REPORT OF THE GENDER-BASED CLIMATE RESILIENCE ANALYSIS FOR THE CO-OPERATIVE REPUBLIC OF GUYANA
and the independent consultants Ms. Cherise Adjodha and Ms. Simone Leid.
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<thead>
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<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired immunodeficiency syndrome</td>
</tr>
<tr>
<td>AR5</td>
<td>Fifth Assessment Report of the Intergovernmental Panel on Climate Change</td>
</tr>
<tr>
<td>CANARI</td>
<td>Caribbean Natural Resources Institute</td>
</tr>
<tr>
<td>CARICOM</td>
<td>Caribbean Community</td>
</tr>
<tr>
<td>CCCCC</td>
<td>Caribbean Community Climate Change Centre</td>
</tr>
<tr>
<td>CDEMA</td>
<td>Caribbean Disaster Emergency Management Agency</td>
</tr>
<tr>
<td>CEDAW</td>
<td>Convention on the Elimination of All Forms of Discrimination Against Women</td>
</tr>
<tr>
<td>COVID-19</td>
<td>Novel Coronavirus disease 2019 (due to SARS-COV-2 virus)</td>
</tr>
<tr>
<td>CRFM</td>
<td>Caribbean Regional Fisheries Mechanism</td>
</tr>
<tr>
<td>CRMW</td>
<td>Convention on the Protection of the Rights of All Migrant Workers and Members of their Families</td>
</tr>
<tr>
<td>CSO</td>
<td>Civil society organization</td>
</tr>
<tr>
<td>EnGenDER</td>
<td>Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>GAB</td>
<td>Gender Affairs Bureau</td>
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<tr>
<td>GAC</td>
<td>Global Affairs Canada</td>
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<tr>
<td>GBV</td>
<td>Gender-based violence</td>
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<tr>
<td>GCM</td>
<td>General Circulation Model</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GEF</td>
<td>Global Environment Facility</td>
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<tr>
<td>GFP</td>
<td>Gender Focal Point</td>
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<tr>
<td>GHG</td>
<td>Greenhouse gas</td>
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<tr>
<td>GLDA</td>
<td>Guyana Livestock Development Agency</td>
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<tr>
<td>GMC</td>
<td>Guyana Marketing Corporation</td>
</tr>
<tr>
<td>GSDS</td>
<td>Green State Development Strategy</td>
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<tr>
<td>GSA</td>
<td>Guyana School of Agriculture</td>
</tr>
<tr>
<td>GuySuco</td>
<td>Guyana Sugar Corporation</td>
</tr>
<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
</tr>
<tr>
<td>ICCPR</td>
<td>International Covenant on Civil and Political Rights</td>
</tr>
<tr>
<td>IDB</td>
<td>Inter-American Development Bank</td>
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<tr>
<td>ILO</td>
<td>International Labour Organization</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<tr>
<td>LCDS</td>
<td>Low-Carbon Development Strategy - Transforming Guyana’s Economy While Combating Climate Change</td>
</tr>
<tr>
<td>LGBTQIA+</td>
<td>Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual and the ally community</td>
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<tr>
<td>MSME</td>
<td>Micro, small and medium enterprise</td>
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<tr>
<td>NAMA</td>
<td>Nationally Appropriate Mitigation Action</td>
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<td>NAP</td>
<td>National Adaptation Plan</td>
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<tr>
<td>NAREI</td>
<td>National Agricultural Research and Extension Institute</td>
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<tr>
<td>NDC</td>
<td>Non-communicable chronic disease</td>
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<td>NDC</td>
<td>Nationally Determined Contributions</td>
</tr>
<tr>
<td>NGESI Policy</td>
<td>National Gender Equality and Social Inclusion Policy</td>
</tr>
<tr>
<td>NAREI</td>
<td>National Agricultural Research and Extension Institute</td>
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<tr>
<td>PAHO</td>
<td>Pan American Health Organization</td>
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<tr>
<td>PRECIS</td>
<td>Providing Regional Climates for Impact Studies</td>
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<tr>
<td>PWDs</td>
<td>Persons with disabilities</td>
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<tr>
<td>RCM</td>
<td>Regional Climate Model</td>
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<tr>
<td>RCP</td>
<td>Representative concentration pathway</td>
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<tr>
<td>SDG</td>
<td>Sustainable Development Goal</td>
</tr>
<tr>
<td>SIDS</td>
<td>Small island developing states</td>
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<tr>
<td>SOCC</td>
<td>State of the Caribbean Climate Report</td>
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<tr>
<td>SST</td>
<td>Sea surface temperature</td>
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<tr>
<td>STEM</td>
<td>Science, technology, engineering and mathematics</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<tr>
<td>UN Women</td>
<td>United Nations Entity for Gender Equality and the Empowerment of Women</td>
</tr>
<tr>
<td>UWI</td>
<td>University of the West Indies</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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</table>
Executive Summary

This report synthesizes the findings from the gender-based climate resilience analysis in the Co-operative Republic of Guyana under the *Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER) Project*. The project’s overall goal is to improve gender-responsive climate and disaster resilience, including for women and girls, key vulnerable populations and future generations in the Caribbean. It supports climate change, disaster-risk reduction and environmental management interventions by leveraging sector-level entry points (e.g. National Adaptation Plans [NAPs] and Nationally Appropriate Mitigation Actions [NAMAs]) in nine Caribbean countries from 2019–2023. These countries include Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Lucia, Saint Vincent and the Grenadines and Suriname. The project is being led by the United Nations Development Programme (UNDP) and funded by Global Affairs Canada (GAC) and the United Kingdom Government.

The objective of the gender-based climate resilience analysis in Guyana was to provide qualitative and quantitative data on the following:

- the gendered inequality and vulnerability of women and men in identified priority sectors (e.g. identified via NAPs, NAMAs or Nationally Determined Contributions [NDCs]);
- the successes and barriers to women’s empowerment and participation in contributing to each identified priority sector, and the opportunities for policy articulation to strengthen the integration of gender equality into sectoral planning and implementation processes to address adaptation and resilience; and
- the projected localized climate change impacts on men and women, persons with disabilities (PWDs), indigenous populations and other vulnerable groups within the priority sectors.

The report presents and analyses data on existing gender and social inequities and how climate change will impact on and shape the vulnerabilities among men, women and key vulnerable groups, and highlights key gaps, opportunities and challenges for two priority sectors for Guyana:

1. Agriculture (crops and livestock)
2. Health

It also provides recommendations to guide the development of gender-responsive and socially-inclusive policies and plans to build climate resilience in the priority sectors identified for Guyana.

1.1 Key findings

Guyana has made progress in the development of policy and institutional frameworks for climate change through its updated NDC\(^1\) and a number of draft policies including its National Climate Change Policy (draft), Climate Resilience Strategy and Action Plan (draft), NAP (draft) and NAMA (draft). Guyana has also made strides in designing and establishing frameworks for gender, with the National Gender Equality and Social Inclusion (NGESI) Policy being up-to-date and aligned with international frameworks, with several assessments and reports focused on gender equality and gender mainstreaming. The country also has plans and policies for the identified priority sectors, some of which are currently being reviewed for the new political term 2021-2025. In all of these, gender is included to varying degrees and oversight and implementation is supported through the efforts of lead agencies and coordinating mechanisms like the

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\(^1\) The Revised NDC has not yet been updated in the UNFCCC registry.
Gender Affairs Bureau (GAB), National Women and Gender Equality Commission and the Inter-ministerial Committee of Gender Focal Points (GFPs).

Despite the strides in creating the enabling policy environment for gender mainstreaming in the priority sectors and beyond, there remain significant areas for improvement for effective and inclusive climate change adaptation and resilience building. There is currently limited data and understanding on the level of implementation of gender-specific actions outlined in national and sectoral plans and policies. Gender, though an increasing priority, is still an abstract concept for many. There is lack of understanding of how to operationalize gender-responsive processes and a lack of financing to support this, and many processes and interventions remain gender blind. There has been a general call for increased training and capacity building to promote gender equality and mainstreaming. Improving systems for collection and analysis of gender-disaggregated and other relevant socio-economic data is also needed to inform planning and decision-making and facilitate this process.

Further, the data from the analysis shows that both priority sectors are particularly vulnerable to climate change and other shocks, such as the COVID-19 pandemic. These shocks include climate change-related impacts due to temperature increases, increasing intensity of storms and storm surge, sea-level rise and coastal flooding, and rainfall decline and variability that threaten the viability of agricultural livelihoods, food security, health and well-being and could exacerbate poverty, which is already high at 42 percent (IDB, 2020).

Women and other vulnerable groups, including remote rural and indigenous populations and youth, will be significantly affected by these impacts and other shocks on the priority sectors. This is due to the type of roles and work they undertake in these sectors and their limited access to resources and services due to issues of informality, lack of tenure or ownership and cultural and traditional beliefs. There is also clear gender inequality in access to the labour force and income broadly, pointing to structural inequality facing women that must be addressed in order to build the resilience and adaptive capacity of communities in Guyana. Structural inequality prohibits sustainable development, and any shocks serve to compound inequalities and hamper recovery.

### 1.2 Key recommendations

Based on the gender-based climate resilience analysis, key recommendations for gender mainstreaming have been identified. The recommendations are categorized below by priority sector, and also include cross-cutting recommendations to address broader structural inequalities.

<table>
<thead>
<tr>
<th>Sector/Area of Concern</th>
<th>Recommendations</th>
</tr>
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</table>
| Agriculture            | • Support skills building amongst women and youth in agriculture and throughout agriculture value chains through targeted and gender-responsive promotion of skills building programmes, and ensuring that they are accessible both in cost and in location. This training can include, but is not limited to, administration, marketing, packaging and labelling, finances and technical training. Training can be specialised to create more opportunities for women and youth from rural/indigenous/marginalized communities and facilitate learning and education in agriculture.  
• Support entrepreneurship and skills upgrading for green jobs in agriculture, including for climate-smart crop development, and enhance access to finance amongst those marginalized in the labour market. |
- Support targeted investments in agricultural diversification and community-led climate-smart agriculture commodities for inclusion of more rural women and youth in the sector and accommodate their access to the same.
- Improve access to micro-finance, including credit, grants and small loans, for women and other marginalized groups to ensure they can acquire land, equipment and other critical inputs for on-farm and off-farm activities. This should include reviewing application procedures, criteria for accessing loans and reporting requirements for banks and other lending institutions relevant to the sector. Opportunities should also be provided for those in agro-processing to access finance for packaging, labelling, marketing, and overall greater use of innovative technology in the agricultural value chain.
- The Ministry of Agriculture can create opportunities to further collaborate with organizations, like the Association of Women Processors and Women for Change, through its own agencies like the GMC, to develop and support agro-processing and agri-business project and initiatives.
- Invest in and develop more agro-processing facilities to ensure it is accessible to all, particularly women and youth in more remote or hinterland areas. This should also be supported increasing access to or financing for acquiring tools and equipment for farms and agro-processing.
- Increased training of extension officers for communication of information and assistance in accessing services, programmes and resources available for women and youth in agro-processing and agri-business, like those offered by the GMC, CSOs involved in agriculture and educational programmes offered by the GSA.

<table>
<thead>
<tr>
<th>Health</th>
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| - Increase health literacy through gender-responsive education and awareness in communities to encourage health seeking behaviour amongst men as they are least likely to go to doctors for regular check-ups and tend to wait until health problems are critical before seeking medical help.  
- Diversify health services beyond the central focus of the reproductive health needs of women to encompass a wide range of services related to general health and disease prevention.  
- Enable gender-responsive health services for the prevention of chronic illness and NCDs. Specific attention must be given to NCDs which may disproportionately affect various groups of women and men. Examples of such attention include focus on prevention and management of prostate cancer, hypertension, and alcoholism in men; a focus on breast and cervical cancer and obesity for women; and a focus on diabetes among both genders.  
- Ensure non-discriminatory treatment in the delivery of gender-responsive health services and an environment of non-judgement, including against persons based on sexual or gender identity and sexual preferences. In particular, sexual and reproductive health services should be provided without discrimination, targeted support should be provided for youth and PWDs, and there should be careful treatment of GBV situations and psychosocial services. Attention to the “whole person” for treatment and prevention of illnesses is also needed.  
- Expand access to health services, including through making sure such services are affordable and easy to get to and open at times that accommodate persons of various professions before, during or after their work days. |

<table>
<thead>
<tr>
<th>Inclusive and evidence-based decision-making</th>
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<tbody>
<tr>
<td>- Enhance representation and inclusion of women Toshaos (chiefs/leaders) on the National Toshaos Council, so they can better advocate for and represent the needs of indigenous women.</td>
</tr>
</tbody>
</table>
| Policy, planning and programme development and implementation | • Improve collection and use of data disaggregation to accommodate intersectional analysis to best understand vulnerability and risk, including by sex, age, ethnicity, disabilities, level of education, household size and dependents, language skills and land tenure.  
• Support capacity building for the development of gender statistics related to climate change. Statistics and other data collected should fit into a gender equality framework for climate change and disaster risk management, and based on established gender equality indicators to support monitoring, evaluation and reporting.  
• Continue efforts to streamline data collection, analysis and dissemination, including for the development of an accessible centralized platform with adequate storage and systems for updating and maintenance of the platform.  
• Expand data collection beyond the traditional male, female, children, adolescent/youth categories to include the LGBTQIA+ community, a cross-cutting group. This will ensure interventions are inclusive, especially for areas where there are larger populations of LGBTQIA+ persons. |
| Equality of access to employment and decent work | • Ensure the finalization of the draft NGESI policy, which has been tabled in parliament, and update the institutional framework to operationalize the policy using a strategic approach within the context of existing human and financial constraints. As a first step, greater institutional support for GFPs in government agencies is needed, and provision of critical resources for roll-out of relevant gender equality-based training to other staff. Training should include application of gender analysis to their areas of work and critical analysis of common errors in and misinterpretations of data utilized by government staff related to gender equality.  
• Apply gender equality analysis and mainstream gender considerations into climate change and disaster-related project design, planning, implementation, and monitoring and evaluation to enable an inclusive and gender-responsive approach. This should also be done for the priority sectors, agriculture and health.  
• Support public education and awareness on the impacts of traditional gender socialization and how it limits the choices of women, men, girls and boys. This can include curriculum reform in educational institutions at all levels (primary, secondary and tertiary) to be gender-responsive, and not reinforcing negative gender stereotypes and encouraging equality in access to STEM subjects to girls and female youth.  
• Strengthen CSOs involved in gender equality work and working directly with vulnerable groups, including remote rural, indigenous and LGBTQIA+ communities, to better address GBV and its broader social impacts in the multi-cultural context of Guyana.  
|  

2 Gender statistics are defined by the sum of the following characteristics: (a) data are collected and presented disaggregated by sex as a primary and overall classification; (b) data reflect gender issues – questions, problems and concerns related to all aspects of women’s and men’s lives, including their specific needs, opportunities or contributions to society; (c) data are based on concepts and definitions that adequately reflect the diversity of women and men and capture all aspects of their lives; and (d) data collection methods take into account stereotypes and social and cultural factors that may induce gender biases. UNSD: [https://data2x.org/resource-center/unsds-gender-statistics-manual-integrating-a-gender-perspective-into-statistics-2013/](https://data2x.org/resource-center/unsds-gender-statistics-manual-integrating-a-gender-perspective-into-statistics-2013/)
national levels would be able to better withstand periods of contraction due to better asset management, access to basic needs and increased ability to have savings and be more self-reliant in a severe and sustained period of economic contraction.

- Support women’s entrepreneurship as a way to support them earning an income, recognizing that most women are employees and not employers. This would also create opportunities for sustainable small business development in Guyana, and in particular in rural and indigenous communities.
- Establish policies and procedures to promote equal pay for women, and ensure that pay parity is implemented and regulated in both the private and public sector.
1 Introduction

This report synthesizes the findings from the gender-based climate resilience analysis in the Co-operative Republic of Guyana under the Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER) Project. The project’s overall goal is to improve gender-responsive climate and disaster resilience, including for women and girls, key vulnerable populations and future generations in the Caribbean. It supports climate change, disaster risk reduction and environmental management interventions by leveraging sector-level entry points (e.g. National Adaptation Plans [NAPs] and Nationally Appropriate Mitigation Actions [NAMAs]) in nine Caribbean countries from 2019 to 2023. These countries include Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, and Suriname. The project is being led by the United Nations Development Programme (UNDP) and funded by Global Affairs Canada (GAC) and the United Kingdom Government.

