adopted by Barbados

Gender Equality Indicators refer to sixteen measures adopted by the United Nations to track progress made by member states towards achieving the goals of SDG 5. CARICOM has adopted a regional list comprising thirty-three GEIs. This gender analysis applied some of the gender equality indicators adopted by the GOB from the CARICOM list of GEIs.

Table C National List of Gender Equality Indicators Applied by Category

No	Category	CARICOM	CARICOM/National Indicator
1	Economic Activity	Indicator 1 Indicator 8 Indicator 10 Indicator 11	<ul style="list-style-type: none"> ▯ More of the persons in poverty are women ▯ 15.7% of Barbados population lives in poverty ▯ Poor women 21%, Poor men 13,96% Extreme poor women:4.7%, Extreme poor men: 2.7% (Beuermann 2017)
2	Education	Indicator 14	Barbados Population statistics: <ul style="list-style-type: none"> ▯ 90.68% completed tertiary education ▯ 93.4% completed primary education²¹ ▯ 89.5% and 87.6% females and males respectively with at least secondary education (Allen et al. 2016) More women, 40 years and under have university education 50% of emigrants as against 30% of locals have university

3	Public Participation	Indicator 28 Indicator 29	Parliament has 30 seats. Women including the Prime Minister, holding 6 seats or 20% compared to 24 seats or 80% held by men. ¹²
		Indicator 30	Head of State: Governor General is a woman.
		Indicator 31	The Cabinet comprises nineteen (19) or (73%) men and seven (7) or 27% women ¹³

2.4.4 BWA Framework for Wastewater Sector Services

The BWA is the primary entity, supported by the Ministry of Transport, Works and Water Resources, with a mandate to deliver satisfactory water and wastewater services to citizens of Barbados, and as such, is responsible for applying the gender equality policy at the level of the wastewater sector. For the delivery of wastewater services, BWA is required to maintain an appropriate organizational structure to exercise utility oversight, a system for data collection and analysis, and wastewater treatment facilities. Details of the several gender equalities issues to be addressed for effective implementation of the project.

2.4.5 BWA Organizational Structure

The configuration of the organizational structure of the BWA makes provision for several functional departments including Finance, Human Resource and Customer Service. The structure also includes a Wastewater Division which is specifically responsible for wastewater management. As of August 2022, the Barbados Water Authority had 753 employees. 556 (73.8%) were men and 197 (26.2%) were women. This represents a 3% drop in total employees from 2016, when a Gender Analysis for the GCF Funded WSRN Project was undertaken. Important to note, is female employment dropped from 28.1% of the BWA workforce to 26.2%. In 2016, The workforce age ranged from 20–67 years with a mean age of 39 years. Approximately half of the BWA employees (61 %) are aged 40-59 years, with the majority of men being 50-59 years (23%) and women 40-49 years (9.9%)¹⁴. The BWA staff are almost equally employed in technical (48.5%) and non-technical roles (51.5%), with technical being defined as all job titles related to project management,

¹² <https://caribbeanelections.com> Barbados Election Results 2018

¹³ <https://www.gov.bb> Barbados Current Cabinet of Ministers

¹⁴ file:///C:/Users/Admin/Downloads/BP20-CCC-01-00-RPT-Gender-Analysis-Report-Rev1.pdf

engineering, science, vocational, heavy equipment operation and field work activities of the utility, and non-technical referring to all other capacities. “Men and women are almost evenly represented in non-technical roles (26.8% and 24.6% respectively), while there is a significantly greater proportion of the BWA staff that are men (45%) versus women (3.5%) employed in technical roles”¹⁵. In the Legal and Compliance Unit, The Customer Service Unit, as well as the Human Resource Unit, there is an over representation of women (100%, 89%, 72%) respectively. On the other hand, the Engineering Unit (75%), the Distribution Unit (95%) and the Drawing Office (100%) has over representation of men.

From interviews conducted during this gender analysis, the perception is that the BWA has demonstrated that as an employer, it provides equal opportunities to men, women, and LGBTQIA persons in the recruitment of employees and this unwritten policy is maintained in staff training, deployment, compensation, and mobility. One KII respondent stated that the BWA employees are unionised and as such, the BWA is committed to implementing provisions of the collective agreement which addresses the gender equality issues highlighted earlier. Important to note is that this is in keeping with the findings of the Country Gender Assessment (CGA) conducted in 2016 by the CDB. The CGA ¹⁶ highlighted that ...

“A number of interviewees stated that law and policy in Barbados facilitate equal opportunities and that institutions are ‘gender neutral’ in their treatment of women and men. They saw differences in economic and social outcomes for men and women (if acknowledged to exist) as resulting from individual choice and tradition rather than systematic impediments. A few interviewees were actively opposed to developing actions based on gender considerations. Others acknowledged gender-related constraints, but most said that gender was not something they generally took into account while working”.

Despite outcomes demonstrating gender imbalances in participation and representation, the views that BWA is an equal opportunity employer remains relatively constant. Important to address however are the institutional cultural biases that may perpetuate inequality. Gender sensitivity training, encouraging more young women in STEM and having more women in leadership roles may help in shifting cultural nuances over time. While there are no recognized formal impediments to gender equality in the workplace, culture and stereotypes may influence how policies and laws are implemented.

2.4.6 BWA Board Governance

The BWA ten-member Board of Directors is appointed by the Ministry of Transport, Works, and Water Resources for a three-year period. At the commencement of this Gender Analysis, it was noted that the BWA Board of Directors comprised of two women one of whom was the chairperson of the Board, and eight men, an arrangement which reflects

¹⁵ file:///C:/Users/Admin/Downloads/BP20-CCC-01-00-RPT-Gender-Analysis-Report-Rev1.pdf

¹⁶ Caribbean Development Bank Country Gender Assessment Barbados, 2016

a gender-imbalanced in the gender make-up of the Board. Since the execution of this study, the Board changed leadership. The BWA Board is therefore male headed. Increase in women’s participation in prominent decision-making spaces provides an opportunity not only for equality of representation but equality of decision-making outcomes. Women’s participation in water governance is essential for achieving SDGs 5 and 6 as is a target of both¹⁷. The Beijing Platform for Action calls for guaranteeing that ‘women's priorities are included in public investment programmes for economic infrastructure, such as water and sanitation’. Women’s voices are increasingly strengthened when women have a seat at the decision-making table, and moreover, when women who fill those seats: i. have the technical competence to contribute meaningfully to decision making and, ii. are empowered to do so. As predominant water users within the household, and increasingly present users of water in private sector, it is imperative that female representation on boards such as the BWA is prioritized.

Table D: Composition- BWA Board of Directors

Stakeholder	Total	Male	Female
BWA Board of Directors	10	7 or (70%)	3 or (30%)

2.4.7 BWA Wastewater Division

The current wastewater management system, used by the BWA to provide wastewater services to the citizens of Barbados, comprises of two treatment plants that are the Bridgetown Sewage Treatment Plant (BSTP) and the South Coast Sewage Treatment Plant (SCSTP). Disaggregated data obtained from a January 2021 staff survey of the BWA indicated that out of a total staff complement of fifty-eight that work at the treatment plants, forty-nine employees or 85% of them are men while only nine, or 15%, are women. The above data confirms the high level of gender-imbalance among the technical staff of the Wastewater Division. This situation is not unique to Barbados, The World Bank’s Water Global Practice published a report highlighting that “women make up less than 1 in 5 of the water workforces (in water utilities) and constitute only 23% of engineers and managers in the sector”.¹⁸¹⁹

In an assessment of the gender segmentation of labour within the BWA, Issacs and Trotz (2017) identified that of technical fields within the BWA, the greatest disparity in employment was in the vocational area, 26.8% men to 0.8% women. This category comprised artisan electricians, fitters, masons, plumbers, welders, heavy equipment operators, sewage inspectors and workshop employees. According to disaggregated staff data of January 2021, there is a 68% gender imbalance in favour of men on the staff of the BWA Wastewater Division confirming that more men are employed doing paid

¹⁷ Ibid

¹⁸ <https://openknowledge.worldbank.org/handle/10986/32319>

¹⁹ Oxfam, 2020 Achieving Sustainable Development Goals 5 and 6

work in the wastewater sector. Therefore, in addition to the gender sensitivity which it has already initiated, BWA needs to create greater opportunities to attract more women to the sector. This imbalance in representation at the wastewater division is reflective of: i. the nature of work performed at treatment plants; and ii. the entry level requirements for the jobs available at the division. More men are drawn to vocational and engineering educational and training programmes than women. Work undertaken at the treatment plans are viewed as heavily laborious and physical and may therefore draw more men than women to apply and take up vacant positions. There is however also the room for expectation that cultural norms may deter women with an interest in performing in this sector to take on open positions.

Data from The Barbados Vocational Training Board (BVTB) (2013) revealed the male-female ratio of graduates as 62.7 to 37.3, very similar to 2003 ratios²⁰. A review of 2019-2022 Graduates suggests a similar pattern. Training areas such as plumbing, electricals, machinery operators were male dominated, while programmes such as sewing, cosmetology and international cooking had greater female graduates²¹. Similarly, The University of the West Indies Vice Chancellor's report 2020-2021, demonstrated overall a higher enrolment rate of females (68.7%) to males (31.3%)²². However, the report identified the male dominated faculties to be Engineering (65.67%) and Sports (65.7%). Employees with the requisite technical skills will be the most eligible, and first to benefit from potential jobs created by projects of this nature²³. There is therefore a need for stronger affirmative action policies to increase women's representation across the water sector.

Table E. Gender Distribution and Gap of Wastewater Division Staff, 201

Stakeholder	Total	Male	Female	Gender Gap
Division Staff by Location				
BSTP/SCSTP	6	4 or (67%)	2 or (33%)	34%
BSTP	29	26 or (90%)	3 or (10%)	80%
SCSTP	23	19 or (83%)	4 or (17%)	66%
	58	49 or 84%	9 or 16%	86%

2.4.8 BWA Gender Equality Strategy

The BWA does not have a written Gender Equality Strategy. The organization has unwritten practices of non-discrimination, and equal pay for equal work as was cited by one KI. Unionization has helped in this regard. However, a well-defined Gender Equality Strategy is not elaborated. The Project provides the space to document policies of non-discrimination

²⁰ *Ibid.*

²¹ <https://www.youtube.com/watch?v=YPdpiMj4WD4>

²² <https://uwi.edu/vcreport/>

²³ <https://www.greenclimate.fund/document/gender-assessment-fp060-water-sector-resilience-nexus-sustainability-barbados-wsrn-s>

through upgrades of SOPs. Important is that the Employment (Prevention) of Discrimination Act of 2020 applies to the BWA, including as it relates to recruitment and provides an avenue for complaints to a tribunal where the BWA violates the law.

2.4.9 BWA Gender Sensitivity Training

With Support from the Water Sector Resilience Nexus for Sustainability in Barbados (WSRN) Project, The BWA is undertaking Gender Sensitivity Training which started in October 2020, and was facilitated by UWI-Gender Studies Department (UWI-IGDS). The programme was designed to train 500 BWA employees to help them develop a better understanding of gender sensitivity issues within the Authority. The programme contains several modules of video presentations and three case studies which include gender components on water and wastewater issues, fish processing and farming topics. It also includes a component on the water and energy nexus and covered areas like drought management, rainwater harvesting and increased water storage. In an interview with UWI-IGDS, it was confirmed that the training involved six workshops with up to 22 participants in each session and was delivered over five days. The training uses videos, case studies, handouts, small group activities and facilitator-led plenary presentations and discussions. The programme was designed to redress the personal and urgent relations of gender. Table F shows the disaggregated data on BWA employees who participated in the gender sensitivity training.

Table F: Disaggregated Data on Staff Attendance in the BWA/UWI-IGS Gender Sensitivity training

Session Date 2020	Total	Male	Female
8 ^m October	23	14 or 61%	09 or 39%
9 ^m October	24	10 or 42%	14 or 58%
15 ^m October	21	8 or 38%	13 or 62%
16 ^m October	23	13 or 57%	10 or 43%
22 nd October	16	9 or 56%	7 or 44%
23 rd October	19	11 or 58%	8 or 42%
29 th October	18	12 or 67%	6 or 33%
30 th October	17	8 or 47%	9 or 53%
Total	161	85 or 53%	76 or 47%

At the end of the programme all successful employees will receive a Certificate in Gender Equality Issues. Participation in trainings is encouraged, but not made mandatory for staff. Trainings have had varying degrees of success in terms of participation. Incentives for attending training often results in increased attendance.

An interview with a female Senior Manager at the BWA revealed that the training is a necessary initiative to expose BWA employees to gender sensitivity and to encourage gender equality relating to co-workers, customers, and clients. The gender sensitivity programme, is ongoing within the framework of the WSRN Project. Training for gender

equality can be a transformative process that provide knowledge, techniques and tools to develop skills and changes in attitudes and behaviours. However, the effectiveness of these programmes is often a result of a continuous and long-term process that requires commitment of all parties²⁴. Similarly, as posited by the European Institute for Gender Equality, if implemented systematically gender training facilitates more efficient actions and a positive change in attitudes²⁵. Likewise, there are certain categories of employee, depending on job functions, who should be mandatorily trained in relevant areas of gender sensitivity.

3.1 Contextual Analysis

3.1.1 Gender Equality and Diversity

This report examines gender equality from a broad perspective which embraces the human rights of all citizens in Barbados, in relation to how climate change is impacting the wastewater systems in the country. It is worthy to note that this contextual analysis centre on key equality pillars that are considered relevant to this 3R-CReWS Project.

It addresses equality among men, women and the LGBTQIA community, to avoid discrimination in the society regardless of gender identity. It is important to address gender equality from this perspective to bring parity between genders and persons of LGBTQIA orientation thereby, respecting their rights as humans. The ILO has taken initiatives to address issues relating to women and LGBTQIA on the sex-based discrimination by advancing the rights of low-waged women and families of the LGBTQIA community. Much has been achieved in terms of human rights of women and people of LGBTQIA community. Also, a case can be made for the inclusion of women and social minorities in the gender equality debate (Johnson 2019). Johnson argues:

“...that gender equality, gender management and gender mainstreaming approaches overlook most problems faced by people from LGBTQIA community and from women of colour. Gender equality is done in a framework which includes vulnerable groups like LGBTQIA integrated in the project with no discrimination.¹”

A large percentage of gay and lesbian adults face some form of discrimination especially on the job although it is argued that there has been progress over the last two decades legally. However, the LGBTQIA community still experience gender bias in Barbados. For example, LGBTQIA persons currently do not have the same rights as non-LGBTQIA people. Intimate acts performed by LGBTQIA persons in Barbados are still considered to be illegal and there is a penalty where the maximum sentence is life imprisonment although it is

²⁴ <https://www.unwomen.org/en/how-we-work/capacity-development-and-training#:~:text=It%20helps%20women%20and%20men,equal%20human%20rights%20for%20all>.

²⁵ <https://eige.europa.eu/gender-mainstreaming/toolkits/gender-equality-training/why-invest-gender-equality-training>

not enforced. The (Barbados Today Newspaper, Dec. 2014) reported that;

“... stigma and discrimination, forms a property damage, ostracism and verbal abuse from strangers and family alike, unjustifiable denial of employment, denial of housing, reflection and abandonment by family, friends and society at large.²⁶”

Every effort is made to advance the cause of all vulnerable groups of all genders, to avoid any form of discrimination and ensure that everyone’s needs are adequately addressed in the Project cycle.

3.1.2 Gender Equality and Climate Change

The Project’s Proposal puts forward in its climate rationale that “the climate change risk profile of Barbados is dominated by coastal and weather effects, especially sea level rise, storm surge, increased tropical storm and hurricane intensity and frequency; and other more slow-onset environmental impacts, such as flooding and drought, which is a very important and specifically Barbadian nuanced issue, as the country already suffers from water scarcity, and changes in rainfall patterns exacerbate this considerably”²⁶. Climate models show that conditions will be warmer and drier in the Caribbean, resulting in water availability issues. As Cited in the Project’s Proposal, it has been reported by the BWA that Barbados has been experiencing less rainfall recently than the mean rainfall amount of 1,270 mm/year measured at the GAIA²⁷. Barbados experienced an annual rainfall of 736.5 mm in 2019²⁸.

...Shifting climatic conditions are leading to increasing interruptions in potable water availability. Water scarcity can cause a variety of health problems by reducing the amount of water available to practice basic hygiene which increases the risk of chemical and microbial contamination (Halcrow, 2011); these can lead to gastrointestinal diseases and other health risks. Studies in the Caribbean show an association between climate variability and increasing incidence of dengue fever. Rainwater storage is being promoted as an adaptation option to increase availability of freshwater; however, environmental health officers report an increase in the *Aedes aegypti* (mosquito that carries yellow fever) index due to mosquito breeding in domestic rainwater storage tanks. These health issues often affect women as primary caregivers and homemakers; children and elderly are also at greater risk. Men in formal work tend to have greater access to clean water and therefore

²⁶ Integrated Solutions, Funding Proposal -3R-CReWs Project, 2021

²⁷ Barbados Weather Climate Data: <http://www.barbadosweather.org/barbados-weather-climate-data.php>

²⁸ Barbados Weather: <http://www.barbadosweather.org/index.php>

at lesser risk for vector borne diseases²⁹.

