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Advancing gender equality in environmental migration and disaster displacement in the Caribbean

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Contents

Acronyms and abbreviations	7
Glossary	11
Abstract	15
Introduction	19
I. Approaching the gender dimensions in disaster displacement and environmental migration	21
A. Gender, disaster displacement and environmental migration in the Caribbean	21
1. Overview	21
2. Disasters, climate change and migration in the Caribbean.....	22
3. The gendered impacts of disaster displacement and environmental migration in the Caribbean	24
B. Regional and international human rights frameworks on displacement and migration	26
1. An enhanced integration of human rights consideration in international frameworks on the migration-climate nexus.....	26
2. Approaching disaster displacement and environmental migration in the Caribbean: Leveraging existing mechanisms and identifying gaps and needs.....	30
C. The importance of gender-disaggregated data and evidence on disaster displacement and environmental migration	31
II. Case studies	35
A. Methodology for the case studies	35
B. The gendered impacts of Hurricane Dorian in the Bahamas	36
1. Vulnerability of the Bahamian population to extreme weather events and climate change.....	36
2. The impact of Hurricane Dorian.....	37

3.	Gender inequality and gender-based violence in the Bahamas	37
4.	The gendered impacts of displacement from Hurricane Dorian	40
5.	Conclusion.....	46
C.	The gendered impacts of Tropical Storm Erika and Hurricane Maria in Dominica	47
1.	Dominica’s vulnerability to extreme weather events and climate change	47
2.	The impact of Tropical Storm Erika and Hurricane Maria	48
3.	Gender integration in disaster risk management and climate change policies	48
4.	Gender inequality and gender-based violence (GBV) in Dominica.....	49
5.	Gendered impacts of displacement from Tropical Storm Erika and Hurricane Maria	50
6.	Conclusion.....	55
D.	The Nexus of Environmental Migration, Urbanization and gender in Jamaica.....	55
1.	Demographics, natural hazards, and gender in Jamaica	55
2.	Women and agriculture in Jamaica	56
3.	Gender mainstreaming in national climate change policies	57
4.	Climate change, urbanization and gender in Jamaica	57
5.	Conclusion: Environmental Migration as a Gendered Phenomenon in Jamaica.....	59
E.	Women’s leadership and gender-responsive planning for evacuation and environmental migration in Cuba	59
1.	Gender, mobility and the environment in Cuba.....	59
2.	Lessons in disaster preparedness: the role of social capital and women’s empowerment	60
3.	Climate change and gender equity in national policy	62
4.	Conclusion: implications for environmental migration and gender in Cuba.....	63
III.	Findings and recommendations	65
A.	Main findings.....	65
1.	Gender is a fundamental factor for understanding environmental migration and disaster displacement	65
2.	Disaster situations, displacement and temporary accommodations require gender-responsive interventions	66
3.	Limited access to resources and opportunities influences gender-specific vulnerabilities and capacities to return to communities of origin after displacement.....	66
4.	Gender-based violence is a critical issue to be addressed in environmental migration and disaster situations.....	67
5.	Improved evidence and data are required to facilitate gender-responsive policymaking	67
6.	Create opportunities to promote and recognize women’s knowledge, empowerment and leadership	68
7.	Specific policies are still required on the gender aspects of environmental migration in slow-onset scenarios	68
B.	Recommendations	69
	Bibliography.....	75
	Studies and Perspectives-The Caribbean Series: issues published.....	85

Tables

Table 1	Disaster-induced displacements in the Bahamas from 2015-2019.....	36
Table 2	Comparison of Abaco and Grand Bahama' populations pre-Hurricane Dorian	42
Table 3	Disaster-induced displacements in Dominica since 2011.....	47
Table 4	Shelter occupants after Tropical Storm Erika by age and sex.....	51

Map

Map 1	<i>Tarea Vida</i> priority zones based on potential flood impacts	63
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Acronyms and abbreviations

ACAPS	Assessment Capacities Project
CARE	Cooperative for Assistance and Relief Everywhere
CARICOM	Caribbean Community
CCCCC	Caribbean Community Climate Change Center
CDB	Caribbean Development Bank
CDEMA	Caribbean Disaster and Emergency Management Agency
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CEPDE	Cuban National Center for the Study of Population and Development
CERD	International Convention on the Elimination of All Forms of Racial Discrimination
CITMA	Cuban Ministry of Science, Technology and the Environment
COP	Conference of the Parties to the United Nations Framework Convention on Climate Change
CDR	Committees for the Defense of the Revolution
CRC	Cuban Red Cross
CRC	Convention on the Rights of the Child
CRMW	International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families
CSO	Central Statistics Office
CSME	Caribbean Single Market and Economy
C2ES	Centre for Climate Change and Energy Solutions
DVRP	Disaster Vulnerability Reduction Project
ECD	Eastern Caribbean Dollars

ECEU	Eastern Caribbean Economic Union
ECLAC	Economic Commission for Latin America and the Caribbean
FAO	Food and Agricultural Organisation of the United Nations
FMC	Federation of Cuban Women
GBV	Gender-based violence
HIV	Human immunodeficiency virus
HRC	Human Rights Council
IADB	Inter-American Development Bank
IASC	Inter-Agency Standing Committee
ICCPR	International Covenant on Civil and Political Rights
IDMC	International Displacement Monitoring Centre
IFRC	International Federation of the Red Cross
INDC	Intended Nationally Determined Contributions
ILO	International Labour Organization
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
IRIN	The New Humanitarian
IUCN	International Union for Conservation of Nature
LCCDRS	Low Carbon Climate Resilient Development Strategy
LGBTI	Lesbian, gay, bisexual, transgender and intersex
MISP	Minimum Initial Service Package
NEEPAP	National Equality Equity Policy Action Plan
NEMA	National Emergency Management Agency
NGO	Non-governmental organization
OECS	Organization of Eastern Caribbean States
PIAL	Local Agricultural Innovation Program
SBI	Subsidiary Body for Implementation of United Nations Framework Convention on Climate Change
SDG	Sustainable Development Goal
SIDS	Small Island Developing State
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

UNGA	United Nations General Assembly
UNHCR	United Nations High Commissioner for Refugees
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, sanitation and hygiene
WEF	World Economic Forum
WHO	World Health Organization

Glossary

Adaptation

"In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects" (IPCC, 2018: 542)

Climate change

"Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forces such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use" (IPCC, 2018: 544)

Damage

"The effects a disaster has on the assets of each sector, expressed in monetary terms. These occur during the event giving rise to the disaster. Depending on the sector, assets may include: (a) assets such as buildings, installations, machinery, equipment, means of transport, storage facilities, furnishings, irrigation systems, dams, road systems and ports. (b) Stocks of final and semi-finished goods, raw material, materials and spare parts." (ECLAC, 2014: 32).

Disaster

"Severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery" (IPCC, 2018: 547).

Disaster risk

"The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity" (IOM, 2019: 51).

Disaster risk management (DRM)

"Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses" (UNGA, 2016: 15).

Disaster displacement

"The movement of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence as a result of a disaster or in order to avoid the impact of an immediate and foreseeable natural hazard" (IOM, 2019: 51).

Displacement

"The movement of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters." (IOM, 2019: 53)

Drought

"A period of abnormally dry weather long enough to cause a serious hydrological imbalance... For example, shortage of precipitation during the growing season impinges on crop production or ecosystem function in general (due to soil moisture drought, also termed agricultural drought), and during the runoff and percolation season primarily affects water supplies (hydrological drought). Storage changes in soil moisture and groundwater are also affected by increases in actual evapotranspiration in addition to reductions in precipitation. A period with an abnormal precipitation deficit is defined as a meteorological drought" (IPCC, 2018: 547).

Early warning system

"The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss" (ECLAC, 2014: 284).

Environmental degradation

"The reduction of the capacity of the environment to meet social and ecological objectives and needs" (ECLAC, 2014: 284).

Environmental migrant

"A person or group(s) of persons who, predominantly for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are forced to leave their places of habitual residence, or choose to do so, either temporarily or permanently, and who move within or outside their country of origin or habitual residence" (IOM, 2019: 62).

Environmental migration

"The movement of a person or groups of persons who, predominantly for reasons of sudden or progressive change in the environment due to climate change, are obliged to leave their habitual place of residence, or choose to do so, either temporarily or permanently, within a State or across an international border" (IOM, 2019: 29).

Extreme weather event

"The occurrence of a value of a weather variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. In many cases, a weather event with high impact is also deemed as an extreme event." (WMO, 2016: 6)

Evacuation

"Facilitation or organization of transfer of individuals or groups from one area/locality to another in order to ensure their security, safety and well-being" (IOM, 2019: 65)

Exposure

"The presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected" (IPCC, 2014: 123).

Feminization of migration

"The changing nature of women's migration, reflecting the fact that more women migrate independently rather than as members of a household, and are actively involved in employment" (IOM, 2019: 71).

Flood

"The overflowing of the normal confines of a stream or other body of water, or the accumulation of water over areas not normally submerged. Floods include river (fluvial) floods, flash floods, urban floods, pluvial floods, sewer floods, coastal floods, and glacial lake outburst floods" (IPCC, 2014: 13).

Hazard

"A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation." (IOM, 2019: 87).

Gender

"The socially constructed roles and responsibilities, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to males and females on a differential basis. Gender is relational and refers not simply to women or men, but to the relationship between them" (IOM, 2019: 81).

Gender-based violence

"An umbrella term for any harmful act that is perpetrated against a person's will and is based on socially ascribed (i.e. gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and denial of resources, opportunities or services, forced marriage and other deprivations of liberty. These acts can occur in public or in private" (IOM, 2019: 81).

Gender equality

"The equal rights, responsibilities and opportunities of all individuals regardless of their gender identity" (IOM, 2019: 83).

Gender mainstreaming

"The process of assessing the implications for women and men, boys and girls, and people with more complex gender identities of any planned action, including legislation, policies or programmes in all areas and at all levels." (IOM, 2019: 84)

Human mobility

"A generic term covering all the different forms of movements of persons" (IOM, 2019: 91).

Intimate partner violence

"Physical, sexual, psychological or economic violence between current or former spouses as well as current or former partners. It constitutes a form of violence which affects women disproportionately and which is therefore distinctly gendered." (Council of Europe, 2011).

Losses

"Goods that go unproduced and services that go unprovided during a period running from the time a disaster occurs until full recovery and reconstruction is achieved" (ECLAC, 2014: 34)

Migrant

"An umbrella term, not defined under international law, reflecting the common lay understanding of a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons. The term includes a number of well-defined legal categories of people, such as migrant workers; persons whose particular types of movements are legally defined, such as smuggled migrants; as well as those whose status or means of movement are not specifically defined under international law, such as international students" (IOM, 2019: 30).

Planned relocation

"In the context of disasters or environmental degradation, including when due to the effects of climate change, a planned process in which persons or groups of persons move or are assisted to move away from their homes or place of temporary residence, are settled in a new location, and provided with the conditions for rebuilding their lives" (IOM, 2019: 157).

Resilience

"The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions" (ECLAC, 2014: 286).

Vulnerability

"The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt" (IPCC, 2014: 128).

Abstract

Disaster displacement and environmental migration are among the most serious humanitarian challenges facing the Caribbean. As a subregion of small island developing States (SIDS) which are vulnerable and prone to extreme weather events and the impacts of climate change, the Caribbean is constantly faced with population displacement resulting from these events. Individuals experience these migration processes uniquely on account of their gender-specific inequalities, vulnerabilities, and access to resources and opportunities. It is critical to understand how the consequences of environmental migration and disaster displacement are gendered in order to address and prevent harm and to protect the rights of women and girls and people of all genders who experience intersecting forms of discrimination.

