



**EnGenDER**

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

**JAMAICA**



**Policy Brief**

# Gender Inequality of Climate Change and Disaster Risk in Jamaica

**November 2021**



## BACKGROUND



**Ten women agribusiness entrepreneurs benefit from stipends under the EnGenDER Project through a partnership between the Ministry of Industry, Investment and Commerce and UN Women Multi-Country Office Caribbean, 2021.**

Source: Urban Development Corporation (UDC), Jamaica, 2021

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 Jamaica. The **two priority sectors** selected by the National Decision-Making Mechanism for Jamaica for EnGenDER are **health** and **transportation**.

In December 2020, the UN Women Multi-Country Office (MCO) Caribbean completed a study on the Gender Inequality and Differential Impact of Climate Change and Disaster Risk and Cost of Inaction for Jamaica. The 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 the 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

Jamaica, like most Caribbean countries, has a high risk of vulnerability. More than **80%** of the population are at risk because they live in coastal communities, with further evidence of sex and age vulnerabilities. Moreover, staggering statistics reveal that more than **50%** of the population are single-parent, female-headed households, and more than **70%** of households below the poverty line are also female-headed. This is an increasing concern as women tend to have higher levels of unemployment, lower income, and more responsibility to deal with household challenges during times of disasters.



Since youth are under the care of their parents, their vulnerability is directly related to the coping capacity of their parents. This group is also at risk from hazards due to disruption to schooling, domestic physical and sexual abuse, as well as possible abduction when traveling at night. Girls more than boys are targeted for sexual abuse and exploitation. These risks tend to increase following a natural hazard.

People with disabilities (PWDs) are most at risk during any kind of disaster given their heavy dependency on others for all forms of support. Lesbian, gay, bisexual, transgender, queer (LGBTQ+) persons also face significant discrimination within the Jamaican population including in disaster situations.



## The main hazard risks for Jamaica are

### 1. Earthquakes



### 2. Floods



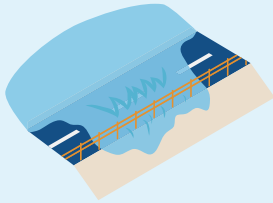
### 3. Tsunamis



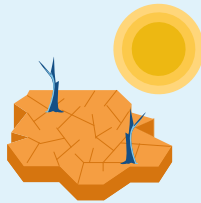
### 4. Storms and hurricanes



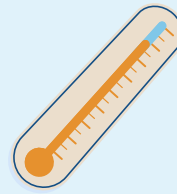
### 5. Sea level rise – coastal flooding and erosion, land loss, seawater intrusion of coastal aquifers



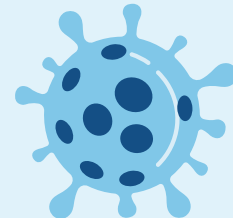
### 6. Droughts



### 7. Heat waves

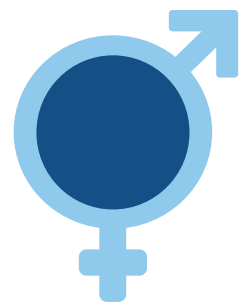


### 8. Pandemics



## GENDER INEQUALITY ISSUES – CLIMATE AND DISASTER RISK

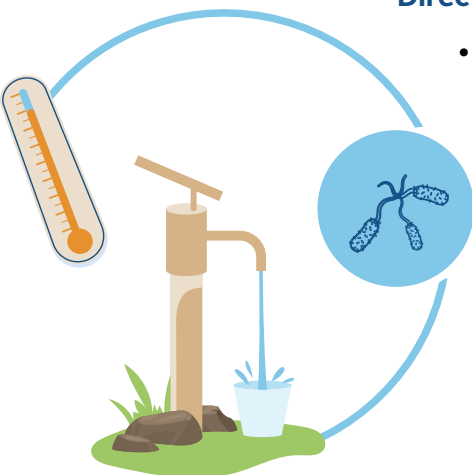
There is a National Policy for Gender Equality for Jamaica as well as a Climate Change Policy Framework 2015, which incorporate gender differentiated concerns, vulnerabilities, and adaptation capacities. However, although there is a National Development Plan, it lacks gender analysis and considerations.



### The health sector

#### Direct risks include:

- Increased incidence of vector-borne diseases;
- Higher occurrence of respiratory diseases and heat and stress-related illnesses and conditions, which could directly increase morbidity and mortality rates, particularly among the youth and the elderly;
- Increased water-related diseases such as dysentery, typhoid and cholera.



