



**EnGenDER**

Enabling Gender-Responsive Disaster Recovery,  
Climate and Environmental Resilience in the Caribbean



**Policy Brief**

# Gender Inequality of Climate Change and Disaster Risk in Guyana

**November 2021**



## BACKGROUND

The Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER) Project is funded by Global Affairs Canada and the United Kingdom Foreign, Commonwealth and Development Office, which is led by the United Nations Development Programme (UNDP) and jointly implemented by UN Women, World Food Programme (WFP) and the Caribbean Disaster Emergency Management Agency (CDEMA). The aim of the project is to identify and address any gaps to ensure equal access to disaster risk resilience, climate change and environment solutions for women, men, boys and girls in nine beneficiary Caribbean countries, including Guyana. The two **priority sectors** selected by the National Decision-Making Mechanism for Guyana under EnGenDER are **agriculture** and **health**.

In December 2020, the UN Women Multi-Country Office (MCO) Caribbean completed a review of the Gender Inequality and Differential Impact of Climate Change and Disaster Risk and Cost of Inaction for Guyana. This study focused on the gender-responsiveness of climate change policies and strategies, and incorporated a mapping of the coping adaptive capacities for key vulnerable groups through stakeholder consultation.

The MCO, in collaboration with the International Institute for Sustainable Development (IISD) also completed a gender-responsive, resilience-building Knowledge, Attitudes, Practices and Behaviours (KAPB) Study in July 2021. This study provided a better understanding of any institutional gender biases that are not captured in policy documents, which can influence the ways in which gender is mainstreamed in their work.

Results from both studies confirm that natural hazards and climate change impact men and women differently for a host of factors, which include their different roles and individual and family responsibilities, and policy development and service delivery by mandating bodies.



## VULNERABILITY: A GENDER LENS

Guyana's tropical climate, which is characterized by considerable rainfall and dry spells, makes the country particularly vulnerable to impacts including, but not limited to: flooding of low-lying coastal planes where a considerable amount of its population (>90%) and the seat of governance reside. This therefore also has implications on: property, services and on the economy; reduced crop yields due to increased storm density, drought conditions, wildfire; and stress on livestock due to extreme heat, lack of water, and limitation of quality feed that particularly affect small farmers and producers of non-traditional crops (non-sugar and non-rice) who are **more likely to be women and youth**.



Agriculture was and remains one of the main contributing sectors to Guyana's economy, providing employment to approximately **30%** of the population, and a mainstay of the overall socio-economic wellbeing of farmers and their families. However, some facets of the country's agricultural policy and regulations including flood and drought management, land-use planning and water abstraction are poorly enforced, which increases the exposure of agricultural activities to climate impacts (draft CRSAP, 2016).

The health sector in Guyana is equally vulnerable to the effects of climate change. Changing weather conditions and associated disasters can exacerbate health problems (malaria, zika, dengue and water-borne diseases) and affect food security and nutrition, which in turn affect human well-being and health.