Many studies have highlighted that women are more vulnerable to the effects of climate change than men. In countries such as Barbados, women and men in rural areas are vulnerable when they are highly dependent on local natural resources for their livelihood. It is therefore important to identify gender-sensitive strategies to respond to environmental and humanitarian crises caused by climate change as women are not only vulnerable to climate change, but they are also effective actors or agents of change in relation to both mitigation and adaptation.

There are many researchers³⁰ who support the idea that gender inequity is making the impacts of climate change worse. They suggest that by bringing the voices of more women/LGBTQIA persons into responses to climate change will help all countries. Gender inequalities affect the abilities of men and women to adapt to climate change particularly in areas of services, decision-making and access to and control of assets. Women are further limited by gender norms, roles and biases across the ecology of Caribbean countries. For women, their role as caregivers and homemakers can be challenged by effects of climate change on availability of food and water and fuel scarcity. These may force women to spend more time trying to access these resources and thereby affects their expected roles as homemakers and breadwinners. Such challenges increase stress and tension within the home and can subsequently lead to manifestations of gender-based violence. Men are also susceptible to negative impacts of climate change. High levels of stress due to unavailability of resources, compromised land and assets, and loss of income can lead to anger which can further encourage self-harm and substance abuse. Loss of income and resources due to climatic events may also lead to sexual and domestic violence against partners or children.

Climatic events inflict deep and lasting impacts on the poor and vulnerable who are least able to withstand their onslaught³¹. The Economic Commission for Latin America and the Caribbean (ECLAC) has published technical reports on the environmental vulnerability of Caribbean SIDS and Barbados in particular³². The position of ECLAC is that “vulnerability is, in part, a function of gender”. Barbadian strategies to address climate change identifies the need to support the poor and disadvantaged who have fewer resources or buffers against climate change or other shocks³³. These strategies do not explicitly present strategies to advance gender equality in addressing issues of climate change sectorally, nor systematically. Poverty data in Barbados reveals that, a larger percentage of women are represented and affected in the poor and vulnerable groups because more women find themselves in poverty brackets. As stated in the CDB Gender Assessment Report, “In

²⁹ Integrated Solutions, Funding Proposal -3R-CReWs Project, 2021

³⁰ <https://www.weforum.org/agenda/2020/07/gender>

³¹ Government of Barbados (2012), Barbados Growth and Development Strategy 2013–2020, Economic Affairs Division, Ministry of Finance and Economic Affairs, Bridgetown, p. 2.; as cited in CDB CGA (2017)

³² Ibid, Pg 73

³³ Ibid, Pg 73

Barbados there is a high rate of poverty among female-headed households. 19.4%, of female-headed households are poor, compared to 11.5% of male headed households, and 15% of all households” (Baksh & Associates, 2016B)³⁴.

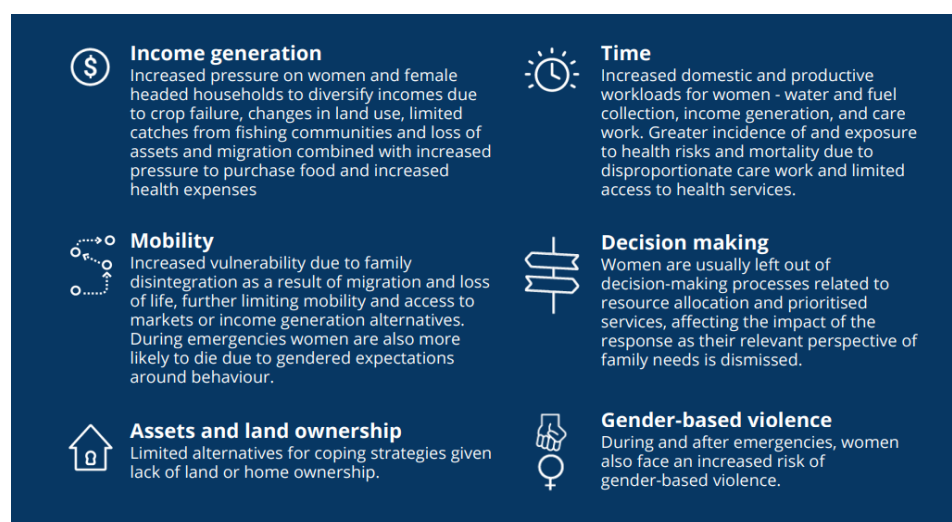


Figure 1 Gendered Impact of Climate Change in the Caribbean³⁵

The IUCN believes that it is possible to strengthen climate action by promoting gender equality and that since women and men experience climate change differently, gender inequalities will persist around the world, affecting the ability of individuals and communities to adapt. They posit the view that by recognizing the important contributions of women, as decision makers, stakeholders, educators, carers, and experts across sectors and at all levels, can lead to successful, long-term solutions to climate change. Women have also proven to be leading the way towards more equitable and sustainable solutions to climate change.³⁶

3.1.3 Gender Responsive Disaster Preparedness and Recovery in the Caribbean

The World Bank’s Global Facility for Disaster Reduction and Recovery GFDRR and the Caribbean Resilience Facility (CRF), published a desk review on Gender Responsive Disaster Preparedness and Recovery in the Caribbean (as cited in footnote)³⁷. The main findings of the desk review are:

³⁴ Ibid, Pg 73

³⁵ Study of the Impacts of Climate Change on the Women and Men of the Caribbean. Pilot Programme for Climate Resilience Countries (Informed by FAO 2017b)

³⁶ <https://www.iucn.org/resources/issues-briefs/gender-and-climate-change>

³⁷ [https://openknowledge-worldbank.org/bitstream/handle/10986/35215/Gender-Responsive-Disaster-Preparedness and Recovery in the Caribbean](https://openknowledge-worldbank.org/bitstream/handle/10986/35215/Gender-Responsive-Disaster-Preparedness-and-Recovery-in-the-Caribbean)

- Women in the CRF countries experience various gaps in access to health, social protection, vocational and technical education, productive resources, economic opportunities, and voice and agency, all of which are associated with their increased vulnerability to disasters and climate change hazards;
- Although indicators for educational attainment—measured as the number of years of education—are almost the same for men and women in the CRF countries, a significant gender gap persists at the level of technical and vocational programs that might prevent women from improving their access to income-earning opportunities, particularly in the recovery and reconstruction programs in post-disaster settings;
- Strong evidence shows that in resource-poor nations, disasters make women more vulnerable to reproductive and sexual health problems, suggesting the necessity to include women’s health as a critical component of disaster relief programs;
- An analysis of social indicators in the CRF countries demonstrates various gender gaps in social protection, all of which make women more vulnerable to disaster impacts due to their lower safety nets compared to men;
- Women’s domestic burdens and their primary responsibility for the well-being of their families limit their economic opportunities and increase burdens imposed on them in disaster situations;
- Higher unemployment rates, access to fewer economic opportunities, lower wages, vulnerable employment, and insufficient social support systems for domestic workers result in women’s limited access to safety nets compared to men, making them more vulnerable in disaster situations;
- Although there are no exact statistics about the number of women in DRM and climate change related decision-making positions, a general trend, based on the number of women in national parliaments, and ministerial and managerial positions, points to significant decision-making gender gaps.
- Country reports from the CRF countries provide evidence of persistent violence due to inadequate protection measures for GBV victims, limited responsive care, treatment, psychosocial and other supportive services, and sub-culturally institutionalized violent practices. Importantly, the trend exacerbates during disasters and in post-disaster settings; and
- A lack of focus prevails with men and boys’ vulnerability and capacity analyses, compounded by limited efforts to engage men and boys adequately as allies to achieve gender equality in disaster preparedness and recovery ³⁸

³⁸ [https://openknowledge-worldbank.org/bitstream/handle/10986/35215/Gender-Responsive-Disaster-Preparedness and Recovery in the Caribbean](https://openknowledge-worldbank.org/bitstream/handle/10986/35215/Gender-Responsive-Disaster-Preparedness%20and%20Recovery%20in%20the%20Caribbean)

3.1.4 Unpaid Work

A case study undertaken (Bobb, 2019), describes the challenges faced by persons of different gender when it comes to their access to clean water. Based on its findings, the study concludes that access to water is critical to one's quality of life and affects men and women differently. The case highlights the challenges of Wendy, a 34-year-old married mother of two children who resides in St. John, Barbados. For half of the year, Wendy's household comprises of herself and her two children: a single parent due to her husband, Bernard, who works overseas on the farm labour program and contributes financially to the household.

In summary, this case study (Bobb, 2019) indicates that the woman spends at least thirty-two hours a week doing paid work, and twice that time doing unpaid domestic work at home including, cooking, washing, gardening, caring for her children and the animals and fetching and storing water for domestic use. Men, on the other hand, spend approximately forty hours a week doing paid work but very little time doing unpaid domestic chores. Although this case study does not necessarily represent the situation throughout all of Barbados it does highlight, what appears to be, a common trend in the country. The CGA (2016), similarly identified that studies in Barbados have shown that women, in part because many are single parents, participate in income-generating activities in both the formal and informal economies as well as carrying out the majority of unpaid care activities.

3.1.5 Sexual and Gender Based Violence

The CGA identified that “patriarchal gender norms are often used to justify violence against women who do not ‘know their place’ with regard to remaining within the private, domestic sphere. These norms also support male control over the bodies of women and girls and entitlement to sexual pleasure, justifying sexual violence”³⁹. These findings were advanced as a result of studies conducted by the Bureau of Gender Affairs/ Caribbean Development Research Services in 2009 which found a prevalence of violence of 27% among adult women over the previous year. Correspondingly, A study on interpersonal violence in three Caribbean countries: Barbados, Jamaica, and Trinidad and Tobago, revealed that violent acts are most commonly perpetrated by a partner within a relationship (59.0% on male victims and 66.7% on female victims)⁴⁰. Important to note is that the study found that the levels of any violence decreased as the victim's ages increased—falling from 72.4% among the 15–18-year-olds to 67.3% among the 27–30-year-olds ($p = 0.03$). Reported physical violence fell from 66.2% among the 15–18-year-olds to 49.0% among the 27–30-year-olds ($p < 0.001$). Reported sexual coercion fell from

³⁹ *Ibid.*

⁴⁰ Le Franc E, Samms-Vaughan M, Hambleton I, Fox K, Brown D. Interpersonal violence in three Caribbean countries: Barbados, Jamaica, and Trinidad and Tobago. *Rev Panam Salud Publica*. 2008;24(6): 409–21.

60.3% among the 15–18-year-olds to 50.1% among the 27–30-year-olds ($p < 0.001$)⁴¹. For Barbados, of survey respondents 50.0% of women compared to 44.7% of men revealed experience of physical aggression within an intimate partner relationship. Similarly, 52.8% of women and 39.6% of men reported sexual coercion in Barbados. Reports of Domestic Violence across the Organization of Eastern Caribbean States increased during the COVID-19 lockdown. The UN Women identifies that Barbados, in particular, experienced an approximately 38 per cent increase in reported cases of domestic violence, many of which were intimate partner violence.”⁴²

While Gender Based violence is found to be more prevalent in intimate partner settings, it is also recognizably present in public spaces as well. There is however, limited information and no comprehensive study on Sexual and Gender Based Violence in the workplace in the Caribbean and specifically, in Barbados. The IFC identifies though, that 30%-50% of women in Latin America and the Caribbean have experienced sexual harassment at work⁴³. Positively, Barbados is one of three Caribbean Countries, also including Belize and the Bahamas with specific legislation which addresses sexual harassment⁴⁴.

In addition to CEDAW, Barbados has ratified key international and regional human rights instruments related to gender equality, namely the Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women. It has also ratified the eight core International Labour Organization (ILO) Conventions. In 2016, there were amendments to the domestic violence laws providing for more powers to the police as well as changes to the definitions of forms of domestic violence, including physical, emotional and financial abuse and harassment and the expanded scope to use of electronic means to perpetuate violence. The Employment Sexual Harassment (Prevention) Act was passed 2017⁴⁵ and provides an avenue for complaints where harassment occurs in the workplace.

The prevalence of violence against women, and in particular young women and girls, warrants a cautious approach to implementing community-based intervention under the 3R-CReWS Project. Importantly, is that the BWA recognizes the risks that may arise from infrastructure works within communities. Projects like the 3R-CReWs bring people and social transformation to the communities in which they operate. They may therefore invariably exacerbate existing risks of Sexual and Gender Based Violence. Addressing gender-based violence, including exploitation and harassment, in infrastructure projects

⁴¹ *Ibid*

⁴² <https://gisbarbados.gov.bb/blog/domestic-violence-increased-with-covid-19/#:~:text=In%20the%20first%20two%20quarters,reported%20incidents%20of%20domestic%20violence>. Accessed: August 15 2022

⁴³ www.ifc.org/wps/wcm/connect/42b50ce3-3867-48b2-9818-acfbc4080ea2/202007-IFC-GBV-COVID+D.pdf?MOD=AJPERES&CVID=ndOei13

⁴⁴ <https://www.world-psf.org/en/barbados-pilot-study-gender-based-violence-public-sector> accessed August 15th, 2022

⁴⁵ *ibid*

is important because construction sites can become spaces where female workers, people with diverse gender identities and those who live or work in the vicinity are victimized⁴⁶. SGBV must be prevented to ensure wellbeing of vulnerable groups in project vicinity. Similarly, if not intentionally addressed, sexual and gender-based violence can easily be ignored⁴⁷. Women working in traditionally male-dominated contexts, in isolated workspaces, or in occupations or shifts in which they constitute a small minority may be at increased risk of SGBV⁴⁸.

The Project's Environmental and Social Impact Assessment puts forward that

“Section 154 of Barbados law is implicit about Sexual Exploitation, Abuse, and Harassment (SEAH) but covers all aspects. By interpretation, it articulates that the government will not tolerate SEAH in any form. This is also the commitment CCCCC and GCF. Therefore, stringent policies and safeguards are instituted at all levels of projects funded by CCCCC and the GCF. In instances where it has been determined that a person has been a victim of SEAH the AE/IE/IA will consult and work with the relevant government ministry, department, or NGO to ensure that the victim is placed at a safe location and protected from further SEAH”.

The project must also be cognizant that while prevention of SGBV is the most effective strategy, it must also provide an avenue for victims of SGBV to complain and to receive redress for their victimization. Therefore, the Project's Grievance Redress Mechanism must be sufficiently responsive to allow for internal and external filing of SGBV and SEAH related complaints.

3.1.6 Barbados Agriculture Sector -Gender, Climate Change and Water

The 3R-CReWs Project identifies that agriculture continues to compete with other sectors for scarce resources such as water, land, labour and capital⁴⁹. With the GOB's increased call for greater domestic food production through new and improved methods of farming as a response to climate change, there is identified need for greater water availability, for irrigation purposes. The Project conceptualizes that this should lead to improved food security and health and well-being of the population. The outputs of Component four (4) are critical to social acceptance and to spur demand. The component targets farmers and communities. In particular, the development of incentive programme and public awareness. During consultations with farmers, including with the Association of Women in Agriculture, there was overwhelming consensus that Farmers are supportive of the use of treated wastewater. According to the Baseline study for the project, farmers have been experiencing the impact of prolonged dry periods. This has resulted in loss of income.

⁴⁶ <https://atalayar.com/en/blog/infrastructure-works-without-gender-based-violence> access August 15th, 2022

⁴⁷ <https://blogs.iadb.org/sostenibilidad/en/the-many-faces-of-sexual-and-gender-based-violence-in-development-projects/>

⁴⁸ <https://blogs.iadb.org/sostenibilidad/en/the-many-faces-of-sexual-and-gender-based-violence-in-development-projects/>

⁴⁹ Integrated Solutions, Funding Proposal -3R-CReWs Project, 2021

Farmers were equally cited as seeing benefits of nutrients in the water for the crop.

Farmers, particularly small farmers, are significantly impacted by both increased production costs and lacking rainfall for rainfed crops⁵⁰. Further to this point, an article was published recently in the Barbados Advocate (2020), pleading with the government to give farmers financial support for their water bills. Specifically, Mr. James Paul, the Chief Executive Officer of the Barbados Agricultural Society, expressed concern for farmers, explaining that the garbage and sewage contribution, imposed through BWA utility bill, has resulted in a spike in agriculture operational costs (Barbados Advocate 2020). This, in combination with the increase in cost for irrigation, profit decrease from lost crops, places farmers and the agricultural industry at a heightened risk.

Agriculture is more than a job for many women in the Caribbean. Women engage in subsistence agriculture to support their families, while men are more likely to engage in cash crop production⁵¹. The CGA puts forward that “although much of subsistence agriculture is not captured in employment or GDP statistics and is carried out by the so-called ‘economically inactive’ population, it is nevertheless a critical contributor to the livelihoods of poorer people and is also important for food security”. Many of the small subsistence plots and smallest farms in Barbados are female owned. Larger farms tend to be owned by males. Close to 80% of all farms in Barbados are owned by men (79.7%)⁵².