**Indirect risks include:**

- Potential increase in deaths and injuries caused by storms, floods and landslides, given the expected increased frequency of extreme weather events;
- Compromised food security, given the vulnerability of the agricultural sector to climate variability, rising temperatures and more frequent droughts and floods, which can result in increases in malnutrition, also due to the high dependency on rainfed subsistence farming.

**The transport sector****Direct risks include:**

- Increased incidence of vector-borne diseases;
- Higher occurrence of respiratory diseases and heat and stress-related illnesses and conditions, which could directly increase morbidity and mortality rates, particularly among the youth and the elderly;
- Increased water-related diseases such as dysentery, typhoid and cholera.



**Regional Director of UN Women for the Americas and the Caribbean, Maria-Noel Vaeza and UN Women MCO Caribbean Representative, Tonni Brodber met with Government of Jamaica officials of the Ministry of Culture, Gender, Entertainment and Sport. (R-L) UN Women National Private Sector Specialist, Gayle Gollop; UN Women Planning & Coordination Specialist, Monique Long; Permanent Secretary Denzil Thorpe; Maria-Noel Vaeza; Minister – the Honourable Olivia Grange; Principal Director of the Bureau of Gender Affairs, Sharon Coburn-Robinson; Tonni Brodber; UN Women Communications Analyst, Sheryl-Ann Thomas-Scott.**




Source: UN Women, 2021



Table 1: Differential impact of climate change and disaster (disaggregated by hazard type) on women, men, children, persons with disabilities, and LGBTQ+

Hazard type		Possible Impact by Gender and Age				
Impact by sector		Men	Women	Boys	Girls	Persons with disabilities (PWDs)
<b>Categories 4 and 5 Hurricanes –</b> Storm surge, inland flooding, wind-related damage.	<b>Health</b> Loss of life; damage to all health facilities; creation of habitats for mosquito breeding; contamination of water resources. Public health impacts include lack of potable water, loss of food production, population displacement, and loss of livelihood security.	Disruptions to access to health care. Risk of injury or death. Higher mortality rates among men because they take more risks trying to save themselves and their families. Increased risk of contracting infectious water diseases. Lack of potable water. Food insecurity – lack of access to nutritious food (especially impacts vegans and vegetarians). Elderly men are more likely to live alone and suffer more food insecurity and lack of potable water.	Lack of access to general healthcare and reproductive health services. Unplanned pregnancies. Women have extensive responsibilities in caring for others. There is an increased risk of gender-based violence. Duties considered ‘women’s work’ – domestic chores, and caring for children, the sick, the elderly and PWDs – increase. Displaced women and girls are vulnerable to sexual violence and sexually transmitted diseases in shelters. Health risks include the outbreak of diseases from overcrowded shelters and inadequate and poor sanitation facilities. Elderly women may suffer from food insecurity and lack of access to health services.	Boys are more likely to be removed from school than girls to assist in recovery efforts after disasters and to work on the farm. There is a lack of access to healthcare. Boys may face abuse while in shelters or homes of relatives. There is a risk of human trafficking for forced labour.	Girls unable to attend school must stay in a shelter. Girls who are displaced from home are more vulnerable. <b>SAME AS BOYS +</b> They are vulnerable to sexual violence and sexually transmitted diseases in shelters. Health risks include the outbreak of diseases from overcrowded shelters and inadequate and poor sanitation facilities. There is risk from human trafficking for sexual exploitation.	There is reduced access to food, water and health care. They may be trapped in homes. There is a disruption to health support systems. There is a lack of potable water. There is a risk of food insecurity, leading to compromised health.
		<b>Recommendations:</b> <ul style="list-style-type: none"> <li>Establish business continuity planning for Class A hospitals</li> <li>Implement sponge concept with permeable areas;</li> <li>Test water and emergency storage; prepare and test evacuation orders; and prepare integrated vector management policies and plans.</li> </ul>				