The report presents and analyses data on existing gender and social inequities and how climate change will impact on and shape the vulnerabilities among men, women and key vulnerable groups. It highlights key gaps, opportunities and challenges. It also provides recommendations to guide the development of gender-responsive and socially-inclusive policies and plans to build climate resilience in the priority sectors identified for Guyana.

The Caribbean Natural Resources Institute (CANARI) provided technical assistance to UNDP to undertake the gender-based climate resilience analysis from September 2020 to May 2021 and develop this report under the EnGenDER project.

1.1 Objectives

The objective of the gender-based climate resilience analysis in Guyana was to provide qualitative and quantitative data on the following:

- the gendered inequality and vulnerability of women and men in priority sectors (e.g. identified via NAPs, NAMAs or Nationally Determined Contributions [NDCs]);
- the successes and barriers to women’s empowerment and participation in contributing to each identified priority sector and the opportunities for policy articulation to strengthen the integration of gender equality into sectoral planning and implementation processes to address adaptation and resilience; and
- the projected localized climate change impacts on men and women, persons with disabilities (PWDs), indigenous populations and other vulnerable groups within the priority sectors.

This analysis will inform development of tailored capacity-building initiatives for gender mainstreaming in the priority sectors identified for Guyana. It will further support the development of gender-responsive and socially-inclusive NAPs, NAMAs and sectoral plans that reflect up-to-date information on climate change impacts and needs of men, women, PWDs, indigenous populations and other vulnerable groups under the EnGenDER project.

1.2 Scope

The gender-based climate resilience analysis focused on the following priority sectors identified for Guyana based on its Climate Resilience Strategy and Action Plan (CRSAP) (2016 draft) and other national climate change policies and plans:
For the agricultural sector, the Strategy notes that agriculture includes farming, fishing and forestry. However, they are separated into different primary sectors. As such, this analysis focused on crop and livestock farming within the agriculture and did not include fisheries and forestry.

2 Country overview

The Co-operative Republic of Guyana is situated to the north east of the South American continent and is surrounded by the Atlantic Ocean to the north, Brazil to the south and west, Venezuela to the north west and Suriname on the east. It is the largest country in the Caribbean Community (CARICOM) with an area of 214,970 km$^2$, a size that gives way to an expansive coastline to the north of the country. The 430 km long coastline is 1.4 m below the average high tide (Government of Guyana, 2012).

There are three major rivers leading to the coast: the Essequibo River, Demerara River, and Berbice River, with the Essequibo being the largest. The capital, Georgetown, is low-lying and located on the mouth of the Demerara River making it vulnerable to the impacts of storm surges and heavy rainfall (Sayers and Partners, 2019). Over 90 percent of the estimated 746,955 Guyanese population lives at or near the coast (Government of Guyana, 2012; Government of the Co-operative Republic of Guyana, 2018). This is also where most of the country’s economic development, government and infrastructure is clustered in a 16 to 64 km wide strip along the coast, covering just 5% of the country’s total land mass (Guyana Lands and Surveys Commission, 2013; Government of the Co-operative Republic of Guyana, 2018). Due to the vulnerability of the capital, Georgetown, and surrounding areas, the coast is also protected by man-made coastal defence structures in addition to natural protection through shell and sand beaches and mangroves (Government of Guyana, 2012).

Guyana has a multi-ethnic population, 9.2% of which are indigenous peoples. There are nine main groups speaking four different languages (Renshaw, 2007). Most of these indigenous peoples reside in hinterland areas, with the largest populations in Regions 1 and 9. In recent years, since 2018, Guyana continues to receive a large influx of Venezuelan migrants, including vulnerable groups such as indigenous peoples, and Guyanese returnees. It is estimated that by December 2021 Guyana will be hosting approximately 33,000 Venezuelan migrants (Inter-Agency Coorindation Platform for Refugees and Migrants from Venezuela, 2021). Table 1 provides a summary of the main administrative regions, their location and the key economic sectors and livelihoods for each regions’ population.
Although Guyana has a typical tropical climate, it has two wet seasons, generally between May to August and December and January\(^3\) in its Tropical Wet climate zone (Sayers and Partners, 2019). It also has two less distinct dry seasons running from February to April and July to November (Government of Guyana, 2012). A unimodal annual wet cycle (mid-April to August) is witnessed over the southernmost part of Guyana. The Rupununi Savannahs experience one wet season (May-September) and one dry season (October-April). This area has an annual precipitation ranging from 1300 to 1400 mm, which is lower than the Tropical Wet climate zone and annual rainfall is less well distributed throughout the year. The wet season is shorter and the dry season longer with a more severe risk to drought. As it lies south of the Atlantic hurricane belt, it is not directly impacted by hurricanes and tropical storms.

Guyana’s vast landscape is also home to extensive and pristine rainforests. According to the Second National Communication to the UNFCCC, 85 percent of the country’s land mass is covered in rainforest, with little deforestation (Government of Guyana, 2012). However, as stated in the report, inadequate frameworks for supporting the protection of the forests, may lead to increased rates of deforestation. A Monitoring Reporting and Verification System (MRVS) was developed for the forestry sector in Guyana. Around 87% of the country is covered by forests, with deforestation rates peaking in 2012 at 0.079% and decreasing to a rate of 0.051% in 2018 with a coverage of 18.07 million ha (Guyana Forestry Commission, 2019).

Guyana’s economy is based around the mining industry for gold, diamond and bauxite, timber production, agriculture and fisheries (Government of the Co-operative Republic of Guyana, 2018). In 2020, Guyana’s economy was growing by an average of 5 percent with an estimated gross domestic product (GDP) per capita of US$3,496 (Ministry of Finance, 2021). The agriculture, forestry and fisheries industries contributed an estimated US$1.29 million (GY$ 270,445,000) to the GDP in 2020 (Ministry of Finance, 2021). More recently, the development of the oil and gas industry in Guyana and investment by large producers such as ExxonMobil is expected to lead to substantial growth in the country’s GDP (WWF-Guianas, 2017; Ministry of Finance, 2021).

Guyana’s low-lying coast, and the high level of settlement and infrastructure along the coast, makes it extremely vulnerable to the impacts of climate change. Key threats include sea level rise, increased occurrences and intensity of storm surges and fluctuations in rainfall, placing it at high risk of riverine, urban and coastal flooding (UNDP, 2019a).

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### Table 1. Administrative Regions and Main Livelihoods in Guyana

<table>
<thead>
<tr>
<th>Area and Administrative Region</th>
<th>Main Industries/Livelihoods</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barima/Waini (Region 1)</td>
<td>Logging&lt;br&gt;Mining (gold, diamond)&lt;br&gt;Agriculture (coffee, ground provisions, fruits)</td>
<td>Frontier portion is coastal and remaining portion is inland</td>
</tr>
<tr>
<td>Pomeroon/Supenaam (Region 2)</td>
<td>Agriculture (rice cultivation, coconuts, ground provisions, vegetables)</td>
<td>Coastal</td>
</tr>
</tbody>
</table>

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\(^3\) The Second National Communication to the United Nations Framework Convention on Climate Change has the wet seasons as April to July and November to January.
<table>
<thead>
<tr>
<th>Area and Administrative Region</th>
<th>Main Industries/Livelihoods</th>
<th>Location</th>
</tr>
</thead>
</table>
| Essequibo Islands/West Demerara (Region 3) | Cattle rearing  
Small scale timber production | Coastal |
| Demerara/ Mahaica Region 4 | Rice cultivation  
Beef and dairy farming  
Vegetables | Coastal |
| Georgetown (Capital) (Demerara/ Mahaica Region 4) | Rice and sugar production  
Livestock  
Fruits and ground provision  
Manufacturing (furniture, food stuff, clothing and textiles) | Coastal (urban/suburban) |
| Mahaica/Berbice (Region 5) | Rice and sugar production  
Coconuts  
Dairy cattle rearing  
Vegetables, ground provisions and fruits | Coastal |
| East Berbice/ Corentyne (Region 6) | Rice and sugar production  
Green vegetables, ground provisions  
Coconuts  
Cattle rearing | Coastal |
| Cuyuni/Mazaruni (Region 7) | Gold and diamond mining  
Logging  
Agriculture | Hinterland |
| Potaro/Siparuni (Region 8) | Gold and Diamond mining | Hinterland |
| Upper Takutu/ Upper Essequibo (region 9) | Semi-precious stones mining  
Cattle ranching  
Tobacco, rice and peanuts | Hinterland |
| Upper Demerara/ Upper Berbice (Region 10) | Bauxite mining  
Timber  
Agriculture (vegetables, legumes, ground provision) | Inland |

4 UNDP. forthcoming. *Desk Review and Consultation Report: Baseline Gender-Based Climate Resilience Analysis for the Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (ENGENDER).* Prepared by Caribbean Natural Resources Institute (CANARI)
2.1 Climate change trends and impacts

Sea level rise in Guyana is occurring at a rate that is two to five times greater than the average global rate at 10 mm/year\(^5\), where global change is around 2–4 mm/year\(^6\) (Government of Guyana, 2012; Sayers and Partners, 2019). There has been a 23 cm increase in sea level over a 37-year period, spanning 1979 to 2016 (Sayers and Partners, 2019)\(^7\). This rise in sea level, plus changes in rainfall patterns and the intensity of rainfall events, has led to significant flooding. One such flood event took place in January 2005, where intense rainfall led to severe flooding with some areas remaining under flood waters for three weeks. The large volumes of water were unable to drain as quickly as expected, which led to increased water levels in the East Demerara Water Conservation System and a weakening of the dam (Government of Guyana, 2012). This flood affected around 50 percent of the population with damages amounting to approximately 59 percent ($92.2 billion Guyanese dollars) of the country’s GDP (Sayers and Partners, 2019; Office of Climate Change, 2020). In terms of economic implications, coastal flooding has a greater impact on the industrial and commerce sector than on agriculture because of its lower value and contribution to GDP (Sayers and Partners, 2019). Following the flood, there was an outbreak of leptospirosis which was responsible for the deaths of 27 of the 34 persons who died due to the floods (UNDP, 2019a). Since then, there have been flooding events in the years 2006, 2008, 2010, 2011, 2013, 2014 and 2015 caused by excessive rainfall affecting thousands of citizens and causing millions of dollars (USD) in damages (Office of Climate Change, 2016).

It is also expected that droughts in Guyana may intensify, becoming more frequent and lasting longer because of climate change, with substantial impacts on water, food and energy (Guyana Lands and Surveys Commission, 2020). A decrease in annual rainfall overall is projected, with less rainfall in months outside of the rainy seasons but greater rainfall during the rainy season, and increased air temperature. There has already been increases in temperature in Guyana, rising by 0.3ºC from the 1960s to 2012. Historically, droughts have impacted Guyana since the late 1990s, between the years 2009 and 2010, and most recently in 2015. Though the extent of the impacts of the droughts varied over events, they all led to losses in agriculture, namely crops and livestock, decreased surface water in water bodies such as ponds and streams, domestic migration to urban areas, increased levels of poverty and reduced national revenue. Past droughts have reduced agricultural GDP up to 31.4 percent\(^8\) (Guyana Lands and Surveys Commission, 2020).

The agricultural sector will likely experience the most detrimental impacts from coastal flooding, particularly the country’s cash crops, rice and sugar cane. A 1m to 6m rise in sea level will affect between 1 percent to 7 percent of agricultural land (Government of the Co-operative Republic of Guyana, 2019). Residential areas are also predicted to be significantly affected. Sea level rise is expected to impact on various sectors including agriculture, health, trade, water, transport and development of communities. Storm surges will pose continued risk for coastal development, including infrastructure, road networks, agriculture and residential areas. Storm surges and increased sea level will also lead to saltwater intrusion. The increased salinity of water can affect commercially important species such as shrimp and decrease the amount of freshwater available to aquaculture farms. Other agricultural sub-sectors will also be affected, like livestock production where grazing grounds are at risk of flooding and drought in the coastal

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\(^5\) According to the Sayers and Partners report, this increase is 6.2mm/year.

\(^6\) Found in IPCC, 2007

\(^7\) Found in Mc Sweeney et al. 2010

\(^8\) Found in Trotman and Farrell (2010)
plains (Government of the Co-operative Republic of Guyana, 2012). The fisheries sub-sector, where landing sites and fishing complexes located on the coast and along river banks, will also be affected by sea level rise and storm surges.

Increased water deficits due to an overall decrease in rainfall, particularly in dry months, will affect water availability for agriculture, industry and manufacturing, and domestic purposes (Government of Guyana, 2012; Government of Guyana, 2019). Health is also expected to be impacted through direct threats to safety during flooding events and storm surges, decreased availability of water during dry months, increased spread of vector-borne diseases like dengue and malaria and water-borne diseases like cholera and typhoid. Health will also be indirectly affected by the decline of agriculture and access to food (Government of the Co-operative Republic of Guyana, 2012) and increased domestic and outward migration is expected to occur due to declining living conditions (Government of the Co-operative Republic of Guyana, 2019).

Further analysis of climate change impacts on the priority sectors based on future projections can be found in section 5.3.

3 Policy and institutional context

3.1 National climate change policies, plans and coordinating mechanisms

Guyana has drafted and developed a number of progressive climate change policies and plans, including a NAP, NAMA and NDC. These key policies are presented in Table 2 below.

<table>
<thead>
<tr>
<th>National Climate Policy/Plan</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Climate Change Policy and Action Plan 2020-2030 Draft 2.0 (Government of the Co-operative Republic of Guyana, 2019b)</td>
<td>This policy was developed to progress work done as part of the First National Communication on climate change and the Low Carbon Development Strategy. It also provides context for the coordination of climate change interventions in the sector, mainstreaming climate change adaptation through a framework of high-level goals and principles. The strategy includes considerations on gender, indigenous communities and other vulnerable groups in Guyana.</td>
</tr>
<tr>
<td>Climate Resilience Strategy and Action Plan (Draft, 2016) (Office of Climate Change, 2016)</td>
<td>The draft strategy was developed to be an overarching framework for climate change adaptation and mitigation. The strategy continues work already done in Guyana to build resilience to the impacts of climate change through five core area: information; research and systematic observation; institutions and capacity building; policy and legal frameworks; infrastructure and technology; and finance.</td>
</tr>
<tr>
<td>Low-Carbon Development Strategy-Transforming Guyana’s Economy While Combating Climate Change (LCDS) 2013 (revised) (Office of the President, 2013)</td>
<td>This strategy provides a framework for the development of a low carbon economy in Guyana. It promotes the concept of “Economic Value to the Nation” as economic feasibility for protection of Guyana’s forests. It will be updated to be the country’s development strategy.</td>
</tr>
</tbody>
</table>
National Climate Change Communications Strategy and Implementation Plan (Draft, 2019)

This strategy and implementation plan was developed by the Caribbean Development Bank to guide the capacity development of the Office of Climate Change to manage climate change action in Guyana, and to provide a framework for climate change communication.


This plan was drafted in 2019 and is supported by the draft Climate Resilience Strategy and Action Plan and the former development strategy— the Green State Development Strategy: Vision 2040. The main goal of the plan is minimising vulnerability to climate change impacts through increased resilience and capacity to adapt. However, it has not yet been approved by Cabinet.

Nationally Appropriate Mitigation Action on Greening of Towns in the Co-operative Republic of Guyana (Draft) (Government of the Co-operative Republic of Guyana, 2018)

The draft NAMA is a comprehensive framework, aligned with tenets of the circular economy, for the greening of towns in Guyana. It specifically looks at energy and related amenities like transport, water and waste management, and the minimization of wastage, loss of energy and emissions produced.

Guyana’s National Drought Mitigation and Adaptation Plan (NDMAP) (Guyana Lands and Surveys Commission, 2020)

This recent plan was developed through the funding and support of the Global Mechanism of the United Nations Convention to Combat Desertification. The plan will help to stimulate proactive management, adaptation and mitigation to the impacts of drought and coordinate efforts in recovery and response.