The UNWOMEN’s 2017 gender analysis of employment in six (6) CARICOM countries provided data on share of women’s employment in a number of standardized occupations in Barbados. The Analysis utilised the ILO’s International Standard Classification of Occupations (ISCO) definition “a set of tasks and duties performed, or meant to be performed, by one person, including for an employer or in self-employment”, in the classification and computation of the share of women’s participation in occupational categories. Correspondingly, the analysis found that men are more likely than women to be employed in agriculture in Countries like Barbados, although this disparity is not as glaring as in other CARICOM countries like Jamaica and Guyana.

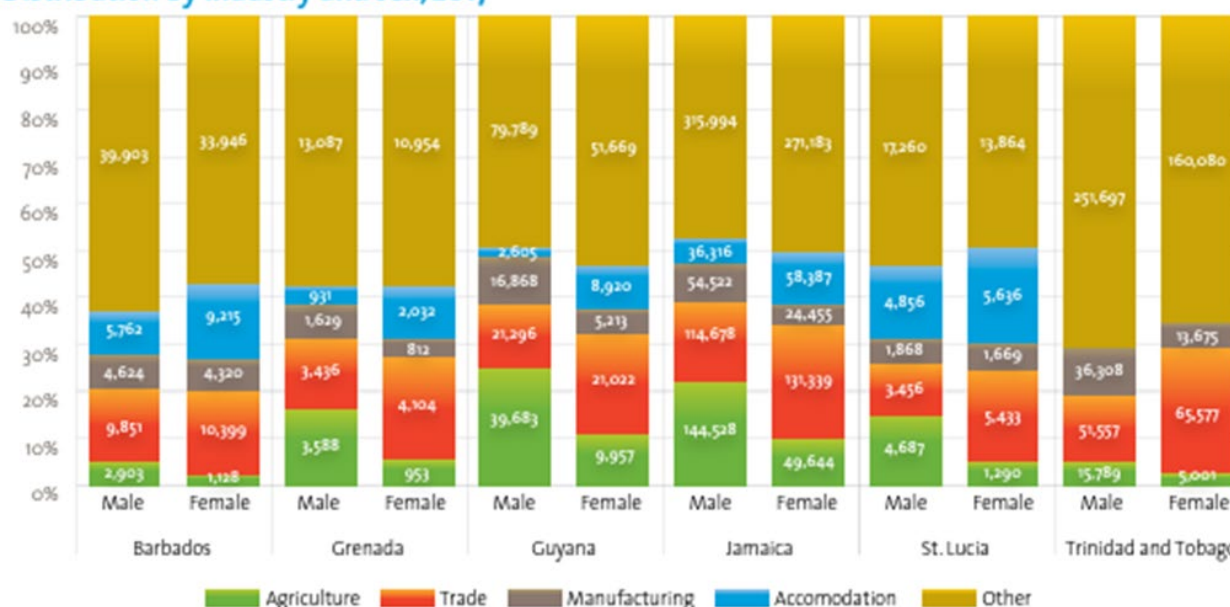
Figure 2: Share of women and Men by Occupation in Six Caribbean Countries

⁵⁰ <https://www.fao.org/americas/noticias/ver/en/c/419202/>

⁵¹ CGA Barbados, 2016

⁵² *Ibid.*

Distribution by industry and sex, 2017



Source: Taken from Status of Women and Men Report: A Gender Analysis of Labour Force Data and Policy Frameworks in Six Caribbean Countries, UNwomen, 2017

Women's non-ownership of resources, like land and proof of formal work, that could be used for collateral constrains their access to credit for agriculture and also for productive work in other sectors. For some women, they rely on a male relative with collateral to apply on their behalf, others, like unmarried women, are not able to do so⁵³. Facilities that allow for farmers to access credit to improve irrigation or access to reclaimed water should therefore be aware of barriers that women often face to formally access finance for upgrade to their agricultural production.

The Association of Women in Agriculture in Barbados was consulted as part of larger stakeholder engagement process during the development of this 3R-CReWS Project. This representative group is seen as a critical stakeholder for the project in soliciting further acceptance of women farmers of use and reuse of wastewater and by-products. Similarly, this group is identified as a conduit for sharing information and opportunities with women farmers so that they can benefit from access to information on use of reclaimed water, but also access to reclaimed water for irrigation.

3.1.7 Barbados Fisheries Sector - Gender, Climate Change and Water

A case study undertaken by the Gender in Fisheries Team and UWI Centre for Resource Management and Environmental Studies as part of the 2014 Barbados Green Economy Scoping Study for the GOB argued that the fishing sector is an important water user. The

⁵³ *Ibid.*

activities of the fisheries sector along with the value change would be significantly affected by any changes in water quantity and quality. The main findings of the study were:

- 3.1.2.1 In Barbados, fisheries have been an important part of the national economy and culture from the earliest recorded times;
- 3.1.2.2 Men typically dominate the harvest sector in Caribbean small-scale fisheries while women play a critical role in the post-harvest sector in fish processing and trade, and in ancillary activities, such as financing;
- 3.1.2.3 Post-harvest processing activities consume and waste large quantities of water; and
- 3.1.2.4 The fisheries sector provides vital benefits to society and is also an important water user.

Climate change presents key challenges for small-scale fisheries and mariculture and is projected to have significant impacts on the lives of people dependent on these activities. Changes in ocean temperature and chemistry are already affecting the distribution and abundance of marine organisms. The precise magnitude of future impacts of climate change on fisheries, in particular small-scale fisheries, are still poorly understood, since they involve numerous interactions with fragile and complex ecosystems that are often already affected by other stressors such as overfishing or pollution⁵⁴. Assessing and managing risks to increase resilience and decrease poverty, inequality, and food insecurity are thus a priority of international cooperation⁵⁵.

3.1.8 Non-Potable Water Generation, Distribution and Re-use

The overall implication of the available body of work suggests that sustainable aquifer yields could decrease by around 50% by 2050. Approximately 57 Mm³/yr is extracted from groundwater resources for domestic potable water distribution and an estimated 11 Mm³/yr is extracted for agricultural irrigation⁵⁶. The exact amount of water extracted by agriculture is much higher as most points of extraction are un-metered private wells. A study on Non-Potable Water Generation, Distribution and Re-use: Analysis of Alternatives, which was published in May 2021. The study identified that wastewater that is not safe for drinking but can be recycled or reclaimed for specific non-potable purposes. The study examined three forms of non-potable water namely; a) stormwater which is water from precipitation such as rain; b) greywater which is wastewater generated in households or office buildings from sinks, showers, baths, washing machines or dishwashers. It is easy to treat and reuse

⁵⁴ Climate change and small-scale fisheries: A climate risk management perspective for the Caribbean 17 December 2021 - <https://reliefweb.int/report/haiti/climate-change-and-small-scale-fisheries-climate-risk-management-perspective-caribbean>

⁵⁵ *Ibid*

⁵⁶ Integrated Sustainability (2021). Feasibility Study See Section 1.1.2

greywater for the purposes of flushing toilets, landscaping, crop irrigation and other non-potable uses; and c) blackwater which is wastewater generated from toilets and contains pathogens such as faeces, urine water and toilet paper from flushed toilets. The paper identified at least three ways to tackle the issue of water scarcity such as; a) increase water rates, to encourage less water wastage; b) offer subsidies to deprived and vulnerable groups of the society; and c) promote collaboration between public and private sectors to develop innovative public-private partnership project models for the generation of water.

It is understood that approximately 8% of the properties in Barbados are connected to a wastewater collection system that directs their sewage to a wastewater treatment plant. This means that approximately 92% of the population, that are not connected, use some form of on-site wastewater disposal and treatment system. Most of these low-income persons comprise of women and vulnerable groups.

It is recognized that the BWA, and the GOB, are currently initiating a project to develop more wastewater collection and treatment systems, especially in Zone A areas that are located over sensitive aquifer and groundwater well abstraction locations. This initiative will most likely positively impact some of the vulnerable communities, including low-income households and women in particular.

Reuse of wastewater produced by the Project should increase the water supply and consequently minimize the negative impact of climate change on women and vulnerable groups with respect to social and economic issues. Therefore, Women and other vulnerable groups stand to benefit from the recycling and reuse of reclaimed water because this will be contributing to a reduction in water scarcity and make more quantities of water available to women as the larger consumers of water domestically.

While the potential benefit to women and vulnerable groups is noted, it is also important to note the financial, informational, and unpaid work barriers that may impede women heads of households and women led enterprises, including those in agriculture from benefiting equally from access to reclaimed water. The 3R-CReWS Project cannot work on the assumption that increased connections automatically translate to increased access. Barriers that impede payment for wastewater services at the domestic level and connection to services that allow for use of reclaimed water for small business, including small farmers is an important consideration in costing wastewater service provision and also in determining the parameters for the RAFF support. Wastewater Strategies, Operational plans and policies must equally consider these barriers to sustained access to services by vulnerable groups.

Although wastewater is not always at the top of the agenda when discussing gender issues, women are more likely to be affected by lack of wastewater treatment, reuse, and poor management than men because they are more in direct contact with food, faeces, childcare, and healthcare.

There are concerns about the amount of pesticide, hormones, medication, and chemicals in wastewater which could seriously affect the health of all genders (Witmer, 2017).

3.1.9 Disaggregated Data for Wastewater

Other gender related issues associated with the wastewater sector are the absence of adequate sex disaggregated data. At both the national and international levels, there is a lack of sex-disaggregated data on water and sanitation. “As early as 1995, the Beijing Declaration called on international organizations, NGOs and the private sector to develop ‘gender-sensitive databases, information and monitoring systems’ on ‘the impact on women of environmental and natural resource degradation, deriving from, inter alia, unsustainable production and consumption patterns, drought, poor quality water, global warming, desertification, sea-level rise [...]’”.⁵⁷ This absence of data results in a gap in service delivery and in ensuring equitable access to water and sanitation services. This gap was demonstrable during the development of this Gender Assessment. Based on roles performed by men and women, and resources accessible to them, the analysis has hypothesized that in the domestic sphere, the availability of affordable reclaimed wastewater can be beneficial for women in their performance of care roles and may lessen the load of their double duty as breadwinners and as carers. The dearth of research and data on the wastewater sector, and more specifically, the absence of sex-disaggregated data, makes it difficult to present strong evidence-based actions.

3.1.10 Social Impact of Upgrading Wastewater Systems

It is recognized that a full ESIA was developed for this Project. As such, this section is meant to highlight some of the high-level issues related to how this Project may impact the public, but further details should be drawn from the full ESIA and ESMP.

SIDS generally lack the capacity to establish and utilize legal and administrative frameworks that define the responsibilities for the various government departments with a mandate to design and execute projects having a need for environmental impact and social assessment. The discharge of primary treated wastewater into the ocean has the potential to cause marine environment and health problems resulting in a negative impact on citizens, tourism, and the economy in Barbados.

Upgrading the wastewater systems also has several positive impacts, such as improved wastewater collection, while higher treatment should result in improved health conditions for the people especially women and other vulnerable groups. Reducing the amount of wastewater discharged into the ocean should also have a positive effect on the marine environment that relates to tourism as the main economic sector. “An increase in potable water security by eliminating potable water demands for applications that can use non-potable reclaimed water, as well as the increased use of reclaimed water would also allow the agricultural industry to be more resilient to the impacts of climate change”⁵⁸.

⁵⁷ United Nations. (1995). Beijing Declaration and Platform for Action. Op. cit. As cited in 3 Oxfam, 2020 Achieving Sustainable Development Goals 5 and 6

⁵⁸ Integrated Solutions, Funding Proposal -3R-CReWs Project, 2021

If energy can be generated from the waste, this helps the country's 2030 renewable energy goals, that should lead to a better quality of life for all citizens of Barbados. Also, if farmers benefit from using reclaimed water, that contains nutrients as fertilizer, for irrigation, then farmers, of all genders, could lower operating costs. Finally, if reclaimed water (from the treatment plants) is used to recharge the aquifer, then this provides more water reliability to all the people in this country - which helps businesses, and residents and tourists. This would provide farmers with a more reliable water source, as the level of water in the wells are often negatively impacted during droughts.

There are many social benefits to be derived from the implementation of this Project including short-term employment during the preparatory and construction phases of the project as part of efforts to upgrade the wastewater systems in Barbados. It will also allow for the integration of gender across all adaptation and mitigation initiatives, build long-term partnerships among stakeholders and improve capacity building and research for informed climate action and training for BWA employees (Tortz et al., 2018). In this regard women stand a great opportunity to be included in the implementation of the project to address issues of concern to them because there are many more men employed in the wastewater sector.

Educating the public on the positive social impacts of this Project is recommended by inviting the public, like schools, to visit the Project and gain first-hand knowledge of the positive activities. Every effort should be made to avoid discrimination on the Project as noted by (Husbands and Dey, 2002). A lack of communication and negative media coverage could affect the outcomes of the project (Husbands and Dey, 2002). One of the prerequisites for the Project success are good appraisal processes in conjunction with management and/or Contractors who possess the necessary motivation.

3.2 Stakeholder Mapping

The BWA Wastewater Division, is the primary authority with the responsibility to provide potable water and manage the collection, treatment, and disposal process of wastewater in Barbados (Isaacs, 2017). The Gender mapping identified individuals or organizations with an interest or concern about the Project. These individuals or organizations, as outlined within the Projects' Stakeholder Engagement report, are categorized as internal and external stakeholders of the Project.

3.2.1 Internal Stakeholders

The internal stakeholders include all persons operating within the BWA, who have a vested interest in the outcome of the Project. They contribute to the internal functions of the authority and affect its overall performance. The key internal stakeholders include the Board of Directors which is responsible for approving the strategic and operational plans, programs, projects along with their budgets, monitor implementation, evaluate, and

approve reports. Other internal stakeholders include the management and support staff of the BWA Wastewater Division which is responsible for developing the annual work plans and budgets, implement approved activities and reporting on progress. The BWA also reports directly to the Ministry of Transport, Works, and Water Resources.

Mapping of the internal stakeholders revealed that there is a gender imbalance in the ten-member Board with eighty percent of directors being men and twenty percent women. Therefore, the Board decisions relating to policy, oversight, and approval of Project plans, budgets and reports are influenced by men more than women. Similarly, as highlighted in Section 2, there is a gender gap of more men and women performing technical functions at the BWA management level.

3.2.2 External Stakeholders

In Accordance with the Project's Stakeholder Engagement Plan, the 3R-CReWS Project's external stakeholders include all persons or organizations with a vested interest in the outcome of the project but operate outside of the BWA. On the one hand, they express opinions on the operations of the BWA and in this way can influence its performance while on the other hand, they can be influenced by the work and the performance of the Authority.

At the national level, decisions relating to wastewater policy and legislation are made by the Parliament and the Executive. Therefore, the mapping of key external stakeholders covered parliamentary representatives, senators, and ministers. Mapping of the external stakeholders revealed that at the national level, there is a 60% gender gap among the 30 parliamentarians, a 14% gender gap among the 21 senators, and a 60% gender gap among the 30 Cabinet Ministers. Although it should be stated that not all ministries have direct influence or involvement over this Project. To see the full list of parliamentarians that are involved in this project (including a measure of their involvement in this Project), refer to Table B in the Stakeholder Engagement report. Consequently, decisions taken by the political directorate and the Cabinet of Ministers involved in this Project are influenced by men.

Table G: below, shows the gender distribution of the members of the Legislature and Executive branches of the Government of Barbados.⁵⁹

Table G. Gender Distribution and Gap of the Barbados Legislature and Executive

Institution	Total	Male	Female
House of Assembly			
Government Parliamentarian	29	23 or 77%	6 or 20%
Opposition Parliamentarian	01	1 or 3%	-
Total	30	24 or 80%	6 or 20%

⁵⁹ <https://www.barbadosparliament.com>

The Senate			
Government Senator	12	7 or 58%	5 or 46%
Independent Senator	7	4 or 57%	3 or 33%
Opposition Senator	2	1 or 5%	1 or 11%
Total	21	12 or 57%	9 or 43%
The Cabinet			
Cabinet Minister*	30	24 or 80%	6 or 20%

*It is noted that Barbados appointed its first female Prime Minister to head the Government in 2018 and was re-elected in 2022.

There are several other important external stakeholder organizations in the public sector, the private sector, and the civil society sector. The country first female Prime Minister was elected to a second term in 2022. Additionally, the country has its second female Governor General. In addition to social assistance, the Government places strong emphasis on facilitating and supporting women entrepreneurship and business development as one way of responding to rising levels of unemployment, retrenchment and to assist with the economy's recovery. Included are incentives for micro and small businesses such as grants, loans, technical assistance.⁶⁰

3.2.3 Stakeholder Feedback

As part of Stakeholder Engagement process, a questionnaire was administered to key stakeholders in Government Ministries, the private sector, community associations, the University of the West Indies Gender Studies Department and NGOs. In total, the survey was sent by email to 49 key stakeholders. With only 24 responding. Table H presents the disaggregated data on a survey among stakeholders to obtain their views on the questions relating to climate change and wastewater collection and treatment in Barbados. A comparison is made regarding the views expressed by men and women to identify similarities or differences between the genders. The acronyms used are shown at the bottom of this table for quick reference.