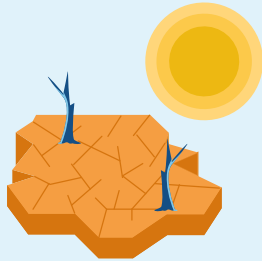


**Barima, Region 1.**

Credit: Consultant – Candice Ramessar

## The main hazard risks for Guyana are:

### 1. Drought



### 2. Flooding



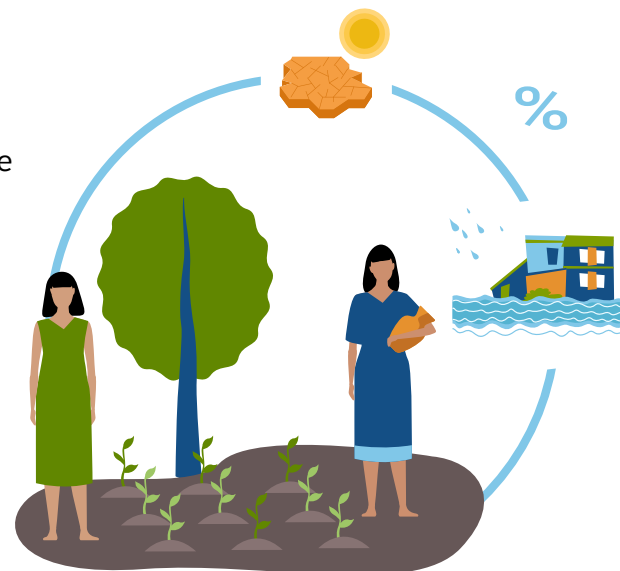
## GENDER INEQUALITY ISSUES – CLIMATE AND DISASTER RISK

Information from the Civil Defence Commission (CDC), Guyana's national disaster agency, suggests that **women and girls seek shelter more than men and boys during disaster events.**

### The agriculture sector

#### Impact on women

It is estimated that **28%** of households in Guyana are headed by women, and these households are at greater risk of disaster impacts. Estimates peg women's participation in the agricultural sector at more than **50%**. Therefore, women's incomes, livelihoods and food security can be negatively affected by floods and droughts. Moreover, indigenous women are more vulnerable to the impacts of floods and droughts due to their higher reliance on natural resources, both in their reproductive and productive roles of securing water, food and fuel and limited mobility. Poverty, which is exacerbated by disaster impacts, is also higher among women, and in particular, indigenous women.



## Impact on men

Primary data derived from focus group discussions (FGDs) conducted during the Gender Inequality of Climate and Disaster Risk (GICDR) Study indicate that **men suffer the greatest direct economic impact of disasters** in Guyana. This is due to their higher participation levels and dominance in the productive sectors including agriculture. Floods on the coastlands and in the agricultural regions of Guyana (Regions 2, 3, 4, 5 and 6) result in a massive loss of crops and agricultural assets; **men are the owners of most of these assets**. Disasters can lead to:



## Impact on girls

Floods lead to a decrease in household income and food insecurity, which can result in girls leaving school early to seek an income or their parents arranging early marriages on the coastland. In the interior, both floods and droughts affect girls negatively, leading to early school dropouts as families can ill-afford to bear the associated educational costs.

## Impact on boys

The impacts of floods and droughts on boys vary depending on age. In extreme cases, younger boys (and girls) often seek shelter with their mothers. Both younger and older boys may not be able to attend schools due to flooding of schools and communities (UNICEF, 2018).



## The health sector

### Impact on women

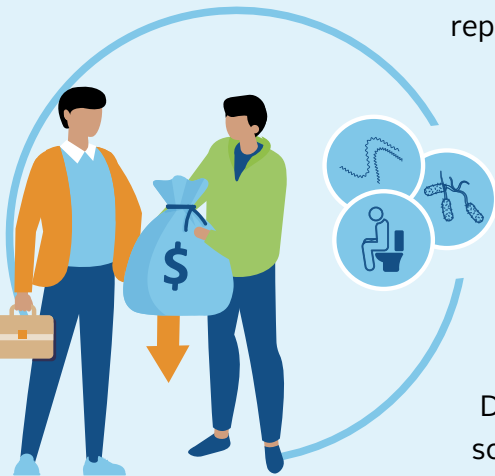
During drought events, women spend extra hours seeking new water sources and tending to household tasks with a decreased water supply. Women's responsibilities are further compounded by a lack of water, such as tending to sick household members (from consuming polluted water) and providing uncontaminated food. Lactating and menstruating women also encounter difficulties in managing health needs in the face of water shortages. Moreover, indigenous women experience lower levels of nutritional status than other populations in Guyana.



### Impact on men

Indebtedness leads to psychosocial issues, including anxiety and depression. Men migrate to other areas in response to drought because their livelihood activities are in farming.

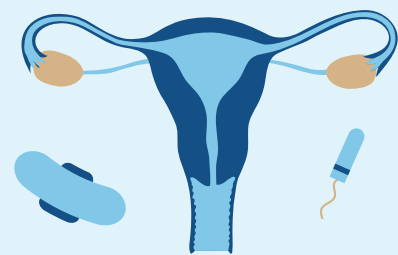
The migration of men out of communities results in an increase in women's reproductive responsibilities and triple roles during periods of droughts.