Guyana’s Revised Intended Nationally Determined Contribution (NDC) (Government of the Co-operative Republic of Guyana, 2016)

The revised NDC document was developed and submitted to the UNFCCC in 2016. It aligns with the Warsaw Conference of the Parties Decision 1/CP.19 and Lima 1/CP.20. It outlines the Government of Co-operative Republic of Guyana’s conditional and unconditional contributions to its efforts to combat climate change.

All these policies are aligned to and guided by regional and international agreements and conventions. Regionally, as a CARICOM member state, Guyana is party to the Liliendaal Declaration on Climate Change and Development reaffirming commitment to the UNFCCC and supporting the work of the CARICOM Task Force for Climate Change and Development and the Caribbean Community Climate Change Centre (CCCCC). The Declaration has also led to the development of the CARICOM Regional Framework for Achieving Development of Resilient to Climate Change and the accompanying implementation plan for 2011–2021, which is spearheaded by the CCCCC. Another relevant regional strategy is the Caribbean Comprehensive Disaster Management Strategy (2014-2024), which is being implemented by the Caribbean Disaster Emergency Management Agency (CDEMA). There are several other CARICOM policy and strategies with implication for climate change actions in Guyana.

At the international level, Guyana is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC), its Kyoto Protocol and the Paris Agreement which commits parties to reduced greenhouse gas (GHG) emissions. Guyana is also dedicated to implementing and meeting targets identified under the Agenda 2030 and its Sustainable Development Goals (SDGs), particularly Goal 13 on climate action.

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9 The proposed NAP was not approved by the head of office in 2019 and was not sent to cabinet.

10 The Green State Development Strategy is no longer being pursued, with a reversion to the Low Carbon Development Strategy.
climate action, along with other SDGs 2, 5, 7, 9, 11 and 15\textsuperscript{11} (Government of the Co-operative Republic of Guyana, 2019b).

The lead agency for climate change in Guyana is the Department of Environment and Climate Change\textsuperscript{12} (formerly the Office of Climate Change), which is responsible for developing and implementing frameworks and activities for addressing climate change. It also coordinates initiatives implemented by various sectors and actors focused on climate change adaptation and mitigation (Government of Guyana, 2019). A coordinating mechanism to support the work of the Department is currently being reorganised and renamed (building on the previous National Climate Change Committee\textsuperscript{13}).

At the local management level, there are also coordinating mechanisms for the different regions. These include Village Councils, the Neighbourhood Democratic Councils, the Regional Democratic Council, the National Toshaos Council\textsuperscript{14} (Ministry of the Presidency, 2015; Government of Guyana, 2019) and Mayor and City Councils (Guyana Lands and Surveys Commission, 2020).

### 3.2 National gender policies, plans and coordinating mechanisms

The constitution of Guyana addresses the inclusion of women in leadership and decision-making. Under Chapter II - Principles and bases of the political, economic and social system, Article 29 states that “Women’s participation in the various management and decision-making processes, whether private, public or state, shall be encouraged and facilitated by laws enacted for that purpose or otherwise”. The constitution goes on to address “Equality for Women” under Article 149F (1) and (2). Here it states that sex or gender discrimination is illegal and that women have equal access and right to education, training, employment, pay and advancement, in all aspects of life. The constitution also makes provisions, under Article 160 (3)(b) (iii-v), for a minimum number of female candidates in a political party and for all parties collectively, and includes considerations for the minimum number of female candidates given geographical constituencies (Government of Guyana, 1980).

Article 212Q of the constitution establishes the Women and Gender Equality Commission. This is the mechanism responsible for the promotion and development of women’s affairs and gender equality. The commission is comprised of experts in the issues related to women and gender inequality. It is also mandated to have representation from the Women’s Affairs Bureau\textsuperscript{15} and commissions of the Rights of the Child, the Indigenous Peoples’, Human Rights and Ethnic Relations (Government of Guyana, 1980). The Commission works to raise the profile of and mainstream gender issues, particularly those of women and girls; empower women and create awareness of the needs of women, their contributions to development (Government of Guyana, 1980).

\textsuperscript{11}SDG 2- zero hunger; SDG 7- affordable and clean energy; SDG 9- industry, innovation and infrastructure; SDG 11- sustainable cities and communities and SDG 15- life on land. Referenced from https://www.un.org/sustainabledevelopment/sustainable-development-goals/

\textsuperscript{12}Formerly known as the Office of Climate Change

\textsuperscript{13}The National Climate Change Committee was the main national multi-stakeholder coordinating mechanism for climate change in Guyana and was made up of representatives from several government ministries, CSOs including organisations representing women and youth development, academia and the private sector. Its primary role was to promote the climate change considerations, planning and management in all sectors and across local and national levels (Government of the Co-operative Republic of Guyana, 2018).

\textsuperscript{14}National Toshaos Council is an indigenous peoples’ representative group.

\textsuperscript{15}The Women’s Affairs Bureau and the Men’s Affairs Bureau were re-formed into the Gender Affairs Bureau
The National Gender Equality and Social Inclusion (NGESI) Policy for Guyana provides an overarching framework to guide social sector policy and activities. In addition to a focus on gender, it takes into account the accessibility of vulnerable and/or marginal groups, social inclusion and the reduction of constraints to basic human rights of these groups. The NGESI policy also focuses on building the capacity of men, women, youth and all other vulnerable groups in the country, including PWDs, the elderly, hinterland communities, LGBTQIA+ groups/persons and addresses issues involving social injustice, gender inequality and inequity and discrimination (Walters and Viteri, 2018).

There is also the Final Costed Strategic Plan for Women’s Development and Addressing the Underachievement among Boys that was developed in alignment with the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). The strategy promotes empowerment of women, girls and boys, the equality of men and women for sustainable development through reduction in gender gaps and supporting human rights. The plan also strongly aligns with Goal 5 - Gender Equality of the SDGs. Guyana has also ratified or is signatory to several international conventions around gender, equity, decent work and human rights. Table 3 includes a summary of these conventions.

The lead agency is the Gender Affairs Bureau (GAB) under the Ministry of Human Services and Social Security, with the mandate to manage gender affairs at the national level. In 2016, the existing Women’s Affairs Bureau and Men’s Affairs Bureau were joined to form the GAB (Walters & Viteri, 2018). GAB is tasked with educating and increasing awareness of the public on non-discrimination and gender equality. It also facilitates and supports networking, interagency coordination and the provision of services to each of the regions (Viteri, 2017). Its work is supported by the Inter-Ministerial Committee Gender Focal Points (GFPs) which are appointed by the various government ministries and agencies and promote gender mainstreaming and carry out gender interventions and actions (Walters & Viteri, 2018). Regional Gender Affairs Committees have also been established by the GAB to help carry out gender-related activities and initiatives in the various regions of the country.

A Women’s Entrepreneurship Network has also been established by CSOs involved in agriculture and environmental projects and supports implementation at the sectoral level (Ministry of Agriculture, 2013). Other key organizations who help promote and coordinate actions related to gender affairs include the Guyana Women’s Leadership Institute, the National Resource and Documentation Centre for Gender and Development, Women of Worth Unit, Women Across Differences, and Guyana Women in Development (Ministry of Agriculture, 2013; Viteri, 2017).
to experience gender differently, or hold different roles, within different groups or relationships. Many other identity factors, such as race, ethnicity, religion, age, and mental or physical disability, can also influence how people experience their identity in these contexts.

Table 3. International conventions and agreements ratified by Guyana (Source: adapted from the NGESI Policy)

<table>
<thead>
<tr>
<th>International/Inter-American Treaties and Conventions</th>
<th>Ratified on March 1, 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Covenant on Civil and Political Rights (ICCPR)</td>
<td>Ratified on February 15, 1977</td>
</tr>
<tr>
<td>International Covenant on Economic, Social and Cultural Rights (ICESCR)</td>
<td>Ratified on February 15, 1977</td>
</tr>
<tr>
<td>Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment</td>
<td>Ratified on May 9, 1988</td>
</tr>
<tr>
<td>Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)</td>
<td>Ratified on July 17, 1980</td>
</tr>
<tr>
<td>Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children</td>
<td>Accessioned on September 10, 2001</td>
</tr>
<tr>
<td>International Convention on the Elimination of All Forms of Racial Discrimination (ICERD)</td>
<td>Ratified on February 15, 1977</td>
</tr>
<tr>
<td>Convention on the Rights of Persons with Disabilities (CRPD)</td>
<td>Ratified on September 10, 2001</td>
</tr>
<tr>
<td>Convention Concerning Forced or Compulsory Labour</td>
<td>Ratified on June 8, 1966</td>
</tr>
<tr>
<td>Equal Remuneration Convention</td>
<td>Ratified on June 13, 1975</td>
</tr>
<tr>
<td>Discrimination (Employment and Occupation) Convention</td>
<td>Ratified on June 13, 1975</td>
</tr>
<tr>
<td>Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Abuse</td>
<td>Ratified on January 15, 2001</td>
</tr>
<tr>
<td>International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families</td>
<td>Ratified on July 7, 2010</td>
</tr>
<tr>
<td>Inter-American Convention on the Prevention, Punishment and Eradication of Violence Against Women</td>
<td>Ratified on January 8, 1996</td>
</tr>
<tr>
<td>Inter-American Convention Against Corruption</td>
<td>Ratified on December 11, 2006</td>
</tr>
<tr>
<td>Indigenous and Tribal Peoples Convention (169)</td>
<td>Not a Signatory</td>
</tr>
<tr>
<td>Convention on the Political Rights of Women</td>
<td>Not a Signatory</td>
</tr>
<tr>
<td>Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages</td>
<td>Not a Signatory</td>
</tr>
</tbody>
</table>

4 Approach and methodology

4.1 Gender-based analysis+ framework

A Gender-Based Analysis+ (GBA+) framework was used to guide the analytical process and inform specific data collection and analysis, in order to assess how diverse groups of women, men, and gender-diverse people may experience climate change policies, programmes and initiatives. The “plus” in GBA+ considers many other identity factors in addition to gender, such as race, ethnicity, religion, age, and mental or physical disability, and how the interaction between these factors influences the way different groups of people might experience government policies and initiatives.

The GBA+ framework provides a systematic way to identify key issues and factors that contribute to gender and other social inequalities. The framework also takes a multi-level approach, focusing on individual, relational and structural factors within both public and private spheres as individuals are likely to experience gender differently, or hold different roles, within different groups or relationships.

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The framework is a means to a bigger end, with the goal of devising and implementing policies and programmes which do not exclude or harm women and other vulnerable groups of men, women and other genders, which take their needs and perspectives into account, and which may help redress some of the existing gender imbalances.

4.2 Applying GBA+ to understand climate change vulnerability and resilience

Given the objectives of the EnGenDER gender-based climate resilience analysis, the GBA+ framework was designed to support three broad areas of analysis:

1. **Vulnerability and Capacity:**
   a. Vulnerability refers broadly to the long-term factors which weaken people's and systems’ abilities to cope with the sudden onset of disaster, or with drawn-out emergencies (Oxfam, 1999). It also makes people more susceptible to disasters. In the context of climate change, vulnerability is understood as the propensity or susceptibility to be adversely affected by climate change risks, including climate variability and extremes (IPCC, 2014) as shown in Figures 2 and 3. It is important to note that vulnerabilities exist before disasters, contribute to their severity, make effective disaster response harder, and continue after the disaster.
   b. Capacity describes the existing strengths of individuals, households and social groups. In the context of climate change, adaptive capacity is defined as the ability of systems, institutions, humans and other organisms to adjust to potential damage, take advantage of opportunities, or respond to consequences (IPCC 2014). This is related to people's material and biophysical resources, their social resources, and their beliefs and attitudes. Capacities are built over time and determine people's ability to cope with crisis and recover from it (Oxfam, 1999; IPCC, 2014).

2. **Policy** – The degree to which national climate change policies and plans, as well as key sectoral polices and plans, have taken into consideration the different needs of various groups of men, women and other key vulnerable groups (e.g. elderly, youth, PWDs, LGBTQIA+ and indigenous communities) and the impacts of policy provisions on these groups.

3. **Institutions** – The degree to which national machineries focused on climate change, and priority sector machineries, have the capabilities and resources to effectively facilitate gender mainstreaming.

This framework for analysis draws on conceptual frameworks and tools for analysis from the NAP Global Network and UNFCCC (2019), IUCN, UNDP and Global Gender and Climate Alliance (2009), Oxfam Capacities and Vulnerabilities Framework (1999) and work developed by the Caribbean Regional Fisheries Mechanism’s Mainstreaming Gender Equality in Fisheries of the Caribbean project17.

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Figure 2. Climate Risk Model, including linkages between vulnerability, hazards and exposure
(Source: IPCC 2014)

Figure 3. Socio-economic processes that influence climate and disaster risk and vulnerability
4.2.1 Key considerations for analysis

Key issues of concern and factors to consider within the three broad areas of analysis are outlined below.

Vulnerability and Capacity
Specific vulnerabilities and capacities, including coping and adaptive strategies, were analysed for the two priority sectors looking at the ways in which men, women and key vulnerable groups have been or are impacted by climate change and related disasters. This analysis took into account the biophysical, financial/material and social assets available for specific groups. In particular, it looked at the following key aspects:

- **access to and control over resources** to understand what differences exist between men and women and key vulnerable groups in terms of their access to critical resources such as land, equipment and tools, financing, information and educational and training opportunities needed to support their day-to-day work and response and recovery to climate-related hazards

- **livelihoods and supporting ecosystems** to understand what are the past and current impacts of climate-related hazards on the main livelihoods of men, women and key vulnerable groups and the supporting ecosystems that provide goods and services and whether any shifts have occurred in livelihoods

- **participation in decision-making** to understand how men, women and key vulnerable groups are engaged and represented in decision-making and consultative processes at the sectoral and local levels, including within households and local organizations, and whether they face disadvantages or barriers to their engagement

- **culture, roles and gender relations** to understand how cultural attitudes, beliefs and social norms and relations, including gender biases and GBV, affect the roles, relationships and opportunities available to men, women and key vulnerable groups and shape their vulnerabilities and capacities

Policy
National climate change policies and plans, and relevant policies and plans for the priority sectors were analysed in terms of the following aspects:

- whether there is a clearly-stated mandate for addressing gender equality and social inclusion, including for specific vulnerable groups

- whether there are specific provisions to ensure consideration of gender equality, including gender-focused research, data collection and monitoring, as part of the implementation process

- whether there is a budget or institutional mechanism(s) in place to address gender concerns

Institutions
The national machineries focused on climate change, and priority sector machineries, were analysed in terms of the following aspects:

- capacity for gender mainstreaming, including technical knowledge and skills to conduct gender analysis and facilitate mainstreaming

- ability of their programmes to show evidence of integrating gender considerations in the design and implementation and make adjustments based on learning

- whether there is financing and budgeting that is gender-responsive

- whether structures and procedures have been designed and put in place to support substantive gender work, including collecting and analysing gender disaggregated data
• capacity for coordination and decision making, including whether there is an established gender focal point and level of collaboration and coordination with the lead agency for gender affairs and key gender machineries
• organizational culture and advocacy, including presence of leaders and champions that advocate for gender equality and whether there are biases towards gender, LGBTQIA+ and related issues

4.2.2 Key assumptions and limitations
In developing and applying this GBA+ framework, there were a number of assumptions made and limitations that have to be taken into account, including as follows:

1. When we refer to gender and differences between men and women we are also taking into account all the intersecting vulnerabilities such as age, disability, class, race and ethnicity and other factors.
2. While gender equality in terms of numbers of men and women in organizations and leadership positions is a key strategic goal for gender equity, it does not, by itself, signal that gender concerns and gender consciousness are implied.
3. Many of the concerns of “invisible” populations will not be taken into consideration simply because they are marginalized in society. These may include LGBTQIA+, indigenous peoples and remote or inaccessible communities.
4. Given the available data and time and capacity constraints, specific analysis of several key vulnerable groups in the GBA+ landscape could not be undertaken. As such, reference to these groups based on interviews and focus groups will be anecdotal and therefore requiring further research to expand on the baseline’s findings.

4.3 Methodology
CANARI utilized a suite of tools to collect data and effectively engage and gain inputs from diverse stakeholders, including typically-underrepresented groups such as women producers and women-led enterprises, youth, PWDs and the very poor, for the gender-based climate resilience analysis using virtual and in-person methods.