Table H Results from key Stakeholder Surveys

No.	Questions	Women's Response %		Men's Response %	
Q1	Is your home or business connected to a sewer and waste/water treatment plant?	Y:43	N:57	Y:43	N: 57
Q2	Do the current wastewater collection systems and treatment plants adequately protect the environment?	Y:43	N:57	Y:43	N: 57
Q3	Does the general practice of discharging untreated wastewater to the ground protect the island ground water quality?	Y:29	N:71	Y: 71	N: 29

⁶⁰ 2021 Barbados NDC Update – July 2021

Q4	All homes, offices, businesses and industries should be connected to a sewer and wastewater treatment plant?	Ag:43	D:57	Ag: 86	D:14
Q5	How concerned are you that climate change could reduce the quantity of drinking water available?	VC:85	MC:15	VC:58	MC: 42
Q6	How concerned are you that climate change could reduce the quality of drinking water?	MC:57	NC: 43	VC:57	MC:43
Q7	How concerned are you that climate change could increase the cost of drinking water?	VC: 42	SC:57	VC:86	SC:14
Q8	How concerned are you that climate change could increase the cost of wastewater collection and treatment?	VC: 71	NC:29	VC:43	NC:57
Q9	How concerned are you that decreased drinking water availability could affect Barbados' economy?	MC:86	SC:14	MC:71	SC:29
Q10	How concerned are you that lack of sewage collection and treatment could affect Barbados' economy?	MC:57	SC:43	MC: 71	SC:29
Q11	Do you think wastewater treatment benefits the environment?	AL: 86	MoC:14	AL:71	MOC:29
Q12	How important do you think it is for the government to invest more money to increase water supply?	VI: 85	Y:29	VI:71	Y:29
Q13	How important do you think it is for the government to invest more money to provide wastewater collection and treatment?	VI: 71	Y: 29	VI:71	Y:29
Q14	How concerned are you about using reclaimed treated wastewater to satisfy non potable (eg. Irrigation) water demands?	MC:14	NC:71	MC:29	NC:71
Q15	How concerned are you about using highly treated reclaimed water to recharge groundwater?	HC: 14	NC: 86	HC:14	NC:86
Q16	There are inadequate government standards and regulations in place to safely enable reclaimed water to be used to satisfy non-potable water demands.	Ag: 29	D: 71	Ag: 14	D: 86
Q17	How much in favor are you of implementing treatment technologies to recover water, energy and nutrients for wastewater?	Ag: 71	D:	29	Ag:

Q18	For the following statement please indicate how strongly you agree or disagree with it? (Only BWA customers connected to the sewer should pay for the cost of wastewater collection and treatment)	Ag: 57	D:	43	Ag:
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*Acronyms

Y: Yes/ N: No	VC: Very Concerned	SC: Somewhat	NC: Not Concerned	VI: Very Important
Ag. Agree D: Disagree	MC: Much Concerned	MoC: Moderately	HC: Highly	AL: A lot

The survey demonstrated that the opinions of men and women stakeholders who responded varied on the effects of climate change related to the wastewater management system in Barbados. Men and women shared similar views on the numbers and adequacy of sewer connection to treatment plants as a protection to the environment, reduction of quality of water through climate change, economic impact, benefits of wastewater to the environment, government greater investment to increase water supply and treatment, use of reclaimed treated wastewater for irrigation, inadequate government standards and regulations to enable reclaimed water to be used for non-portable water and agreed to recover water, energy and nutrients from wastewater. These views reflect a lack of understanding of the extent of the wastewater problem in the country. This calls for greater public education in this regard.

All respondents expressed concern that climate change would affect the quantity of drinking water with 85% of women and 58% of men rated as very concerned. This is reflective of the statistical data showing that in general, women engage in more water related tasks within the household, such as cooking, cleaning, and washing, and therefore tend to report greater amounts of water usage (Suchorski, 2009). 78.5% of respondents expressed concern that climate change could reduce the quality of drinking water, although the responses show that women are on the two extremes of this response with 57% of women very concerned, while the remaining 43% are not concerned about drinking water quality. At the community level, households are concerned with the impact of water scarcity, including availability of quantity and quality water to households, interruptions in water supply, costs associated with improved wastewater collection systems, and environmental impacts of using wastewater. With the high number of female-led households, and given that women, children and elders are primary users of water, a concerted effort to address these concerns from a gendered and rights-based approach is paramount. Strengthened capacities of BWA technical and administrative staff on application of gender-sensitive/responsive approach to implementation would seek to mitigate the concerns of the primary water users, including other vulnerable groups.

All respondents felt that the impacts of climate change would affect the cost of drinking

water in Barbados with 64% expressing they are very concerned (33% females, 67% males). It is important to note, that of the survey respondents, 43% of females and males respectively, indicated that they are connected to a sewer and/or wastewater collection plant. These, respondents felt that the current system adequately protects the environment and felt that all homes should be connected to a sewer and/or wastewater collection plant. More men than women agreed all homes, offices and businesses should be connected to a sewer treatment plant. However, more women are of the view that only BWA customers connected to sewer should pay for the cost of wastewater collection treatment plant.

Neither men nor women appear to be concerned about using highly treated reclaimed water/wastewater to satisfy non portable water demands like irrigation. The reaction is positive and project strategies can capitalize on this general acceptance to increase connection to waste water treatment systems and eventual non-potable use of reclaimed water.

In summary, there are many issues where both men and women share similar views on wastewater collection and treatment among the stakeholders in Barbados. There are, however, instances where there are differences in the views of men and women, especially in the area of discharging untreated wastewater to the ground. Another area where men appear to differ from women is in the area of willingness to pay for wastewater improvement. Men are seemingly more concerned with paying for wastewater improvement. Women typically need more water during their daily activities and might be willing to pay more to satisfy their needs.

Willingness to Pay

A Limited Willingness to Pay Survey was initiated in 2021 where 75 individuals (19 females, 56 males) participated. All respondents indicated that they were representing households (there were no business responses). The administration of this survey was halted as GOB requested a hold on the process due to unfavourable economic conditions. Trends were examined from this data and are included in the 3R-CReWs Project Feasibility Study. From the information gleaned, the data collected can provide some perspective on the impact of cost and willingness to pay for upgrades to the current system to address gaps in wastewater collection and treatment. 45% of respondents (8:4.75 male to female) provided responses regarding increasing the monthly costs for upgrading the wastewater management system in Barbados including for planning, construction, operation and maintenance. The average cost respondents were willing to pay was BDS \$15.94 monthly. The data showed no glaring differences in women's and men's willingness to pay. A gendered analysis of cost must take account for the wage gap between males and females, especially considering the 8:4.75 male/female ratio in the willingness to pay survey. Similarly, it is important to emphasize that the findings of the willingness to pay survey does not bare statistical significance given its limited number of respondents relative to the population of Barbados. Therefore, strategies to expand connectivity to treatment systems must ensure prior, gender responsive consultations with male and female headed households and must document their views whether divergent or

similar. The UWI IGDS put forward in a KII that the Welfare Department periodically makes provisions to supply water to those who can't afford to pay their water bills. The bills have doubled recently as a levy for wastewater was added now. Management is now included on the water and wastewater bill. It was confirmed that the minimum charge is now (\$37.5) United States dollars per month which includes solid waste.

Consistent with survey issued to key stakeholders, 75% of respondents agreed that Barbados was experiencing a shortage of clean water. While 93% felt that Barbados would benefit from improved wastewater management. UWI-IGDS identified that there are several households that do not have flushable toilets and some people are squatters making sanitation a big issue. There are still several people who use pit latrines.

The UWI-IGDS opined in a KII that using reclaimed water may be difficult for people to accept. It might be a hard sell for many. Recently several blue pipes were replaced by black pipes. Although the use factor was identical a lot of people resisted because they thought the black pipes were giving dirtier water. Interestingly the limited Willingness to Pay survey revealed that 82.8% of respondents agreed that if wastewater was treated to the highest level, it could be distributed in a pipe system for uses other than drinking, including watering household gardens (91%) and household toilet flushing (95%). Of note is that only 46% agreed that this type of water is useful for laundry. There was no noticeable divergence in views of men and women. It remains important however that the project utilized gender sensitive communication campaign to address reservations that men and women may have regarding the use of wastewater for non-potable purposes.

Table I Survey Responses on Awareness of Wastewater System Improvement Needs and Cost

No.	Questions	Responses	Participants %	Gender Renonse
1	Where does wastewater go when it leaves your home?	-Into a septic tank or hole/well (that does not connect to a soak-away field) -Into a septic tank or hole/well that connects to a soak-away field (that soaks into the ground) - Other	37% of 62 =23 21% of 62=13 42% of 62=26	M=13, F=10 M=7, F=6 M=14, F=12
2	How often is water supply interrupted?	-Rarely once or twice for the year -Only a few times per year -Other	38% of 60=23 35% of 60=21 27% of 60=16	M=13, F=10 M=12, F=09
3	How satisfied are you with the water flow?	-Satisfied -Neutral/Unsure -Dissatisfied	53% of 58=31 29% of 58=16 18% of 60=11	M=17, F=14 M=09 F=07 M=06
4	Aware of Water conditions	Aware Not aware	66% of 60=38 34% of 60=20	M=21, F=17
5	Water aspects that are very important	-Very important -Not important	93% of 57=53 7% of 57=4	M=29, F=24
6	Average amount from respondents	Willingness to pay \$15.94 Bds monthly Willingness to pay below \$15.94 Bds monthly	100% of 34=34 67% of 34=23	M=19, F=15 M=13,
7	Maximum in additional amount	Willingness to pay above \$15.94 Bds monthly	33% of 34=11	M=06 =05
8	Do you agree/disagree with these statements: -Barbados has a shortage of available clean Water -Discharging wastewater into sea	Average agreed 84 % of total responses Average Neutral 14%, of total responses Average Disagree 2%, of total responses	84% of 56=47 14% of 56=8 2% of 56=2	M=26, F=21 M=04 F=0 M=01, F=01

9	Use of treated wastewater for non-drinking purposes Use of wastewater for crops	Approve 82%, of total responses Neutral 11%, of total responses Disapprove 7%, of total responses	82% of 56=46 11% of 56=6 7% of 56=4	M=25, F=21 M=03, F=03 M=02, F=02
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Ability to Pay

Labour force participation is lower among women than men, but similar percentages are classified as unemployed (8%). The difference in labour force participation is accounted for by the consistently higher participation of men in formal employment and of women in the so-called ‘economically inactive’ population⁶¹. The CGA identified the stratification of labour based on sex. Men and women are mostly economically active in distinct work areas, albeit having some areas of congruence. This may account for gender wage gap identified to be 18.9% (average male wage 18.9% higher than average female wage). Men are mostly employed in the areas of construction, mining and quarrying; wholesale and retail; transportation and storage; and public administration and defence. The largest numbers of female employees are in wholesale and retail; accommodation and food services (tourism); health and social work; education; and public administration and defence.

A UN women study (2017) in six Caribbean countries, including Barbados found that in all countries, the rate of employment increases with increasing education. The differences in employment vis a vis educational level was largest for women in St. Lucia and Barbados, where fewer than a fifth of women with primary education are employed as against approximately seven in every ten women with tertiary education. In Barbados only 19% of women and 33% of men respectively with a primary education were employed compared to 69% of women and 72% of men with a tertiary education being employed⁶². The 2017 study revealed a constant pattern across countries is that the employment rate is lower for women than men at each of the three levels of education. The study put forward that “The gender difference in this respect tends to be smaller for those with tertiary education than for those with only primary education. Given that women tend to be more highly educated than men in these six countries, the lower employment rates for women suggest the economy is not taking full advantage of the available human resources. Conversely, many women are not reaping the full potential”.

In addition, studies have identified that poverty is concentrated among households headed by women, which account for 47.5% of all households. The rate of poverty in female-headed households is 19.4%, compared with 11.5% in male-headed households and 15% in all

⁶¹ Country Gender Assessment (CGA) Barbados – Caribbean Development Bank, January 2016

⁶² A Gender Analysis of Labour Force Data and Policy Frameworks in Six CARICOM Member States- STATUS OF WOMEN AND MEN REPORT-PRODuCTive EMPLOYMENT AND DEcENT WORK FOR All, UNWomen, 2017

households. Poor female-headed households also have the highest dependency ratio, with 74.8% non-earners per household compared with 68.6% in poor male-headed households and 49.9% in the total population⁶³. The UWI-IGDS confirms that single women head 57% of households in Barbados. Among the households, these include migrant women caring for critically ill relatives or those with disabilities⁶⁴.

To this end, strategies for expanding access to sewage treatment systems and associated cost, need not only take into account male and female headed household differences but should also consider the educational level of household heads in determining the ability to pay for services. Consideration of Gender intersectionality in this regard is important and may serve to inform the articulation of national wastewater strategies, legislation and RAFF.

FINDINGS

The Gender Impact Assessment is the third part of the gender analysis process model which involved determining the gendered needs of the wastewater sector and services as well as an assessment of the impacts (main/ancillary), risk perception, and equality of distribution of the Project benefits. Using the GCF's Gender Assessment template, the results of the gender analysis have been organized in a manner to respond to five key questions; What is the context? Who does what? Who has what? Who decides? and Who benefits? Details of responses received are presented under separate headings in the sub-sections that follow.

4.1 Gender Context

The GOB seeks to develop and implement this climate resilience wastewater systems Project to address several national development challenges facing the country. Some of the factors that are regarded as relevant to the Project include:

- Citizens of Barbados generally experience limited access to the wastewater collection and treatment facilities of the BWA;
- The absence of an approved national gender policy and lack of provisions in wastewater legislation currently in force makes it imperative for the GOB to intensify efforts to create a more enabling legal environment for implementation of the project. Moreover, the project provides an opportunity for update of the wastewater legislation and masterplan in a gender responsive manner that includes meaningful consultation with women and women's representative groups;
- The Project presents an opportunity to expand the availability of sex-disaggregated data for water and sanitation services. The increased availability of data may help

63 Country Gender Assessment (CGA) Barbados – Caribbean Development Bank, January 2016

64 KII- UWI IGDS

close policy and practice gaps in providing equitable access to water services;

- The BWA and other public agencies with mandates to provide wastewater services to citizens are expected to give due consideration to address the social, political, and economic problems that citizens face and to collaborate with each other to resolve them;
- Authorities operating in the wastewater sector, such as the BWA, have a responsibility to consult citizens, as key stakeholders, on issues that affect them to ensure that national wastewater policies are aligned to the UN-SDGs. More, specifically, these institutions are also expected to highlight SDG-5 by adopting appropriate strategies and plans which promotes gender equality in the wastewater sector;
- Given that climate change impacts on the wastewater sector is a serious challenge to national development in Barbados, it is imperative that efforts to improve wastewater management focus on initiatives to achieve more sustainable and equitable services. It is also important for the Project to identify the various causes of vulnerability and take steps to build on the diverse knowledge and capacities within the communities/households that can be used to make wastewater services more resilient to climate-related shocks and risks.;
- Citizens would appreciate if the Project would include governing structures and operating mechanisms to foster gender sensitive stakeholder participation in the design, implementation, and evaluation of the Project. The project should refrain from operating under the assumption that initial connection to wastewater services immediately translates to benefits for more women than men. It is important to consider sustainability of access by reviewing wastewater costing structure and incentive programmes.
- Stakeholders should also be offered opportunities to better understanding the gender roles and power relations among different men and women involved the Project. An examination of the different roles, rights, needs, and opportunities of men and women, boys, and girls will help provide guidance on measures required to promote the gender equality using relevant gender entry points, policies, and identify opportunities for enhancing gender equality within the project
- Barbados has made recognizable Human Development gains and has made improvements in legislation that tend to gender equality. However, there remains inequities. Linked to those, is the unequal power relationships often detrimental to the promotion and protection of women and girls. The prevalence of SGBV, though higher in intimate partner relationships is still present outside of the private sphere. Therefore, projects such as these need to promote a preventative approach to SGBV. This includes zero tolerance policy and code of conduct for project staff and staff interacting with communities. In addition, there has to be gender responsive complaint

mechanisms that prove useful for victims of SGBV, if prevention is not achieved. Gender sensitivity training is useful as well in addressing SGBV risks, however these are to be made mandatory to staff based on roles and functions.

- As an employer, the BWA should also seek to provide a non-discriminatory working environment that facilitates gender-balance in appointments and gender sensitivity in the decisions and actions of the project staff. The BWA also seeks to offer a safe working environment for its managerial, technical, and administrative staff and those assigned to the Project; and
- The project provides key stakeholders with a unique opportunity to undertake a stakeholder review of the existing policy and legal instruments as well as the main institutions making up the operating environment. It also allows the opportunity to strengthen policies related to gender equality and update and enact wastewater legislation and introduce regulations to guide the decisions and actions of staff within the BWA, the Wastewater Division, and the Project.
- During the Project implementation, it recommended that the GOB take steps to create an enabling legal environment by providing appropriate policy, legislative and institutional support where needed. The primary legislation that governs the operations of the BWA, is the BWA Act, of October 1980, Cap. 274a LRO, 1985. The Act is supported by the BWA (Sewerage Regulations), 1980, (S.I. No. 151 of 1980), and the BWA (Validation of Water and Sewerage Rates) Act, 2009.
- It is noted that some of these legal instruments are outdated because they have been in force for over forty years and as such, they are likely to limit the ability of the BWA to upgrade its systems and operations and do not necessarily reflect the needs of the wastewater sector and the Project at this time. Efforts by the relevant Ministries and Bureau of Gender Affairs of the GOB to advance gender equity and equality are commendable but more is still needed to be done.
- The BWA, and the Ministry of Transport, Works and Water Resources, should encourage the GOB, through the Ministry of Legal Affairs, the Bureau of Gender Affairs and the Department of Labour, to undertake a comprehensive review of the legal instruments and take steps to strengthen provisions for gender equity and equality. These Ministers should table an updated wastewater legislation that is gender sensitive in Parliament for enactment and should introduce updated supporting regulations as required.