As extreme weather events intensify and sea levels rise in the subregion, there is a need to devise durable solutions to environmental migration and disaster displacement that build on the capabilities, knowledge and perspectives of women and girls, indigenous and migrant populations, LGBTI persons and persons with disabilities, and support their empowerment as active agents in pursuing mitigation and adaptation responses. However, the gendered impacts of disaster displacement and environmental migration are not well understood in the subregion, due to a lack of gender-disaggregated data on these processes and corresponding lack of focus on their impact on women and girls. Through case studies on the gendered impacts of disaster displacement and environmental migration in four Caribbean SIDS, this study addresses the data gap and explores how extreme weather events and climate change can amplify inequalities and the risks faced by women, girls and marginalized groups when they are in the process of migration.

The Bahamas case study examines the gendered impacts of disaster displacement related to Hurricane Dorian to illustrate challenges in emergency response and to highlight opportunities to strengthen gender-responsive disaster response and recovery. The study draws attention to certain groups that are disproportionately affected by these events, such as LGBTI persons and Haitian women and girls, who face multiple forms of discrimination and a heightened risk of gender-based violence. Hurricane Dorian displaced a greater number of women than men, and women face additional barriers in returning to their communities of origin. The case study also features a gendered analysis of emergency shelters following Hurricane Dorian, finding that these shelters and other temporary accommodations were lacking in gender-responsive planning and management. Women, LGBTI persons, and Haitians migrants with irregular status reported avoiding government-run shelters due to

security concerns and discriminatory treatment. Given that the pre-existing inequalities of marginalized groups are magnified during and after hurricanes, there is a need to mainstream a gender perspective in the Bahamas' climate change and disaster risk management laws, plans and policies.

In the case study on Dominica, experiences from Tropical Storm Erika and Hurricane Maria offer insights into issues of gender inequality and intersecting forms of marginalization experienced by certain vulnerable groups, including indigenous Kalinago women and girls. Women in Dominica experience higher rates of unemployment and lower rates of participation in political life than men, despite evidence that girls outperform boys in education. Tropical Storm Erika resulted in notably higher displacement rates for women in some of the worst affected communities and longer stays in emergency shelters for female-headed households. Incidents of family separation and gender-based violence, along with inadequate privacy and security measures at these shelters, were reported following both Tropical Storm Erika and Hurricane Maria. Ninety per cent of the Kalinago population was displaced by Hurricane Maria, and many of the families impacted migrated to other countries seeking improved living conditions and livelihood opportunities. Many Kalinago women who were previously employed in the agriculture and tourism sectors were unable to earn sufficient income to recover economically from these disaster events. At the policy level, Dominica's National Policy and Action Plan for Gender Equity and Equality does make reference to the vulnerability of certain groups to disasters. At present, this plan is being updated in an effort to place greater emphasis on slow-onset hazards due to climate change. This update presents an opportunity for Dominica to mainstream gender considerations and strengthen the gender-responsiveness of disaster risk management and climate change plans and policies.

The Jamaican case study focuses on slow-onset hazards and the gendered impacts of environmental migration. It highlights the vital role of women in the country's agricultural sector. Jamaican women and their livelihoods are significantly affected by both sudden-onset and slow-onset natural hazards. Disparities in land ownership and access to financial services increase the economic insecurity of women involved in the agricultural sector and their vulnerability to the negative impacts of climate change. With rising economic insecurity and the degradation of rural livelihoods, rates of internal migration to urban areas have escalated. Just as poverty in Jamaica is considered feminized, this case study reveals that urbanization in Jamaica can also be characterized as feminized. When compared with men, women in Kingston's urban settlements reside in inferior physical conditions, with less access to green space. These are contributing factors to the increased stressors that women face in urban environments, including social hazards and physical insecurity. Both the Jamaican Climate Change Policy Framework and the Second and Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) have recognized some of the gender-differentiated impacts of climate change, and the country's 2030 Vision encourages gender and social equity in the context of limited natural resources. As Jamaican women move within the country, there is an opportunity to ensure that the benefits of environmental migration are shared equitably among all Jamaicans, regardless of gender.

The case study on Cuba indicates that women's leadership in disaster displacement is a critical tool for improving community safety and effective disaster response, and that the country's advances in climate change planning offer the potential to develop a gender-responsive approach to environmental migration. Cuba is often noted for its progress in gender equity in education and political participation. Higher education and literacy rates for Cuban women have been found to be correlated with lower mortality after disasters due to natural hazards, when compared with other countries in the Caribbean. The Federation of Cuban Women, a national civil society organization, is central to the country's disaster risk reduction efforts. However, women and men are often assigned gender-specific responsibilities in disaster response that may reinforce traditional gender roles. Cuba is also considered to be advanced in its climate change adaptation policy-making, though opportunities remain to improve

gender-mainstreaming and inclusion of vulnerable groups in planning. To date, formal planning documents and policy related to environmental migration in Cuba, if developed, are not publicly available. The country's primary framework for climate change adaptation and mitigation, Tarea Vida, does include planned relocation strategies, though it is unclear to what extent gender is considered in these documents.

Based on the findings documented in the case studies, recommendations are provided for Caribbean SIDS seeking to develop gender-responsive policies, processes and responses to address disaster displacement and environmental migration, and to enable women and girls and those experiencing multiple forms of discrimination to achieve durable solutions that build on their knowledge and capacities while meeting their recovery and livelihood needs.

Introduction

As a subregion extremely vulnerable to extreme weather events and the adverse effects of climate change, the Caribbean is particularly susceptible to disaster displacement and environmental migration. Displacement can occur before, during or after both sudden-onset events and more gradual degradation processes. Movement may be temporary or permanent and can occur within countries or across borders. Although Caribbean Small Island Developing States (SIDS) experience lower absolute displacement risk than more populous countries, this risk is substantial in relation to the typically small population size of SIDS. During the 2017 Atlantic Hurricane season, three major hurricanes resulted in the internal and cross-border displacement of approximately 3 million Caribbean people in a single month (IDMC, 2018). Significant changes in migration and displacement patterns are expected in the Caribbean as extreme weather events intensify and slow-onset environmental changes place Caribbean communities under increasing economic and social stress.

Although regional and international frameworks have highlighted the importance of addressing climate-induced migration and disaster displacement from a gender perspective, the gendered impacts of these processes are not well understood in the Caribbean subregion. Like other types of migration, environmental migration and disaster displacement have the potential not only to exacerbate existing inequalities between women and men, but also to expose individuals to new vulnerabilities and intensify gendered experiences of poverty, violence, discrimination and socioeconomic inequality (IOM, 2014). In fact, gender is one of the main factors that determine the overall experience of climate change and the migration processes that flow from it. In the Caribbean, gender inequality and gender-based violence remain persistent and poverty is highly feminized (ECLAC, 2019a). At the same time, Caribbean women are active agents and leaders in their families and communities, and often play leading roles in ensuring better outcomes for displaced persons in disaster situations. However, a lack of gender-disaggregated data and analysis on disaster displacement and environmental migration currently prevents a more comprehensive understanding of the specific vulnerabilities and opportunities of Caribbean women and girls in these situations. This in turn hinders the development of gender-responsive policies and processes for addressing climate-induced migration and disaster displacement.

This study introduces the gender dimensions of disaster displacement and environmental migration in the Caribbean and provides case studies on the gendered impacts of these situations in four Caribbean SIDS: the Bahamas, Cuba, Dominica, and Jamaica. In doing so, it begins to build the evidence base on how disaster displacement and environmental migration affect Caribbean women and girls and certain marginalized groups in specific ways on account of their gender and other characteristics, such as migration, disability, or indigenous status, and how these effects can worsen gender inequality as pre-existing patriarchal norms and gender roles are reinforced and perpetuated. Targeted recommendations are provided for Caribbean SIDS seeking to achieve durable solutions for displaced persons and environmental migrants and to develop gender-responsive policies, processes and responses that facilitate empowerment of women and girls and marginalized groups to meet their recovery and livelihood needs and to make transformative adaptation decisions.

I. Approaching the gender dimensions in disaster displacement and environmental migration

A. Gender, disaster displacement and environmental migration in the Caribbean

1. Overview

The Caribbean is an exceptionally diverse subregion that consists of more than 7,000 islands and 40,000 kilometres of coastline (Gable and Aubrey, 1990). It is also home to 16 of the world's 38 Small Island Developing States (SIDS), which are identified as having "unique and particular vulnerabilities" to climate change and natural hazards (UNGA, 2012). The subregion is highly vulnerable and prone to hurricanes, tropical storms, earthquakes, droughts and flooding. The 1992 United Nations Framework Convention on Climate Change (UNFCCC) drew special attention to SIDS and other countries with low-lying coastal areas, as they have comparatively greater levels of risk to sea level rise, changing rainfall and temperature patterns, and extreme weather events.

Both extreme weather events and climate change are expected to bring about significant changes in migration and displacement patterns in the Caribbean. However, internal and international movements due to environmental causes, particularly disasters, are not new to the subregion. Recent disasters in the Caribbean have resulted in the temporary and permanent displacement of Caribbean people, both within their countries and to other countries. The 2010 earthquake in Haiti led to 6.5 million cases of internal movement over the course of the following decade. Many Haitians also sought refuge and assistance across the border in Dominican Republic and in other countries of the Western Hemisphere (Cantor, 2018). In the wake of Hurricane Dorian in the Bahamas in 2019, thousands were evacuated to Nassau and neighboring locations, where many remained in temporary shelters for many months while others moved abroad.

Migration and displacement, whether attributable to disasters, climate change or the combined impacts of both, affect women, men, girls and boys differently on account of their gender and other characteristics, and can worsen gender inequality by reinforcing patriarchal gender norms and stereotypes. Although Caribbean countries have made some positive strides in achieving gender equality, persistent gender inequalities are still evident in households, workplaces, the labour market, and society as a whole. Furthermore, poverty is highly feminized, with a higher percentage of poor people living in female-headed households (ECLAC, 2019a). Levels of gender-based violence in the Caribbean are among the highest in the world and have been described as “dramatic” (UNDP, 2014: 8). Violence against women and girls is “so entrenched and normalized that both men and women have a high tolerance for its manifestations” (Watson Williams, 2020: 8).

Climate change is already increasing the severity of extreme weather events in Caribbean SIDS, but also placing economic and social stress on communities via slow-onset environmental changes. Although climate change is a global phenomenon, it affects certain groups and individuals more severely, including rural and coastal populations and marginalized groups. A person’s gender is one of the main factors that determines the overall experience of climate change and the migration processes that flow from it, including environmental migration and disaster displacement. Climate change will exacerbate existing inequalities and vulnerabilities, particularly of women and girls and marginalized groups, by reducing the resources available to communities, threatening livelihoods, and displacing families. It is critical to understand how the consequences of environmental migration and disaster displacement are gendered in order to address and prevent harm and protect the rights of vulnerable individuals, including women and girls.

2. Disasters, climate change and migration in the Caribbean

While economics and labour markets were historically the primary drivers of mobility both within the Caribbean subregion and internationally, disasters and climate change are adding a complex overlay of factors to the traditional impulses for migration. Disaster displacement and environmental migration can occur before, during or after both sudden-onset disasters and more gradual degradation processes. Movement may be temporary or permanent and can occur within countries – internal displacement – or across international borders – cross-border displacement.

Disaster displacement was one of the many challenges experienced during the 2017 Atlantic hurricane season, which caused unprecedented damage and destruction across the subregion. Three million people were displaced internally and across borders in more than a dozen Caribbean countries primarily by Hurricanes Harvey, Irma, and Maria. The entire island of Barbuda was evacuated by authorities in preparation for Hurricane Maria, which also caused massive displacement within and from the island of Dominica. The same hurricane also caused severe damage to housing, water and communications infrastructure in Puerto Rico (IDMC, 2018). Approximately 135,000 Puerto Ricans left the islands in the aftermath; as many as half of them are believed to have resettled permanently on the US mainland (Cantor, 2018).