Possible Impact by Gender and Age						
Hazard type	Impact by sector	Men	Women	Boys	Girls	Persons with disabilities (PWDs)
<p><b>Categories 4 and 5 Hurricanes –</b> Storm surge, inland flooding, wind-related damage.</p>	<p><b>Transport</b> Damage to all roads caused by landslides and flooding. <b>Coastal erosion could destroy the economically critical infrastructure</b> (ports, tourism centres, airports, road networks). This could result in massive economic losses for the country. <b>Recommendations:</b> Road placement and design (raised); sponge concept with permeable areas; sea walls and wetlands.</p>	<p>Decreased access to employment and livelihoods. Lack of transportation to take produce out if in agriculture. Increased costs of transportation for goods.</p>	<p><b>SAME AS MEN +</b> Increased risk of human trafficking. Reduction of income due to inability to go to the market to sell.</p>	<p>Limited access to transportation with increasing costs, resulting in difficulty in going to school. Increased absence from school – poor school performance or dropout. Increased vulnerability to physical and sexual abuse at home or in communities. Vulnerable to assault on unofficial transport operators.</p>	<p>Limited access to transportation with increasing costs, resulting in difficulty in going to school. Increased absence from school – poor school performance or dropout. Increased vulnerability to physical and sexual abuse at home or in communities. Vulnerable to assault on unofficial transport operators.</p>	<p>Immobility increases resulting in less access to all services and facilities, e.g. health care. Inaccessible transportation system for PWDs.</p>
<p><b>Torrential rainfalls events –</b> Inland flooding</p>	<p><b>Health</b> Inundation and damage to health care facilities in the floodplain; habitats for mosquito breeding; contamination of water resources; death. Incidents of leptospirosis may increase with heavier rainfall. <b>Heavy rains can have public health consequences</b>, such as human and animal faecal products and other wastes into groundwater.</p>	<p>Flooding of health facilities results in a lack of access to health care. There is a loss of livelihoods and employment. There is increased incidents of dengue and leptospirosis. There is a lack of access to clean water due to faecal contamination from animal and human waste.</p>	<p><b>SAME AS MEN +</b> Flooding of health facilities affecting access to health care especially reproductive health services - unplanned pregnancies. Increased reproductive roles, such as caring for children and sick family members. Migration to other areas in the case of low-lying areas.</p>	<p>Increased incidents of dengue and diarrhoea. There are increased incidents of water-borne diseases. Increased absence from school, resulting in early school dropout due to ill health.</p>	<p><b>SAME AS BOYS +</b> Lack of potable water and poor sanitation also increases the likelihood of infection affects menstrual hygiene management.</p>	<p>They are unable to access medical care. There is increased risk and vulnerability to infectious diseases. Lack of potable water and poor sanitation, which increases the likelihood of infection.</p>

Possible Impact by Gender and Age						
Hazard type	Impact by sector	Men	Women	Boys	Girls	Persons with disabilities (PWDs)
 <p><b>Torrential rainfalls events –</b> Inland flooding</p>	 <p><b>Transport</b> Damage to all roads caused by landslides and flooding <b>Recommendations:</b> Appropriate road placement and design; sponge concept, i.e. permeable areas.</p>	<p>Lack of transportation to get to work, resulting in a potential loss of jobs. Lack of transportation to take produce to the market (if in agriculture). Increased cost of transportation to move goods.</p>	<p><b>SAME AS MEN +</b> Greater loss of income for women in rural areas due to breakdown of road infrastructure. They are unable to go to market for selling given their dependence on road transportation, which would affect their food and livelihood security.</p>	<p>Limited access to transportation with increasing costs, resulting in difficulty in going to school. Increased absence from school, resulting in poor school performance and engaging in anti-social/criminal behaviour.</p>	<p>Limited access to transportation with increasing costs, resulting in difficulty in going to school. Increased absence from school, resulting in poor school performance and engaging in anti-social/criminal behaviour.</p>	 <p>Immobility increases resulting in less access to all services and facilities, e.g. health care. Inaccessible transportation system for PWDs.</p>



## ADAPTIVE COPING MECHANISMS

The coping methods reflect the adage in Jamaica, 'tun yuh hand mek fashion' ('take what you have and make something new'). From the interviews conducted, all the social groups in Jamaica reported innovative ways to cope with post-hazard impacts, be it stress, lack of access to health services and medication, transportation, water or electricity, or general safety. There is strong community and communal support following a natural hazard impact or an extreme event. Conflicts are generally set aside to address the negative impacts of the extreme event or disaster. However, the groups all expressed some scepticism towards governmental assistance to address climate change impacts. The social groups were more accepting of churches and other non-governmental organizations (NGOs) to lead assistance and recovery programmes.