4.2 Gender Roles

- With regards to the division of labour between men, women, there are more men than women employed in the technical professions (Allen et.al., 2016). In the case of the technical professions, this pattern is also reflected in the wastewater sector as a January 2021 staff survey indicates that the staff complement of the Wastewater Division is currently made up of 83% men and 17 % women.

- Currently, the BWA has more men involved in the technical aspects of the Wastewater Division management role, while women serve in more administrative capacities. It is therefore important for the BWA to conduct a gender needs assessment of its wastewater services team and adopt an employment promotion strategy to bring about a more gender balance among BWA wastewater employees;
- Generally, there appears to be more women employed in the informal economy as vendors, speculators, janitors, baby-sitters, shop operators and in the service industry and professions such as nursing and teaching. In the labour force, there are more men employed in the formal economy while conversely more women are in the 'economically inactive' population which is classified as the informal economy. Women are typically selected to care for children and the elderly. Among the elderly, men are more likely to live alone than women.⁶⁵.
- In general, more men are employed in the formal economy as information technologists, technicians, professionals such as engineers and occupy top managers or chief executive. Most of these jobs require long hours of specialized training, they are also more competitive, require high level of knowledge and skills and they are generally more secured and are high paying jobs. Given the technical nature of this wastewater Project, it is expected that it will attract more men than women. While the BWA's gender sensitivity training for its employees in collaboration with the UWI-IDGS is commendable, there are more steps required to increase participation of underrepresented groups in technical fields and in leadership positions at the BWA. Trainings are voluntary and may not be as impactful in ensuring transformational change if intended recipients do not participate. The BWA making trainings mandatory for certain staff, such as those in HR and even for members of Management, will go further to ensuring that cultural challenges to gender equality are addressed. Additionally, if the BWA acts as a champion for women in STEM, this may influence female youth, who have not selected career paths, to view STEM as a viable career option for them.
- There are more men involved in providing wastewater services and importantly in waste water decision making. On the other hand, women are the dominant users of water in the Domestic Sphere. Improved wastewater services, resulting from this Project, should result in more women having access to water to carry out daily chores efficiently and effectively. However, how provision of services is rolled out and the cost of services may be impacted by who makes decisions. Therefore, it is important for the BWA to ensure that women are consulted and provided opportunities for sustained access to water. Also important is that at the Project Board level, women and women's representatives should have equal participation in determining how the benefits of the project are ascribed.

⁶⁵ Allen, C. F & Maughan, J. & Baksh, J & Associates, January (2016). Gender Situation in Barbados CDB Country Assessment (CGA)

- With respect to household management, most poor households are headed by women, and therefore women stand to benefit from any treatment in wastewater and increase in the quantities of non-potable water, if it is within their ability to pay for it. Women are usually the ones who spend longer hours doing unpaid domestic work such as cooking, gardening, collecting, and storing water for domestic use, caring for children and the elderly, and the animals.⁶⁶

4.3 Resources

- Despite the general acceptance of the principle of comparable worth, more men than women are likely to be employed in positions related to finance, technology, information services, and the legislature, management, and technical professions⁶⁷. Consequently, more men than women are likely to have greater control over and benefit from resources. There are some women whose economic status also improve because they gain access to resources through marriage, common law relationships and inheritance.
- The CGA identifies that the majority of self-employed persons, employers and owners/managers of businesses are men. Research from the University of the West Indies (UWI) as cited by the CGA, revealed the following difficulties for women's entrepreneurship and ownership:
 1. Lack of access to credit, especially because of lack of collateral to secure loans;
 2. Weaker professional networks than men;
 3. Lack of knowledge about procedures for incorporation, registration and the taxation system;
 4. Care roles
- The inability to produce job letters is also a greater barrier to access to finance for women than for men as women have lower levels of employment in the formal sector. The CGA posits that the formality of credit institutions and a history of discrimination may make women, specifically socio-economically deprived women feel uncomfortable to access services⁶⁸. Risk taking aversion may compound vulnerable women's comfort in accessing services that are necessary to acquire resources such as land or for enterprise start up or expansion.
- Barbados has universal access to primary and secondary education such that 90.6%

⁶⁶ Bobb, D., (2019), Understanding Unequal Relations of Gender in the Caribbean, Wendy Water Woes: A Barbados Case Study, UWI-IGDS, BWA, GCF, CCCCC.

⁶⁷ Allen, C. F & Maughan, J. & Baksh, J & Associates, January (2016). Gender Situation in Barbados CDB Country Assessment (CGA)

⁶⁸ CGA Barbados, 2016

of attendees' complete tertiary education while 93.4% complete primary education. As well, more young women 40 years and below, have completed university education and 50% of immigrants as against 30% locals have university education (Beuermann, 2017). While education is accessible to both women and men, in recent years, more women tend to pursue higher education continuously for a longer period through distance learning to help them secure better paying jobs. The UN Women's gender analysis on employment trends in six Caribbean countries identified that women need to have higher educational levels than men if they want earnings at the same level as those of men. Students who stay longer in the education system are likely to begin doing economic work later, however, once employed the nature of the jobs secured ensures increased earning potential.

- Conversely, data shows that more men than women enrol for technical programmes than women. Trotz and Issacs (2017) posits that low enrolment of women in technical programmes can be linked to gender norms, roles and perceptions that act as a barrier for women's greater participation in these fields. "Water and wastewater treatment usually fall under the field of Civil and Environmental Engineering. In the Caribbean, the main training institutions with this program are the University of the West Indies St. Augustine Campus in Trinidad and Tobago, the University of Technology in Jamaica, and the University of Guyana. The percentages of females have remained constant over nearly a decade with ~30% and ~45% enrollment between 2006 and 2014 for undergraduate and graduate engineering programs. This is significantly different from the overall UWI enrollment which showed the proportion of females to males was 68.5% to 31.5% for total University enrolment, with the St Augustine campus having 63% female enrolment for 2013/2014"⁶⁹.
- There are Policies and laws that provide for equal access for women and men to land holdings and tenure in Barbados. These have been in place since 1968⁷⁰. "The Town and Country Planning Act (1968) (Amended 2003) provides for land and water rights and legal security of tenure for all individuals irrespective of gender"⁷¹. However, available evidence according the Country Gender Assessment suggests that men own the bulk of land and other productive resources.
- The fact that men predominantly own land is much linked to the fact that the majority of large agricultural land holdings are male owned and therefore men are predominantly large-scale farmers, while women farm at a smaller scale and for subsistence. Mechanisms used to target farmers for information sharing about the use of reclaimed water needs to take this into consideration. Similarly, efforts at engaging the private sector as partners and as potential beneficiaries of RAFF resources similarly need to consider the needs of small-scale farmers. This has bearing of livelihood and

⁶⁹ <https://www.greenclimate.fund/document/gender-assessment-fp060-water-sector-resilience-nexus-sustainability-barbados-wsrn-s>

⁷⁰ CGA Barbados, 2016

⁷¹ *ibid*

food security for vulnerable populations.

- Access to monetized resources has impact on this project since the persons with more financial resources are better able to pay for wastewater services⁷². Therefore, it is reasonable to advance that more men than women will be able to afford water and wastewater services⁷³. Men also tend to have greater access to technical knowledge and skills upgrading in wastewater because there are fewer women employed in the sector. Incentives for development of domestic reuse and reclaimed waster systems may benefit more men as a result.

4.4 Decision Making

There are several levels of decision making associated with the implementation of this 3R-CReWS Project. Brief discussions on the different categories of decision makers and the type of project decisions they are required to make follows.

- Parliamentarians as policymakers decide on the laws that influence gender equality practices in Barbados. At present, parliament has 20% female and 80% male representation with a first woman Prime Minister and a first woman Senate President. In the twenty-six members Cabinet of Ministers, 73% of them are men and 27% are women including the Prime Minister. Since there are more men than women in Parliament, most of the decisions taken are likely to reflect the thinking of men. In the absence of gender sensitivity training, male parliamentarians are slow to recognize the need and urgency of making provisions for gender equality in legislation;
- Cabinet ministers make public policy decisions to address issues relating to gender equality and wastewater infrastructure and services. They may encourage men and women as key stakeholders in the wastewater sector to participate in formulating wastewater or gender policies in so far as these will affect them;
- The current ten member BWA Board, which was appointed in 2018 for a three-year term, comprise 7 men or directors and 3 women directors. With the current gender imbalance, the Board decisions will be influenced by the male directors. Women and girls are key water and sanitation stakeholders, but this has not translated to practice within the sector in Barbados. Of the fifty-eight staff attached to the Wastewater Division 49 (or 84%) of them are men while only 9 (or 16%) are women. Similarly, with the gender imbalance, support level decisions will also be influenced by the male staff;
- In the households, men normally make most of the decisions as the bigger contributor to the household income. Although women have made strides through education and in gaining paid employment in management and supervisory levels in the public and

⁷² Ibid.

⁷³ Ibid

private sector, they are relied upon in doing most of the domestic work and making decisions in the household. However, like much of the English-Speaking Caribbean, there is a substantial number of single female heads of households. Therefore, consultation processes need to be mindful that stakeholder engagement activities reach and document needs and decisions of these households.

4.5 Beneficiaries

- The Project across all its components targets 136,220 people in Barbados. Appendix 22b of the Funding proposal breaks down the project beneficiaries and identifies that 66,748 (49%) men and 69,472 (51%) women are likely to be direct beneficiaries from the implementation of this Project because those who stand to benefit directly include users of water wastewater services, which include the entire country. There is a similar distribution of indirect beneficiaries Important to note is that this is reflective of the overall population of Barbados. A more detailed look at the beneficiaries of the Project by component suggest that the project is taking an approach of leave no one behind. More specifically, the Project positions that 100% of female headed households and 100% of male headed householder respectively will benefit from the installation of decentralized wastewater management systems in zone A. It is however important to identify the recurrent costs that are associated with the connection to improved wastewater services. Given that women do most of the domestic and care work, they are greater users of water and wastewater services and will benefit more than men from the implementation of the project at the domestic level. On the other hand, a key beneficiary group identified by the Project are farmers, in this regard, there will be higher numbers of male beneficiaries than male beneficiaries given the share participation of male to female in Agriculture. The Tariff structure for water used for irrigation should be mindful of the often-small scale agricultural activities performed by women vis-a vis larger commercialised agriculture often headed by men. Important is that the Project works along with the Association of Women in Agriculture to ensure that women farmers (including for subsistence) receive information on the benefits of the used of reclaimed water and are also supported with access to reclaimed water services and other by-products of treated waste water.
- The GOB will also benefit directly from the project because it will bring about long-term savings in energy cost (through the implementation of a possible related biogas facility) and would be able to take credit for improving the lives of citizens. Though not a direct benefit, savings may translate to improvement of services for customers of the BWA.
- As the people/customers connected to the BWA wastewater collection system benefit from the improved quality of wastewater services delivered to them, so should the BWA, considering they will have a more satisfied customer base. This should also lead to more customers paying their utility bills consistently. The BWA Wastewater Division should also handle fewer breakdowns in the infrastructure (if the

recommendations for an improved operation and maintenance programme that involves a more proactive approach is initiated, as outlined in the Conceptual Design report) and should receive fewer complaints from customers.

- Several institutions from public, private, and civil society sectors, such as the Bureau of Gender Affairs, the Office of Poverty Alleviation, the UWI-IGDS, the Barbados Union of Teachers Union, and the Barbados National Women's Organization, with mandates to address gender-equality issues should benefit indirectly from implementation of this Project. These institutions will benefit from participation in stakeholder consultations, information sharing, improved wastewater services and greater organizational productivity. Conversely the Project should facilitate the advancement of the mandates of these institutions by ensuring their input into project activities for the benefit of vulnerable groups, including women.

MAINSTREAMING GENDER INTO THE PROJECT CYCLE

In keeping with the requirements of the Gender Analysis Process Model, part four will focus on mainstreaming gender into this Project cycle and giving a gender perspective to the activities highlighted at the initiation, formulation, implementation, monitoring and evaluation and closure stages of the project. This exercise entails clarifying the Project goals and activities planned to be implemented at the different stages of the project, examining the level of access/control that women, men and LGBTQIA persons have over Project resources, examining the distribution of Project benefits to ensure that is equity and equality among women, men and LGBTQIA persons, and their level of participation in making important Project decisions.

5.1 Project Initiation Stage

- At the initiation stage, the focus of mainstreaming gender in this Project cycle is to clarify the main goals, assumptions, priorities, roles and responsibilities, schedule, deadlines, and risks of the Project. This should make sure that the Project team has made every effort to review and revise where necessary, the stakeholder engagement plan for the project to ensure that key stakeholders, including representative groups of vulnerable people, and women are engaged on wastewater services and gender equality issues.
- In terms of priorities, it is noted that the Project comprises of several components, as outlined in the Logical Framework. With respect to the Project governance function, the BWA should pay attention to the establishment of a PSC that is gender-balanced and the appointment of members to it who are gender sensitive. Similarly, the BWA should apply the principles of gender-balance and gender sensitivity when considering appointments to the positions of Project Manager and technical/administrative support staff.

5.2 Implementation Stage

Project management should entail executing activities in accordance with the Project Planning Frameworks. The implementation of the actions in the Gender Actions of the projects are to be systematically mainstreamed into project activities to ensure meaningful implementation. This stage also requires the Project Manager to hold status review meetings to ensure that the Project is on schedule, and to document all changes to the Project plan. It is also significant to undertake Project research to gather empirical data for the purpose of making evidence-based decisions on matters relating to planning, budgeting, staffing, and coordinating the implementation of Project activities. Additionally, empirical data also provides the basis to evaluate the gender sensitivity practices of Project officials and advocating for changes in gender equality policies and laws.

The 3R-CReWS Project has by design set the foundation for implementation of gender responsive actions and ultimately gender mainstreaming. Gender Considerations are mainstreamed across all four components of the project, but are more strongly visible in Components 1, 3 and 4. These considerations have informed the Gender Action Plan (Appendix 3).

The Project’s proposal puts forward that “the intended impact of the gender mainstreaming action plan is to (i) increase the participation of women and LGBTQIA persons in decision making and raise the awareness of men, women and vulnerable LGBTQIA communities on gender issues to minimize discrimination against vulnerable groups including LBTQIA; and (ii) improve the quality of life for vulnerable residents, especially women, and children of Barbados in the areas of health, agriculture, and employment”.

The following outputs and activities have been included in the project to advance these gender mainstreaming goals⁷⁴:

Output 1.4: Decentralized treatment plants or cluster treatment facilities installed

Activity 1.4.1: Construct two small (cluster) decentralized wastewater collection and treatment demonstration systems in Zone A locations to produce reuse quality water for domestic/commercial non-potable water applications. This activity will ensure that consultative processes capture the views of both male and female headed households in a manner that informs the roll out and connection of services to these two communities. Mixed methods of engagement will be employed, including focused conversations with women’s groups and female farmers. Additionally, in the implementation of this activity the project will ensure that communities are protected from sexual and gender-based violence and gender-based discrimination. The Project will therefore set up mechanisms to capture community concerns in a gender sensitive manner and that will prohibit exploitative, abusive and harassing conduct by workers of the BWA, contractors and subcontractors. Under this activity, the project will ensure that a code of conduct that includes prohibitions for SEAH and SGBV is developed. This will apply to design consultants’ staff, BWA staff, as well as contractors and their staff. Under this activity, there is opportunity to open spaces for female employment in traditionally underrepresented areas. The Project should ensure therefore, that hiring practices in decentralized treatment facilities include non-discriminatory actions and promotes female employment.

Output 3.1: Improved capabilities of water technical personnel to operate, maintain and monitor and implement climate change adaptation planning strategies for wastewater management

Activity 3.1.1: Develop and provide specialized and customized training to support the

⁷⁴ Sourced Directly from Project Funding Proposal

operations and maintenance of wastewater collection and treatment facilities including photovoltaic equipment. This activity will include gender sensitivity and climate change training for BWA employees and private sector

Activity 3.1.2: Update Standard Operating Procedures (SOP) and Operational Manual that addresses the requirements of the upgrades, preventative maintenance, operator safety, and environmental monitoring, including risks posed by climate change and gender and social inclusion considerations.

Output 4.1: Governance and planning roadmaps enhanced to enable use of reclaimed water in a controlled and regulated manner.

Activity 4.1.1: Undertake a legislative review to promote the Planning and Development Act, Wastewater Reuse Bill and other related legislations for enhancing wastewater effluent quality, treatment options and re-use requirements and applications. The review will also include recommendations for strengthening - private sector engagement, public-private partnerships, building codes, resiliency to climate change and equal opportunities and access to males and females.

Activity 4.1.2: Develop a water and sanitation master plan that includes an optimal combination of decentralized, cluster and centralized water reclamation and reuse applications, with the centralized reclaimed water being transmitted and used for agricultural irrigation and/or industrial use (such as lower cost of reclaimed water transmission). This strategy will also take into consideration the social, gender-related and climate risks in the design and prioritization of water reuse strategies.