A comprehensive desk review was conducted to understand the policy and institutional context, climate change impacts and vulnerabilities, current climate change initiatives, and climate financing options as well as identify key opportunities, challenges and past recommendations to support a gender-responsive and socially inclusive approach to adaptation and resilience building in the priority sectors in Guyana. Relevant national and regional documents and statistics were collected for the priority sectors for the desk review, including national and sectoral policies and plans, legislation, census data, vulnerability assessments, gender assessments, poverty and other socio-economic assessments, funding proposals and project documents for climate change adaptation and resilience initiatives.

A gap analysis was conducted based on the desk review to identify key data gaps and needs in assessing climate change impacts and vulnerabilities and key opportunities and challenges for mainstreaming gender in the priority sectors. This gap analysis informed the identification of target stakeholders and the design and delivery of the data collection tools for the stakeholder consultations to ensure that specific gaps are filled, and tools are tailored to the local context and needs.

Data collection included key informant interviews and an online survey, using largely virtual methods, focusing on filling data gaps and supplementing the desk review findings. In total, six key informant
interviews were conducted in November 2020 with key government agencies and civil society organizations (CSOs) (targeting three men and three women). The interviews sought to capture relevant data based on the GBA+ framework and allow for more in-depth exploration and discussion of local perceptions, experiences and the economic, political and socio-cultural factors shaping gender and social inequalities and vulnerability to climate change and disasters in the priority sectors and Guyana more broadly. See Appendix 1 and 2 for the list of key informants and the interview questions, respectively.

A regional online survey was also administered in November 2020 to gain wider stakeholder inputs, including from farmer organizations, small agri-businesses and CSOs working on gender and climate-change issues. There were a total of six respondents from Guyana representing farmer organizations or other CSOs and academic institutions. However, due to poor survey response, detailed statistical analysis could not be undertaken based on the online survey.

Data from focus groups conducted by a local consultant, who worked in parallel under the EnGenDER project to conduct a gender equality and cost of inaction study for the priority sectors from September to December 2020 (UN Women, forthcoming), were also integrated into the analysis. These focus groups were facilitated virtually from October to November 2020, and targeted staff from the Ministry of Agriculture, Ministry of Health – Woman’s Health Section and the National Commission on Disability.

Due to the limitations in primary data collection, additional efforts to collate recent data from 2018 to 2020 from climate change vulnerability and risk assessments, gender assessments and socio-economic assessments for the priority sectors were undertaken from January to March 2021 to ensure a sufficient evidence base and the robustness of the findings and recommendations from the analysis.

4.3.1 Climate and socio-economic vulnerability profile
In addition to the above, a climate and socio-economic vulnerability profile was also developed to better understand the potential impacts of climate change, related vulnerabilities and how this may shape the socio-economic context, including for men, women and key vulnerable groups engaged in the two priority sectors, to inform climate change planning and programming.

The profile draws on and analyses the latest available climate change data and projections and socio-economic data, focusing on those variables that are most significant or catalytic in terms of climate change adaptation and resilience. Therefore, the idea was not only to identify socioeconomic vulnerabilities that would be compounded by climate change but, conversely, to identify vulnerabilities which, if they were positively addressed, would produce far reaching or catalytic impacts. This is why the profile focuses on access to labour and employment as a key theme.

The profile specifically addresses the main climate change trends and projections and potential key impacts, overall socio-economic vulnerabilities, and climate change-related shocks and their intersections with structural inequalities in relationship to access to decent work18.

18 As defined by the United Nations (2018), decent work “means opportunities for everyone to get work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration. It is also important that all women and men are given equal opportunities in the workplace. See: https://www.un.org/sustainabledevelopment/wp-content/uploads/2018/09/Goal-8.pdf
The latest climate change data and projections were sourced from the State of the Caribbean Climate Report (UWI-Climate Studies Group Mona, 2020), focusing on temperature, rainfall and sea level rise as well as rapid onset extreme events like hurricanes and floods. The projections are for three time periods: 2030, 2050 and 2100 and are based on a range of General Circulation Models (GCMs), Regional Climate Models (RCMs) as well as statistical downscaling techniques. Additional data and maps were sourced from the Caribbean Climate Weather Impacts Group (CARIWIG) Portal.

Data on the labour force were primarily sourced from the most recent labour force surveys conducted by the Bureau of Statistics for Guyana, and the limitations noted in relation to when the data was collected, the sample size, and the level of disaggregation. Attention is paid to the COVID-19 pandemic as much as possible in light of the lack of data on its impacts to date, and structural analysis is used to highlight trends and areas of concern. COVID-19-related data combined with labour and other socio-economic data provides a more relevant contextual analysis.

GBA+ is also integrated to address the equitable participation of women and men in the development areas being discussed, as well as key vulnerable groups, and socio-economic analysis takes into account vulnerabilities associated most closely with gender and employment in the context of climate change.

4.3.2 Limitations

The COVID-19 pandemic prevented the CANARI team from conducting planned in-person activities, including focus groups and in-person meetings during a mission to Guyana, which are typically much more effective in engaging the marginalized and vulnerable groups that the analysis hoped to target. Additionally, with the political transition due to a new incoming government, there were further difficulties in engaging and mobilizing government stakeholders that usually can be effectively targeted using virtual methods. Therefore, the level of stakeholder engagement in consultations was lower than expected and the poor survey response meant that statistical analysis could not be undertaken for surveys.

As such, the sectoral analysis presented in section 5.1 and policy and institutional analysis in 5.2 are largely based on secondary data, including recent gender and socio-economic assessments for specific projects

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19 A climate model (including Global or Regional) is a numerical representation of the climate system based on the physical, chemical and biological properties of its components, their interactions and feedback processes, and accounting for some of its known properties. The climate system can be represented by models of varying complexity; that is, for any one component or combination of components a spectrum or hierarchy of models can be identified, differing in such aspects as the number of spatial dimensions, the extent to which physical, chemical or biological processes are explicitly represented, or the level at which empirical parametrizations are involved. There is an evolution towards more complex models with interactive chemistry and biology. Climate models are applied as a research tool to study and simulate the climate and for operational purposes, including monthly, seasonal and interannual climate predictions. See https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Annex1_Glossary.pdf

20 Downscaling is a method that derives local- to regional-scale (up to 100 km) information from larger-scale models or data analyses. Two main methods exist: dynamical downscaling and empirical/statistical downscaling. The dynamical method uses the output of regional climate models, global models with variable spatial resolution, or high-resolution global models. The empirical/statistical methods are based on observations and develop statistical relationships that link the large-scale atmospheric variables with local/regional climate variables. In all cases, the quality of the driving model remains an important limitation on quality of the downscaled information. The two methods can be combined, e.g., applying empirical/statistical downscaling to the output of a regional climate model, consisting of a dynamical downscaling of a general circulation model (GCM). See https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Annex1_Glossary.pdf

21 See http://cariwig.caribbeanclimate.bz/#future_data_viewer
and initiatives within the priority sectors. For certain marginalized groups, such as migrant workers and refugees from Venezuela, Haiti and other countries and the LGBTQIA+ community, even secondary data is limited and so the analysis does not include detailed findings and recommendations for these groups.

For the vulnerability profile in section 5.3, it was difficult to obtain downscaled climate change data and the most up-to-date socio-economic data for Guyana, recognizing that COVID-19 has had a significant effect on the current landscape. However, the data utilized is seen as legitimately indicative of socio-economic conditions of concern in addressing vulnerability to the impacts of climate-related hazards and other shocks. Additionally, it is worth noting that the climate change data and socio-economic data are at different geographic scales, with the climate change data of coarser resolution than the socio-economic data. This also limits the depth of the analysis.

5 Findings of the gender-based climate resilience analysis

5.1 Sectoral analysis

Drawing on the GBA+ framework, this section analyses gender differences and inequities and issues of concern to key vulnerable groups, including PWDs, elderly and indigenous communities, for the two priority sectors.

5.1.1 Agriculture sector

Guyana’s agricultural sector is a significant contributor to the country’s GDP, contributing up to 20 percent, and an important source of employment for 33 percent of the working population (Ministry of Agriculture, 2013). There are both larger scale and smaller scale farms involved in the industry, but the majority are small holdings or “family farms” of 5 ha. or less. There are five main sub-sectors namely sugar, rice, livestock, fisheries and non-traditional agricultural commodities. Agriculture varies between regions, with rice, peanuts and other legumes, coconuts and fruits and vegetables grown in Regions 1–4, 6 and 10, cashew, coconuts, legumes and fruits grown in region 5, ground provision and pineapple grown in Regions 7 and 8, a wide range of ground provision and fruits grown in Region 9 (Ministry of Agriculture, 2013). Livestock farming, including beef and dairy farming, is focused in Regions 2, 3, 5, 6 and 9 (Ministry of Agriculture, 2013).

The Ministry of Agriculture is the lead agency for the management and development of the agriculture sector in Guyana. The ministry works through four programmes: Administration; Crops and Livestock Support Services; Fisheries Department; and the Hydrometeorological Services. There are also numerous other agencies which support the management and implementation of initiatives in the sector, such as The Guyana Sugar Corporation (GuySuCo), Guyana Livestock Development Agency (GLDA) and the National Agricultural Research and Extension Institute (NAREI). The work of the Ministry is guided by the National Strategy for Agriculture 2013–2020 (Ministry of Agriculture, 2013), which is in the process of being revised for the period 2021–2025. There is also a National Adaptation Strategy to Address Climate Change in the Agricultural Sector of Guyana. These two key strategies are summarized in Table 4.

The main coordinating mechanism for the sector is the Food Security and Nutrition Council, tasked with facilitating inter-agency and inter-sectoral coordination and dialogue on food and nutrition in Guyana in consultation with stakeholders (Ministry of Agriculture, 2013).
Table 4. Key national plans for Guyana’s agricultural sector

<table>
<thead>
<tr>
<th>National agriculture policy or plan</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Strategy for Agriculture in Guyana 2013-2020</td>
<td>The 8-year strategy was developed around the F-5 strategic approach which comprises five main priority areas: “food security, fibre and nutritious food by citizens, fuel production, fashion and health products and furniture and crafts” (Ministry of Agriculture, 2013).</td>
</tr>
<tr>
<td>Disaster Risk Management Plan for the Agriculture Sector 2013-2020</td>
<td>This strategy is a multi-hazard comprehensive framework for the mainstreaming of disaster risk reduction and management in the agricultural sector in Guyana. It focuses on livelihood protection, development of social capital and food and nutritional security of the country and wealth creation. The plan is aligned with national disaster risk management and development agendas and with the CARICOM regional model for Comprehensive Disaster Management.</td>
</tr>
<tr>
<td>National Adaptation Strategy to Address Climate Change in the Agricultural Sector of Guyana (Strategy and Action Plan)</td>
<td>This strategy was spearheaded by the Caribbean Community Climate Change Centre (CCCCC) as part of the Mainstreaming Adaptation to Climate Change project. The Strategy and Action Plan identifies ways to address climate change and sustainable management of the agricultural sector (Development Policy and Management Consultants, 2009).</td>
</tr>
</tbody>
</table>

The ways in which different genders are engaged in the agriculture sector, existing inequities and vulnerabilities, and opportunities and barriers for empowerment of women and key vulnerable groups are outlined below in terms of access to resources, risks to their livelihoods and supporting ecosystems, influence and participation in decision-making, and culture and gender relations.

Access to and control over resources

Critical resources for crop and livestock agriculture include land, finance or credit, tools, and relevant information, knowledge and skills. Men dominate the sector with respect to land and farm ownership (Lily, 2020), and are usually involved in the more physically-intense work in agriculture, while women engage in lighter work (Fredericks, 2020). Men are also more involved in large-scale commercial cultivation, while women and children are particularly involved in small-scale cultivation of fruits and other crops, such as avocado, banana, cherry, carambola, citrus, mango, passion fruit and pineapple that are important for local livelihoods and nutrition (Ministry of Agriculture, 2013).

Male farmers are therefore better able to access loans for development or for recovery of costs due to land ownership and income levels. Women farmers and processors or vendors do not enjoy the same levels of access to land or finance and credit due to the lending policies of public and private sector banks and financial institutions (Fredericks, 2020). For example, women who wanted to apply for access to state land were previously required to be accompanied by or identify her husband. However, this is no longer the case (Fredericks, 2020). Access to land and other resources has been changing over time, with more women owning farms. For example, in the past, land was passed down from father to son, not daughters, due to legal or cultural factors (e.g. traditional values in indigenous communities). As more women are educated and trained in the sector, they have been more engaged in purchasing and managing farms.

Other resources critical to agriculture, such as water, are generally available to everyone, but access may be limited by geographic location and the impacts of drought conditions and other climate change effects.

Women may also face a disadvantage in terms of access to knowledge, skills and relevant information to thrive in the agriculture sectors. While both men and women farmers have access to information shared
online or via traditional media or extension services, men have access to more information through their wider informal networks (Lily, 2020). Women from poorer households are also expected to work within the household, particularly in remote rural and indigenous communities, which may affect their ability to participate in schooling or training and acquire needed skills. Even within education systems, there are biases in terms of perception of the types of fields that girls and women should pursue, which discourages women from pursuing fields of science and technology, trade and commerce-related careers (Walters & Viteri, 2018). Women are also likely to be paid less than men in the same position (Walters & Viteri, 2018).

For the agro-processing industry, there has been services and support extended in particular to women and youth. The Guyana Marketing Corporation (GMC), which operates under the Ministry of agriculture provides assistance with marketing of goods in the non-traditional agricultural sector, that is, those not involved in sugar or rice production. There are also packaging facilities in Georgetown and Parika, cold storage facilities and cold transport services. They also assist processors in packaging and labelling and creates linkages between buyers and seller and provides additional support to bulk buyers. The GMC has works with organizations such as the Association of Women Agro-producers to improve stakeholders packaging and labelling skills. The GMC manages the Guyana Shop, where agro-processors can house, sell and promote their products. In order to utilise this service agro-processors must have a Food Handlers’ Certificate; Business Registration Certificate approved by the High Court and a Food and Drug Department Certification. The Food and Drug Department Certification requires Sanitary Officers or Environmental Health Officers inspecting food processing facilities and the Government Analyst- Food and Drug Department (GA-FDD) testing the products. Some of the products sold in the Guyana Shop include juices, jams, sauces and condiments, dried salted shrimp, wine and other beverages, flour, oils and many other products. There are currently 123 agro-processors in the Guyana Shop; 56 male, 60 female and 7 mixed (both male and female). Another CSO, Women for Change, also provide training to women in gardening, hydroponics, agro-processing, farming under shade and standards in agriculture, where they target women from vulnerable groups. They also help to raise funds for purchasing of tools.

A programme is offered by the Guyana School of Agriculture (GSA) on agro-processing, which is predominantly undertaken by women and of which 66% of the lecturers are women (Ndiaye, 2020). Training is also offered by other organizations such as NAREI, GLDA, Food and Agriculture Organization of the United Nations (FAO), and the Rural Enterprise and Agricultural Development project (Ndiaye, 2020).

Risk to livelihoods and ecosystems
Crop and livestock agriculture contributes significantly to rural and traditional livelihoods, providing employment, household income and food security. It is also an important part of traditional knowledge and values for indigenous communities. The changing climate and related disasters pose a serious threat to these agriculture-based livelihoods (Government of Guyana, 2019). Reduced water availability will rain-fed agriculture and the ability of rural and indigenous communities to grow food for subsistence, as well as for sale, and to maintain their health and well-being. More extreme flooding and sea level rise may displace communities situated on the coast (in Regions 1-4) or along riverbanks in the interior, and disrupt road and river transport and access to markets and public services. The increase in temperatures and drier conditions may lead to droughts and forest fires, affecting hinterland communities and farms and further limit access to clean water and increase health risks (e.g. respiratory problems) (Government of the Cooperative Republic of Guyana, 2018).

Although farmers will be broadly impacted by climate change, women farmers or processors and vendors are less able to adapt or recover due to limited access to insurance or relief for losses if they do not own land or do not have formal documentation of income or losses (Lily, 2020). Women are also often the
primary caregivers in households, who are responsible for feeding the household and affected by shortages or spikes in food prices. This may require women to spend a greater portion of their income or time to secure food for the household in addition to their other responsibilities.