Men are generally the last to leave the homes and seek shelter during disasters. They usually stay to protect the family's property and household assets, and are therefore more exposed to diseases during floods, including leptospirosis, dysentery and diarrhoea.

### Impact on girls

During drought events, girls may be absent from school to assist in obtaining water. Girls' menstrual hygiene is also affected negatively. In their quest to obtain water for family use, they may be exposed to several dangers including physical attacks and sexual assaults. Girls may also be prevented from going to school due to lack of water affecting water, sanitation and hygiene (WASH) facilities in schools during droughts and school closures due to flooded school facilities during floods.



### Impact on boys

Older and younger boys' health, water and nutritional situations may decline, leading to higher incidence of diseases. School attendance may also be impacted by loss of income, especially in rural and hinterland communities. Early school dropout may also occur with older boys (13 years and above) because they are forced to seek employment (both within and outside of their communities) to assist with decreased household income and food insecurity. Boys' mental health and psychological state are also affected during drought.



### Impact on persons with disabilities

During disaster events, psychosocial impacts are exacerbated by pre-existing high levels among persons with disabilities (PWDs). Excessive stress and a lack of psychosocial support by counsellors specialized in addressing the needs of the disabled further add to the challenges experienced by PWDs during disasters.



Also, often, the format of disaster warnings and information on coping and recovery is not in the format for persons with sight and hearing disabilities. Information, while available, can be inaccessible to some PWDs. Indigenous PWDs are particularly affected by a lack of information because they already suffer from language barriers and stigmatization within their own communities (UNICEF 2017).

### Impact on gender minorities

The lesbian, gay, bisexual, transgender, queer (LGBTQ+) community is also vulnerable to climate change and disasters in the country. Limited pre-disaster livelihoods are threatened, and household and individual stability are severely impacted during and after a disaster. Due to discrimination resulting in the inability to obtain a job in the private sector or governmental agencies, the community is mostly self-employed. Disaster events cause disruptions and eliminate livelihood opportunities, resulting in the community becoming poorer and more vulnerable, and increasing their already high rates of marginalization.

Disaster events also have a mental health impact on the LGBTQ+ persons. The community suffers disproportionately from mental health issues as a result of bigotry, which escalates during disaster conditions. Therefore, any gender-differentiated analysis of the impacts of disaster and climate change will be incomplete without the inclusion of the effects on the LGBTQ+ community.





**Staff from the Gender Affairs Bureau (GAB) in Guyana receives 500 cloth masks produced by a local woman tailor, Ms. Sharon King under the EnGenDER Project. These masks aimed to boost capacity at government-assisted shelters in response to COVID-19.**

Source: GAB, August 2020.

## ADAPTIVE COPING MECHANISMS

FGDs and key informant interviews (KII) were conducted with governmental agencies of the education, health and education sectors and bodies representing PWDs, women and gender minorities.

Abilities to cope with the effects of climate change and disaster events vary between the various groups. The main determinants of coping and absorptive capacity include locational factors (coastland, hinterland) and poverty, which is higher among some groups such as indigenous populations.

The GICDR Study then reviewed the various groups' coping mechanisms to disaster and climate change impacts. The following information was obtained from the FGDs and KIIs:





### 1. Women, men, PWDs and LGBTQ+ are vulnerable to the loss of household income

Coping mechanisms include conservative spending on necessities, alternative sources of income through home-based activities, loans and gifts from family and friends, migration, and the use of savings.