Caribbean countries are inherently vulnerable to disaster and climate change impacts and the migration processes that flow from them due to their small landmass, dense populations, large marine area and lack of secure infrastructure in areas of high exposure. Of the Caribbean’s 44 million inhabitants, more than fifty per cent live within 1.5 kilometres of the coastline (Mycoo, 2017). One-third of the population resides in low-elevation zones, less than 10 metres above sea level. The overall population doubled in size in the latter half of the twentieth century, contributing to the rise of densely populated, informal settlements in these areas. These trends continue with projections that urbanization will increase three-fold in Antigua and Barbuda, Barbados, and the Bahamas by 2050 (Mycoo and Donovan, 2017).

In recent decades, the Caribbean has been characterized as the second most hazard-prone region in the world, due to its geographical location and the concentration of its population in coastal areas. Almost 17 per cent of the 10,271 disasters registered worldwide between 1970 and 2010 have occurred in Latin America and the Caribbean (ECLAC, 2017b). Extreme weather events continue to be the main cause of disasters in the Caribbean and globally (UNDRR, 2009). The impacts of extreme weather events are magnified for Caribbean SIDS compared to countries in other regions. In comparison to Europe and Central Asia, "SIDS are expected to lose on average 20 times more of their capital stock each year in disasters" (UNDRR, 2015b: 60).

While sea level rise is one of the most significant corollary effects of global warming, it is also expected to magnify the intensity and timing of extreme weather events in the Caribbean subregion.¹ Global warming is likely to reach 1.5°C above pre-industrial levels as early as 2030 (IPCC, 2018). Sea level rise in the Caribbean is forecast to be higher than the global average due in part to the subregion's proximity to the equator (Simpson et al., 2010). With no reduction in emissions, sea level rise is estimated to be between 0.72-0.92 metres in the Caribbean by the end of the century (Strauss and Kulp, 2018). Elevated sea levels can produce coastal erosion and overall loss of land mass, leading to destruction of homes, businesses and livelihoods. In addition, increased flooding and saltwater intrusion cause damage to ecosystems and agriculture.

The amount of heavy precipitation and the mean maximum wind speed associated with extreme weather events is also increasing in tropical regions as a result of climate change (IPCC, 2018). Sea level rise, in combination with higher wind speeds associated with extreme weather events, present a specific hazard to Caribbean SIDS (IPCC, 2012). The impacts of hurricanes and storms are worse where sea level rise has occurred, as the increased sea level weakens natural defense systems like mangroves and challenges human defense systems such as levees and seawalls (C2ES, 2020). Although higher rainfall is projected during extreme weather events in the Caribbean, climate change will overall cause an estimated reduction in rainfall of 0.18 mm per year (Mycroo, 2017). As a result, the Caribbean is likely to experience more intense and frequent droughts (FAO, 2016). As many as 73 million in the Caribbean could be affected by water stress by 2080 (Biermann and Boas, 2010).

In the face of increasingly severe disasters and climate change impacts, individuals, families and communities in the Caribbean will make the choice to migrate in order to find safety or greater economic opportunity. Both sudden-onset events and gradual changes associated with climate change can lead to losses of livelihoods or to conflicts over resources, prompting decisions to migrate that might be associated with economic, social, or political motivations as well as environmental factors. Other factors, such as age, number of children, income and religion, may also play a role in decision-making, highlighting the complexity involved in identifying climate migrants (Thomas and Benjamin, 2018). The effects of climate change tend to cause internal movement before international migration. Eight Caribbean countries and territories are recognized as having the highest average annual displacement risk relative to population size as a result of disasters (IDMC, 2018a).²

Numerous aspects of life may be transformed following environmental migration and disaster displacement, including identity, culture, safety, and economic well-being. Losses may be economic and non-economic (Thomas and Benjamin, 2018). While it is usual for individuals and communities to experience the initial impacts negatively, both environmental migration and disaster displacement can have a positive impact, especially in the long-term, as people find safer communities and more stable livelihoods in new locations. While the outcomes of these processes can be positive, disaster displacement and environmental migration are nonetheless "a reality and among the biggest humanitarian challenges facing States and the international community in the 21st century" (The Nansen Initiative, 2015, p. 6).

¹ There is currently little evidence to support the assumption that the frequency of tropical storms has changed over time. See IPCC, 2018.

² They are Antigua and Barbuda, the Bahamas, British Virgin Islands, Cayman Islands, Dominica, Puerto Rico, Saint Kitts and Nevis, and Turks and Caicos Islands.

3. The gendered impacts of disaster displacement and environmental migration in the Caribbean

While all Caribbean people are negatively affected by disasters and climate change, these events and the migration processes associated with them are experienced differently based on one's gender and other intersecting characteristics, as vulnerability to climate and environmental stressors is shaped by gender roles and responsibilities (IOM, 2019b). Women and girls, especially those from marginalized groups, experience poorer displacement and migration outcomes due to their pre-existing inequalities and traditional gender roles and expectations. The negative impacts of environmental migration and disaster displacement are also exacerbated for marginalized groups, including persons with disabilities, migrants with irregular status, LGBTI persons and elderly persons, due to their particular vulnerabilities, heightened risk of violence and societal exclusion.

In the aftermath of disasters, Caribbean women and girls experience heightened mortality rates and risk of gender-based violence (GBV) as well as additional barriers to meeting their recovery and livelihood needs (Dunn, 2013). In the year following Hurricane Katrina, levels of GBV, especially intimate partner violence, increased in Mississippi and remained higher than pre-disaster levels during the protracted phase of displacement (Anastario et al, 2009). Experiences of GBV were also linked to poorer mental health outcomes. Women are more likely than men to die during and in the aftermath of disasters, and women's socioeconomic marginalization increases their vulnerability after disasters (Neumayer and Plümper, 2007). However, disaster mortality rates of women and men are less differentiated where economic and social rights are more equally distributed (Brunkard, et al, 2008). Another driver of gender inequality following disasters is access to healthcare, as women are more likely to suffer from certain types of chronic diseases, such as diabetes and hypertension (Sobers-Grannum et al., 2015). Yet in displacement situations, the attention to these types of diseases is often lacking (Miller and Arquilla, 2008).

Globally, women and men face different burdens as a result of more intense extreme weather events and other climate change impacts. Women and girls are typically relegated responsibility for unpaid household work and caregiving, particularly in less economically developed countries and in rural communities; climate change and disaster impacts directly affect this work (Skinner, 2011). Women's unpaid care work will become increasingly time-consuming given climate change impacts on water availability and food production. In the aftermath of disasters, women carry out the majority of care and reproductive work. As a result, women have less time for paid work and to "participate in community decision-making, gain knowledge on adaptation strategies, or invest in new resilient livelihoods" (UNDP, 2020). In Latin America and the Caribbean, women already spend more than three times as many hours on unpaid care and domestic work than men (ECLAC, 2020).

Women often lack access to and control over resources and livelihood opportunities, which reduces their resilience to climate change related-shocks and disasters (Chindarkar, 2012). With more limited access to credit, information and relief services, women have fewer resources upon which to rely when a shock or disaster occurs (Shah, 2006). In the aftermath of disasters, women's socio-economic marginalized status leaves them less likely to have the social status or material resources to rebuild homes and return to communities of origin (Dankelman, 2009). These factors reinforce and perpetuate the marginalization of women and girls. At the same time, Caribbean women are skilled at mobilizing social networks and maintaining community structures and play a pivotal role in ensuring better outcomes for affected population following disasters.

The impacts of disasters and climate change on the tourism sector of Caribbean SIDS disproportionately affect women, as employment in this sector is highly feminized in the Caribbean and generates job opportunities for women living in rural, coastal and remote areas. The growth of the tourism industry throughout the subregion has expanded construction in wetlands and coastal areas.

These developments are often situated in fragile ecosystems, and many land-use planning programmes have yet to implement controls that address the impacts of disasters and climate change (Lewsey, et al., 2004). It is estimated that one metre of sea level rise and the erosion associated with it will inundate agricultural lands and sea turtle nesting beaches and cause the loss or damage of more than 300 tourist resorts in the Caribbean (Simpson et al., 2010). Women represent almost sixty per cent of employment in accommodation and food service activities in the Caribbean, which are closely linked to the development of the tourism sector (ILO, 2020).

Men and boys are also affected in specific ways by the loss of livelihood and degradation in living conditions that can result from disasters and climate change. Following disasters in the Caribbean, men have been reported to resort to unhealthy coping mechanisms, such as increased consumption of alcohol (Commonwealth of Dominica, 2017). Their need for mental health support is often overlooked due to a scarcity of skilled health professionals. This can in turn lead to an increase in GBV inflicted upon displaced women and children (IDMC, 2019b). There is also evidence that men are specifically vulnerable to climate-related disasters in parts of Central America as well as to heat-related injuries as a result of outdoor work in Canada (COP UNFCCC, 2019a: 8). Male-dominated labour markets, such as agriculture, will be severely impacted, forcing men to migrate away from their families in search of livelihood opportunities (Jost et al., 2016).

LGBTI and non-binary individuals are uniquely vulnerable to disasters and climate change and poor displacement and migration outcomes, due to their societal exclusion and discrimination. Following the 2010 Haitian earthquake, gay and transgender persons were excluded from sex-segregated bathrooms in emergency camps and shelters, health services and emergency food distribution. Since female-headed households were prioritized for food distribution and many LGBTI persons are excluded from their families, gay and transgender persons dressed as women in order to gain access to food and basic services (Petchesky, 2012). While it is recognized that the LGBTI community is a particularly vulnerable to the impacts of climate change, there has been little focus on LGBTI and non-binary individuals in data collection and research (COP UNFCCC, 2019a: 8).

The gendered dimensions of vulnerability can be compounded by other factors, including age. In Puerto Rico, for example, power outages due to Hurricane Maria had a significant impact on elderly populations. Power supply was slow to be restored on the island, and it has been noted that “in long-term outages, the risk of irreversible morbidity and mortality impacts in vulnerable populations (the elderly, poor, and disabled) is much higher than for average households” (Román et al., 2019).

Both the decision to move away from areas vulnerable to disasters and climate change impacts and the ability to migrate are heavily gendered. The choice to migrate is multi-dimensional and is rarely determined by a single factor, but the available evidence shows that men and women may respond differently to the consequences of climate change, making the choice to migrate at different points or taking into account different factors when deciding whether migration will address those consequences (Kumasi, et al, 2017, Massey, et al, 2010, Grey and Mueller, 2012, Gururaja, 2000). For women, children and marginalised people, a decision to migrate may need to factor in increased risk to GBV and human trafficking in transit and destination locations (Castañeda Camey et. al, 2020: 136).

It is also important to recognize that not all who are affected by disasters are displaced, and not all who are affected have the option to move, migrate or relocate (Black et al., 2012). From 2008 to 2018, there were more than 8.5 million new displacements recorded in the Caribbean subregion (Caribbean Migration Consultations, 2019). The level of risk to which individuals and communities are exposed during disasters varies, as do their responses. Security of land tenure and infrastructure, ecosystem health, access to insurance, and the efficiency and equity of social and emergency services all play a role in displacement outcomes (Hamza et al., 2017). Women typically have lower levels of property ownership and lesser access to credit and economic opportunities in the Caribbean. Furthermore, a

higher percentage of poor people live in female-headed households (ECLAC, 2019a). This in turn impacts the ability of women and their family members to recover from shocks and return to communities of origin following disasters. Not all women are equally vulnerable; women with existing economic or social vulnerabilities may be less secure than others. This may be particularly true for indigenous, migrant, widowed and poor women (UNEP, et al, 2013) and women from other marginalized groups.