**Culture, roles and gender relations**
Sexual harassment and GBV against women remain an issue, along with forced marriages, particularly in remote rural and indigenous communities dependent on agriculture (Walters & Viteri, 2018). Sexual harassment and GBV can occur on the farm or in agri-processing facilities and markets, encumbering women's ability to perform well and seek mobility. Women who are responsible for work at home are also more likely to be subjected to emotional, physical, sexual and financial abuse (Walters & Viteri, 2018). This can detract from women being able to realize further economic and social development.

Underachievement of boys is also identified as a critical and often underappreciated challenge in Guyana. According to the Final Costed Strategic Plan for Women’s Development and Addressing the Underachievement among Boys (Viteri, 2017), gender systems in Guyana has caused the indigenous groups, particularly boys, to be marginalized because of limited access to resources, education and the opportunities they provide. They are thus more often subjected to poor labour environments in sectors such as agriculture and mining, including exposure to health risks associated with chemical or pesticide use. This exploitation of men and boys, their reduced access to resources and factors such as race and class, perpetuate “subordinate masculinities” and limits opportunities for low income/poor, indigenous or black, rural men and boys (Viteri, 2017). This also appears to have a link with the high level of suicide in Guyana, the highest among Caribbean and South American countries and forth highest per capita globally (Henry, 2015).

5.1.2 **Health sector**
The lead agency for the health sector is the Ministry of Health, whose main goal is to promote and facilitate the best public health services for the citizenry. The ministry comprises several units and agencies within its structure, for example, Food and Nutrition, Maternal and Child Health, Men’s Health and Regional Health Services. The primary document advising the work of the ministry is the Health Vision 2020 National Health Strategy for Guyana 2013–2020 (Ministry of Health, 2013), which will soon be under revision. See Table 5 below for a summary of the key sectoral strategies and plans.

For the health sector, the National Health Policy Committee is responsible for providing policy and strategic guidance, as well as facilitating the participation of stakeholders. There are also six working groups set up to guide the technical aspects and implementation of the National Health Strategy (Ministry of Health, 2013). The health sector is also guided by the Joint Steering Committee which oversees the development and implementation of the National Health Strategy and was established under the Ministry of Health and is chaired by the Permanent Secretary. The Chief Medical Officer is the technical lead of the committee and further technical support is provided by the Pan American Health Organization (PAHO) (Ministry of Health, 2013).

**Table 5. Key national plans for Guyana’s health sector**

<table>
<thead>
<tr>
<th>National gender policy or plan</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Vision 2020 - A National Health Strategy for Guyana 2013-2020 (Ministry of Health, 2013)</td>
<td>This strategy was developed using priority areas of the “Poverty Reduction Strategy Paper and the Low Carbon Development Strategy” and the “Low Carbon Development Strategy”. It is also guided by national, regional and international frameworks on</td>
</tr>
</tbody>
</table>
health, the “Health Agendas for the Americas” and the Millennium Development Goals (MDGs), just to name a few.

<table>
<thead>
<tr>
<th><strong>Food and Nutrition Security Strategy for Guyana (Government of Guyana, 2011)</strong></th>
<th>This strategy was developed with the goal of enhancing the well-being and overall health of Guyanese nationals by improving access to food and nutritional security, through a focus on sustainable livelihoods and increased access and availability to food, education and information sharing on healthy lifestyle and food, particularly for vulnerable groups.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Guyana Country Cooperation Strategy 2016-2020 (PAHO and WHO, 2016)</strong></td>
<td>This is the third strategy for work and cooperation between the Pan American Health Organization (PAHO)/World Health Organization (WHO) and the Government of the Cooperative Republic of Guyana. The document is guided strongly by SDG 3 “Ensure healthy lives and promote well-being for all ages”, the strategic direction of the WHO and PAHO and the Health Vision 2020 strategy.</td>
</tr>
<tr>
<td><strong>National Policy on Occupational Safety and Health 2018 (Ministry of Social Protection and National Advisory Council on Occupational Safety and Health (NACOSH), 2018)</strong></td>
<td>This is a revised policy which addresses Guyana’s commitment to the implementation, monitoring and enforcement of the Occupational Safety and Health Act. This policy specifically addresses the vulnerability of women, youth, the elderly, PWDs, persons living with HIV/AIDS, persons living with mental illness and persons with drug addictions.</td>
</tr>
</tbody>
</table>

The ways in which different genders are engaged in the health sector, existing inequities and vulnerabilities, and opportunities and barriers for empowerment of women and key vulnerable groups are outlined below in terms of access to resources and culture and gender relations.

**Access to and control over resources**

In comparison to men, women face challenges in access to healthcare, hygiene products (particularly women’s hygiene products), and information about how to access these services. Limited access to healthcare and information means that they have little knowledge on reproductive health, prevention of unplanned pregnancy, sexually transmitted diseases and other diseases such as ovarian and breast cancer (Walters & Viteri, 2018).

During disasters which displace households, there is limited availability of emergency shelters and relief in hinterland areas and abuse reportedly takes place in shelters where they exist. Shelters may also be unable to meet the cultural needs of indigenous communities. Community health is expected to be negatively affected by climate change due to reduced water availability and decreased income through agriculture, and by the increase in vector-borne, food-borne and water-borne diseases (Government of the Co-operative Republic of Guyana, 2018).

In terms of delivery of health services, the division of labour is less clear than in the agriculture sector, but there is some separation of roles. For example, there are more doctors who are men, and women who are nurses (Lily, 2020). In addition, there are often greater expectations of women working in the health sector during climate-related or other disasters. For example women who are nurses have increased pressure at work during these times and also have increased responsibility at home (Lily, 2020).
Culture, roles and gender relations
Culturally, women are more likely to seek help and there are more organizations offering or more opportunities to access psychosocial help, than available for men (Lily, 2020). This is despite provisions being made for both men and women to access health services. However, as it relates to GBV, women tend not to seek out help through healthcare professionals or otherwise, particularly those in remote rural or indigenous communities in the hinterland (UNDP, 2019b).

Gender is specifically mentioned as a key factor shaping health and well-being in national policy, and can intersect with other factors such as ethnicity and race, disabilities and poverty which often determines the level of access to potable water and proper sanitation (Ministry of the Presidency, 2015).

5.2 Policy and institutional analysis
5.2.1 Policy analysis
The degree to which national climate change and gender policies, as well as key sectoral polices and plans, have taken into consideration the different needs and impacts of various genders and other key vulnerable groups, including PWDs, elderly and indigenous communities are outlined below in Table 6.
Table 6. Findings of analysis on key climate change, gender, agriculture and health policies

<table>
<thead>
<tr>
<th>Policy</th>
<th>Clearly stated mandate for inclusion of various genders (and other vulnerable groups) in policy</th>
<th>Specific provisions to ensure consideration of gender equity and gender analysis as part of policy implementation</th>
<th>Budget, committee or other institutional mechanism(s) exist to address gender concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate change</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Climate Change Policy and Action Plan 2020-2030 Draft 2.0 (Government of the Co-operative Republic of Guyana, 2019b)</td>
<td>Yes. Gender is highlighted in the guiding principles of the draft policy and is mentioned throughout along with vulnerable communities and indigenous peoples.</td>
<td>Yes. Gender equity and equality appears under policy objective 6.1 which is “Drive social equity for vulnerable groups (women, youth, indigenous and aged) in national climate change processes” in reference to the development of climate action. It also states that vulnerability and risk assessments should be prioritized to inform development of gender-sensitive strategies.</td>
<td>No specific budget for gender mainstreaming is identified, however, increasing national budgets for climate budgeting is addressed, which will include gender considerations and vulnerable groups. No specific coordinating mechanism for gender is mentioned in the policy.</td>
</tr>
<tr>
<td>Proposed National Adaptation Plan for the Co-operative Republic of Guyana (Draft) (Government of the Co-operative Republic of Guyana, 2019a)</td>
<td>Yes. Gender equality is identified as a cross-cutting aspect of the proposed NAP. It notes that differences between genders be taken into account, and promotes equality and equity in decision-making processes and access to financial and other resources.</td>
<td>Yes. Gender is more specifically addressed under the sector of Equity and Equality with gender analysis mentioned as a “gender-related direction” along with the inclusion of gender specialists in development of plans.</td>
<td>No specific budgeting mechanism, committee or other mechanisms were identified in the proposed NAP, however “gender responsive budgeting” was highlighted as part of the development of action plans.</td>
</tr>
<tr>
<td>Nationally Appropriate Mitigation Action on Greening of Towns in the Co-operative Republic of Guyana (Draft) (Government of the Co-operative Republic of Guyana, 2018)</td>
<td>No. There is limited mention of gender in the plan except for articulating how the draft NAMA contributes to achieving the Sustainable Development Goals (SDGs).</td>
<td>No. It does however mention women, youth, poor and other vulnerable groups in relation to SDG 8 decent work and economic growth and the creation of employment through promotion of entrepreneurship and innovation, growth of micro-enterprises.</td>
<td>No. There is a NAMA working group identified, but it does not specify the inclusion of women, gender focal points or other vulnerable groups.</td>
</tr>
<tr>
<td>Guyana’s National Drought Mitigation and Adaptation Plan (NDMAP) (Guyana Lands and Surveys Commission, 2020)</td>
<td>Yes. The plan identified the need for a gender-responsive process of implementation.</td>
<td>Yes. Under the priority actions of the plan, “Drought Risk and Vulnerability Assessment Recommendations” the integration of gender differences and issues in assessment design and implementation was highlighted.</td>
<td>No specific mention of budget for gender mainstreaming, however, it is stated that, through the work of the Drought Committee, stakeholders representing women and other vulnerable groups will be considered to</td>
</tr>
<tr>
<td><strong>Guyana’s Revised Intended Nationally Determined Contribution (NDC) (Government of the Co-operative Republic of Guyana, 2016)</strong></td>
<td>No. There is no mention of gender or women in the Revised NDC, however, it does recognize the human rights of indigenous groups, local communities and other vulnerable groups in executing contributions.</td>
<td>No. There are no specific provisions to ensure consideration of gender equity and gender analysis as part of policy implementation.</td>
<td>No. There is no mention of budget, committee or other institutional mechanism(s) exist to address gender concerns.</td>
</tr>
<tr>
<td><strong>A Low-Carbon Development Strategy - Transforming Guyana’s Economy While Combating Climate Change (LCDS) (Revised 2013) (Office of the President, 2013)</strong></td>
<td>No. Gender is not explicitly mentioned in the mandate of the document, but there is a heavy focus throughout the plan on vulnerable groups, especially remote communities/hinterland communities and small and micro enterprises.</td>
<td>No. There are no specific provisions to ensure consideration of gender equity and gender analysis as part of policy implementation.</td>
<td>No. There are no budgets or mechanisms specific to gender. It does identify the Multi-stakeholder Steering Committee, which involves civil society organizations. It also highlights funding made available to hinterland development.</td>
</tr>
<tr>
<td><strong>National Gender Equality and Social Inclusion (NGESI) Policy for Guyana (Walters &amp; Viteri, 2018)</strong></td>
<td>Yes. The entire mandate of the policy is gender inclusion. It provides guidance for social sector policy and activities through the context of gender, challenges in accessibility of vulnerable and or marginal groups and social inclusion, and the reduction of constraints to basic human rights of these groups.</td>
<td>Yes. There are specific provisions to promote gender equality and gender analysis to better inform policy implementation.</td>
<td>Yes. The NGESI, though not identifying a specific budget or funding, speaks to government allocation to the Ministry of Human Services and Social Security and the limited budget available. It also addresses the issue of including gender perspectives in budgeting (gender-responsive budgeting) and recognizes the allocations within legislation for PWDs. It also identifies mechanisms such as the Inter-Ministerial Committee GFPs, the Regional Gender Action Committees and commissions for several of the vulnerable groups.</td>
</tr>
<tr>
<td>Document Title</td>
<td>Gender Considerations</td>
<td>Health Considerations</td>
<td>Budgeting Considerations</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>National Strategy for Agriculture in Guyana 2013–2020 (Ministry of Agriculture, 2013)</td>
<td>No. There is no clearly stated mandate for addressing gender equality and equity, increasing the involvement of women and youth in agriculture is identified as a cross-cutting aspect to Guyana’s vision for agriculture. There is extra emphasis on youth in agricultural entrepreneurship and technology.</td>
<td>No. There is no mention of gender equity and equality or gender analysis for the sector, however, equity is referenced as part of the overall vision for agriculture.</td>
<td>No. There is no budget for gender mainstreaming identified but it speaks to the financing of agriculture as a whole. There is also no specific mention of a coordinating mechanism for gender work in agriculture, however, it identified the National Food and Security Council, which engages a wide range of stakeholders.</td>
</tr>
<tr>
<td>National Adaptation Strategy to Address Climate Change in the Agricultural Sector of Guyana (Strategy and Action Plan) (Development Policy and Management Consultants, 2009)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Health Vision 2020- A National Health Strategy for Guyana 2013-2020 (Ministry of Health, 2013)</td>
<td>Yes. Gender considerations are included throughout the strategy and is set out in its values and the importance on the ministry itself in developing and implementing rights-based health policies which are gender sensitive.</td>
<td>Yes. The strategy mentions gender equality and references equity in health and well-being throughout the document. Gender equality is specifically mentioned under strategic interventions dealing with GBV.</td>
<td>No specific budgeting mechanism, committee or other mechanisms were identified specific to gender.</td>
</tr>
<tr>
<td>Food and Nutrition Security Strategy for Guyana (Government of Guyana, 2011)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Guyana Country Cooperation Strategy 2016-2020 (PAHO and WHO, 2016)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Note* n/a indicates that there was insufficient data to assess the relevant factor and/or the mechanism is currently inactive.
### 5.2.2 Institutional analysis

The analysis also examined the degree to which the lead agencies of the three priority sectors, as well as national climate change machineries, have the capacity and capabilities to facilitate gender mainstreaming into climate change and resilience actions. See Table 7 for summary of findings.

**Table 7. Findings of institutional capacity analysis of key agencies and coordinating mechanisms**

<table>
<thead>
<tr>
<th>Agency/Coordinating body</th>
<th>Capacity for gender mainstreaming</th>
<th>Programmes show evidence of gender consideration and learning</th>
<th>Gender-responsive financing and budgeting</th>
<th>Coordination and decision making promotes gender equity</th>
<th>Organizational culture and advocacy for gender mainstreaming</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Climate change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Environment of Climate Change (formerly the Office of Climate Change)</td>
<td>There is a gender focal point who sits on the Gender Focal Point Committee. Most staff had exposure to basics of gender mainstreaming through in-house information sharing. Technical staff were exposed to various degrees to gender mainstreaming.</td>
<td>Some projects have gender considerations built-in. However, the extent varies.</td>
<td>Not currently practiced since budgets are largely project based.</td>
<td>While the top management and large proportion of the staff are women, the decision-making processes did not consider gender unless specifically required by a project, etc.</td>
<td>There was increased recognition of the importance and therefore advocacy.</td>
</tr>
<tr>
<td>National climate change coordination mechanism (formerly the National Climate Change Committee)</td>
<td>The GAB is a member of the committee.</td>
<td>The coordinating body did not have a set programme of activities.</td>
<td>No allocated budget or financing, therefore no gender-responsiveness.</td>
<td>n/a</td>
<td>Unclear. However, given representation of the GAB, indigenous peoples and youth organizations, advocacy can be considered inherent in the structure.</td>
</tr>
<tr>
<td>Gender Affairs Bureau (GAB)</td>
<td>Gender mainstreaming is the mandate of the organization. The Gender Focal</td>
<td>The GAB is involved in some projects/programmes where is can</td>
<td>n/a</td>
<td>n/a</td>
<td>The GAB supports and provides training to different organizations,</td>
</tr>
<tr>
<td><strong>Inter-ministerial Committee Gender Focal Points</strong></td>
<td>Gender focal points have a role of advising projects and activities on the various sectors.</td>
<td>It is comprised of representatives across the various sectors including the Department of Environment of Climate Change, Ministry of Public Works, Ministry of Tourism etc.</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>National Gender Equality Commission</strong></td>
<td>The Commission advises on gender issues nationally</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Local government-Regional Affairs Committees</strong></td>
<td>They work under the Regional Democratic Councils and include a large cross-section of organizations inclusive of the private sector, CSOs and religious groups.</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

### Agriculture

| **Ministry of Agriculture** | There is a gender focal point who sits on the Gender Focal Point Committee | Recent project focussed on gender mainstreaming in the sector including a gender assessment and development of a gender policy | n/a | n/a | n/a |
| **Food Security and Nutrition Council** | n/a | n/a | n/a | n/a | n/a |

### Health

| **Ministry of Health** | There is a gender focal point who sits on the | n/a | n/a | n/a | n/a |
5.3 Climate and socio-economic vulnerability profile

A climate and socio-economic vulnerability profile has been developed to better understand the current and projected impacts of climate change, related vulnerabilities and how this may shape the socio-economic context in Guyana, including for the two priority sectors. It also focuses on the structural inequalities most likely to be exacerbated by the impacts of climate change, particularly gender inequality.