With regard to hazard impacts in the **transportation sector**, persons are willing to walk, use makeshift stretchers to transport the sick, carry persons on their backs, use hand carts, bicycles, bikes, boats and rafts, etc. when roadways are damaged, flooded and or become impassable.

Coping methods described to address the impacts in the **health sector** include converting a local nurse's or teacher's home into a clinic/shelter, who then become the resident health service provider for the area. Both modern and traditional medicine are also utilized in makeshift health centres. Local plants are used to purify water, remove poisons, cure headaches, treat stress and heal cuts and bruises, among others. Details of adaptive coping mechanisms are provided in Table 2.



**A craft vendor showcases her booth at a hand over event, jointly hosted by the Jamaica Urban Development Corporation (UDC) and UN Women.**

Source: UDC, April 2021



Table 2: Adaptive coping capacities from the focus group discussion on coping methods

 <b>Effects of identified hazards</b>	 <b>Women's coping mechanisms</b>	 <b>Men's coping mechanisms</b>	 <b>Coping mechanisms of persons with disabilities</b>	 <b>Coping mechanisms of LGBTQ+</b>
<p><b>Lack of access to transport</b></p>	<p>This results in women accessing makeshift transportation – walking, donkeys, carts, boats, bikes, bicycles, illegal taxis, carrying persons on your back, use of stretchers made from bamboo/lumber with cloth and rafts. <b>Elderly women</b> depend on children, grandchildren and members of the community for support and makeshift transportation. The elderly are a priority in evacuation for Jamaica Urban Transit Company (JUTC) transportation services.</p>	<p><b>SAME AS WOMEN</b></p>	<p>JUTC provides transport to evacuate PWDs; otherwise, SAME AS WOMEN</p>	<p>LGBTQ+ must find their own means of transportation due to discrimination against them. Alternative means of transport is by foot or provided by services from community organizations such as Jamaica Forum for Lesbians, All-Sexuals and Gays (JFLAG). They follow evacuation advice so as not to be trapped in an area without access to transport, given that they are aware that they might not be offered much support in their communities.</p>
<p><b>Lack of access to health facilities</b></p>	<p>Some homes with elderly or medical personnel (nurses) are usually automatically converted into a community clinic. Elders/health practitioners act as midwives to deliver babies, if necessary, and mothers and babies are treated with local remedies after delivering (arrowroot, porridge, etc.). Elderly women use traditional knowledge of herbs and other care methods. They are taken to hospitals and health care clinics if deemed not treatable at home.</p>	<p>Men do not usually go to hospitals or clinics unless is a serious injury but will also use traditional herbal remedies for ailments if encourage or considered necessary.</p>	<p>PWDs, like women, use whatever services are offered by community members.</p>	<p>They use traditional remedies and obtain some support from women in the communities if ill. They seek assistance through organizations such as JFLAG. They follow evacuation advice so as not to be trapped in an area without access to transport; given their awareness that they might not be offered much support in their communities.</p>

 <b>Effects of identified hazards</b>	 <b>Women's coping mechanisms</b>	 <b>Men's coping mechanisms</b>	 <b>Coping mechanisms of persons with disabilities</b>	 <b>Coping mechanisms of LGBTQ+</b>
<p><b>Loss of livelihoods and income</b></p>	<p>Spend conservatively on necessities.                      Develop alternative sources of income through home-based activities.                      Women may seek a job outside of the home such as domestic helper (single parent or lower income households).                      They receive loans and gifts from family and friends and private institutions.                      They have an increase dependency on remittances from abroad.                      They use savings (if any).                      If desperate, they may sell assets for cash.                      They may engage in transactional sex.                      They seek support from state cash grants (MPs and councillors).</p>	<p><b>SAME AS WOMEN +</b>                      They seek alternative livelihood activities.                      The men seek employment in infrastructure repair projects in or near the community following a hazard event.                      Men migrate in search of income activities.                      They sell assets for cash.                      They use savings.                      They may loot neighbouring stores (e.g. appliance stores) to sell stolen property.                      Some may rob individuals or homes outside their communities.                      They may directly contact political representatives for money/work.</p>	<p>They use alternative sources of income.                      They seek assistance from relatives and friends.                      PWDs may seek social assistance from relevant agencies.</p>	<p>They seek alternative sources of income including transactional sexual activities.                      They seek assistance from relatives and friends.                      They may receive social assistance from representative organizations.</p>