Output 4.2: Mechanisms developed/expanded to encourage the adoption of wastewater treatment and reuse applications by private individuals and businesses.

Activity 4.2.1: Develop a strategy and action plan to engage the private sector in the provision and adoption of wastewater treatment technology and the utilization of wastewater by-products such as activated sludge. This includes conducting an assessment to identify opportunities for public-private partnership in the water and wastewater sector, especially for the expansion of the decentralized onsite cluster wastewater systems. The strategy will also promote gender equality and women empowerment

Activity 4.2.2: Undertake a review and identify recommendations for a gender sensitive and socially inclusive incentive programme to encourage conservation, recycle, re-use.

Activity 4.2.3: Expand the Revolving Adaptation Fund Facility (RAFF) to provide resources for the adoption of decentralized onsite wastewater systems. The management of the expanded RAFF will ensure to promote gender equality and social inclusion as a requirement.

Output 4.3: Gender Sensitive Public Education and Awareness Campaign Implemented.

Activity 4.3.2: Develop and implement a Gender Sensitive Public Awareness Campaign

for community and visitors (tourists) through workshops, videos, community town hall meetings, site tours (demonstration of the plant technology and by-product reuse) and consultations. Consultations will include, but will not be limited to representative groups of vulnerable communities, including with the Association of Women in Agriculture.

Activity 4.3.3: Develop a 3R-CReWS Project Web Page and social media accounts, which is dedicated to transparent measures of reporting, knowledge products, identify/host a link to the Redress Mechanism and provide update to all stakeholders on the project activities. This page will include, to the best extent possible, functions such as audio, sub-titles and/or sign language to encourage social inclusion from disabled population. The project's webpage will also ensure to report project results disaggregated by gender, where possible.

The Project's Implementation arrangements will promote gender mainstreaming in the management and governance structures.

In addition to the gender sensitive results and activities flagged above, the following implementation strategies will be utilized by the project implementation unit to further strengthen gender considerations in the day-to-day operations of the project:

1. There will be gender sensitive stakeholder consultations throughout the lifetime of the project that will aim to engage women's groups and other vulnerable groupings (all Components)
2. CCCCC Procurement policies, which promote adherence to the Centre' Gender Policy and Action Plan
3. Monitoring of indicators will disaggregate information by sex, where possible
4. The AE's gender specialist will be available to provide technical advice and quality control for the mainstreaming of gender in the results and activities identified above, as well as to support the analysis of the sex disaggregated monitoring and evaluation information collected routinely to inform planning and decision making on gender mainstreaming, including the early identification of possible unplanned negative gender issues emerging because of the project's activities.
5. The Project PSC will strive to ensure gender balance and will include a representative from the Barbados Bureau of Gender Affairs. The Project Manager will present to the PSC a report on the Project's Gender Action Plan annually.
6. All members of the Project Management Team will receive gender sensitivity training at the inception of the project and thereafter mandatorily participate in Gender Sensitivity training sessions.

Table J Gender Implications of Project Component Activities

Components and Outputs	Activities	Gender Considerations
<p>Component 1: Wastewater Reclamation and Reuse</p> <p>Outcome 1: To enhance availability, management and use of tertiary level reclaimed water to improve the water sector's resilience to climate change. The BSTP will be upgraded from a CAS to a CAS-4Stage Bardenpho system and 2 onsite decentralized treatment plants (cluster) will be installed in 2 communities in Zone A locations to produce a high-quality effluent that is biologically and chemically safe. The effluent from the upgraded plants will be utilized for non-potable water applications including irrigation and aquifer recharge. This is expected to reduce the extraction of groundwater leading to reduced aquifer saltwater intrusion, and increased availability of groundwater during dry periods.</p>		<ul style="list-style-type: none"> - This will enhance the capacity of persons who are the greatest victims of climate change. Many more women stand to benefit from any increased resilience of infrastructure in the wastewater sector.
<p>Output 1.1: The Bridgetown Sewage Treatment Plant is upgraded to treat wastewater to a tertiary water-quality standard.</p>	<p>Activity 1.1.1: Design, procure and convert/upgrade the existing conventional activated sludge (CAS) biological treatment process at the Bridgetown Sewage Treatment Plant to tertiary filtration and disinfection for achieving national reclaimed water-quality standards.</p>	<ul style="list-style-type: none"> - Efforts to reduce energy cost and conserve wastewater treatment capacity for sanitary sewage will enhance the conditions of vulnerable persons particularly households headed by women and those in poverty. This is best done by ensuring that these persons are engaged and that costing structure allows for continued access to services by vulnerable people.
<p>Output 1.2: Tertiary treated reclaimed water is available to supplement non-potable use</p>	<p>Activity 1.2.1: Install reverse osmosis (RO) membrane filtration systems to reduce the total dissolved solids concentration of the reclaimed water produced at the BSTP</p> <p>Activity 1.2.2: Install a 9Km pipeline and 6 aquifer recharge wells (injection wells) going from the BSTP for irrigation and aquifer recharge.</p>	<ul style="list-style-type: none"> - Ensure that a code of conduct that includes prohibitions for SEAH and SGBV is developed. This will apply to design consultants' staff, BWA staff, as well as contractors and their staff. - Ensure that hiring practices in decentralized treatment facilities include non-discriminatory actions and promotes female employment. - Ensure that small farmers and female farmers have equitable access to water for irrigation and are informed of opportunities for access. - Ensure that 2 communities in zone A are consulted appropriately and that they are aware of redress options if affected by the project.
<p>Output 1.3: Decision-support tools and</p>	<p>Activity 1.3.1: Implement a sewer monitoring programme that will include the installation of</p>	<ul style="list-style-type: none"> - This includes redress options for victims of SGBV.

Components and Outputs	Activities	Gender Considerations
infrastructure implemented to mitigate potential climate change risks to the wastewater collection and treatment systems	<p>flow measurement and rain-gauging equipment at the BSTP to identify and address sources of inflow and infiltration to the sewer. Mechanisms that identify and reduce or mitigate vulnerabilities in the wastewater collection systems will also be investigated.</p> <p>Activity 1.3.2: Establish on-site laboratory facilities and personnel at the BSTP to generate influent and effluent water quality data to inform operations control strategies that optimize operations and reduce energy consumption and GHG emissions.</p> <p>Activity 1.3.3: Implement a Computerized Real-time Management System (CMMS) at the BSTP to inform decision making and climate resilient building</p>	<ul style="list-style-type: none"> - Vulnerable women and girls in communities where decentralization plants are to be installed should be protected from exploitation and violence. - The low-income sector of the population stands to benefit from the major outcomes of the project, and this will improve their quality of life and bridging the gap between high and low-income earners. Many women living in poverty will benefit the most. This is done where costs are kept minimal to ensure continued access to service. - This will contribute to improvements in the quality of life for women and other vulnerable persons. - Women play a critical role in climate activities and additional knowledge and skills in this area will minimize risks in response to adverse effects of climate change. - A reduction in energy requirements will be of great benefit to women who form the larger percentage of persons living in poverty. - A saving for men who are heads of their households.
Output 1.4: Decentralized treatment systems or cluster treatment systems installed	Activity 1.4.1: Construct two small (cluster) decentralized wastewater collection and treatment demonstration systems in Zone A locations to produce reuse quality water for domestic/commercial non-potable water applications.	<ul style="list-style-type: none"> - Any increase in the water supply will enhance the quality of life for more women in their domestic and care roles. - Women spend a great deal of their time fetching water for domestic use and use large quantities in the field of work. - Ensure increased participation of women in the production and use of reclaimed water, Women should benefit from any improvement in the efforts by BWA to collect and measure wastewater influent and effluent water samples to implement control strategies as these efforts could improve the quality of wastewater service - Women have been experiencing great challenges to maintain a clean environment in the home and the workplace. An improvement in the quality of life and reduce time lost to collect and store water for use. - Drought conditions resulting from climate change are likely to cause serious water shortages in Barbados which can pose great

Components and Outputs	Activities	Gender Considerations
		challenges for women who are primarily care givers for children and the elderly.
<p>Component 2: Renewable Energy and Energy Efficiency in Wastewater Treatment</p> <p>Outcome 2: Climate resilient low carbon operations achieved at BSTP. This will be realized by: 1)installing grid-tied Photovoltaic (PV) Renewable Energy Systems to offset increased power consumption associated with the centralized treatment plant process upgrades using Category 3 hurricane resistant solar panels; 2) implementing automated controls and energy efficiency measured within the upgraded centralized treatment processes to reduce the overall energy footprint and reduce GHG emissions; and 3) installing sludge dewatering equipment to improve energy efficiency and reduce the overall GHG and CO2 emissions associated with the biosolids.</p>		<ul style="list-style-type: none"> - Women are very vulnerable in the time of disaster. However, any effort to reduce exposure to climate risk to allow speedier adaptation by victims. - Regular power outages could disrupt water supplies at critical moments which could negatively affect the quality of life for women consumers who rely on the service for sanitation and consumption. - Potential lowered energy requirements, that could result in lower customer fees, will be of great benefits to persons who have challenges with paying utility bills. Even if utility fees are not lowered for most customers, considerations should be made to lower utility costs to vulnerable communities. Lower operational costs for the BWA, through means such as biogas and more solar, will certainly provide service to accelerate recovery from these disasters.
<p>Output 2.1: Energy efficiency and renewable energy technologies are implemented</p>	<p>Activity 2.1.1: Install a grid-tied Photovoltaic (PV) Renewable Energy Systems to offset increased power consumption associated with the centralized treatment plant process upgrades using Category 3 hurricane resistant solar panels</p> <p>Activity 2.1.2: Implement automated controls and energy efficiency measures within the upgraded centralized treatment processes to reduce the overall energy footprint and reduce GHG emissions.</p> <p>Activity 2.1.3: Install sludge dewatering equipment to improve energy efficiency and</p>	<ul style="list-style-type: none"> - An increase in water supply will improve productivity in agriculture by having access to adequate water for irrigation. - Preventing the contamination of ground water will make it possible to increase the supply of water and generate economic activities among the more vulnerable persons like women headed poor households. - Energy efficiency if translated to cost savings may have positive impacts on the cost of wastewater and water service provision, therefore having positive benefits for poor households (the majority of which are female headed)

Components and Outputs	Activities	Gender Considerations
	reduce the overall GHG and CO2 emissions associated with the biosolids.	
<p>Component 3: Capabilities to operate, maintain, expand and monitor wastewater and related renewable energy technologies</p> <p>Outcome 3: Enhanced capacity and capability to support the preventative maintenance and climate resiliency programmes.</p>		<ul style="list-style-type: none"> - Increases in women's participation in the sector at technical levels and managerial levels may help advance policy options that are more favorable to vulnerable households and small enterprises
<p>Output 3.1: Improved capabilities of wastewater technical personnel to operate, maintain and monitor and implement climate change adaptation planning strategies for wastewater management</p>	<p>Activity 3.1.1: Develop and provide specialized and customized training to support the operations and maintenance of wastewater collection and treatment facilities including photovoltaic equipment</p> <p>Activity 3.1.2: Update Standard Operating Procedures (SOP) and Operational Manual that addresses the requirements of the upgrades, preventative maintenance, operator safety, and environmental monitoring, including risks posed by climate change and gender and social inclusion considerations.</p> <p>Activity 3.1.3: Develop and implement a risk management framework to support the sustainable management of BWA's operations.</p>	<ul style="list-style-type: none"> - Develop a specialised Women in STEM Internship programme relative to the 3R-CReWS Project. - SOPs should ensure that it is reflective of the needs of vulnerable people and underrepresented groups within and outside of the BWA. - Strategic engagement with community groups, including women's groups and LGBTQIA groups to ensure that Strategic and Operational plans consider the needs of women and vulnerable groups a gender-responsive approach and that there is community-wide buy-in. - The low energy requirements will be of great benefits to persons who have challenges with paying utility bills. - Risk management framework for the BWA should include risks of gender-based violence, as well as other social and gender related risks. - Women should be exposed to the benefits to be derived by the initiatives in the wastewater so they can have a greater awareness and appreciation of this project. - There will be the need for greater involvement of women in the wastewater for them to make meaningful contributions and help expedite the process by lobbying for changes in the sector. - Where possible, the Project will aim for parity in the number of individuals trained, nevertheless, women will be strongly encouraged to participate in the technical training programs thereby addressing the decision-making gap for women in technical thematic areas.

Components and Outputs	Activities	Gender Considerations
		<ul style="list-style-type: none"> - The education materials should be designed with gender sensitivity in mind so all persons will be made aware of the groups which should be given priority. - The staff in the sector should be trained with a focus on gender equality to minimize the level of resistance that could hamper the progress of the project. - those directly affected. - The Wastewater sector will need to continue its gender sensitivity training to ensure that there is gender balance in the content and application of the policies and legislation. - Efforts should be made to secure the financial and human resource with gender balance as part of its focus to enhance the skills of technical professionals in combating climate change. - Data collection should be disaggregated for easy access and use in ongoing works in the project.
Output 3.2: A strategic plan is developed to guide the replication of water treatment facilities along the west coast	Activity 3.2.1: Investigate and develop a strategic plan for the installation of water treatment facilities along the west coast corridor for augmenting water supply and protecting the west coast ecosystem.	<ul style="list-style-type: none"> - Develop a specialised Women in STEM Internship programme relative to the 3R-CReWS Project. - SOPs should ensure that it is reflective of the needs of vulnerable people and underrepresented groups within and outside of the BWA. - Strategic engagement with community groups, including women's groups and LGBTQIA groups to ensure that Strategic and Operational plans consider the needs of women and vulnerable groups a gender-responsive approach and that there is community-wide buy-in. - The low energy requirements will be of great benefits to persons who have challenges with paying utility bills. - Risk management framework for the BWA should include risks of gender-based violence, as well as other social and gender related risks.

Components and Outputs	Activities	Gender Considerations
		<ul style="list-style-type: none"> - Women should be exposed to the benefits to be derived by the initiatives in the wastewater so they can have a greater awareness and appreciation of this project. - There will be the need for greater involvement of women in the wastewater for them to make meaningful contributions and help expedite the process by lobbying for changes in the sector. - Where possible, the Project will aim for parity in the number of individuals trained, nevertheless, women will be strongly encouraged to participate in the technical training programs thereby addressing the decision-making gap for women in technical thematic areas. - The education materials should be designed with gender sensitivity in mind so all persons will be made aware of the groups which should be given priority. - The staff in the sector should be trained with a focus on gender equality to minimize the level of resistance that could hamper the progress of the project. - those directly affected. - The Wastewater sector will need to continue its gender sensitivity training to ensure that there is gender balance in the content and application of the policies and legislation. - Efforts should be made to secure the financial and human resource with gender balance as part of its focus to enhance the skills of technical professionals in combating climate change. <p>Data collection should be disaggregated for easy access and use in ongoing works in the project.</p>
<p>Component 4: Capacities (regulatory, governance, awareness), buy-in and ownership within the private and public sectors are improved for climate resilient development planning for the water sector.</p> <p>Outcome 4: An enabling environment is created for wastewater technologies and use of reclaimed water. The enabling environment speaks to the legislation, organizational structures and competency and</p>		<p>Enabling Environment:</p> <ul style="list-style-type: none"> - The absence of legislation that make provision for standards to regulate the discharge of effluent in marine water poses a health risk for women who are the ones most likely to care for the sick.

Components and Outputs	Activities	Gender Considerations
strategies that need to be put in place. Achieving this outcome will significantly change the culture of the water sector in Barbados, building a level of partnership and professionalism that is needed to continually innovate and adapt to climate change, which in turn promotes sustainability for this project.		<ul style="list-style-type: none"> - It also creates a unique opportunity for the GOB to introduce appropriate water reuse policies and to enact legislation that make provision for gender equality in their contents. - Mechanisms should be put in place to improve regulatory systems to respond to climate change in a timely manner. These mechanisms must have gender balance in its composition. Public education must play a central role in the awareness building across sectors and government agencies. <p>Awareness Raising and Capacity Development</p> <ul style="list-style-type: none"> - BWA should design and implement an ongoing public education program to create awareness of wastewater issues. The unique issues for men and women should be highlighted. The BWA should continue with presentations by participants in Gender Sensitivity training. - Communication campaign should include varied strategies that appeal to demographic differences of the population.
Output 4.1: Governance and planning roadmaps enhanced to enable use of reclaimed water in a controlled and regulated manner.	<p>Activity 4.1.1: Undertake a legislative review to promote the Planning and Development Act, Wastewater Reuse Bill and other related legislations for enhancing wastewater effluent quality, treatment options and re-use requirements and applications</p> <p>Activity 4.1.2: Develop a water and sanitation master plan</p>	<ul style="list-style-type: none"> - A strategic awareness campaign on climate change and its impact on vulnerable persons is critical. Policies which will empower persons in authority in the sector to take the necessary actions to promote gender equality in the wastewater sector and climate change issues. - Ensure that campaign to gather acceptance on use of treated wastewater for non-potable purposes will need gender sensitive messages and targeting approaches. - The government Ministers need to be sensitized to be made aware of the importance of the legislation and how the project could positively impact the lives of women and the vulnerable in the society. - The education materials should be designed with gender sensitivity in mind so all persons will be made aware of the groups which should be given priority.
Output 4.2: Mechanisms developed/expanded to encourage the adoption of wastewater treatment and reuse applications by private individuals	Activity 4.2.1: Develop a strategy and action plan to engage the private sector in the provision and adoption of wastewater treatment technology and the utilization of wastewater by-products such as activated sludge.	