While the profile does not provide a detailed analysis of projected climate change impacts on the two priority sectors of agriculture and health, it does note the implications of negative impacts on households and communities as a result of their decline. The profile also provides insights for strengthening these sectors directly and indirectly by referencing relevant socio-economic concerns for climate change adaptation and mitigation.

As noted in the methodology in section 4.3.1, it was difficult to obtain downscaled climate change projections for Guyana and therefore the climate change data is of coarser resolution than the socio-economic data in the profile. It was also difficult to obtain up-to-date socio-economic data given the impacts of the COVID-19 pandemic since March 2020. However, preliminary data on the changing socio-economic conditions due to COVID-19 is taken into account.

5.3.1 Climate change data and projections

This section outlines projected climate changes for Guyana based on data sources including UWI-Climate Studies Group Mona (2020) and Caribbean Climate Weather Impacts Group (CARIWIG) (2021).

The State of the Caribbean Climate Report (SOCC) (UWI-Climate Studies Group Mona, 2020) provides projections on temperature, rainfall and sea level rise, as well as information on rapid onset extreme events like hurricanes and floods. The projections are for three time periods, 2030, 2050 and 2100, and are based on a range of GCMs, RCMs as well as statistical downscaling techniques as noted in 4.3.1. The GCM projections described in the SOCC were run using several Representative Concentration Pathway (RCP)22 scenarios, specifically RCP2.6, RCP4.5, RCP6.0, and RCP8.523 from the Intergovernmental Panel on

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22 Pathways are the temporal evolution of natural and/or human systems towards a future state. Pathway concepts range from sets of quantitative and qualitative scenarios or narratives of potential futures to solution oriented decision-making processes to achieve desirable societal goals. Pathway approaches typically focus on biophysical, techno-economic, and/or socio-behavioural trajectories and involve various dynamics, goals and actors across different scales. (Available at https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Annex_I_Glossary.pdf)

23 RCP 2.6 is termed a “stringent” mitigation scenario which assumes global mitigation attempts e.g. massive scale reforestation are able to keep global warming less than 2°C below pre-industrial levels. RCP8.5 is a high greenhouse gas emissions scenario often referred to as “business as usual scenario e.g. continuation of high fossil fuel use which then results in a 4.3°C increase in temperature by 2100, when compared to pre-industrial temperatures. RCP4.5 and RCP6.0 are intermediate scenarios between the extremes of RCP2.6 and RCP8.5 which assumes some mitigation actions e.g. policies to reduce carbon emissions or use of carbon capture technologies.
Climate Change (IPCC) Fifth Assessment Report (AR5). Each of these scenarios assume different concentrations of carbon in the atmosphere in the future. Thus, for example RCP2.6 is a scenario where atmospheric carbon levels lead to an increase in temperature of 1.8°C by the year 2100 while the RCP8.5 is a scenario where carbon emissions and ensuing atmospheric carbon lead to a 4.3°C increase in temperature by 2100 compared to pre-industrial temperatures.

RCM projections in the SOCC were based on the Providing Regional Climates for Impact Studies (PRECIS) model, which use a relatively fine scale 25km grid resolution and are based on the IPCC Special Report Emission Scenarios A1B future (high emissions/atmospheric carbon) scenario that is similar to the RCP8.5 scenario initially and then the RCP6.0 scenario closer to 2100. In the SOCC RCM, data are used to describe projections for six rainfall zones as shown in Figure 4. This figure also shows how rainfall and temperature serve as a unit of analysis to build a zoning framework for the Caribbean region, using the PRECIS regional model. The PRECIS model has identified 6 zones throughout the region, and RCMs suggest that Zone 1 and Zone 6 are likely to see the most drying.

Guyana is located in Zone 6, and projected to experience the following:

- Higher levels of warming compared to Zones 2–5 (due to its location within a continental land mass)
- Greatest annual warming during the 2020 compared to the rest of the Caribbean region

Apart from information presented above from UWI-Climate Studies Group Mona (2020), additional projection information has been downloaded from the CARIWIG portal. This portal provides both data and maps showcasing projections of change in variables such as mean daily temperature, daily rainfall and proportion of dry days. The portal allows for selection of three different future time slices, two options
for baseline time periods to compare against and a choice of either ECHAM5-Conditioned Precis or HADCM3Q0-Conditioned PRECIS where ECHAM5 and HADCM3Q0 are GCMs. The portal generates projections based on specific months thus for the maps provided below this has been standardized by using the month of March for each map. Figures 5, 6 and 7 below portray projected changes in mean daily temperature, mean daily rainfall, and proportion of dry days respectively.

Figure 5 below displays a trend of increasing mean daily temperatures for Guyana, with an anticipated increase of around 0.5–1°C in the month of March during the time slice 2011–2040 compared to the baseline time period. The coastal area of Guyana is anticipated to have greater temperature increase compared to the interior as seen on the map. An increase of around 2–3°C is anticipated for the same month for 2041–2070 and by 2100 an increase of between 3–4°C for March is projected compared to the baseline of 1981–2010. Figure 6 showcases an overall decrease in rainfall levels among time slices as the time slices progress to 2100. Figure 7 illustrates the increase in the proportion in dry days by between 1–2 percent for the time slice 2011–2040, (1.5–2.5 percent) for 2041–2070 and (1.5–5 percent) for time slice 2071–2100 compared to the baseline period of 1981–2010. For the time slice 2071–2100, the proportion of dry days anticipated is higher closer to the coastline compared to the interior as seen on the maps.
Maps of Guyana generated using the CARIWIG portal showing projected change in mean daily temperature for a) the time slice 2011-2040 b) the time slice 2041-2070 and c) the time slice 2071 – 2100 all compared to the baseline 1981-2010 for the month of March using the ECHAM5 - CONDITIONED PRECIS projection.

Key: Projected change in mean daily temperature

-5.0°C
-4.5°C - -4.0°C
-4.0°C - -3.5°C
-3.5°C - -3.0°C
-3.0°C - -2.5°C
-2.5°C - -2.0°C
-2.0°C - -1.5°C
-1.5°C - -1.0°C
-1.0°C - -0.5°C
-0.5°C - 0.0°C
0.0°C - 0.5°C
0.5°C - 1.0°C
1.0°C - 1.5°C
1.5°C - 2.0°C
2.0°C - 2.5°C
2.5°C - 3.0°C
3.0°C - 3.5°C
3.5°C - 4.0°C
4.0°C - 4.5°C
4.5°C - 5.0°C
5.0°C - 5.5°C
5.5°C+

Maps generated 7/3/21 -
downloaded from http://cariwig.cari
bbeanclimate.bz/r
cm/cfs
Maps of Guyana generated using the CARIWIG portal showing projected change in mean daily rainfall for a) the time slice 2011-2040, b) the time slice 2041-2070 and c) the time slice 2071 – 2100 all compared to the baseline 1981-2010 for the month of March using the ECHAM5 - CONDITIONED PRECIS projection.

Key: Projected change in mean daily rainfall (mm)

Temperature increases will have a cascading and detrimental effect on the health and well-being of persons living in Guyana as well as on agriculture and food security, and the economy as a whole, including export-related industries. For example, mining of gold and other minerals become increasingly dangerous
in the heat. Countries in the region and internationally, dependent on exports from Guyana as part of their industry value chains, will also be negatively impacted.

In addition to the projections highlighted from the SOCC, the Government of Guyana specifically notes the climate variables of key concern are:

- **Sea level rise and flooding in coastal areas:** There is an estimated sea level rise of 1m by the year 2100, with other projections showing a rise of approximately 25 to 51cm by the year 2071. Specific impacts include in agricultural sub-sectors like livestock production where grazing grounds are at risk of flooding and drought in the coastal plains (Government of Guyana, 2012).

- **Fluctuations in rainfall and temperature (extreme precipitation and droughts):** Highly variable annual rainfall by the 2090s ranging from a decrease of 34 percent to an increase of 20 percent (Government of Guyana, 2012). It is anticipated that rainfall will also change over months, with expected decreases in October and November by 2040 to 2069 and a general decrease in rainfall (Government of Guyana, 2012; Sayers and Partners, 2019).

- **Temperature increases:** Projected average annual air temperature increase by the 2060s is between 0.9 and 3.3°C, with an average 2–4°C increase by 2100. Projected average minimum temperature increases by a range of 0.9°C and 1.5°C while the maximum will increase by 0.5°C and 1.1°C (Sayers and Partners, 2019).

- **Increased frequency and intensity of hurricanes and tropical storms and storm surges:** an increase in storm intensity, along with sea level rise, can produce between 2.94cm and 5.94cm increases in storm surges to catastrophic effect in low-lying coastal areas (Sayers and Partners, 2019).

With the majority of the population and corresponding economic activity occurring on the coast or in the vicinity of the coast, sea level rise leading to flooding, salination of soils and water sources, rainfall extremes and more intense storms and storm surge leading to property and infrastructure damage, will have significant impacts. This is in addition to the temperature increases noted above.

Also, as noted in Table 1 in section 1, the heavy dependence on natural resource-based livelihoods that are climate-sensitive across the administrative regions of Guyana also increases vulnerabilities to climate change.

5.3.2 **Socio-economic vulnerability**

Whilst some progress in poverty reduction has been made, Guyana notably has high poverty rates at 42.1 percent, with higher rates of poverty in rural areas of the country (up to 55 percent in the rural interior) as of 2017 (IDB, 2020). In terms of the general health and well-being of the population, changing weather conditions and associated climate-related shocks will compound existing socio-economic vulnerabilities, including the spread of vector-borne diseases like malaria, zika, dengue, and water-borne diseases. These fundamentally affect food security and nutrition and by extension poverty.

Migration and disaster displacement are also an important factor to gendered climate-related socio-economic impacts. Experiences of persons who are migrating or displaced due to climate-related disasters is heavily influenced by their gender. Structural and traditional gender norms and roles exacerbate impacts on vulnerable groups including women and girls, elderly, indigenous peoples and members of the LGBTQIA+ community, during extreme events, during migration, in their temporary or long-term new residence and their return to their community of origin (Bleeker, et al., 2021). Outcomes are amplified when socio-political conditions in communities or home countries and global phenomena like the CVOID-19 pandemic.
In Guyana, there have been influxes of migrants from Venezuela and other Caribbean countries like Cuba and Haiti. With ongoing socio-political crisis in Venezuela, migration and settlement of Venezuelans in Guyana has been particularly significant since 2018. Migrants, particularly those with an irregular migratory status, are more vulnerable and prone to the impacts of climate-related shocks due to limited access to health services, lack of safe and dignified shelter and WASH facilities (water, sanitation and hygiene facilities), especially in rural, hinterland areas. Furthermore, migrants have difficulty accessing sustainable livelihoods and the formal labour market, hindering their capacity to meet their basic needs, leading to food insecurity and malnutrition. Many of them, including female heads of households, work in the informal sector and there may also be limited government services available to them. Where there are services available, a language barrier may exist, such as Spanish and other languages of migrant groups.

Following on this, access to the labour force, employment and income is crucial to building adaptive capacity and managing recovery from climate and other shocks. Overall, climate change will impact access to labour and, specifically, decent work24 in some fundamental ways including via:

- economic restructuring, resulting in the displacement of workers and possible job losses as well as job creation attributable to the greening of enterprises and workplaces
- the need for enterprises, workplaces and communities to adapt to climate change to avoid loss of assets and livelihoods and involuntary migration
- adverse effects on poor households’ incomes from higher energy and commodity prices

Current impacts from the COVID-19 pandemic may be illustrative here of current vulnerabilities. These can help us to contextualize how climate-related shocks may compound existing vulnerabilities. While data is limited as countries struggle to get the pandemic under control, the Caribbean COVID-19 Food Security and Livelihoods Impact Survey published in May 2020 for Guyana does offer initial insights (World Food Programme, 2020). Although the survey is not nationally representative, summary results showed that COVID-19 has led to:

- widespread disruptions to livelihoods, with 77 percent of respondents indicating that their ability to carry out their livelihood was affected. Restrictions on movement are the predominant reason for these disruptions; and
- loss of income, with about 38 percent of respondents reporting loss of jobs or reduced salaries (World Food Programme, 2020).

Additionally, the World Bank (2020) noted that industries in the services sector will be most affected by COVID-19, including retail trade, transport, food and accommodation services, and the impacts will fall disproportionately on informal workers who account for approximately 60 percent of the workers across these sectors.

It is also worth noting that the sectors that employ the largest numbers of people, namely agriculture, forestry and fishing, wholesale and retail trade, and public administration and defence based on the most

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24 As defined by the United Nations (2018), decent work “means opportunities for everyone to get work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration. It is also important that all women and men are given equal opportunities in the workplace”. See: https://www.un.org/sustainabledevelopment/wp-content/uploads/2018/09/Goal-8.pdf
recent labour force data (Bureau of Statistics for Guyana, 2020), are also some of the most vulnerable to shocks. These sectors can have high levels of informal employment as noted above for the services sector.

However, while the conditions leading to slowed or stalled socio-economic development as a result of COVID-19 are temporary, this is not the case in the context of climate change. It will not be easy to adapt or recover from the projected impacts of climate change unless adaptation planning and resilience building is approached aggressively and innovatively given Guyana’s limited fiscal resources.

5.3.3 Climate-related shocks and structural inequalities
The structural inequalities faced by particular groups of people need to be taken into account in understanding vulnerabilities as these inequalities can lead to increased exposure of disadvantaged groups to climate-related hazards; increased susceptibility to damage caused by climate-related hazards; and decreased ability to cope with and recover from the damage (see Figure 8) (Nazrul Islam and Winkel, 2017).

Figure 8. Inequality and Climate Change Vicious Cycle (Source: Nazrul Islam and Winkel, 2017)

In the Gender at work in the Caribbean, Guyana Country Report (ILO, 2018), it is noted that:

- Agriculture and industrial sectors (e.g. gold and bauxite mining, oil and gas, manufacturing) employ mostly men, while most women are employed in the service sector.
- As the service sector is growing, the employment of women can be expected to increase over time. However, female unemployment rates have not fallen, indicating systemic barriers to women’s employment.
- Of further note is that there actually are fewer female employees than males in the service sector. ILO figures show this to be the case every year since 2000. For example, some 82,000 men and 78,000 women reportedly were employed in services in 2015.
- Because labour force participation is so low, it is possible for services to represent over 80 percent of women’s jobs, but for the number of jobs in this sector still to be smaller than those of men.

The above is corroborated by the main findings of the labour force survey (Bureau of Statistics for Guyana, 2020) which indicate that, as a percentage of the working age population, there are overall higher
numbers of men in the workforce than women. This includes for youth (men and women). This is despite that women slightly outnumbered men in the working age population at 51.4 percent and 48.6 percent respectively. Yet, men represented 58.3 percent of the total labour force as can be seen in the table below.