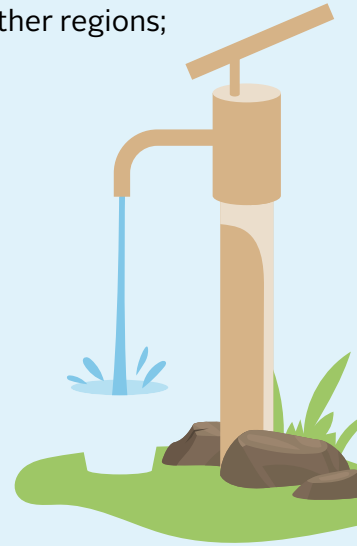
### 2. Men are the ones mostly impacted by lower crop yields/ crop destruction

Coping mechanisms identified include: accessing loans and credit from informal and formal financial institutions; working in alternative jobs or livelihood activities within villages or that connect other villages in other regions; and replanting crops.



### 3. Women are mostly impacted due to a disruption in water supply as a result of damaged infrastructure

Coping mechanisms include the purchasing of water (coastal, middle and upper classes), water harvesting, and the use of untreated and raw water sources (in hinterland communities).



### 4. Women, men, PWDs and LGBTQ+ are vulnerable to increased water-borne diseases

Some of the coping strategies identified include the use of alternative remedies, visits to private health care professionals, or postponing or not seeking medical attention.



## 5. There is also the risk of increased food insecurity

Generally, persons may seek assistance from relatives and family, or even plant kitchen/home gardens as an alternative.



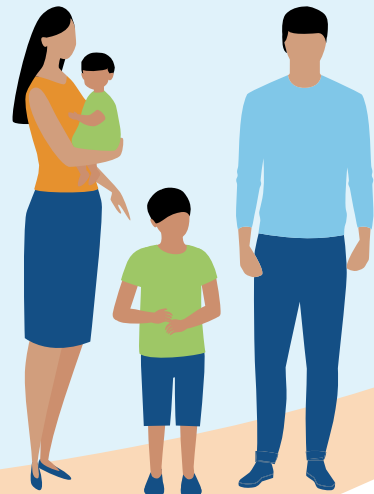
## 6. In post-disaster impact, damage to homes and household furnishings are experienced

Women, men, PWDs and LGBTQ+ seek government and community assistance to restore homes and furnishings, such as loans from formal and informal institutions.



## 7. Psychosocial stress impacts women, men, PWDs and LGBTQ+ in different ways. Coping strategies also differ:

- Women – discuss issues with family members;
- Men – drink alcohol;
- PWDs – discuss issues with family members and seek assistance from government or NGOs;
- LGBTQ+ – drink alcohol, use recreational drugs and seek assistance from community, government or NGOs.



## THE COST OF INACTION

### The agriculture sector

The equation for calculating the cost of inaction to climate change adaptation is: 'accumulated cost of inaction minus the cost of adaptation of the priority actions identified in national adaptation documents for the agriculture sector.'



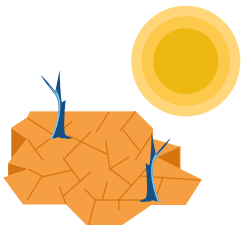
It can be generally estimated that year-over-year loss in sugar and rice would be approximately **US\$2 million** and **US\$4 million**, respectively



And that a 2-degree Celsius increase in temperature by 2050 would increase yield losses by approximately **20%**, equivalent to **US\$400,000** and **US\$800,000** per year, respectively



Therefore, the average cost of losses to agriculture due to climate change-related events, over the past 23 years can be estimated at approximately **US\$42 million** a year, based on Draft CRSAP (2016)



Based on increases in the number of dry spells, drought conditions, changing rainfall patterns and rising sea levels (**draft CRSAP, 2016**), the losses in agriculture can be estimated at least the same average per year up to 2050

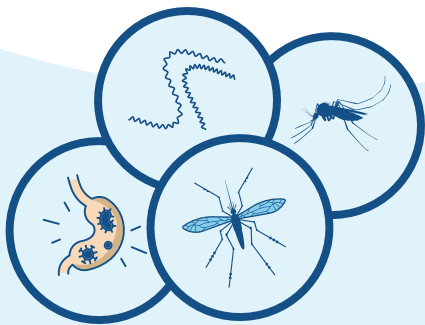


Together, these costs – not including indirect losses in employment and livelihoods and subtracting the cost of adaptation included in national plans – can be estimated at at least **US\$1.3 billion**