While it is important to analyze how disaster displacement and environmental migration are gendered and how women and girls are uniquely vulnerable, it is also critical to recognize that they are also powerful agents and leaders in their families and communities. Women and girls play key roles providing resources for their families, facilitating migration, and adapting during displacement. The same factors and structures that increase women's vulnerability also create obstacles for women to be active participants in policy discussions to address climate change (IUCN, 2015). Utilizing the contributions and ensuring the participation of all genders is key to addressing climate change and disaster impacts and ensuring that any solutions build on the capabilities, knowledge and unique perspectives of women, share mutual benefits between genders, and empower women to be active agents in mitigating climate change and pursuing adaptation responses.

B. Regional and international human rights frameworks on displacement and migration

1. An enhanced integration of human rights consideration in international frameworks on the migration-climate nexus

The international legal framework governing climate-induced migration and disaster displacement remains a complex landscape with multiple intertwined systems. The international community has developed a wide range of strategic frameworks and processes that address the various angles of human mobility in the context of disasters and climate change, notably since 2015 when the Paris Agreement played a catalytic role in addressing the mobility dimensions of climate change (IOM, 2018b). Caribbean countries were an active negotiating group and early adopters of the Paris Agreement, with Barbados, Belize, Grenada, Saint Kitts and Nevis, and Saint Lucia ratifying it the day it opened for signature (Ourbak and Magnan, 2018).³ While many of the frameworks addressing human mobility incorporate gender considerations and pay particular attention to vulnerable groups, they rarely mainstream gender and prioritize gender-transformative policy measures and responses.

International human rights law remains at the forefront of States' obligations and applies to all human beings, including environmental migrants and displaced persons, regardless of their migration status. The body of international human rights agreements relevant to international migration has grown in recent years, with a strengthened approach to environmental and climate factors. Human rights agreements that apply in the context of environmental migration include the International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families (CRMW) and its overseeing Committee on the Protection of the Rights of All Migrant Workers and Members of their Families. Only four Caribbean countries have ratified the CRMW – Belize, Guyana, Jamaica and Saint Vincent and the Grenadines.

Similarly, the International Covenant on Civil and Political Rights (ICCPR), which has been ratified by 13 Caribbean countries,⁴ is applicable in these settings, and has been used in a recent ruling of the

³ The Paris Agreement opened for signature on 22 April 2016, with entry into force on 4 November the same year.

⁴ They are Antigua and Barbuda, the Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Vincent and the Grenadines, and Trinidad and Tobago.

Human Rights Council in an environmental migration case between Kiribati and New Zealand.⁵ The International Convention on the Elimination of All Forms of Racial Discrimination (CERD) and the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) are also important mechanisms applicable to all persons, including environmental migrants and displaced populations.

The Convention on the Rights of the Child (CRC) is the most widely ratified international human rights instrument, with 193 State Parties. Like CERD and CEDAW, the CRC has been ratified by all sixteen sovereign Caribbean states.⁶ In many cases, these human rights treaties have also been extended to the Caribbean's 13 non-self-governing territories (NSGTs) by their administering powers – France, the Netherlands, the United Kingdom and the United States of America. Pursuant to the CRC's principle of non-discrimination, State Parties owe obligations to all children irrespective of their own or their parents' or legal guardians' nationality or migration status. For example, children have the right to acquire a nationality and to be cared for and not separated from their parents against their will.⁷

The United Nations General Assembly Human Rights Council has called for the protection of the rights of persons on the move due to climate change in light of the "adverse effects [of events related to climate change] on the full enjoyment of all human rights". In doing so, the Council made reference to the need to integrate "a gender perspective in pursuing mitigation and adaptation responses to the adverse impact of climate change on the full and effective enjoyment of human rights, including those of migrants and persons displaced across international borders in the context of the adverse impact of climate change" (HRC, 2017: 6). Climate change threatens the fundamental rights of many communities, and vulnerable groups require particular attention and support. Meanwhile, a Joint Statement of the overseeing committees of five international human rights treaties calls on States to "...offer migrant workers displaced across international borders in the context of climate change or disasters and who cannot return to their countries complementary protection mechanisms and temporary protection or stay arrangements" (UN HRI, 2020: 4).

The 2030 Agenda for Sustainable Development, with its 17 Sustainable Development Goals (SDGs), also provides a platform to address migration in an intersectional way, taking into consideration the specific experiences, needs and strengths of particular groups of migrants and refugees, through inclusive, responsive and evidence-based policymaking. The 2030 Agenda explicitly calls on member states to "facilitate orderly, safe, regular and responsible migration and mobility of people, through the implementation of planned and well-managed migration policies" (SDG 10.7) and also to "enhance capacity-building support to developing countries, including least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by gender and migratory status, and other characteristics relevant in national contexts" (SDG 17.18) (UNDESA, 2015). These development targets are an opportunity to gain better quality data on different dimensions of migrants' situations to better understand their living conditions, and the impacts on health, income, education and other areas.

⁵ A January 2020 ruling of the United Nations Human Rights Committee (HRC) related to an asylum claim entered in New Zealand by Ioane Teitiota, a Kiribati national, has raised attention to human rights considerations applicable to environmental migration (HRC, 2020). New Zealand courts denied the asylum claim entered by Mr. Teitiota, who argued that the risks to his life from climate change forced him to leave Kiribati. The HRC upheld the New Zealand decision on the basis that while "...sea level rise is likely to render the republic of Kiribati uninhabitable... the timeframe of 10 to 15 years, as suggested by Mr. Teitiota, could allow for intervening acts by the republic of Kiribati, with the assistance of the international community, to take affirmative measures to protect and, where necessary, relocate its population" (HRC, 2020, para 9.12). However, the ruling also recognizes that returning a person to a place where their life would be at risk due to climate change may violate the right to life under article 6 of the ICCPR. The threshold for applying this non-refoulement standard remains very high, and it is not clear how this decision may apply to other scenarios.

⁶ They are Antigua and Barbuda, the Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago.

⁷ CRC, Articles 7 and 9.

The New York Declaration on Migrants and Refugees (2016) paved the way for a stronger approach to environmental migration in international migration governance, a process that has been crystallized in the Global Compact for Safe, Orderly and Regular Migration and, to a lesser extent, in the Global Compact on Refugees (both adopted in 2018). Several Caribbean countries played an active role in the negotiations for the Global Compact for Migration, including Cuba, Haiti and Jamaica.⁸ Despite being a non-binding document, it includes objectives that are directly relevant to human mobility in the context of disasters and climate change, in particular:

- Objective 1: Collect and utilize accurate and disaggregated data as a basis for evidence-based policies;
- Objective 2: Minimize the adverse drivers and structural factors that compel people to leave their country of origin, with a specific subsection on Natural disasters, the adverse effects of climate change, and environmental degradation;
- Objective 5: Enhance availability and flexibility of pathways for regular migration; and
- Objective 7: Address and reduce vulnerabilities in migration.

Some of the recommendations in the Global Compact for Migration specifically call for the protection of the human rights of environmental migrants and displaced persons (UNGA, 2018). Through the negotiation process, civil society organizations and UN Women pushed for the introduction of gender responsive language in the final version of the document. While the result in terms of language and policy can be perceived as positive, the extent to which the Global Compact on Migration concretely contributes to the promotion of gender equality remains to be assessed (Hennebry and Petrozziello, 2019).

The Paris Agreement represents a landmark moment in bringing a human rights approach to environmental migration. In its Preamble, the Agreement calls Parties to “respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity” (COP UNFCCC, 2015: 2). The Agreement calls for adaptation action and capacity building efforts to be gender responsive. Like CERD and CEDAW, the Caribbean’s sixteen sovereign states have ratified the Paris Agreement, and it has also been extended to some of the subregion’s non-self-governing territories (NSGTs). France automatically extends international agreements to its Caribbean overseas departments, Martinique and Guadeloupe. The United Kingdom extended the Agreement to the Cayman Islands and Bermuda on their request and is consulting with its other overseas territories about extending the Agreement to them.⁹ However, the Netherlands only ratified the Agreement for its European parts,¹⁰ and the United States of America withdrew from the Agreement in November 2019 with implications for Puerto Rico and the United States Virgin Islands.

In a set of recommendations endorsed by COP24 in 2018, the Task Force on Displacement under the UNFCCC Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts recommended that State Parties to the UNFCCC develop laws, policies and strategies to avert, minimize and address displacement related to the adverse impacts of climate change, “taking into consideration their respective human rights obligations and, as appropriate, other relevant international

⁸ UN, ‘General Assembly Endorses First-Ever Global Compact on Migration, Urging Cooperation among Member States in Protecting Migrants’ 19 December 2018 (online) [date of reference: 26 October 2020] <https://www.un.org/press/en/2018/ga12113.doc.htm>.

⁹ See Written Question for UK Department for Business, Energy and Industrial Strategy, UIN 291441, tabled on 26 September 2019, regarding Carbon Emissions: British Overseas Territories: <https://questions-statements.parliament.uk/written-questions/detail/2019-09-26/291441>.

¹⁰ See End Note 5 on the Netherlands’ ratification of the Paris Agreement: https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=_en#5.

standards and legal considerations” (COP UNFCCC, 2018a: 7). Furthermore, the Task Force invited State Parties to “enhance research, data collection, risk analysis, and sharing of information, to better map, understand and manage human mobility related to the adverse impacts of climate change, in a manner that includes the participation of communities affected and at-risk of displacement related to the adverse impacts of climate change” (COP UNFCCC, 2018a: 7). Gender considerations are, however, not specifically developed in these recommendations.

At COP25 in Madrid in 2019, UNFCCC Parties approved a 5-year enhanced Lima Work Programme on Gender, with a specific gender action plan. The document identifies five priority areas to drive gender action on climate but does not include specific references to human mobility (UNFCCC, 2019a). Other multilateral environmental agreements, including the outcomes of the Earth Summit, the Convention on Biodiversity and the Basel, Rotterdam and Stockholm Conventions, incorporate gender considerations but remain limited in terms of human mobility. This situation calls for further efforts to bridge the gap in terms of bringing together climate change, human mobility and gender perspectives.

In 2018, Latin American and Caribbean countries adopted the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement). This Agreement deepens the link between human rights and environmental management and protection in the region and calls on State Parties to “establish conditions that are favourable to public participation in environmental decision-making processes and that are adapted to the social, economic, cultural, geographical and gender characteristics of the public”.

The protection of “all human rights including the right to development” is one of the guiding principles of the Sendai Framework for Disaster Risk Reduction (2015-2030), the main international platform on disaster risk management. The Sendai Framework specifically notes that “women and their participation are critical to effectively managing disaster risk and designing, resourcing and implementing gender-sensitive disaster risk reduction policies, plans and programmes; and adequate capacity building measures need to be taken to empower women for preparedness as well as to build their capacity to secure alternate means of livelihood in post-disaster situations” (UNDRR, 2015a: 23).

The Words Into Action Guidelines on Disaster Displacement were produced by a team of experts under the leadership of UNDRR in 2019 to complement the Sendai framework with a specific focus on displacement. They specifically identify the need to apply human right standards, including in evacuations: “ensure evacuations protect human rights including safety from gender-based violence and trafficking; identify displaced people and their needs; consult with and inform displaced populations” (UNDRR, 2019: 6). Successful disaster risk reduction interventions are expected to promote dignified mobility that protects the rights of affected populations. This entails adopting a gender-based approach that looks at the specific situation of women and girls, who may be exposed to greater risks of gender-based violence in displacement scenarios.