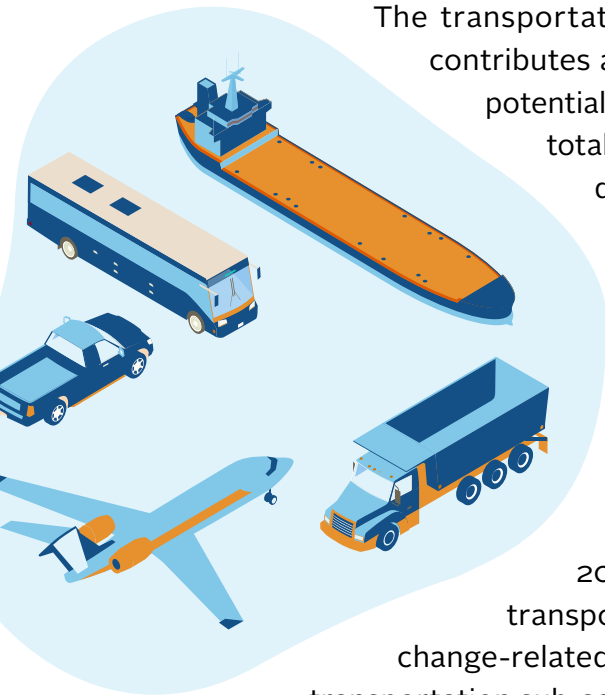
## THE COST OF INACTION

The cost of inaction may be seen as the potential savings from acting in time to prevent the worst economic consequences of climate change (Bueno et. al., 2008). Jamaica has the 6th highest projected cumulative cost of inaction and is likely to be one of the Small Island Developing States (SIDS) likely to be hit the hardest because of climate change inaction.

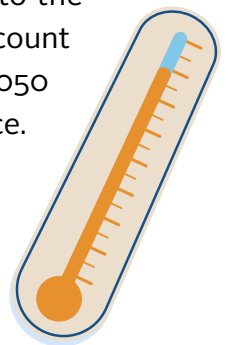


### The transportation sector

The transportation sector is vital for Jamaica's development since it contributes at least **11.5%** to gross domestic product (GDP), with the potential to contribute as much as **37%** by 2025. Estimated costs of total damages across all sectors due to climate change-related disasters range from JMD111.4 billion – JMD226 billion, in 2001–2017 (roughly **6%** and **13%** of GDP, respectively). Using 2021 as a baseline, and an average growth rate of **2.5%**, Jamaica's GDP is forecast at US\$18.6 billion by 2030 and US\$30.5 billion by 2050. With the cost of inaction on climate change as a percentage of GDP for Jamaica projected at **14%** and **30%** by year 2030 and 2050, respectively, this would cost the country as much as US\$4.3 billion by 2030 and US\$5.6 billion by 2050. As reported by the Planning Institute of Jamaica, the transportation sector alone accounted for **46%** of total climate change-related disasters costs, of which **86%** can be attributed to the transportation sub-sector. The transportation sector could therefore account for US\$1.7 billion (JMD252 billion) by 2030 and US\$2.2 billion (JMD328 billion) by 2050 of climate change-related disasters costs if adaptation measures are not put in place.



Assuming that temperatures continue to increase by a minimum of 2 degrees Celsius annually by 2050, this translates to exponential expenditure increases for the transportation sector in order to address the buckling of pavements and runways, as well as the misalignment of railroad rails.

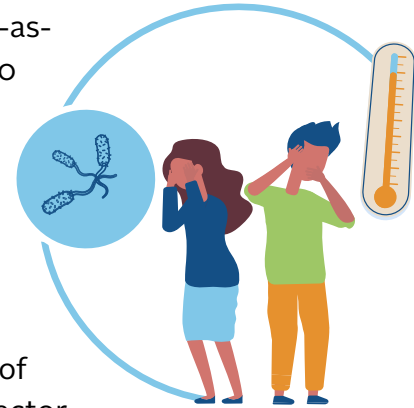


### In the health sector

Between 2000 and 2018, Jamaica's health expenditure almost doubled, peaking at about \$320 per capita. Over the last ten years, the average investment by the Central Government into the health sector (as a percentage of GDP) has been approximately **6%**. While relatively low compared to other SIDS in the region, Jamaica has increased its spending in the health sector by **3.9%** since 2012 (from **4.8%** in 2012, to **8.7%** in 2020), which may have contributed to a reduction of out-of-pocket expenditure (as a percentage of health expenditure) for its citizens from **27%** in 2012 to **17%** in 2018.