## The health sector

In order to calculate the cost of inaction to climate change adaptation in the health sector, the same equation would be used as that for the agriculture sector. However, unlike the agriculture sector, where the accumulated cost of inaction can be more easily deduced based on projected loss of future stock, the health sector's accumulated cost of inaction is broader given its spillover effects on all economic sectors. Accordingly, it should be based on, at the very minimum, the projected increase of the Government's health sector expenditure plus the overall indirect cost (productivity loss) in all sectors due to reduced workforce participation as a result of health complications and tangential, negative spillover effects.



Cost of inaction is based on four vector-borne diseases, namely dengue, malaria, leptospirosis and gastroenteritis, and their direct costs (prevention and treatment costs) and indirect costs (productivity loss).



Under the most extreme scenario, the total cost of inaction over a ten-year period (2021–2030) to Guyana would be approximately **US\$270 million**, but this does not include other negative impacts due to climate change, such as cholera, diarrhoea, typhoid, salmonella, cardiovascular diseases, heat stress, hypothermia and respiratory illnesses. Using this estimate, the average cost of inaction per year would be **US\$27 million**.



If the same cost is assumed per year until 2050, the total cost of inaction to climate change adaptation in the health sector would be approximately **US\$800 million**.

## THE KNOWLEDGE, ATTITUDES, PRACTICES AND BEHAVIOUR STUDY

There is an assumption that individual knowledge, attitudes, and behaviours can influence institutional practices (and vice versa), while policies create the environment in which individual and institutions operate.

In addition to a policy institutional mapping, which identified the key policies and institutions (in the priority sectors) related to gender, climate change and disaster risk reduction, a survey including stakeholder consultation was carried out for Guyana. Findings revealed that while women and men have equal rights in the workplace, there were a few areas for strengthening gender resilience.

Respondents to the survey indicated the following:



## At the individual level



Although individuals perceive themselves as 'gender champions', there are knowledge gaps with respect to understanding gender and its concepts.



Women are more vulnerable than men to climate change and disasters; therefore, opportunities for strengthening resilience must take the varying risks into consideration.



There are aspects of bias in gender attitudes. For example, some respondents believed that women should prioritize their family, regardless of the impact on their career. Survey respondents also believed that women are better at planning and multi-tasking than men.

## At the institutional level



There is evidence of limited awareness of the importance of gender considerations in institutions. Gender strategies and action plans are rarely in place.



The lack of disaggregated data is the main barrier to gender being incorporated at the institutional level.

## CONCLUSION

For women in Guyana, disaster impacts exacerbate gender inequalities in the agriculture sector. Disaster impacts increase their reproductive responsibilities during and after an event, resulting in greater workloads. For girls, indirect impacts on their education lead to dropouts and lessen their ability to obtain work outside of the home. Disaster and climate change impacts are determined not only by gender, but also by social status, geographic location, age and disability. In addition, there is a transgender population in Guyana who also have specific concerns during and after disasters.

For both agriculture and health sectors, the cost of inaction to climate change adaptation is high. For the agriculture sector, based on publicly available data, which are likely to underestimate the true cost of inaction, the cost is **US\$1.3 billion dollars**; for the health sector, the corresponding cost is **US\$800 million**. From the research, it is clear that adaptation is more economical than inaction.

In essence, the lack of gender data and sex-disaggregated data in Guyana prevents a full analysis of the gender-differentiated impacts of disaster. Therefore, the collection of gender data and sex-disaggregated data should be a priority in reducing gender inequality to climate and disaster risks.

## KEY RECOMMENDATIONS

- Raise awareness of gender policies and mandates across different institutions.
- Promote continuous learning by investing in gender training and mentoring.
- Foster a safe and inclusive workplace culture.
- Create incentives for positive behaviours and practices related to gender equality.
- Put in place institutional mechanisms to support gender-responsive approaches.
- Build accountability by tracking and reporting on progress, both internally and externally.

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