The Agenda for the Protection of Cross-Border Displaced Persons (Nansen Agenda) was specifically developed in 2015 as a tool to promote the protection of persons displaced across borders due to disasters and climate change. Endorsed by an intergovernmental consultation with more than 100 represented governments, including Dominican Republic, Haiti and Trinidad and Tobago, the Nansen Agenda provides recommendations to overcome protection gaps for persons displaced by sudden and slow onset processes (Nansen Initiative, 2015). Both the need for sex and age disaggregated data and for specific protection against gender-based violence appear in the recommendations of the Nansen Agenda although the overall document does not reflect a strong gender sensitiveness. The Platform on Disaster Displacement was created to follow up on the recommendations of the Nansen Agenda and has developed plans of action to promote an enhanced protection for disaster displaced persons.

2. Approaching disaster displacement and environmental migration in the Caribbean: Leveraging existing mechanisms and identifying gaps and needs

Despite the magnitude of the issues posed by disaster displacement and environmental migration in the Caribbean, most countries have not yet formalized policies specifically related to these issues resulting primarily in “ad hoc” approaches led by the government or the communities themselves (Thomas and Benjamin, 2018). This does not mean that environmental migration is not addressed in public policies. Different aspects of environmental migration, notably from a disaster risk reduction and displacement perspective, appear in national development documents, disaster risk reduction strategies, national communications to the UNFCCC, Nationally Determined Contributions and others. Furthermore, subregional mobility arrangements exist that can improve displacement outcomes following disasters and climate-induced events by providing individuals with the right to seek temporary shelter or stay permanently on other islands.¹¹

In the Caribbean, the free movement of persons is facilitated through two systems: the CARICOM Single Market and Economy (CSME), as provided for in the Revised Treaty of Chaguaramas of the Caribbean Community (CARICOM)¹² and the Eastern Caribbean Economic Union (ECEU) endorsed by the Organization of Eastern Caribbean States (OECS).¹³ The OECS free movement of persons regime enables full movement of OECS nationals: “all OECS nationals are able to move freely among any OECS Protocol Member States, and an indefinite period of stay is granted to citizens of Protocol Member States at the official point of entry” (IOM, 2019j: 34). Through the CSME, CARICOM Member States have taken a phased approach to free movement, which applies to more limited categories and under more restrictive conditions. All CARICOM nationals are entitled to “hassle-free travel” and an automatic six-month stay in any CSME Member State (IOM, 2019j).¹⁴ Free movement in the CSME is also possible through the facilitation of travel and five regimes, among which “three are relevant for the movement of people: indefinite stay for skilled nationals, movement of service providers, and movement as part of the right of establishment” (IOM, 2019j: 46). These regimes require the amendment of national migration frameworks, which has not been accomplished evenly across Member States.

These mobility arrangements have an impact in the event of disasters and considering the adverse impacts of climate change. Indeed, the existence of regular and accessible migration pathways can enable persons affected by disasters to easily leave their country and seek protection on other islands. This can be especially valuable for women and female-headed households due to their more limited access to economic resources and opportunities for cross-border migration. Free movement arrangements enable persons within the ECEU to access healthcare in the same manner as the nationals of the Protocol Member State in which they are located, and the CSME enables access to health care for certain categories of intraregional migrants, and migrants moving within the CSME (IOM, 2019j). However, this access may be challenging in complex displacement scenarios.

Free movement can entail greater opportunities for persons affected by environmental degradation who seek improved or alternative livelihood opportunities. The 2017 hurricane season in the Caribbean provides an example of the use of free movement arrangements in the Caribbean in a context of climate-induced migration, when these arrangements “provided disaster displaced persons a right of

¹¹ The CARICOM and OECS systems will be described in more detail in Section B.

¹² CARICOM has 15 full Member States, 5 Associate Members and 8 observers.

¹³ The OECS is an eleven-member grouping comprising of the full Member States of Antigua and Barbuda, Commonwealth of Dominica, Grenada, Montserrat, St. Kitts and Nevis, Saint Lucia and St. Vincent and the Grenadines. The British Virgin Islands, Anguilla, Martinique and Guadeloupe are associate members of the OECS.

¹⁴ Not all individuals living in CARICOM Member States are similarly situated when it comes to ability to move within the subregion. The Bahamas, for instance, is not a CSME Member State, which means Bahamians lack access to the CSME system in disaster and environmental migration scenarios.

entry in other islands; supported the waiver of travel document requirements where documents had been lost or damaged; granted indefinite stays to some disaster displaced persons, facilitating permanent resettlement; eased access to foreign labor markets through a mutual recognition of skills scheme" (Francis, 2019: i). Caribbean collaboration on emergency response, notably through the Caribbean Disaster and Emergency Management Agency (CDEMA), can also play an important role in enabling the development of adequate solutions in disaster situations for cross-border displaced persons.

The Brazil Declaration and Plan of Action adopted by Latin American and Caribbean countries in 2014 recognized displacement caused by climate change and disasters in the subregion and called for a study to facilitate the development of adequate responses. The research sheds light into the different approaches undertaken by countries in the subregion to facilitate the admission and stay of persons displaced by disasters across borders through the use of immigration law, international protection law, disaster risk management, and climate law and policy (Cantor, 2018). Although the use of free movement arrangements features prominently in the adopted solutions, countries have also used other approaches in events such as the 1997 Montserrat volcanic explosion, the 2010 Haitian earthquake and the 2017 Hurricane Season.

While research and policymaking has mostly focused on the governance of cross-border disaster displacement related to sudden-onset events, the situation of environmental migrants in slower onset scenarios remains more difficult to address. This is particularly due to the difficulty of isolating the climate drivers of mobility from other factors, including social or economic reasons. In these frameworks, environmental migrants affected by slow onset processes, such as sea level rise or droughts, land degradation and desertification, are conceptually considered economic migrants. In the absence of specific frameworks governing environmental migration, they are subject to regular migration categories and the use of existing movement arrangements.

While these considerations apply to the governance of international migration, including climate-induced movements, it is important to consider as well how countries address internal migration and displacement. The management of these flows is channeled through the particular legal arrangement of each specific State or territory and relies on different branches of government intervention, including urban and territory planning, disaster risk reduction and emergency response, climate policies, etcetera. The extent to which gender considerations are included in these policies and effectively implemented in concrete interventions is considered in the country case studies in Chapter Two.

C. The importance of gender-disaggregated data and evidence on disaster displacement and environmental migration

Given that the impacts of disaster displacement and environmental migration are felt differently based on one's gender, disaster risk reduction and migration policies, strategies and plans must address gender norms, roles and access to resources. In doing so, accurate, timely and gender-disaggregated data must be utilized as an evidence base. However, gender data on displacement and climate-induced migration in Caribbean SIDS are generally lacking and a coordinated approach to fill this gap is needed.

As mentioned earlier, regional and international human rights frameworks on displacement and migration, including the Global Compact for Migration, highlight the need for gender-disaggregated data on migration processes and call on countries to enhance data collection, sharing and analysis in order to better map, understand and manage migration related to the adverse impacts of disasters and climate change. Even though there has been increased global attention on issues relating to migration, environment and climate change, gender considerations have often been left out of many policy deliberations and data collection and analysis. As a result, the number of women and men impacted by environmental migration and climate induced displacement globally at any given time remains relatively unknown (IDMC, 2020c).

While there is still much room for improvement, significant progress has been made over the last decade in terms of better collaboration, more accessibility and higher quality data. Several countries and organisations now collect gender-disaggregated migration data, but environmental migration and climate induced displacement have not yet been elevated to a significant policy concern for many SIDS, which distorts the gendered reality and risks associated with migration experiences and outcomes (Thomas and Benjamin, 2018). Both disaster and emergency management agencies and national gender machineries are paying increasing attention to data collection and analysis in the Caribbean subregion, and several countries have participated in recent regional trainings to promote coordination and collaboration in the collection and analysis of disaster and migration data.¹⁵

One of the main reasons why environmental migration and climate-induced displacement data are not usually available, much less disaggregated by gender or age, is because of a lack of coordination and agreement on key definitions and measurements for determining those that are displaced. The Internal Displacement Monitoring Centre (IDMC) in its ten-year Global Review on Disaster Displacement found inconsistencies in the use of the term “displaced” when collecting data on disaster displacement. For example, persons displaced by floods in one country were referred to as “homeless”, while another country categorized them as “moved”. Data collectors also often included displaced persons among those “directly affected”, and while it is true that those displaced are directly affected, not all persons who are directly affected are necessarily displaced.

Inaccuracies can also occur in displacement data when evacuations are associated with, and included in statistics on, disaster displacement. They may, however, be carried out for the specific purpose of avoiding harm and enable prompt return to communities of origin once danger has passed. For example, in 1998, as Hurricane Mitch was approaching, Belize conducted a mass evacuation of one-third of its population and no lives were reported lost. In neighbouring Honduras, 18,000 lives were lost, and migration rates tripled following after the hurricane (McLeman and Hunter, 2010). Furthermore, only a few countries track displaced persons beyond the evacuation and early recovery phase of a disaster, and information on what happens stops being captured after a certain period of time has passed (IDMC, 2019a). This means that disaster displacement is usually easier to identify in the short-term than more voluntary forms of migration that follow delayed decisions to move. Recent studies have shown increases in permanent and temporary migration from the Caribbean about one year after major storm events (Cantor, 2018).

A factor that leads to confusion and limited gender-disaggregated data after disasters is that agencies collect data by household and not by gender. Even where gender-disaggregated data is collected, it is rarely disaggregated beyond the usual sex binary of male and female, which fails to consider those with non-binary identities. Similarly, data on migrants’ deaths are only occasionally disaggregated by gender given that disaggregation depends on the identification of bodies (IOM, 2017h). Other obstacles that prevent countries from collecting gender disaggregated environmental migration and climate induced displacement data are limited statistical capacity and resources to disaggregate and cross reference all migration data collected from various sources and also weak institutional capacity for mainstreaming gender equality considerations, especially during humanitarian situations such as the aftermath of a disaster.

Collecting data and evidence on human mobility related to slow onset processes associated with climate change, including sea level rise, land degradation, desertification, sea intrusion, is challenging due to the multicausal nature of migration and the difficulties of isolating the climate drivers of migration. At this stage, “there is limited evidence of migration occurring directly as a consequence of impacts associated with environmental change generally and sea level rise specifically” (IPCC, 2019: 396). Human mobility may be a response to multiple drivers and can take multiple forms, including the planned relocation of communities from vulnerable areas. In 1995, the entire population of Montserrat was relocated due to a volcanic eruption (Cantor, 2018).

¹⁵ See, for example: <https://www.iom.int/news/caribbean-countries-tackle-data-collection-challenges-regional-workshop>.

The occurrence and patterns of human mobility related to gradual environmental degradation requires additional evidence and information, including from a gender perspective. For example, women migrant workers are often extremely vulnerable, and incorporating a specific focus on gender when addressing labour migration connected to natural resources, such as work in agriculture or fisheries, is critical (IOM, 2019b). The integration of migrant women in the informal economy and the lack of social protection is an important driver of vulnerability in climate change and disaster scenarios. There is evidence of gender inequalities in informal economies in Caribbean countries. In Trinidad and Tobago, for instance, “formal sector workers earn more than informal sector workers and [...] men tend to work for higher wages than women in the informal sector. Most of the observed difference may be attributed to wage discrimination rather than to human capital differences between males and females” (Sookram and Watson, 2008). Large informal sectors in Caribbean economies, where women are disproportionately employed, contribute to vulnerability in the face of climate change and disasters, as wages tend to be lower and more irregular, and social protection schemes are scarcer than in the formal sector.