According to the World Health Organization (2018) under a business-as-usual scenario, climate change is expected to cause an additional 250,000 deaths per year from malnutrition/undernutrition (approximately 95,000 additional deaths, or a **3.1%** increase), malaria (approximately 60,000 additional deaths, or a **14.8%** increase) and other vector-borne diseases, diarrhoea/sanitation (approximately 48,000 additional deaths, or a **9.14%** increase, predominantly among children) and heat stress (approximately 38,000 additional deaths). Consequently, applying global estimated percentage increases presented above to country baselines of cases and deaths will translate to increases in health sector spending for both the Government and the population.



- Currently, based on data on expenditure per capita and size of the population, Jamaica spends almost US\$1 billion (JMD148.6 billion) directly and indirectly to ensure access to healthcare and healthcare services. However, this does not include new threats like the COVID-19 pandemic, which triggered an additional US\$370 billion (JMD2.5 billion) subvention to the health sector. With an average growth rate of **2.5%** (2021 baseline), government spending on health alone could be approximately US\$4 billion (JMD592 billion) and US\$6 billion (JMD880 billion) by 2035 and 2050, respectively, if adaption measures are not developed and implemented.

## THE KNOWLEDGE, ATTITUDES, PRACTICES AND BEHAVIOUR STUDY

There is an assumption that individual knowledge, attitudes, and behaviours can influence institutional practices (and vice versa) and 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 Jamaica. 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. For example, there seems to be a poor understanding of equality vs. equity.



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 believe that women should prioritize their family, regardless of the impact on their career. Respondents also believed that women were better at planning and multi-tasking than men. Survey results also revealed that there was a general consensus that it is more important for a man than a woman to get a university degree and work outside the home.

## At the institutional level



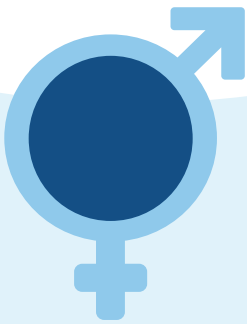
There is evidence of limited awareness of the importance of gender considerations in institutions. Gender strategies and action plans are rarely in place.



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



## RECOMMENDATIONS



Revise supporting sector policies in order to ensure that they are gender-responsive.



Address the security risks that are increased and heightened during disaster conditions, for example, safety risk of girls and women when traveling to get water and other supplies after a disaster. In addition, attention should be paid to improving water supply systems, ensuring that potable water is available to the most vulnerable – children, the elderly and PWDs, and reducing the need to source water with its associated risks to women.



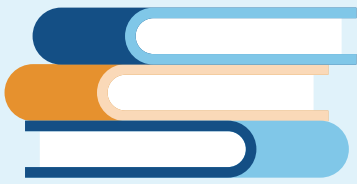
Promote climate risk insurance as a means of protecting assets, ensuring that it is affordable and gender-responsive. This might require state subventions since the most vulnerable may not be able to afford the true market price.



Expand social support services, especially in coping with mental stress, targeting women, especially in single-parent households.



Develop coping mechanisms to address the needs of the LGBTQ+ population in all stages of the disaster cycle due to the widespread discrimination (de facto and de jure) against the LGBTQ+ population.



Expand the first responder programmes to schools and youth and community-based organizations, and provide training on responding to vulnerable members of the community, in particular the elderly and PWDs.



Promote local environmental and natural resources management to reduce risk and enhance resiliency. Practices can include ensuring adequate and functional drainage, which reduces the risk of flooding and vector-borne diseases (dengue, malaria, chikungunya and zika).



Ensure that post-disaster infrastructure work employs persons with the skills set from the communities where the work is taking place, thus providing a temporary income stream to some residents of the community.



Develop an organized network among churches and NGOs as part of the response team to deal with post-disaster relief work, and ensure that they have the requisite equipment and resources to carry out their duties.



Link the agriculture sector with disaster management by supporting the agri-processing segment (usually dominated by women) to develop meals ready to eat (MREs). MREs can be a source of nutrition, especially at shelters, during food scarcity. They should also be made available to the vulnerable populations (the elderly, PWDs, the indigent, etc.) who are not in shelters. The establishment of dry and cold storage facilities across all parishes will also ensure supplies of food in disasters.



## REFERENCES

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