**Table 8. Population and Labour Force: 2020 first quarter**

<table>
<thead>
<tr>
<th>Population aged 15+ (thousand persons)</th>
<th>2020 First quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total persons</td>
</tr>
<tr>
<td>Men</td>
<td>292,865</td>
</tr>
<tr>
<td>Women</td>
<td>309,901</td>
</tr>
<tr>
<td>Rural</td>
<td>432,934</td>
</tr>
<tr>
<td>Urban</td>
<td>169,831</td>
</tr>
<tr>
<td>Total</td>
<td>602,765</td>
</tr>
<tr>
<td>Labour force (thousand persons)</td>
<td>Persons</td>
</tr>
<tr>
<td>Men</td>
<td>177,212</td>
</tr>
<tr>
<td>Women</td>
<td>126,622</td>
</tr>
<tr>
<td>Rural</td>
<td>213,436</td>
</tr>
<tr>
<td>Urban</td>
<td>90,398</td>
</tr>
<tr>
<td>Total</td>
<td>303,834</td>
</tr>
</tbody>
</table>

Additionally, as seen in Table 9 below, the overall labour force participation rate as a percentage of the employed population was recorded at 50.4 percent, showing a significant difference in participation rates for men and women, with men at 60.6 percent and women at 40.9 percent. The employment-to-population ratio for women and men also showed a significant disparity of 35 percent and 54 percent respectively. Based on their overall limited participation in and earnings in the labour market, women’s vulnerability to poverty and by extension children and others in their care is a concern. IDB (2020: 19) corroborates these findings, noting that women “may be increasingly vulnerable in a slowing economy, and that structural inequality of women includes that, while women have similar or higher levels of education than men (71 percent of women over 25 have at least some secondary education compared to 55 percent of men; UN Human Development Indicators, 2018), women have lower labour participation rate[s]...”.

In addition to the differential employment participation rates between males and females, in the most current labour force data, the urban employment participation rate was higher than the rural employment participation rate at 53.3 percent and 49.3 percent respectively (See Table 10). The vulnerability of rural populations to poverty has been noted as a characteristic of overall socio-economic vulnerability in Guyana. Poverty rates are highest in the sparsely populated interior, in particular in indigenous communities, where access to economic opportunities, healthcare, and public services are limited (World Bank, 2020). Further, while oil revenues could have a transformative impact on Guyana’s development, growth in the offshore oil sector is likely to be benefit coastal rather than hinterland areas.
Unsurprisingly, there is higher unemployment in rural areas. There is also higher unemployment among women (both adults and youth), although women (female youth) comprised 46.7 percent and men (male youth) comprised 53.3 percent of total unemployed youth (Bureau of Statistics for Guyana, 2020). See Table 10.

Labour force participation and employment levels have obvious correlations with access to income. Disparities between men and women at all ages in the labour force leads predictably to lower earnings among women. There are some nuances with this, however, that are important to be mindful of. Specifically, as can be seen in Table 11:

- Women work fewer hours a week than men overall, whether in salaried or self-employed occupations.
- Salaried workers have higher monthly income than non-salaried/self-employed persons.
- Self-employed women have slightly higher monthly income than salaried men.
- Self-employed men have substantively higher monthly income than self-employed women.

### Table 9. Labour Force Participation Rate and Employed Population 2020 First Quarter

<table>
<thead>
<tr>
<th>Labour force participation rate (%)</th>
<th>2020 First quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>60.6</td>
</tr>
<tr>
<td>Women</td>
<td>40.9</td>
</tr>
<tr>
<td>Rural</td>
<td>49.3</td>
</tr>
<tr>
<td>Urban</td>
<td>53.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50.4</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employed population</th>
<th>2020 First quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total persons</td>
<td>% of total employed population</td>
</tr>
<tr>
<td>Men</td>
<td>156,424</td>
</tr>
<tr>
<td>Women</td>
<td>108,438</td>
</tr>
<tr>
<td>Rural</td>
<td>185,675</td>
</tr>
<tr>
<td>Urban</td>
<td>79,460</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>264,862</strong></td>
</tr>
</tbody>
</table>

### Table 10. Unemployment and Youth Unemployment: 2020 First Quarter

<table>
<thead>
<tr>
<th>Unemployed population (thousand)</th>
<th>2020, First quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons</td>
<td>As % of total unemployed</td>
</tr>
<tr>
<td>Men</td>
<td>20,788</td>
</tr>
<tr>
<td>Women</td>
<td>18,184</td>
</tr>
<tr>
<td>Rural</td>
<td>28,034</td>
</tr>
<tr>
<td>Urban</td>
<td>10,938</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38,972</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unemployment rate (%)</th>
<th>2020, First quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>11.7</td>
</tr>
<tr>
<td>Women</td>
<td>14.4</td>
</tr>
<tr>
<td>Urban</td>
<td>13.5</td>
</tr>
<tr>
<td>Rural</td>
<td>12.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12.8</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unemployed youth (thousand persons)</th>
<th>2020, First quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons</td>
<td>% of total unemployed youth</td>
</tr>
<tr>
<td>Men</td>
<td>9,438</td>
</tr>
<tr>
<td>Women</td>
<td>10,428</td>
</tr>
<tr>
<td>Rural</td>
<td>14,963</td>
</tr>
<tr>
<td>Urban</td>
<td>5,303</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30,866</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Youth unemployment rate (%)</th>
<th>2020, First quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>25.4</td>
</tr>
<tr>
<td>Women</td>
<td>36.4</td>
</tr>
<tr>
<td>Rural</td>
<td>30.8</td>
</tr>
<tr>
<td>Urban</td>
<td>28.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30.2</strong></td>
</tr>
</tbody>
</table>
Table 11. Average Weekly Working Hours Worked and Average monthly income: 2020 First Quarter

<table>
<thead>
<tr>
<th>Average weekly working hours</th>
<th>2020 First quarter</th>
<th>Average monthly labour related income 2020 First quarter, in Guyanese dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All jobs, actual weekly hours worked</td>
<td>All jobs, usual weekly hours worked</td>
</tr>
<tr>
<td>Men</td>
<td>46.5</td>
<td>49.6</td>
</tr>
<tr>
<td>Women</td>
<td>40.5</td>
<td>42.7</td>
</tr>
<tr>
<td>All Workers</td>
<td>44.0</td>
<td>45.8</td>
</tr>
</tbody>
</table>

Table 12 goes further in showing the nuances in how women and men participate in the labour force, specifically

- Whilst most Guyanese workers are employees rather than employers, substantively more men are employers at 75 percent of all employers and women at 25 percent.
- More women are employees of employed workers than men.
- Substantively more women are identified as contributing family members to family business at 67 percent with men at 33 percent.

Further, women comprise more of the inactive labour force (persons of working age but not working) at 59.1 percent, with men at 39.5 percent (Bureau of Statistics for Guyana, 2020). Women comprise a larger percentage of discouraged workers, that is, those persons of working age who during a specified reference period were without work and available for work, but did not look for work in the recent past for specific labour market-related reasons (such as past failure to find a suitable job, lack of experience, believing that there were no jobs available, believing there were none for which they would qualify, or having given up hope of finding employment)\(^{25}\), with women at 5.1 percent and men at 4.3 percent (Bureau of Statistics for Guyana, 2020).

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Table 12. Employed Population by Gender and Status in Employment and Relative Share: 2020 First Quarter

<table>
<thead>
<tr>
<th>Status in employment, employed population</th>
<th>2020, First quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
</tr>
<tr>
<td>1 - Employees</td>
<td>97,099</td>
</tr>
<tr>
<td>As % of total employees</td>
<td>58.1</td>
</tr>
<tr>
<td>As % of total employed workers by sex</td>
<td>62.1</td>
</tr>
<tr>
<td>2 - Employers</td>
<td>10,882</td>
</tr>
<tr>
<td>As % of total employers</td>
<td>75</td>
</tr>
<tr>
<td>As % of total employed workers by sex</td>
<td>7.0</td>
</tr>
<tr>
<td>3 - Own-account workers</td>
<td>45,207</td>
</tr>
<tr>
<td>As % of total Own account workers</td>
<td>61.5</td>
</tr>
<tr>
<td>As % of total employed workers by sex</td>
<td>28.9</td>
</tr>
<tr>
<td>5 - Contributing family workers</td>
<td>3,236</td>
</tr>
<tr>
<td>As % of total contributing family workers</td>
<td>33.0</td>
</tr>
<tr>
<td>As % of total employed workers by sex</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>156,424</td>
</tr>
</tbody>
</table>

Attitudes towards work, and the availability of sustainable livelihoods is complicated, as there is low labour force participation in general in Guyana. Further, income-based inequalities are compounded by the impacts of hazards, especially as the majority of persons earning an income are dependent on income from livelihoods that are highly vulnerable to shocks, such as agriculture, forestry and fishing.

Structural inequalities must also be acknowledged for the growing population of migrants in Guyana. As the service sector grows, the employment of women can be expected to increase over time. However, female unemployment rates have not fallen, indicating systemic barriers to women’s employment. These barriers tend to be more acute for migrant women, particularly those with an irregular status and single head of households. These barriers include, but are not limited to, language and the lack of access to day care services (or the means to afford them) thus hindering their ability to access formal and stable jobs. Many rely on community support networks, however, this can place children at risk. In addition, the stigmatization and hypersexualization of migrant women, particularly Venezuelan, reduces their ability to access a broader range of jobs. It should be noted that this particular barrier, although observed, is anecdotal and will require further investigation and data.

Migrants, including women, also have difficulty validating their education and qualifications as some might not have their documentation with them and those who have them face long bureaucratic procedures that sometimes discourage them to pursue their validation, as they have to prioritise meeting their basic needs. There is limited access to skills development programs, including entrepreneurship, for migrant women.

It should be recognised that there has been work done to address the vulnerabilities of migrants in Guyana. The country is one of only four Caribbean countries to ratify the Convention on the Protection of the Rights of All Migrant Workers and Members of their Families (CRMW) and has also ratified the
International Covenant on Civil and Political Rights (ICCPR) (Bleeker, et al., 2021). However, there is an outstanding need to develop or update relevant policies focused on collecting data on migrants/migration and displacement due to climate change-related events or other factors and developing strategies to addresses these issues and the inequalities arising, particularly targeted at vulnerable groups (Thomas & Benjamin, 2018).

5.3.4 Summary of findings
Data shows that there is dependence on livelihoods particularly vulnerable to shocks, including climate change-related impacts due to temperature increases, increasing intensity of storms and storm surge, sea level rise and coastal flooding, and rainfall decline and variability. This includes the priority sector, agriculture, and the growing service sector, such as retail trade, hospitality and tourism-related activities. Attention must be paid to addressing temperature increases in landlocked areas, in particular, as these areas will see even greater acceleration in warming. There is potential for population displacement in these areas, and the potential impacts of the same of the remainder of the country. Impacts from coastal flooding, including loss of property (e.g. hotels and restaurants) and destruction of blue economy-related activities related to tourism, are also of concern. Investment in infrastructure and industry planning that will take this into account is critical. The Second National Communication on Climate Change (Government of Guyana, 2012) highlights that climate change is expected to create substantial challenges for economic development and livelihoods in Guyana and notes the importance of having policies and strategies addressing relocation of infrastructure, services and communities. In these policies, it will be crucial to highlight the impacts of gender on relocation.

The impacts of COVID-19 have provided a snapshot of the socio-economic shocks likely to be brought on as a result of climate change. The scale of the impact is indicative of what it means to have shock which causes major contractions in economic sectors without warning, and a cascading effect.

As a result of inequality of access to labour, and specifically decent work, it is difficult for women and other disadvantaged and vulnerable groups in Guyana to adapt to and recover adequately to shocks. These vulnerable groups include rural and indigenous populations and youth. There is clear gender inequality in access to income, pointing to structural inequality facing women that must be addressed in order to build the resilience and adaptive capacity of communities in Guyana. Structural inequality prohibits sustainable development, and any shocks serve to compound inequalities and hamper recovery. In the case of vulnerable economies like Guyana, with high levels of poverty, recovery is often not attainable and economies and social conditions simply continue to deteriorate. This inequality extends to migrant workers as well.

In relation to decent work, there is also need to address the human rights of workers and ensure safe working conditions, given projected temperature increases and rainfall extremes. The ability of the population to cope with rising temperatures, especially given the large amount of work happening outdoors, is of particular concern.

The above must be addressed in the context of sustainable livelihoods, which need to be planned for and invested in, with a focus on building adaptive capacity to climate change-related shocks. Further, Guyana is in a unique position to better develop its inactive labour force in keeping with the principles of sustainable development, and women can play a large role in spearheading this process.
6 Conclusions and recommendations

Guyana has made progress in the development of policy and institutional frameworks for climate change through its updated NDC and a number of draft policies including its National Climate Change Policy (draft), Climate Resilience Strategy and Action Plan (draft), NAP (draft) and NAMA (draft). Guyana has also made strides in designing and establishing frameworks for gender equality, with the NGESI being up-to-date and aligned with international frameworks, with several assessments and reports focused on gender equality and gender mainstreaming. The country also has plans and policies for the priority sectors identified, some of which are currently being revamped for the new political term 2021–2025. In all of these, gender is included to varying degrees and oversight and implementation is supported through the efforts of lead agencies and coordinating mechanisms like the GAB, National Women and Gender Equality Commission and the Inter-ministerial Committee of GFPs.

Despite the strides in creating the enabling policy environment for gender mainstreaming in the priority sectors and more broadly, there remain significant areas for improvement for effective adaptation and resilience building. Based on the above analysis, key recommendations for gender mainstreaming have been identified. The recommendations are categorized below by priority sector in Table 13, and also include cross-cutting recommendations to address broader structural inequalities.

Table 13. Summary of key recommendations for gender mainstreaming in the priority sectors in Guyana

<table>
<thead>
<tr>
<th>Sector/Area of Concern</th>
<th>Recommendations</th>
</tr>
</thead>
</table>
| Agriculture            | • Support skills building amongst women and youth in agriculture and throughout agriculture value chains through targeted and gender-responsive promotion of skills building programmes, and ensuring that they are accessible both in cost and in location. This training can include, but is not limited to, administration, marketing, packaging and labelling, finances and technical training. Training can be specialised to create more opportunities for women and youth from rural/indigenous/marginalized communities and facilitate learning and education in agriculture.  
• Support entrepreneurship and skills upgrading for green jobs in agriculture, including for climate-smart crop development, and enhance access to finance amongst those marginalized in the labour market.  
• Support targeted investments in agricultural diversification and community-led climate-smart agriculture commodities for inclusion of more rural women and youth in the sector and accommodate their access to the same.  
• Improve access to micro-finance, including credit, grants and small loans, for women and other marginalized groups to ensure they can acquire land, equipment and other critical inputs for on-farm and off-farm activities. This should include reviewing application procedures, criteria for accessing loans and reporting requirements for banks and other lending institutions relevant to the sector. Opportunities should also be provided for those in agro-processing to access finance for packaging, labelling, marketing, and overall greater use of innovative technology in the agricultural value chain.  
• The Ministry of Agriculture can create opportunities to further collaborate with organizations, like the Association of Women Processors and Women for Change, through its own agencies like the GMC, to develop and support agro-processing and agri-business project and initiatives.  
• Invest in and develop more agro-processing facilities to ensure it is accessible to all, particularly women and youth in more remote or hinterland areas. This
<table>
<thead>
<tr>
<th>Inclusive and evidence-based decision-making</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance representation and inclusion of women Toshao (chiefs/leaders) on the National Toshao Council, so they can better advocate for and represent the needs of indigenous women.</td>
<td>Increase health literacy through gender-responsive education and awareness in communities to encourage health seeking behaviour amongst men as they are least likely to go to doctors for regular check-ups and tend to wait until health problems are critical before seeking medical help.</td>
</tr>
<tr>
<td>Improve collection and use of data disaggregation to accommodate intersectional analysis to best understand vulnerability and risk, including by sex, age, ethnicity, disabilities, level of education, household size and dependents, language skills and land tenure.</td>
<td>Diversify health services beyond the central focus of the reproductive health needs of women to encompass a wide range of services related to general health and disease prevention.</td>
</tr>
<tr>
<td>Support capacity building for the development of gender statistics related to climate change. Statistics and other data collected should fit into a gender equality framework for climate change and disaster risk management, and based on established gender equality indicators to support monitoring, evaluation and reporting.</td>
<td>Enable gender-responsive health services for the prevention of chronic illness and NCDs. Specific attention must be given to NCDs which may disproportionately affect various groups of women and men. Examples of such attention include focus on prevention and management of prostate cancer, hypertension, and alcoholism in men; a focus on breast and cervical cancer and obesity for women; and a focus on diabetes among both genders.</td>
</tr>
</tbody>
</table>

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26 Gender statistics are defined by the sum of the following characteristics: (a) data are collected and presented disaggregated by sex as a primary and overall classification; (b) data reflect gender issues – questions, problems and concerns related to all aspects of women’s and men’s lives, including their specific needs, opportunities or contributions to society; (c) data are based on concepts and definitions that adequately reflect the diversity of women and men and capture all aspects of their lives; and (d) data collection methods take into account stereotypes and social and cultural factors that may induce gender biases. UNSD: [https://data2x.org/resource-center/unsds-gender-statistics-manual-integrating-a-gender-perspective-into-statistics-2013/](https://data2x.org/resource-center/unsds-gender-statistics-manual-integrating-a-gender-perspective-into-statistics-2013/)
- Continue efforts to streamline data collection, analysis and dissemination, including for the development of an accessible centralized platform with adequate storage and systems for updating and maintenance of the platform.
- Expand data collection beyond the traditional male, female, children, adolescent/youth categories to include the LGBTQIA+ community, a cross-cutting group. This will ensure interventions are inclusive, especially for areas where there are larger populations of LGBTQIA+ persons.