Integrating considerations of gender into environmental migration analysis and displacement tracking may lead to a more accurate understanding of how the gender dimension influences the decisions of women and men affected by natural hazards or environmental degradation (IOM, 2014). It will also provide governments with a proper picture to initiate appropriate gender responsive interventions as well as the ability to track their progress in addressing displacement (IDMC, 2019b). Gender disaggregated data should be collected on a consistent basis as it contributes not only to identifying and reducing risks, but also to assessing the effects and impacts of disasters. Sectoral baseline data that are disaggregated by gender would allow line ministries to identify exposed assets and vulnerable populations and take actions to mitigate or reduce the risk of disasters. Similarly, such data could be used in the event of an emergency to prioritize the allocation of resources and explore options for resilient reconstruction (ECLAC, 2017b).

Gender mainstreaming in environmental impact and disaster assessments offers a powerful tool to identify and evaluate risks of vulnerable groups in the design of inclusive evidence-based resilient strategies. To improve the understanding of the situation of migrant women, who are typically invisible in data records, such as domestic workers and undocumented migrant women, these hard-to-reach migrant women groups should be targeted for data collection, using creative and purposive sampling methodologies. Integrating the perspective of women climate migrants remains important but is not always easy. Indeed, “speaking to women migrants or women left behind can be very problematic because of social and cultural barriers” (IOM, 2019b: 2). Additionally, the inclusion of disaggregated data by gender and other migration-related variables in national censuses, labour force and other household surveys, and administrative sources would also provide beneficial baseline data for the conduct of impact assessments (UNGA, 2018). Therefore, greater collaboration between local, national, regional and global stakeholders in collecting, analyzing and using gender-specific information is required to help improve the support provided to displaced women and girls (IDMC, 2020c).

II. Case studies

A. Methodology for the case studies

This study provides a baseline assessment of the gendered impacts of disaster displacement and environmental migration in the Caribbean, following a human rights-based approach. Such an approach highlights and addresses the needs of those who are most marginalized or at risk in displacement and migration contexts. It reviews potential threats to the rights of affected populations, analyses different forms of discrimination and power imbalances, and encourages interventions to uphold human rights. Four Caribbean countries were selected as case studies based on their recent experiences with disaster-induced displacement and environmental migration and the relative availability of data and research in these areas. While these case studies highlight the distinct and varying experiences of different Caribbean communities and States, they are complementary in their contribution to the shaping of a broader perspective of a critical nexus: the challenge of environmental migration, disaster displacement, and gender in the Caribbean.

The research team used a combination of primary and secondary sources, as were appropriate, for each case study. For the case studies on Cuba and Jamaica, the research team reviewed secondary sources and conducted semi-structured interviews with experts, many from academia and non-governmental organizations, on the gendered impacts of slow-onset environmental changes in Cuba and Jamaica from a human mobility perspective. These interviews allowed for a deeper and more contextualized understanding of the situations in these two countries. For the case studies on Dominica and the Bahamas, the researchers also reviewed secondary sources and requested data from government officials and regional organisations working on issues of disaster risk management, gender and social development in order to understand the gendered impacts of disaster displacement in those countries. This approach allowed for a data-driven examination of the recent impact of hydro-meteorological hazards. Given the constraints imposed by the COVID-19 pandemic and the heavy burden on government officials at the time of writing, interviews with officials were not possible. As such, the research team relied heavily on secondary sources of data and non-governmental sources of primary data. While each case study presents a unique set of circumstances and conditions, they collectively

provide a broader perspective on how Caribbean countries and communities are responding in real time to the changing environment and how gender is a foundational factor in experiences of migration and displacement. They also shed light on existing shortcomings and gaps in the attention paid to gender and the promotion of gender equality in scenarios of environmental migration and disaster displacement. As such, they offer lessons that may be applied throughout the Caribbean and perhaps beyond.

B. The gendered impacts of Hurricane Dorian in the Bahamas

1. Vulnerability of the Bahamian population to extreme weather events and climate change

Located in the Atlantic hurricane belt with eighty per cent of its landmass lying within 1.5m above sea level, the Bahamas is comprised of some 700 islands and dispersed over 800 square kilometres of ocean. As a result, the country is extremely vulnerable to the effects of extreme weather events and climate change. As water temperatures rise, tropical storms and hurricanes are increasing in intensity in the Caribbean. Women, men, girls and boys are affected differently by these events on account of their gender, nationality (or lack thereof), migration status, disability and socio-economic status, among other characteristics.

The majority of the Bahamas' population and economic activity is situated in coastal areas, leaving communities, assets and infrastructure highly exposed to hazards. The country's population is approximately 350,000, with most inhabitants living on the islands of Grand Bahama and New Providence, the administrative capital. The other main inhabited islands include Abaco, Andros, Bimini, Eleuthera, Long Island and Cat Island, collectively known as the Family Islands.

In part due to the frequency and catastrophic effects of hurricanes and tropical storms and resulting reduced livelihood opportunities, Abaco and the other Family Islands have experienced population shrinkages over the past two decades (Department of Statistics, 2010d). The Family Islands also have the highest poverty rate in the country (17.2 per cent) (Department of Statistics, 2016). While the sex distribution of internal migrants from the Family Islands to other Bahamian islands was almost equal between 1990 and 2010, male migrants dominated by far in the age group of 30-64, suggesting that working age men may have fewer cultural and social barriers to mobility in search of employment opportunities. Grand Bahama and New Providence received the largest intakes of internal migrants.¹⁶

Disaster displacements have become a yearly occurrence in the Bahamas in recent years, and it is estimated that there will be an average of 23,206 average displacements per year from sudden-onset hazards in the future.¹⁷

Table 1
Disaster-induced displacements in the Bahamas from 2015-2019

Year	Disaster event	Number of displacements
2015	Tropical Storm Erika	2 800
2016	Hurricane Matthew	3 500
2017	Hurricane Irma	1 600
2018	Ongoing from Hurricane Irma	230
2019	Hurricane Dorian	9 800

Source: IDMC, 2020.

¹⁶ The Bahamas has the highest urbanization rate in the English-speaking Caribbean, with 84 per cent of people living in urban areas (UN Habitat, 2015).

¹⁷ IDMC, 'Country information: The Bahamas' (online) [date of reference: 7 July 2020] <https://www.internal-displacement.org/countries/bahamas>. IDMC uses information about the probability of future hazard scenarios to model displacement risk based on probable housing destruction.

2. The impact of Hurricane Dorian

Hurricane Dorian was just one in a series of extreme weather events that have resulted in deaths and mass displacement in the Bahamas in recent years. On 1 September 2019, the Category 5 hurricane made landfall as the strongest hurricane on record to hit the country¹⁸ and wreaked havoc on the Abaco Islands and Grand Bahama for three days, causing loss of human life and catastrophic damage. Hurricane Dorian coincided with an unseasonably high tide, known as a King Tide, which combined with the storm surge to send a deluge of water up to seven metres high over some of the country's low-lying islands. The hurricane also resulted in significant flooding and a major electrical outage in Nassau.

The official death toll of Hurricane Dorian is 74 persons – 11 on Grand Bahama and 63 on the Abaco Islands¹⁹ – but the actual figure is likely higher, with at least 282 people still reported as missing as of 18 October 2019. The reconstruction effort will take many years, with more than 13,000 homes on Grand Bahama and Abaco damaged or destroyed and basic infrastructure devastated. The estimated damage is USD 2.5 billion, of which Abaco suffered eighty-seven per cent and Grand Bahama thirteen per cent, and losses are estimated at USD 717.3 million (ECLAC and IDB, 2019).²⁰

Recovery efforts have been hampered by the unexpected shock of the COVID-19 pandemic, which has further raised the country's public debt. Indeed, the COVID-19 pandemic can itself be characterized as a disaster for the Bahamas, given its widespread adverse human, material, economic and environmental effects (Kelman, 2020). The country has also been on high alert during a particularly active 2020 hurricane season.

3. Gender inequality and gender-based violence in the Bahamas

Gender inequality and GBV are pervasive problems in the Bahamas, amplifying women and girls' risk and vulnerability to extreme weather events and climate change. Certain groups, including LGBTI persons and Haitian women and girls, are among the most marginalized and vulnerable to violence due to the intersection of their gender, nationality and/or sexual orientation. In disaster situations, these groups experience the most challenges in the response to their recovery, reconstruction and livelihood needs.

Gender inequality in employment

Unequal distribution of power, access to resources and economic opportunities affects women's ability to prepare for, cope with and recover from disasters. Bahamian women experience a gender pay gap with a thirty-three per cent income disparity between men and women (UNDP, 2019a). Women comprise the majority of people living in poverty in the Bahamas (51.8 per cent), and the incidence of poverty among female-headed households is higher than among male-headed ones (Department of Statistics, 2016). Furthermore, the Family Islands have the highest poverty rates (17.2 per cent) in the country. Therefore, women living in the Family Islands are more likely to be poor and have access to fewer employment opportunities than their Grand Bahama and New Providence counterparts (CARE, 2020). As a result, women living in Abaco were among some of the least equipped to cope with and recover from Hurricane Dorian.

Seventy per cent of working age women participate in the labour force, while the rate is eighty-two per cent for men (Department of Gender and Family Affairs, 2019). Only one in four women with less than a high school education participates in paid work (CARE, 2019). While girls typically outperform boys in education, women have a slightly higher unemployment rate, with 9.9 per cent of women and 9.2 per cent of men unemployed in May 2019 (Department of Statistics, 2019a).

¹⁸ US National Hurricane Center (NHC), 'Tropical Cyclone Report Hurricane Dorian (AL052019) 24 August – 7 September 2019' 20 April 2020 https://www.nhc.noaa.gov/data/tcr/AL052019_Dorian.pdf.

¹⁹ Based on the 2010 Population and Housing Census, the combined population of Grand Bahama and Abaco was approximately 68,600 persons (Department of Statistics, 2010b and 2010c).

²⁰ See the Glossary for ECLAC's definitions of damage and losses.

The services sector provides the largest share of national employment and employs a third of the country's women (Department of Statistics, 2010d).

Meaningful and active participation of women in planning and decisions affecting their lives is essential for gender-responsive preparation for and recovery from disasters, notably because "gender roles ascribed to men and women affect the way in which they relate to one another and their vulnerability to natural hazards" (Stephens, 2013). However, entrenched gender stereotypes hinder women's ability to participate in political and public life in the Bahamas. Participation of women in politics is generally low, with women holding only 12.8 per cent of the positions in the lower house in 2017 (IPU, 2018). However, there is room for some optimism as the number of women appointed to the Upper Chamber increased from four to seven in 2017 (representing 43.8 per cent of positions).

Gender-based violence (GBV)

Gender-based violence (GBV) is a persistent problem disproportionately impacting women and girls in the Bahamas, both in ordinary times and in disaster situations. The true extent of GBV in the Bahamas prior to Hurricane Dorian is not known, due to inconsistent data collection and underreporting (IFRC, 2019). No surveys have been conducted to determine the prevalence of GBV in the Bahamas (Department of Gender and Family Affairs, 2019). However, GBV has been described as "endemic in our communities and ... a major public health issue in our country" (Ministry of Social Services and Community Development, 2015: XIII).

Studies point to domestic violence occurring in twenty to thirty per cent of households (Fielding, Ballance, & Strachan, 2016). According to the UN's Special Rapporteur on violence against women, its causes and consequences, violence against women is "widespread, largely perceived as a private matter and accepted as normal" in the Bahamas, and migrant women and women of Haitian descent are at particular risk (Šimonović, 2018: 4). Female prisoners are another group at heightened risk of sexual violence in the Bahamas, and they disproportionately come from violent homes. Forty-two per cent of Bahamian prison inmates have witnessed their mothers be beaten by their fathers or partners during childhood (IDB, 2020).