Components and Outputs	Activities	Gender Considerations
and businesses.	<p>Activity 4.2.2: Undertake a review and identify recommendations for a gender sensitive and socially inclusive incentive programme to encourage conservation, recycle, re-use.</p> <p>Activity 4.2.3: Expand and promote the Revolving Adaptation Fund Facility (RAFF) to provide resources for the adoption of decentralized onsite wastewater systems.</p>	<ul style="list-style-type: none"> - The staff in the sector should be trained with a focus on gender equality to minimize the level of resistance that could hamper the progress of the project. - Policy makers need to be made aware of the importance of the project and this should be driven from community-based groups and those directly affected. - The Wastewater sector will need to continue its gender sensitivity training to ensure that there is gender balance in the content and application of the policies and legislation. - Data collection should be disaggregated for easy access and use in ongoing works in the project. - Ensure that the update of the governing instruments of the RAFF is done through a gender informed consultative process. - Ensure that updates to the governing instrument continue to promote the needs of vulnerable groups including persons living in poverty. the adjustments to RAFF should ensure that women's needs and those of the vulnerable to inform rearticulation of the RAFF. - Efforts at engaging the private sector as partners and as potential beneficiaries of RAFF resources need to consider the needs of small-scale farmers.
Output 4.3: Gender Sensitive Public Education and Awareness Campaign Implemented.	<p>Activity 4.3.1: Re-educate communities, teachers, students, farmers and businesses about the impact of climate change on water resources and their impact on water quality and quantity (availability as well as the importance of water reuse activities and indirect potable reuse (IPR)) to building climate resilience in the Water Sector.</p> <p>Activity 4.3.2: Develop and implement a Gender Sensitive Public Awareness Campaign for community and visitors (tourists)</p>	<ul style="list-style-type: none"> - Greater awareness of climate threats and risk reduction will impact positively on women who carry the bulk of the burdens of the negative effects of natural disasters. - Raising awareness among consumers should contribute in bridging the gender divide and equality in the society. Women are very sensitive to the issues of wastewater reuse and careful consideration should be given on the advantages to national development and advancement. - The re-education program should target all sectors in the society especially those who are not in the traditional line of

Components and Outputs	Activities	Gender Considerations
	Activity 4.3.3: Develop a 3R-CReWS Project Web Page and social media accounts	<p>communication. Those with lower levels of literacy, limited access to ICT and low income and classified as poor will benefit the most.</p> <ul style="list-style-type: none"> - The materials prepared must be gender sensitive and cater for inclusion of a cross section of the society also aiming at visitors. - All mediums should be used especially electronic, social and print. Persons who are differently able need to be catered for and this will ensure that the vulnerable persons are considered. The emphasis on educating the youthful population for futuristic development and the older population to break from tradition is critical in the re-education campaign. - Ensure focus on unique gender issues on webpage. - Ensure results presented on webpage are disaggregated by sex.

5.3 Monitoring and Evaluation Stage

At this stage of the Project, the focus of mainstreaming gender equality should be to involve stakeholders on observing and documenting the status of Project procurement services and control quality activities as they are being carried out and providing feedback to maintain the desired standards and to ensure that gender equality issues are not compromised. Stakeholders are expected to comment on the outcome of milestone reviews conduct periodically on the Project. Monitoring should ensure that Project deliverables bear demonstration of gender mainstreaming and that all relevant data produced by the project is gender sensitive.

5.4 Project Accountability Stage

During the multi-year life of the Project, it is expected that at the end of each Project year, stakeholders provide feedback on the Draft Annual Progress and Financial Report which gives an update on the status of the Project activities as they are being carried out. The stakeholder team should focus on disaggregated data on the gender categories, an assessment of the distribution of resources relative to men, women and LGBTQIA persons and any actions required to improve gender equality and equity. Such feedback should be incorporated in the final Annual Report before it is submitted to the PSC for initial endorsement and then to the BWA for consideration and approval.

5.5 Project Closure Stage

At the Project closure stage, the Project Management team is also expected to provide feedback on the Draft Project Completion Report on whether the Project achieved its and confirm whether the activities were carried out in accordance with the requirements of the Gender Action Plan, in addition to the Log frame. Results presented should show disaggregated data, assessment of the distribution of resources relative to men, women and LGBTQIA persons and any actions taken to improve gender equality and equity encountered.

5.6 Project Organizational Structure

The Project should have an organizational structure that incorporates both the project governance, and the project management functions.

The PSC should be trained in gender sensitivity issues at the project initiation stage. It is important to ensure that the board has equitable representation of male and female members. The aim is to have representatives who are empowered make decisions for the benefit of all. The PSC should have specific representation from the Barbados Bureau of Gender Affairs. This representative is important to ensure that the needs of vulnerable populations, including women are fore fronted for consideration.

A suitable structure for project management should include and Social and Gender Specialist to champion the Project's gender sensitive stakeholder engagement exercises and to ensure that identified activities of the project is meaningfully mainstreaming gender in the implementation. The Specialist will also support in gender-based budgeting, monitoring and evaluation and reporting. This approach will assist the PSC in ensuring gender equality in the composition of each of these mechanisms and in demonstrating gender sensitivity when handling complaints lodged against the Project team. The Project Management Team should all mandatorily be trained in Gender mainstreaming at the initiation stage of the Project. The team should also participate in gender sensitivity trainings for BWA employees throughout the life of the Project.

5.7 Project Plans, Budgets, Reports

A prerequisite for ensuring effective gender mainstreaming in this Project cycle is the preparation of a Gender Action Plan (GAP). The actions recommended to mainstream gender equality are outlined in the (GAP) annexed to this Analysis. Complementarily, the Project should include provisions for clear identification of gender actions in the preparation of annual project plans and budgets to support the execution of approved gender-related activities each year. Additionally, the Project Manager should ensure budgetary allocations to support the execution of approved gender-related activities are in keeping with the GAP.

The Project's PSC should set guidelines for the Project Manager to prepare Annual reports on the progress of implementation of the Gender Action Plan in keeping with the approved scope, goals, specific objectives, and deliverables. They should include statements on gender sensitivity issues and provide dis-aggregated data on changes in project personnel, wastewater service users and external stakeholder participation.

5.8 Project Data Management

Members of the PSC the Project Manager and other project personnel require technical and general data on a continuous basis to make evidence-based decisions. The Project officials should therefore collect, store, and retrieve the data for analysis and manage data throughout the Project lifecycle. They should ensure that key stakeholders have the right data at the right time and are able to gain access to accurate and reliable Project information on a timely and consistent basis. With respect to Project personnel, it is necessary for the data to be disaggregated or broken down into gender categories relative to men, and women. Such data helps to ensure that project resources are used where they are needed most and to measure issues of gender equality and equity.

Limited disaggregated data, related to gender and wastewater currently available in Barbados hindered the process of conducting a comprehensive gender sensitivity

analysis for this Project. There is need for the BWA, and other relevant government agencies like the Barbados Statistics Department and Bureau of Gender Affairs, to put systems in place to collect, store and retrieve disaggregated data for use in planning and decision making throughout the Project cycle.

5.9 Building Gender Sensitivity Capacity

In recent years, the BWA has collaborated with the UWI IGDS on gender sensitivity training for its staff. There are also opportunities for the two institutions to work together on capacity building activities to address climate change adaptation and mitigation in the future. Specific tasks and activities that the UWI IGDS should undertake to build capacity to address climate change adaptation and mitigation are as follows:

- Engage regional climate change experts to undertake research with a focus on the impact of climate change on gender and wastewater;
- Collaborate with the BWA to assist with the collection of disaggregated data on climate change and wastewater management and publish online annual reports for wider circulation;
- Continue to collaborate with the BWA to deliver an expanded gender training, including on sexual and gender-based violence for employees of the Authority;
- Collaborate with the BWA to engage in outreach and advocacy activities using multi-media approach to reach a wide cross section of individuals at the national level.
- Collaborate with the BWA to engage in gender responsive stakeholder consultations.

Given the nature of this Project, the BWA Board and staff, particularly those from the Wastewater Division, should be made aware of how gender plays a role in the way they treat Project personnel and beneficiaries throughout the life of the Project. Gender relations are present in participating public, private and civil society institutions that are involved in this Project. Members of the BWA Board, and BWA staff, require continued training and awareness of gender sensitivity especially so that they can recognize privileges and discrimination around gender.

The BWA should continue to collaborate with the UWI IGDS to train and educate persons serving on the PSC, in project management and as support personnel to become more aware of and sensitive to gender issues arising from Project activities. Training for Project Staff and for identified staff of the BWA should be mandatory.

CLOSURE

Integrated Sustainability would like to thank the Caribbean Community Climate Change Centre for your support in developing this document. We trust that this report meets your needs and expectations. If you have any questions, please contact the undersigned at any time.

Sincerely,

A handwritten signature in black ink, appearing to read 'V. Poyotte', with a long horizontal flourish extending to the right.

Dr. Virginia Albert Poyotte

REFERENCES

- Allen, C. F & Maughan, J. & Baksh, J & Associates, January (2016). Gender Situation in Barbados CDB Country Assessment (CGA).
- Baksh & Associates, R. (2016). Country Gender Assessment Synthesis Report, CDB.
- Beuermann, D., (2017). Methodological Report on the consumption Aggregate and Poverty Lines based on the Barbados Survey of Living Conditions
- Bobb, D., (2019), Understanding Unequal Relations of Gender in the Caribbean, Wendy Water Woes: A Barbados Case Study, UWI-IGDS, BWA, GCF, CCCCC.
- CARICOM Gender Equality Indicators <https://caribbean.unwomen.org/en/materials>
- Consultations on CARICOM Gender Equality Strategy Begins in Antigua & Barbuda retrieved from https://www.today.caricom.org/2019/02/07_consultation_on_CARICOM_Gender_Equality
- Henry, A., (Jan 27, 2021). Barbados today.bb Boscobelle Residents want BWA to address long standing water woes
- Husbands, C & K. Dey, P. (2002). Impact assessment of a sewerage project in Barbados <https://doi.org/10.3152/147154602781766708>.
- Isaacs, W. (2017). Opportunities to Mainstream Gender in water and wastewater Infrastructure Project: A Case Study in Barbados: University of South Florida, pg. 26
- Johnson, C.P.G, (2019). Better Together: A Model for Women & LGBTQIA Equality.
- Schuhmann, et al, (2019) Visitors' Willingness to Pay Conservation Fee in Barbados, tourism Management, 71,315-326
- Suchorski, A., (2009). Socio-economic and Physical Development Influence on water use in Barbados, Caribbean Water Initiative (CARWIN) McGill University Document CARWIN, retrieved from https://www.mcgill/carwin/saw_09_Scuchorski.pdf.
- Tortz, M. et al, (2018). Water Sector Resilience Nexus for Sustainability in Barbados WSRN- Barbados environmental and Social Assessment.
- UN-ECLAC& Cooperacion Espaniola (March 2017) Report. Gender Equality Plans in Latin America & the Caribbean: Road Map to Development

- UN Partnerships for SDGs platform
<https://www.sustainabledevelopment.un.org/partnerships>.
- UN-water Joint Statement https://www.womenforwater.org/unwater-joint_statement_covid-19.pdf.
- Witmer, L. (2017). Women of water Partnership
<https://www.womenforwater.org/waste-water-is-a-she-waste-water>.

Appendix 1 - Results of Stakeholder Surveys and Interviews

Outcome of Zoom Interview with UWI Institute of Gender and Development Studies, Dr.

Tonya Haynes, October 25th, 2020

Question	Response
Q-1: What is the nature of the joint training undertaken by the UWI Institute of Gender Development Studies and the	It is a training programme customized for the BWA in October 2020 to help 500 employees to obtain a certificate in Gender sensitization and infrastructure.
Q-2: Who are the participants enrolled in the	All five hundred (500) employees of the BWA are expected participate in the training.
Q-3: What is the duration of the training?	The training is for 1-5 contact days over 6 workshops with 16-22 participants in each cohort.
Q-4: Who organized the training?	The BWA HR Department is responsible for organizing and scheduling the workers to undertake the training.
Question 5: What are the contents of the course?	The course contains several modules of video presentations and three case studies.
Question 6: What will be the benefits to the BWA employees?	Each successful employee will receive a Certificate in Gender Analysis.
Q-7: What has happened to the training since the COVID-19 Pandemic?	With the advent of COVID-19 the training sessions have been suspended.
Q-8: What has been the participants' response or attitude to the training?	Employees have responded positively to the training although initially there was some resistance by men who later realized the gender equity meant equalization for women and men.
Q-9: Do you think the participants would want to continue the training?	There is great demand for future training by the participants many of whom have requested follow up workshops including the month-long program offered by UWI which reflects a high level of motivation on the part of the employees.
Q-10: Are there women participating in other gender-sensitivity training?	The UWI Centre for Research and Management (CERMES) offers a six-month course on gender studies. Several women graduate from this programme and enter into the water and
Q-11: What are the challenges women experience in the wastewater sector?	There was one case study which reveals the challenges of a woman whose entire day revolves around water. She lives in a community that does not have taps water and has no personal storage tank. She has property which is not accessible to a water truck so she has to walk to meet the truck. She has a small farming income but had to abandon it due to lack of
Q-12: What is the economic status of women in Barbados?	The department confirms that single women head 57% of households of which 20% of the women are categorized as poor. These include migrant women caring for critically ill

Question 13: What has been the experience of participants with water supply?	They revealed that due to a combination of drought and very, very old infrastructure, many people have water shortages fairly constantly especially during the dry season. This of course affects the poor the most. Some of the highest poverty areas are in Saint Joseph and St John but Saint Thomas and the north of Barbados also experience problems which make it worse for wastewater. It is not just a case of having a water connection, but it is beyond the connection
Q-14: What are the challenges people experience in the water/wastewater sector?	People cope by storing water in whatever containers they have such as bottles and saucepans. Some may have a tank, but it is often not adequate or safe. The dry season is now longer, and the days are hotter which exacerbates the water shortages and limits capacity to dispose of wastewater where health and sanitation becomes a huge problem for the vulnerable.
Q-15: What are the current water/wastewater treatment issues referenced by the participants?	There are several households that do not have flushable toilets and some people are squatters where sanitation becomes a big issue. There are still several people who use pit latrines. The welfare department periodically makes provisions to supply water to those who can't afford to pay their water bills. The bills have doubled recently as a Levy for wastewater. Management is now included on the water and wastewater bill. It was confirmed that the minimum charge is now (\$37.5) United
Q-16: What was the level of acceptance of the use of wastewater?	The response to the level of acceptance if wastewater becomes available for reuse for irrigation it was felt that this has been a difficult issue for the people to accept. It might be a hard sell for many. Recently several blue pipes were replaced by black pipes. Although the use factor was identical a lot of people resisted because they thought the black pipes were giving dirtier water. There is evidence that there has been poor communication with the general public.
Question 17: What suggestions do you have to improve the quality of water?	The curriculum and content of the training involves video presentations in 3 different case studies. One of the main outcomes of the training is that it will have a positive impact on the future work of BWA.

Appendix 2 -Interview with Mrs. Shelley Parris, Senior Engineer, BWA (Feb 19, 2021)

Questions	Responses
Q-1: How many men, women and LGBTQIA persons are at the management level in the BWA Wastewater Department?	There is an equal number of men and woman managers at the BWA, although the women that are managers tend to have more administrative roles, while men have more technical roles. The Chairperson of the Board of Management BWA is a woman. The presence of the trade union representing the employees of BWA there is no possibility to
Q-2: Is the level of pay for men and women equal in BWA wastewater department?	There is equal pay for employees as agreed in the collective agreement between BWA and the union as the bargaining body for the workers
Q-3: What legislations in Barbados are used by BWA to protect women and their employment?	Women have equal opportunities to participate in any activity of their choice. For example, there are woman in parliament including a woman as the first Prime Minister.
Q-4: Has BWA developed specific strategies in its programme implementation to address the needs of men, women and LGBTQIA persons in the wastewater department?	There are no specific strategies developed as all the employees are treated equally. There are some heavy- duty work to be done which could be strenuous for women. They are not assigned these responsibilities. A first-time woman plumber is currently working with BWA.
Q-5: What challenges are the BWA facing in implementing any gender sensitive programmes in the wastewater department?	No major challenges are being experienced, aside from current challenges being faced because of this pandemic. However, the BWA has taken the initiative to introduce its employees to gender sensitivity training, from the UWI, to encourage gender equality relating to co-workers, customers, and clients. COVID19 has posed new challenges,
Q-6: Are there clear policies for the recruitment of women, men and LGBTQIA persons and mentoring programs for recruits in BWA?	There are general documented policies but none relating specifically to women and LGBTQIA persons. However, the BWA has taken the initiative to introduce its employees to gender sensitivity training to encourage gender
Q-7: What are the specific focused areas in the BWA gender training for employees at UWI?	Gender sensitivity issues and the infrastructural needs of the BWA. There attendees of this course will be awarded with a certificate at the end of the training programme.