### Policy, planning and programme development and implementation

- Ensure the finalization of the draft NGESI policy, which has been tabled in parliament, and update the institutional framework to operationalize the policy using a strategic approach within the context of existing human and financial constraints. As a first step, greater institutional support for GFPs in government agencies is needed, and provision of critical resources for roll-out of relevant gender equality-based training to other staff. Training should include application of gender analysis to their areas of work and critical analysis of common errors in and misinterpretations of data utilized by government staff related to gender equality.
- Apply gender equality analysis and mainstream gender considerations into climate change and disaster-related project design, planning, implementation, and monitoring and evaluation to enable an inclusive and gender-responsive approach. This should also be done for the priority sectors, agriculture and health.
- Support public education and awareness on the impacts of traditional gender socialization and how it limits the choices of women, men, girls and boys. This can include curriculum reform in educational institutions at all levels (primary, secondary and tertiary) to be gender-responsive, and not reinforcing negative gender stereotypes and encouraging equality in access to STEM subjects to girls and female youth.
- Strengthen CSOs involved in gender equality work and working directly with vulnerable groups, including remote rural, indigenous and LGBTQIA+ communities, to better address GBV and its broader social impacts in the multi-cultural context of Guyana.
- Enable systematic collection and analysis of migrant data, which can be shared by and with relevant ministries and agencies who work with migrants or displaced persons, given the growing population of migrants in Guyana. This data is needed to address issues of migrants’ access to formal and stable livelihoods and services within the priority sectors of agriculture and health and more widely to ensure their well-being and reduce vulnerabilities, particularly for women.
- Conduct further research to inform the development of appropriate policies and strategies, on climate migration and disaster displacement, understanding the differences in impacts among groups (women, girls, elderly, indigenous peoples and LGBTQIA+) and the agencies/entities with responsibility for addressing and implementing them. These policies can address the access to formal work, information on services translated or staff available to address language barriers, access to public health care services and day-care facilities for the children of working single women headed households. The stigmatisation and attitude towards migrants, particularly women, can be addressed through sensitisation campaigns and public education and awareness, as well as providing services and support for migrant women to report and seek redress on issues related.
| Equality of access to employment and decent work | • Ensure provision of decent work, which includes remuneration which sustains individuals needs as well as provides access to social protection, to build overall resilience to climate change-related impacts and other shocks like the COVID-19 pandemic. This would mean that economic activity on local and national levels would be able to better withstand periods of contraction due to better asset management, access to basic needs and increased ability to have savings and be more self-reliant in a severe and sustained period of economic contraction.  
• Support women’s entrepreneurship as a way to support them earning an income, recognizing that most women are employees and not employers. This would also create opportunities for sustainable small business development in Guyana, and in particular in rural and indigenous communities.  
• Establish policies and procedures to promote equal pay for women, and ensure that pay parity is implemented and regulated in both the private and public sector. |
7 References


Caribbean Natural Resources Institute, 2020. Draft Institutional analysis and organisational assessment of fisheries-related state agencies for enabling ecosystem stewardship in the fisheries sector of Guyana, Barataria: CANARI.


8 Appendices

8.1 Appendix 1 – List of key informants

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Position</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Adel Lily</td>
<td>Gender Affairs Bureau</td>
<td>Manager</td>
<td>Male</td>
</tr>
<tr>
<td>Mr David Fredericks</td>
<td>National Agriculture Research and Extension Institute</td>
<td>Deputy Chief Executive Officer</td>
<td>Male</td>
</tr>
<tr>
<td>Ms Simone Sills</td>
<td>National Coordinating Coalition of NGOs</td>
<td>Executive Director</td>
<td>Female</td>
</tr>
</tbody>
</table>
| Ms Abigail Liverpool| Ministry of Public Health                        | Principal Health Officer  
Disaster Health Coordination  
Focal Point and Climate Change  
Focal Point                  | Female |
| Dr Dennis Bassier  | Ministry of Public Health                         | Men’s Health Coordinator  
Gender Focal Point                                                     | Male   |
| Ms Raisa Spencer   | FAO - Guyana                                      | Junior Programme Officer –  
Programme/Project Management                                             | Female |
8.2 Appendix 2 – Key informant interview questions

Name of interviewer: ___________________________ Date: ___________________________
Name of participant: __________________________
Organization/Title: __________________________
Gender: __________________________

Introduction: This gender-based baseline analysis is part of the Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER) project from September to March 2020. This analysis will inform tailored capacity building for gender mainstreaming in the priority sectors identified for the project countries, and support the development of gender-responsive and inclusive National Adaptation Plans and sectoral plans. The assessment is being implemented by the Caribbean Natural Resources Institute (CANARI) in collaboration with the United Nations Development Programme (UNDP) – Barbados Office and country focal points in nine countries including Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Lucia, St. Vincent and the Grenadines and Suriname.

1. a) Can you please describe your role and responsibilities?
   b) How long have you served in this role?

Country/sectoral context
2. What are the policy priorities for your sector?

3. Is there a sectoral policy or plan? Does it include a gender focus?

4. Can you describe the different roles and division of labour between men and women, if any, in your sector?

5. What is the situation in terms of access and control of resources (land, water, finances etc.)?
   a) How many men vs women own agricultural or other land?
   b) How many women apply for or are granted loans?
   c) Who collects or manages access to water (e.g. via communal pipes, wells, rainwater tanks, rivers etc.)?

6. What is the level of access to information, services (e.g. extension, credit/loan programmes etc.) and employment and economic opportunities?
   a) Does it differ among men and women?
   b) Does it differ by age, ethnicity or for PWDs, migrant or indigenous populations?

7. What information is collected to understand gender roles, needs and any inequalities for your sector (e.g. gender disaggregated data)? If none/limited, why?

8. What types of data do you need to help you make better decisions about the needs of men, women and vulnerable groups (e.g. elderly, PWDs, indigenous communities) in planning?
Climate change impacts, needs and capacities

9. What climate change impact or vulnerability assessments have been done nationally/for your sector? Did any of these include a gender focus?

10. Can you share key experiences and lessons from past climate-related disasters (e.g. hurricanes, floods or droughts) over the last 10-20 years?
   a) Were men and women impacted differently?
   b) Were vulnerable groups – children, elderly, PWDs, rural poor, indigenous or migrant populations – impacted differently?
   c) Have these impacts and needs been documented in post-disaster needs assessments (PDNAs) that can be shared?
   d) Were any special provisions made for men, women and other vulnerable groups in national or sectoral plans and projects based on these experiences?

11. What are the current or projected impacts of climate change and related disasters on your sector?
   a) How do these climate change impacts differ for men and women?
   b) How do these climate change impacts differ for vulnerable groups – children, elderly, PWDs, rural poor, indigenous or migrant populations?

12. How do people cope/deal with these climate change impacts?
   a) How do men and women cope?
   b) How do vulnerable groups cope (e.g. children, elderly, PWDs, rural poor, indigenous or migrant populations)?

13. What are possible factors determining these differences in impacts and ability to cope experienced by men, women and vulnerable groups?

14. Is there a sectoral adaptation or disaster plan? Is climate change integrated into the current sectoral policy/plan?

15. a) How are the different impacts and needs of men, women and vulnerable groups factored into the sectoral policy or plans?
    b) How are these differences factored into climate change projects or programmes to ensure equitable access to resources and benefits?

Access to climate finance

16. a) What climate finance options and frameworks (e.g. GCF or GEF country programme/strategy, climate investment plan for specific sectors) exist to support implementation of national and sectoral policies, plans and projects?
    b) What criteria or other measures are in place to ensure climate finance addresses gender concerns and promote gender equality?
    c) What measures are in place to ensure climate finance addresses the needs of key vulnerable groups (e.g. elderly, PWDs, poor and indigenous communities)?
Participation and influence in decision-making

17. What coordination mechanism(s) exist to support climate change action at the national or sectoral levels?
   a) Do these coordination mechanisms include women and/or representatives of women-focused NGOs or groups?
   b) Do these mechanisms engage other vulnerable groups (e.g. youth, PWDs, indigenous or migrant populations)?
   c) Do these mechanisms support awareness and action to address gender concerns? If so, how?

18. Who/what organizations need to be involved in these coordination mechanisms to ensure that gender considerations are integrated?

19. Does your agency/organization have a gender expert on staff? Do you have a gender focal point?

20. Have you had specific training to build your knowledge and skills to address gender concerns? If so, please describe.

21. What do you see as key challenges for mainstreaming gender in your sector?

22. What recommendations do you have for mainstreaming gender in your sector?
8.3 Appendix 3 – Online survey

About the survey: This survey aims to capture existing information and local perspectives on the impacts of climate change and related disasters on men, women and key vulnerable groups – elderly, persons with disabilities, poor rural and indigenous communities, and migrants – and opportunities and barriers to ensure gender equality and social inclusion in climate change responses in nine Caribbean countries, including Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Lucia, Saint Vincent and the Grenadines and Suriname. This will provide baseline data to inform the development of national and sectoral policies and plans to adapt and build climate resilience.

This baseline analysis is being implemented from September to December 2020 by the Caribbean Natural Resources Institute (CANARI) in collaboration with the United Nations Development Programme (UNDP) – Barbados and the Eastern Caribbean and national focal points for the nine target countries as part of the project, Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER).

We would greatly appreciate your inputs into this baseline analysis. This survey should take no more than 15-20 minutes to complete.

For further information, please see the brief on the baseline analysis. You can also contact the CANARI Project Manager, Dr. Ainka Granderson, at ainka@canari.org.

General Information

1. Would you be willing to share your full name as part of this survey?
   Yes – happy to share my name   No – prefer to remain anonymous

   If yes, please provide your full name: .................................................................

2. What type of organization do you work for?
   Academic or research institution
   Civil society organization (NGO or community group)
   National or local government
   Private enterprise
3. A) What is your role at this organization? .................................................................

   B) How long have you served in this role?
   [ ] Less than 1 year  [ ] 1-4 years  [ ] 5-9 years  [ ] Over 10  [ ] N/A

4. Which of the following sectors do you work in? (Tick all that apply)
Agriculture (crops and livestock)
Banking and finance
Climate change
Disaster management
Energy
Fisheries
Forestry
Gender and social development
Health
Housing and infrastructure
Natural resource or protected areas management
Transport
Water
Other: ...............................................................
Climate change impacts, needs and capacities

8. A) How would you assess the level of impact of the following climate hazards on your sector or livelihood? (circle or check the relevant rating)

<table>
<thead>
<tr>
<th>Climate hazard</th>
<th>No/ hardly any impact</th>
<th>Little impact</th>
<th>Medium impact</th>
<th>Significant impact</th>
<th>Very severe impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry spell and drought</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Heatwave</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Flood (e.g. river, ravine)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Landslide</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Hurricane and storm</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Storm surge</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Sargassum seaweed influx</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Rising sea level and coastal erosion/flooding</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Unpredictable or variable rainfall</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Climate hazard</td>
<td>No/ hardly any impact</td>
<td>Little impact</td>
<td>Medium impact</td>
<td>Significant impact</td>
<td>Very severe impact</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
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</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

B) For those hazards ranked 4 or 5, what were the impacts on your sector or livelihood? (tick all that apply)

- Property Damage
- Economic loss
- Decline in viability of your livelihood (e.g. agriculture, fishing, small business)
- Health impact
- Other: _______________________

C) For those hazards ranked 4 or 5, please describe the strategies used to cope with these impacts on your sector or livelihood:

- Seek government assistance
- Seek assistance from family and friends
- Switch jobs or find additional jobs to earn income
- Use savings or access loans to support loss of income
- Get insurance for yourself or your property and equipment
- Move or migrate to another area
- Other: _______________________

56
9. A) Are men and women impacted differently by climate change and related hazards within your work or sector?

Yes  No  Unsure

B) If you answered yes to Question 9, please describe the differences in the impacts on men and women.

If you answered no, skip to Question 11.

10. What strategies would you recommend to address these different impacts on men and women?

11. A) Which of the following groups may be more highly impacted by climate change and related hazards? (Tick all that apply)

- Children (under 18 years)
- Elderly (over 60 years)
- Communities dependent on farming, fishing and forestry
- Indigenous communities
- Migrants/ refugees
- Persons with disabilities
- Poor/very poor households
- Single parent households
- Other: ...........................................

B) For the groups that you ticked above, please describe the specific impacts on these groups and why you think they are more badly impacted.

12. What strategies would you recommend to address these impacts on specific vulnerable groups?

57
Access and influence in decision-making

13. A) How would you rate your ability to access land and resources (e.g. water, electricity, fuel etc.) to support your work or livelihood?

<table>
<thead>
<tr>
<th>Very Poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

B) If you ranked your ability as 1 or 2, what are the factors limiting your access? (tick all that apply)
- Government policies or management
- Cultural or traditional values
- Lack of funds
- Lack of access to loans or credit
- Limited availability of land and other resources
- Lack of awareness or education
- Other: ...........................................

14. A) How would you rate your ability to access to information and services (e.g. agricultural extension, training, credit/loan programmes, etc.) to support your work or livelihood?

<table>
<thead>
<tr>
<th>Very Poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

B) If you ranked your ability as 1 or 2, what are the factors limiting your access? (tick all that apply)
- Government policies or management
- Cultural or traditional values
- Lack of awareness or education
- Lack of equipment (e.g. phone, computer, radio)
- Poor communications (e.g. internet or phone service)
- Poor transport (e.g. to access services in urban areas)
- Other: ...........................................

15. What is the main way in which you access support for your work or livelihood (e.g. funds, equipment, technical support)?
- Through government
- Through local civil society organizations (National NGOs, community groups)
- Through international NGOs (e.g. Red Cross, The Nature Conservancy)
- Through international agencies (e.g. UN agencies, World Bank)
- Through your family and friends (e.g. remittances)
- Other: .............................................
16. A) Have you been engaged in any coordination mechanism (e.g. advisory group, council, committee) to support joint decision-making or action within your sector or nationally?
   Yes    No    Unsure

B) If yes, what is this coordination mechanism? ..............................................................

If no, skip to Question 19.

17. If you answered yes to Question 16, how well do you think women or women-focused groups have been engaged in this mechanism?

<table>
<thead>
<tr>
<th>Very Poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

18. If you answered yes to Question 16, how well do you think key vulnerable groups (e.g. elderly, persons with disabilities, indigenous communities, youth etc.) have been engaged in this mechanism?

<table>
<thead>
<tr>
<th>Very Poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

19. If you ranked engagement as 1 or 2, who or what organizations need to be engaged in the coordination mechanism to ensure that concerns related to gender and key vulnerable groups are integrated?
   ...........................................................................................................................................................................
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20. A) What do you see as the key barriers for promoting gender and social equality in your work or sector?
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B) What do you see as the key opportunities for promoting gender and social equality in your work or sector?
Awareness and training

21. A) Does your organization collect information on numbers of women and men in your area of work or sector including their different roles, needs, opportunities and challenges?
   Yes        No        Unsure

B) If yes, please list the type of assessments, what information is collected and how often.

22. Does your organization have a gender expert on staff?
   Yes        No        Unsure

23. A) Have you had specific training to build your knowledge and skills to address gender concerns?
   Yes        No

B) If yes, please describe what type of training and by whom