The Bahamas has the highest recorded rape rates in the Caribbean, although most incidences of rape and child sexual abuse are not reported (CARE, 2019). The average rape rate was 27 per 100,000 persons between 2009 and 2013, but emergency room data shows that actual rates are higher. Bahamian law includes a spousal rape exemption, meaning that a husband can have sexual intercourse with his wife without her consent and not be held criminally liable for rape.²¹ In 2009, the Bahamian legislature attempted to remove the exemption but strong resistance from religious organisations prevented the change (Elvy, 2015).

Discriminatory laws affecting women and persons of Haitian descent

Discriminatory gender norms and attitudes are prevalent in the Bahamas, often supported by colonial-era laws. The country has nationality laws denying married Bahamian women with foreign spouses the right to confer nationality on their children.²² Children born to a foreign mother and a Bahamian father out of wedlock are also denied citizenship.²³ These laws have a disproportionate impact on women in the Bahamas as well as Bahamian-born children of Haitian descent putting the latter group at a heightened risk of statelessness (Belton, 2017). In May 2020, the Bahamian Supreme Court declared that anyone born in the Bahamas is entitled to citizenship at birth if at least one of their parents was a citizen of the country, irrespective of whether the parents were married. However, the government is appealing the decision.

²¹ This does not apply where the husband had notice that his wife filed a petition for judicial separation or divorce prior to the assault: Sexual Offences & Domestic Violence Act, section 15(b) (2010) (The Bahamas).

²² See Article 10 of the Constitution of The Bahamas and Section 4 of The Bahamas Nationality Act.

²³ See Articles 9 and 14(1) of the Constitution of the Bahamas.

These laws perpetuate Bahamian women's unequal status within the family and society, contribute to the exclusion of children from education, healthcare and other services, and can result in separation of family members (Global Campaign for Equal Nationality Rights, 2017). They also affect access to resources in disaster situations and can impact the vulnerability of persons of Haitian descent and migrant populations to deportation, statelessness, violence and harassment.

Haitian women and girls

Whether coming from Haiti or born in the Bahamas, women and girls of Haitian descent are among the most marginalized in the Bahamas, facing discrimination based both on their ethnicity and gender. Lured by a booming tourism sector and escaping political unrest in their own country, Haitians began migrating to the Bahamas as early as the 1950s and have since experienced persistent exclusion and discrimination, resulting in limited educational and work opportunities and higher poverty levels.

Haitian households have long represented a disproportionate number of households living in poverty in the Bahamas (IOM, 2005). In fact, the incidence of poverty is 27.9 per cent higher for households headed by a Haitian migrant than the national rate (CARE, 2020). Almost two out of five Haitian persons lived below the poverty line in the Bahamas in 2013 (Department of Statistics, 2016). Research shows that Haitian migrants in the Bahamas have poorer health outcomes than the Haitian population in Haiti, including a higher risk of hypertension, due to the stress of poverty and living in a hostile environment in the Bahamas as well as barriers to accessing healthcare (Mazzeo, 2013).

Many Haitian migrants and persons of Haitian descent live with irregular status in the Bahamas as a result of strict limitations on their residency and citizenship and a government policy of repatriation. Persons of Haitian descent in the Bahamas have been described as "neither fish nor fowl" and "betwixt and between" since they often do not qualify for Bahamian citizenship but also experience issues accessing Haitian citizenship (Belton, 2017: 80, 143). Practices of citizenship deprivation and denial have resulted in persons born in the Bahamas being rejected by the country of their birth and assumed to hold a nationality that they feel does not belong to them.

Haitian women report performing sexual acts for government officials in order to obtain citizenship documents for themselves or their children (Belton, 2017: 64). In disaster situations, Haitian women and girls are at particular risk of GBV and have more limited access to justice due to fears of mistreatment and possible deportation.

LGBTI community

LGBTI persons are marginalized and particularly vulnerable to displacement and poor recovery outcomes following extreme weather events. Disaster recovery strategies usually favour assistance for heterosexual nuclear or single-parent families, and the LGBTI community is at heightened risk of discrimination and violence in temporary accommodations (Gorman-Murray et al, 2014).

While consensual same-sex sexual activity is legal in the Bahamas, same-sex marriage is still illegal, and there are no anti-discrimination or harassment laws to protect the LGBTI community.²⁴ Violence against the LGBTI community is endemic, including killings and physical attacks, which forces LGBTI people to hide their sexual orientation and gender identity (Immigration and Refugee Board of Canada, 2013). Underreporting of crimes against LGBTI persons is also common, in part because some members of the police force are openly homophobic and do not treat crimes against this group seriously (Immigration and Refugee Board of Canada, 2013). Homophobic attitudes also influence judicial treatment of sexual and gender minorities. Defendants in murder cases of LGBTI persons have been reported to escape jail time or receive a lesser penalty by pleading self-defence against homosexual advances.

²⁴ The Bahamas held referendums in 2002 and 2016 on adding the word "sex" to the Constitution as a prohibited ground of discrimination and in both cases the referendums were rejected.

Between 2011 and 2014, at least sixteen Bahamians were granted asylum in Canada due to persecution on the basis of their sexual orientation or gender identity.²⁵

4. The gendered impacts of displacement from Hurricane Dorian

Hurricane Dorian-induced displacement affected women, men, girls and boys in specific ways on account of their gender owing to loss of livelihood, reduced access to education, health care and other social services, and a deterioration of living conditions. Other characteristics, such as age, disability, nationality, immigration status, and sexual orientation, also contributed to the vulnerabilities and opportunities of persons of all genders following the disaster.

There was a lack of resources available for displaced people of all genders, including those in emergency shelters and those that were able to secure private accommodations. Where the government lacked capacity and resources, the private sector attempted to address remaining recovery needs.²⁶ A rapid gender analysis conducted after Hurricane Dorian found that 40,238 women and girls (51.4 per cent) and 38,047 men and boys were affected (CARE, 2020). Of the affected women and girls, it is estimated that at least 21,500 required support with dignity kits for menstruation (53.4 per cent), 3,200 woman and girls were pregnant (7.9 per cent) and 470 (1.2 per cent) faced life-threatening complications in pregnancy. Furthermore, all affected women and girls were at risk of gender-based violence with varying degrees of vulnerability based on their characteristics.

Gender integration in disaster risk management and climate change policies

Despite the disproportionate impact of disasters on women and girls, gender is not currently mainstreamed or given special consideration in climate change or disaster risk reduction laws or policies in the Bahamas.²⁷ The National Equality Equity Policy Action Plan (NEEPAP)²⁸ was still in draft when Hurricane Dorian hit. It includes the goal of reviewing climate change and disaster response management documents and activities to promote a gender perspective and ensure adequate and suitable provisions for the differential needs of women and men, including appropriate infrastructure for shelters. However, the review of these documents is yet to take place pending finalization of this document.

The Disaster Preparedness and Response Act 2006 (amended in 2011) provides for effective organization of emergency and disaster mitigation, preparedness, response and recovery, but does not specifically mention women and girls or include gender considerations. Similarly, the National Policy for the Adaptation to Climate Change 2005 focuses on the vulnerability of the country to sea level rise, the lack of human and economic resources and the vulnerability of settlements, without special mention of the vulnerability of women and girls. This also applies to the Bahamas' Nationally Determined Contribution and National Communications to the UNFCCC.

Gender disparities in numbers of displaced persons

Women were displaced in larger numbers than men from the two main affected islands of Grand Bahama and Abaco following Hurricane Dorian. This trend was observed most prominently in the case of Grand Bahama. However, more people evacuated from Abaco since it sustained the most severe damage.

Sudden-onset disasters, such as hurricanes, trigger evacuations and can result in both temporary and permanent displacement. Given that the government did not issue mandatory evacuation orders

²⁵ Based on a news report from The Tribune in March 2014.

²⁶ See, for example, the emergency relief work of the Bahamas Strong Alliance, a local NGO that formed post-Dorian to address recovery needs: <https://www.connectingbusiness.org/system/files/2020-10/Dorian%20Case%20Study.pdf>.

²⁷ Note that it is unclear whether the National Disaster Preparedness and Response Plan (NDP) includes a gender perspective as it is unavailable online. The NDP aims to "establish a process and structure for the systematic, coordinated and effective delivery of national assistance to address the consequences of any major disaster or emergency".

²⁸ The NEEPAP is a ten-year plan to effect systemic change to structures of inequality and provide guidelines and strategies to address differences between women and men to which unequal value is ascribed.

on either of the hardest hit islands, residents had to make individual decisions about whether to evacuate. Unaware of the severity of the hurricane about to hit, many households chose to stay (IDMC, 2020d). Once the storm died down and waters subsided, people evacuated in large numbers.

Approximately 9,800 movements of people were recorded as a result of Dorian (IDMC, 2020d).²⁹ Two months after the disaster, affected settlements in Great and Little Abaco Islands recorded a population loss of 8,127 people compared to pre-Dorian figures (IOM, 2019g). In addition to internal displacement between islands, a significant number of people were displaced across borders, mainly to the US and Canada. While the US denied Temporary Protected Status to persons affected by Hurricane Dorian, approximately 600-700 persons entered the US with visas acquired before the disaster (IDMC, 2020d).

As of December 2019, three months after Hurricane Dorian tore through the Bahamas, a Labour Force Survey conducted by the Department of Statistics showed that approximately 3,360 persons had 'relocated' to New Providence from Grand Bahama (565) and Abaco (2,795). While the term 'relocation' is not defined in the Survey, it appears to refer to persons forced to leave Grand Bahama or Abaco Islands and remain in New Providence for at least three months in order to avoid the impacts of Hurricane Dorian. Of these 3,360 persons, 1,805 were females and 1,555 were males. More women than men were displaced with women making up fifty-four per cent of the total persons displaced to New Providence (Department of Statistics, 2019b).

Gender disparities in the volume of movements can also be noted at the island level, particularly in the case of Grand Bahama. 70 per cent of the persons displaced from Grand Bahama to New Providence as a result of Hurricane Dorian were women, although they made up only 51.5 per cent of the total Grand Bahama population (Department of Statistics, 2019b). While less marked, 50.5 per cent of the persons displaced from Abaco to New Providence were women, while women made up only 48 per cent of the Abaco population.

In contrast to Abaco, the population of Grand Bahama enjoyed a higher standard of living prior to Hurricane Dorian, and residential buildings were more likely to be permanent structures built with reinforced concrete. In these circumstances, male property owners were more likely to remain in place or return quickly after the Hurricane to perform traditional male roles of property protection and repair, while women fulfilling gendered care and reproductive roles temporarily vacated the island to find shelter with children (IDMC, 2020d). Since Bahamians are the majority population in Grand Bahama, with persons of Haitian descent only comprising five per cent of the population, female evacuees were also less likely to have had protection and deportation concerns and therefore may have faced fewer barriers to entering government-run shelters.

Dorian's disproportionate impact on persons of Haitian descent

The Abaco population was particularly vulnerable to disaster displacement following Hurricane Dorian due to its large Haitian community. As illustrated in Table 2, Haitian citizens made up more than a quarter of Abaco's total population, while women with Haitian citizenship formed almost a quarter of the island's female population. It is important to note that these statistics do not capture the undocumented Haitian population, which is particularly difficult to enumerate (Belton, 2017).

²⁹ Note that this IDMC data refers to a number of movements, and not people, as individuals can be displaced several times, and the data IDMC collects does not always reflect this.