Appendix 3 - 3R-CReWS Project Gender Risk Matrix

Gender Risk	Probability⁷⁵ From 1 (Low)- 5 (High)	Impact⁷⁶ From 1 (Low)- 5 (High)	Mitigating Action
1. Limited will at the Project Governance and Management level to mainstream gender into project activities.	3	5	<ul style="list-style-type: none"> i. Ensure Gender Sensitivity training for Project Steering Committee (PSC) and Project Management (PM) team. ii. CCCCC Project Development and Management Unit as AE closely monitor Gender Action Plan (GAP) and provide guidance and instruction to PM team on mainstreaming, where activities are implemented using a gender-blind approach. iii. Ensure annual reporting on GAP to the PSC. iv. Ensure annual budgetary process cost GAP actions to be undertaken annually.
2. Increased connections to decentralized systems lead to increased financial burdens, on vulnerable people, including Female Headed Households to cover sewage costs treatment.	2	3	<ul style="list-style-type: none"> v. Ensure that the review of Water and Sanitation Master Plan consider cost implications/price structure that does not create economic hardship for vulnerable groups.
3. Incentive programme does not benefit small female owned business, including female farmers who may not have infrastructural or financial inputs compared to large businesses, who are predominantly male owned.	3	4	<ul style="list-style-type: none"> i. Develop recommendations for incentive programme that identifies opportunities that will benefit female headed households and socio-economically deprived households.
4. Small female owned business, including female farmers and	3	3	<ul style="list-style-type: none"> i. Ensure gender inclusive consultations in reformulating RAFF and provide windows, where

⁷⁵ Probability (how likely the risk is to occur)

⁷⁶ Impact (if the risk takes place, how seriously will it impact your project)

female headed households are excluded from benefiting from the Revolving Adaptation Fund Facility (RAFF) Charter after its update.			possible, for access to support for small business owners, (including those that are female led), small scaled farmers and female heads of households.
5. Discrimination against women and LGBTQI+ populations who work, or are interested in working in the wastewater sector.	3	3	<ul style="list-style-type: none"> i. Ensure development of Project Code of Conduct that applies to project Staff, Consultants, Contractors, BWA employees who are interacting with communities under the framework of this project. ii. Ensure continuous training and reminders on Discrimination and its impacts. iii. Ensure relevant staff participate in Gender Sensitivity Training. iv. Ensure frequent check in with Interns (Women in STEM) with BWA Human Resource Department and Project Social and Gender Specialist.
6. Gender Base Violence (GBV) and Sexual Exploitation and Harassment (SEAH) against workers, interns, and community members under the framework of this project.	3	4	<ul style="list-style-type: none"> i. Ensure development of Project Code of Conduct that applies to project Staff, Consultants, Contractors, BWA employees who are interacting with communities under the framework of this project. ii. Ensure that the GRMs designated to receive complaints for this project are able to effectively receive complaints and provide redress to victims. iii. Ensure frequent check in with Interns (Women in STEM) with BWA Human Resource Department and Project Social and Gender Specialist. iv. Ensure Procurement Documents and contracts explicitly prohibit practices of GBV and SEAH consistent with AE's Policies, including Gender Policy 2021-2026.

Appendix 4 - Gender Action Plan

Impact:

- Improved resilience of male and female headed households, small farmers, small business owners and vulnerable populations to the impacts of climate change on water supply.

Outcome:

- Waste Water sector improves its capacity to respond to gender issues by implementing at least four (4) gender-responsive interventions by the end of the Project (Outputs 1, 2, 3, 5 and 7)
- 50% increase in the use of reclaimed water for non-potable uses by male and female heads of households, small farmers and small business owners in two low-income communities (Belle Tenantry, and Bellevue Gap) by end of Project. (Outputs 4 & 6)

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
Output 1: Gender specific gaps and requirements are identified and incorporated in legislative and planning frameworks for wastewater management.				
1.1 Hire a Gender Expert to conduct a Gender Gap Assessment, including consultations with key stakeholders as part of the Review of Wastewater Reuse Bill, Planning and Development Act, and other related legislations for enhancing wastewater effluent quality, treatment options and re-use requirements and applications	Legislative review notes include gender specific gaps and recommendations. (Yes/No)	Complete by year 3	-the BWA Board -3R-CReWS PSC -Project Manager - Project Social and Gender Specialist	\$6,000.00 (Gender Expert as part of legal review team)
1.2 Ensure findings of gap assessment are captured in overarching legislative review.				

⁷⁷ Targets are reflected in Brackets.

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
1.3 Ensure that water and sanitation master plan promote gender sensitive actions as it relates to the water and wastewater sector.	<p>Number of specific actions targeting gender equality and inclusion of vulnerable people in Water and Sanitation Master Plan (3)</p> <p>Number of Women's Groups, consulted in development of Water and Sanitation Action Plan (10)</p> <p>Number of groups representing vulnerable populations consulted in development of Water and Sanitation Action Plan (10)</p>	Complete by year 2	<p>-The BWA Board</p> <p>-3R- CReWS PSC</p> <p>- Project Social and Gender Specialist</p>	\$5,000.00 (Gender Expert to review and provide recommendations as well as participate in consultations)
1.4 Ensure update to Standard Operating Procedures (SOP) and Operational Manuals of the BWA address the requirements of gender and SGBV.	<p>Number of BWA SOPs and manuals developed to include gender needs of wastewater section (3)</p> <p>(1 updated set of SOPs 1 updated O&M manual 1 risk management framework))</p>	Completed by year 3	<p>-3R- CReWS PSC</p> <p>- Project Manager</p> <p>- Project Social and Gender Specialist</p> <p>-BWA Wastewater Manager</p>	\$10,000.00 (Gender Expert as part of Team updating Documents)
Output 2: Improved capacity of BWA staff to integrate gender considerations into their provision of wastewater services				
2.1 Roll out UWI/BWA Gender Sensitivity Training programme #2 for existing BWA employees.	<p>Number (disaggregated by sex) of BWA staff members participating in the UWI/BWA Gender Sensitivity Training program (300) (150 M, 150F)</p>	Completed by end of project	<p>BWA Human Resource Department</p> <p>- Project Social and Gender Specialist</p> <p>-Project Manager</p>	\$45,000.00 (Trainers, developers for online training and Logistics)
2.2 Develop online self-paced mandatory SGBV training for all BWA employees	<p># Of SGBV Trainings Developed (2)</p> <p>% of BWA employees by sex who have taken SGBV training (80%M, 80%F)</p>			

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
2.3 Conduct training for BWA staff on the updated SOPs and OM that include gender considerations.	# Of operators (disaggregated by sex) exposed to the training on the SOPs and OM (70)			
Output 3: Increased participation of women performing technical roles in waste water sector				
3.1 Develop in collaboration with relevant training institutions Women in STEM Internship Programmes at Wastewater division.	# of Women in STEM Internship Programme developed (1)	End of Project	-Project Manager -BWA HR Department -BWA Wastewater Department - Project Social and Gender Specialist	\$ 10,000 (stipend co-financing)
3.2 Implement in collaboration with relevant training institutions a Women in STEM Internship Programme at Wastewater division, including the recommendations from interns on potential measures to increase participation of women in STEM and to increase equality for women in waste water management.	# of female interns participating in Women in STEM internship programme (8)			
	# of reports including recommendations for improvement of gender equality within wastewater sector (8)			
3.3 Ensure equal participation of men and women in Ratio of Males and females participating in Caribbean Vocational Qualification (CVQ)/ National Vocational Qualification (NVQ) courses offered under the Project.	# of recommendations implemented (4)	Throughout the Project	-Project Manager -BWA HR Department -BWA Wastewater Department Project Social and Gender Specialist	Cost subsumed under technical training line.
3.4 BWA female staff to participate in public education campaigns encouraging girls	Ratio of Males and females participating in CVQ/NVQ programmes offered from 3R-CREWS (1:1)	Throughout the project	-BWA Public Relations Department -Project Social and	\$5,000.00 (\$1,000.00 per outreach session)

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
and young women to aspire to leadership and technical roles in the waste water sector	spaces with girls and young women, including schools (5).		Gender Specialist -Project Manager	
Output 4: Gender sensitive stakeholder consultations and awareness programmes instituted to ensure public knowledge and buy-in on the use of wastewater services and potential impacts.				
4.1 Convene gender informed stakeholder consultations to inform and solicit input from community members (heads of households, small farmers, small business owners and vulnerable populations) into the design, implementation and monitoring phases of the Project,	<p># of consultations held with community members (heads of households, small farmers, small business owners and vulnerable populations) who offer inputs and receive information on the project from design to M&E</p> <p>4-8 community consultations (Town halls, outreach, walk through etc) per year = 8-16 communities over 2 years x 75 persons per community = 600-1200 community persons (50% males and 50% females.</p>	At least quarterly until end of Project	BWA Public Relations Department Project Manager Social and Gender Specialist PSC BWA Wastewater Division	Cost subsumed under stakeholder engagement lines
4.2 Develop communication strategy that is informed by Gender sensitive KAP Survey. KAP Survey must therefore ensure that results are easily disaggregated by sex and that analysis of knowledge, attitudes and practice is gender responsive.	<p>% of women and men administered KAP instruments (51%, 49% respectively)</p> <p>KAP Study reveals gender differences in analysis (Yes/No)</p> <p>Communication strategy tailors messaging and channels to men and women based on feedback from KAP surveys (Yes/No)</p>	Year 1 of the Project	Project Manager Project Social and Gender Specialist BWA Public Relations Department 3R-CReWs PSC	No Additional Cost (SGS salary to review KAP TOR and documents for gender analysis)

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
	# Of persons benefitting from education activities (Disaggregated by sex) (10000 (4,900M, 5,100F))			
4.2 3R-CReWS Project webpage will report on project results disaggregated by sex where possible. Webpage will include communication messaging including of gendered impacts of climate change on water supply and messaging encouraging use of reclaimed water targeting female farmers, heads of households, small business owners and small business owners.	<p>% of applicable project results based on Project Log frame disaggregated by sex on Project website (100%)</p> <p>Number of stories communicating gendered impact of climate change on water supply and access (4)</p> <p>Number of Communication messages messaging encouraging use of reclaimed water targeting female farmers, heads of households, small business owners and small business owners (4)</p>	Throughout the project	<p>-BWA Public Relations Department</p> <p>-Project Social and Gender Specialist</p> <p>-Project Manager</p>	\$50,000.00 (webpage consultancy design and establishment as well as communication messages))
Output 5. Increased capacity of BWA to respond to SEAH complaints from community and staff members				
5.1 Update the Wastewater Division Complaints Management System to ensure complaints system is capable of capturing SGBV complaints, publicized (including on Project webpage), accessible for directly impacted communities and has mechanisms for external referral, including the CCCCC GRM.	<p>Existence of mechanism for reporting on SGBV as part of Wastewater Management Division Complaints Management System (Yes/No)</p> <p>% of stakeholder engagement community events that publicises the SEAH /SGBV complaints process (100%)</p> <p>Complaints systems accessible</p>	Within 6 months of project inception	BWA Human Resource Department. Project Social and Gender Specialist	\$6,000.00 (update and publicity of Complaints system)

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
	on Project webpage (Yes/no)			
	CCCCC GRM Publicized as source for receiving SGBV related complaints (Yes/No)			
5.2 Develop and implement complaints procedure for addressing SEAH/SGBV complaints in waste water sector	# of SEAH/SGBV complaints procedures developed (1) # of SEAH/SGBV complaints procedures developed (1)	Within 6 months of project inception	BWA Human Resource Department. Project Social and Gender Specialist	\$7,000.00 (Part of the consultancy to develop and support implementation complaints procedure)
Output 6: Male and female heads of households, small farmers, small business owners and vulnerable populations have increased opportunities to connect to wastewater treatment systems.				
6.1 Update RAFF charter to include wastewater treatment and reuse options to promote gender equality.	Review of charter includes assessment of needs of male and female business and households (Yes/No)	6.1- 4.3- By end of year 3	Project Manager, Project Social and Gender Specialist, 3R-CReWS PSC BWA Board of Directors	6.1-\$5,000.00
6.2Develop recommendations for incentive programme provide opportunities that will benefit female headed households and socio-economically deprived households.	Existence of report providing recommendations for a gender sensitive incentive programme to benefit FFH and socio-economically disadvantaged households (Yes/No) # of recommendations for incentive programme implemented that benefit female headed households and socio-economically deprived households. (4)	6.4- 6.7 By end of year 4		6.2- \$5,000.00 (consultant to develop recommendations
6.3Undertake re-education programs targeting farmers	Number of sessions (workshops, meetings,			6.3 No additional costs outside of BWA Co-

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
<p>particularly women, to enhance capabilities and leadership for the adoption of wastewater treatment technologies and reuse options in two communities</p> <p>6.4 Small scale female farmers who participate in re-education [programmes receive subsidies to adopt waste water treatment technologies and reuse options in two communities</p> <p>6.5 Male and Female headed households in Two communities in Zone A provided with connections to decentralized waste water treatment systems.</p>	<p>training) targeting farmers, especially female small farmers (8)</p> <p>Ratio of Female to Male Farmers participating in re-education programme (2:3)</p> <p>% of small scale female farmers participating in the re-education programs that adopt wastewater treatment tec</p> <p>% of small scale female farmers who participate in re-education programs receiving subsidies to adopt waste water treatment technologies and reuse options in two communities (50%)</p> <p># Of Households with connections to waste water treatment system (Disaggregated by sex of head of households). (225) (115 FHH, 110 MHH)</p> <p>Volume of reclaimed water is available for non-potable use disaggregated by male/female HH. (2.25 million m3) (1.114 m3 FHH) (1.113m3 MHH).</p>			<p>finance and stakeholder engagement.</p> <p>6.4Subsumed under existing Project costs</p>

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
6.5 Workshop held to encourage small and women owned businesses to leverage the mechanisms available (incentives and RAFF) for access to wastewater services.	<p>% of small and women owned businesses participating in workshop on leveraging the mechanisms available (incentives and RAFF) for access to wastewater services. (30%)</p> <p>% of small and women owned businesses attending workshop that use information to access incentives/ RAFF in order to access waste water services (30%)</p>			6.5 subsumed under existing Project costs for stakeholder engagement
Output 7: Enabling a gender responsive project management and governance environment for the duration of the Project				
7.1 Ensure contractors, BWA Staff and project staff interacting with community signs Code of Conduct to be developed under this project.	<p>Existence of COC that prohibits SEAH/SGBV (Yes/No)</p> <p>% Of Staff, consultants working in communities who have signed COC (100%)</p>	Throughout the life cycle of the project	BWA HR Department BWA Procurement Department Project Social and Gender Specialist 3R-CReWS PSC	No additional cost (staff time)
7.2 Select a gender balance Project Team	<p>Ratio of Male to Female Project Team (1:1)</p> <p>% of men on project team in female dominated roles (20%)</p> <p>% of women on project team in male dominated roles (20%)</p>	Throughout the life cycle of the Project.	BWA HR Department CCCCC	Advertise & Interview applicants Applicant Orientation. No standalone costs identified.

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
7.3Develop a gender balance PSC.	Ratio of Male to Female on PSC (1:1)	Throughout the life cycle of the Project.	CCCCC BWA Board of Directors	No Standalone cost identified (Staff time)
7.4Ensure representation of Bureau of Gender Affairs on PSC.	Existence of representative from Bureau of Gender Affairs on PSC (yes/No)			
7.5 Recruit and retain Social and Gender Specialist for the Project. The specialist will be responsible for stakeholder related activities to ensure gender mainstreaming, update of the complaints system, gender mainstreaming in all components of the project and reporting on gender progress.	# Of qualified Gender Specialist working on the project. (1)	Throughout the Project	-BWA Human Resource Department - CCCCC	\$192,000.00
7.6Present annually to PSC, report on Progress of implementation of GAP.	# Of Reports on Gender Progress of Project presented to PSC (5)	Annually	-Project Manager -CCCCC -Project Social and Gender Specialist	No Standalone cost identified (Staff time)
7.7Table annually, a discussion on the Progress of GAP Implementation as an agenda item of the PSC.	# Of discussion on Gender report held at Project PSC (5)			
7.8Ensure mandatory participation of Project staff in Gender Sensitivity and SEAH/SGBV Training sessions	% Project staff participating in gender sensitivity training disaggregated by sex (100%) % of Project staff participating in SEAH/SGBV training (disaggregated sex) (100%)	Annually	BWA Human Resource Department Project Manager -CCCCC -Project Social and Gender Specialist	No Standalone cost identified (Staff time)
7.9 Collect, store, and retrieve data disaggregated by sex and other vulnerability indicators for planning and decision making throughout the Project cycle, including during stakeholder engagement.	% of applicable data collected, stored and is disaggregated by sex and other vulnerability (indicators (100%)).	First six months of project	BWA Wastewater Division Project Manager Project Social and Gender Specialist PSC	No Standalone cost identified (Staff time)

Focus Area/Activity	Indicators/Targets ⁷⁷	Timeline	Responsibilities	Estimated Cost (in USD)
	# of baseline report on sex disaggregated data produced (1)			