Table 2
Comparison of Abaco and Grand Bahama' populations pre-Hurricane Dorian

	Abaco	Grand Bahama
Population (total)	17 224	51 368
Women (total)	8 322	26 372
Sex ratio (number of males per 100 females)	106.97	94.78
Persons with Haitian citizenship (percentage of total population)	26	5
Women with Haitian citizenship (percentage of total women)	23	4.5
Women immigrants (percentage of total women)	24	19

Source: Department of Statistics, 2010.

Although Haitian migrants with irregular status feared entering emergency shelters following Hurricane Dorian due to the possibility of immigration raids and deportation, the poor living conditions of the Haitian community in Abaco prompted large movements of the population to shelters (Ailworth, 2019). Prior to Hurricane Dorian, many Haitians lived in informally constructed housing without running water, sanitation or electricity in areas prone to flooding (Belton, 2017). Despite their vulnerability, many residents stayed in their homes rather than seek safety from Hurricane Dorian due to fears of deportation and discriminatory treatment. These fears appear to have been well-founded as, one month following the disaster, 'illegal immigrants' were declared unwelcome in government shelters (Nation News, 2019). This forced both Haitian migrants with irregular status and those whom had lost their documents during the hurricane to vacate shelters and find alternative accommodations.

Of the approximately 9,000 homes damaged across Grand Bahama and Abaco, 88.9 per cent were in Abaco (ECLAC and IDB, 2019). 57 per cent of Abaco housing was severely damaged while the shantytowns in Abaco known as the Mudd and Pigeon Peas that housed thousands of Haitian nationals were completely destroyed. Although authorities did not deport undocumented immigrants in the immediate aftermath of the disaster, 112 Haitians, including some Abaconians, were deported on 10 October 2019, a little over a month following the passage of Hurricane Dorian.³⁰ Deportations were reported to have taken place in the Bahamas without screening for human trafficking, placing women and girls at heightened risk of GBV and exploitation (US State Department, 2019). Furthermore, humanitarian aid groups reported that the government instructed them not to help Haitians lacking immigration documentation in the aftermath of Dorian (Christian Science Monitor, 2019).

Displaced persons of Haitian descent also faced more challenges in their efforts to return to their pre-Dorian communities as a result of their higher poverty levels, more limited social contacts, and the threats of deportation (IDMC, 2020d). Female-headed households of Haitian descent likely faced the highest barriers to returning due to the risk of family separation and added insecurity caused by GBV and protection concerns in communities of origin. Approximately a third of settlements reported visits from Immigration Services, suggesting that Haitian returnees may have faced particular insecurity due to the risk of harassment and deportation (IOM, 2019h). It is reported that the risk of deportation drove Haitians to hide in bushes in New Providence during the recovery phase (IDMC, 2020d). Even where reporting and referral mechanisms for victims of abuse existed, Haitian women with irregular status may have been more hesitant to make use of them due to the presence of immigration authorities in their return communities.

Differential impact of living conditions in temporary accommodations on women and girls

Since disaster displacement generally amplifies pre-existing vulnerabilities and inequalities, women and girls were more adversely impacted by poor living conditions and protection issues in emergency shelters and other temporary accommodations following Hurricane Dorian.

³⁰ OHCHR, 'Press briefing note on Bahamas' 11 October 2019, <https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=25146&LangID=E>.

Furthermore, vulnerable groups, including Haitian and female-headed households, were likely to stay longer in temporary accommodations.

- *Overview of shelter population and conditions*

By 4 September 2019, nearly 5,500 evacuees were registered in New Providence, with 1,985 in seven government-run collective shelters (IOM, 2019c). Shelters in Abaco and Grand Bahama also accommodated a smaller number of evacuees. Less than half of displaced persons sought shelter in government-run shelters³¹ with, for example, at least 900 people finding accommodation in rental properties in New Providence. While some evacuees were able to return to their island after a few days, particularly in the case of Grand Bahama, evacuees from Abaco were for the most part either temporarily or permanently displaced, given the severity of the damage on that island. A number of displaced persons were not counted in official data as they used private transport to evacuate to other islands in the Bahamas, including an estimated 500 people who went to Eleuthera, and to move temporarily or permanently to Canada and the US (IDMC, 2020d).

Site assessments carried out at government shelters in the immediate aftermath of the disaster noted that not all sites collected sex- and age-disaggregated information on their populations, but information on specific vulnerabilities was usually recorded (IOM, 2019c). Most of the population in New Providence shelters had come from Abaco, and the largest group of displaced persons were of Haitian descent. While the most commonly reported vulnerability was old age, the shelters accommodated a significant number of pregnant women, breastfeeding mothers, children and persons with disabilities and chronic disease.

A risk assessment completed by the International Federation of the Red Cross (IFRC) concluded that the government's seven emergency shelters did not observe the Sphere Standards, the most widely used humanitarian guidelines to guide gender-responsive shelter planning and management. By the end of 2019, 497 people remained in two shelters in New Providence (IDMC, 2020d). The IFRC's assessment also expressed concerns about proposed government plans to build a relief centre to accommodate the remaining shelter population for two years, since it was not clear if the Sphere Standards would be observed. In particular, the construction of the shelter could increase the risk of GBV if construction workers, who are primarily male, lived among the displaced population (IFRC, 2019).

- *GBV and other security concerns*

In recent years, the National Emergency Management Agency (NEMA) has provided gender sensitivity training to disaster officials and the government has implemented 'Gender and Family Sensitive Shelters' (Department of Gender and Family Affairs, 2019c). However, in the aftermath of Hurricane Dorian, a heightened risk of GBV was reported at shelters in New Providence, particularly where people were sleeping in open spaces (IFRC, 2019). Aid agencies observed that households at the main government shelter did not have separate spaces for sleeping, and women and girls lacked safe access to separate toilet and bathing facilities (IFRC, 2019).

All government shelters had security personnel present, either from the military or local police. According to shelter managers, no specific security incidents were reported although some displaced persons expressed concerns about theft. Since underreporting of GBV and child protection matters is common in the Bahamas, the true extent of security incidents is unclear, particularly those involving women and adolescent girls, who experience the most barriers to reporting. Of the seven government shelters in New Providence, only five had adequate lighting (IOM, 2019c). Dark areas in shelters increase the risk of abuse, and therefore adequate lighting can improve security for vulnerable persons (IASC, 2017). Furthermore, at the main government shelter in New Providence, approximately a quarter

³¹ Based on information provided by the Climate Change Adaptation and Resilience Research (CCARR) Centre, University of the Bahamas on 10 November 2020.

of the population were accommodated in tents, increasing vulnerabilities and challenges for women who bear the primary responsibility for care of elderly persons and children following disasters.

As demonstrated by other disasters in the Caribbean, including the 2010 Haitian earthquake, women and girls are at risk of GBV in the aftermath of these events where they are forced to use open spaces or travel long distances to use toilet facilities, especially at night (Thomas et al, 2013). There was “an epidemic of gender-based violence against Haitian women and girls” following the 2010 earthquake, with armed gangs targeting women and girls in displacement camps (MADRE, et al, 2011: 2). Furthermore, poor water quality and inadequate sanitation have a greater impact on women following disasters, since they retain primary responsibility for reproductive care and must attempt to gain access to clean water and health services for themselves, their children and other family members (UN Water, 2006).

When interviewed for a case study of displaced families staying at non-government sites, women reported choosing to stay with family and friends instead of in shelters because “we have small children” and “we felt extremely insecure in Nassau and this was the best option available” (IOM, 2019d). Displaced members of the LGBTI community are reported to have also sought private accommodations with the support of non-governmental organisations due to fear of violence in collective shelters (IDMC, 2020d). Some members of this community with sufficient resources used the disaster as an opportunity to move permanently to Canada (IDMC, 2020d).

- *Access to healthcare, WASH facilities and other services*

Government-run shelters in New Providence provided water, sanitation and hygiene (WASH) facilities and basic healthcare, but shelter populations did not have access to sexual and reproductive health services in line with the Minimum Initial Service Package (MISP) recommended in crisis situations (CARE, 2020). This includes obstetric and new-born care, access to contraception and safe abortion care, clinical management of rape, and treatment and referral for sexually transmitted diseases.

The main government shelter in New Providence only had a single health desk located in the open, preventing private consultations. This situation would have disproportionately affected women, adolescent girls and other vulnerable groups, including Haitian migrants with irregular status and HIV positive individuals. UNAIDS estimates that 3,107 of the 6000 people over 15 living with HIV in the Bahamas experienced reduced or no access to treatment and antiretroviral therapy following the disaster (UNAIDS, 2019).

In the aftermath of Dorian, the government recognized the psychological impact of the disaster on the Bahamian population, including elevated stress levels and risk of post-traumatic stress disorder.³² However, due to a lack of mental health and psychosocial support professionals coupled with heightened demand for services, many mental health needs went unmet, especially in Abaco (IFRC, 2020).

- *Child protection and special measures*

According to the Department of Education, 2,835 students were displaced by Hurricane Dorian.³³ 1,500 enrolled in schools in New Providence and other Family Islands; however the location and school enrolment status of the remaining 1,300 students is not known as education officials lacked a process to track students and ensure their reentry into education. In the immediate aftermath of the disaster, the largest government-run shelter in New Providence accommodated 199 boys and 189 girls. Of the 46 children separated from their caregivers in child-only accommodation, seventy-two per cent or thirty-three were girls. At this time, approximately 10,500 children lacked access to safe and protective

³² The Tribune, ‘Nation Will Face A Mental Health Impact from Storm’ 11 October 2019 (online) [date of reference: 11 November 2020] < <http://www.tribune242.com/news/2019/oct/11/nation-will-face-a-mental-health-impact-from-storm/>>.

³³ Eyewitness News, ‘Education report: Nearly 3,000 students displaced by Dorian’, 5 November 2019 (online) [date of reference: 11 November 2020] <<https://ewnews.com/education-report-nearly-3000-students-displaced-by-dorian>>.

learning opportunities and physical support in the Bahamas (ECLAC and IDB, 2019). By the end of September, some 1,200 displaced children had been registered in schools on islands other than their own (UNICEF, September 2019).

Of the seven government shelters in New Providence, only two had designated safe spaces for children's recreation (IOM, 2019c). While social workers were present at all emergency shelters in New Providence, child protection checks were not performed for shelter volunteers, increasing the risk of abuse for children interacting with support workers (IFRC, 2019). At children-only collective sites for children separated from their caregivers, the majority of whom were girls, there was access to separate lockable male/female toilet and bathing facilities. However, the sites lacked counselling and specialized services to support the psychosocial well-being of the displaced children (IOM, 2019e).

With existing community-based and protection support systems strained, a number of education and support needs of children were not met following Dorian. Interventions were also hampered by a lack of real-time data and data management on children's age, gender and other characteristics (UNICEF, September 2019). Evidence shows that displaced children are exposed to higher levels of corporal punishment, due to elevated stress levels of caregivers and changes to children's supervision in shelter settings (Kelley, 2010). Since interethnic tensions and social inequalities worsened after Hurricane Dorian, it is possible that more Haitian children were denied education and social services and were at greater risk of abuse not to mention deportation.

Heightened barriers to return to communities of origin for women and girls

Following Hurricane Dorian, women were more likely to have limited access to the resources and skills necessary for reconstructing homes and returning to their communities of origin in Abaco and Grand Bahama. They also faced greater security concerns in these communities. A year on, many Abaconian women have been unable to return with their families due to the slow pace of restoration of basic services and housing reconstruction, and have built new lives in Grand Bahama and other locations.³⁴ In July 2020, some Abaconians were still living in tents on the islands as a result of Dorian's destruction of their homes.³⁵ However, due to a lack of available data, it is not possible to further substantiate the displacement outcomes of women who lost their homes and livelihoods in Abaco and Grand Bahama.

- *Protection and security concerns upon return*

By the beginning of November 2019, approximately 5,700 people had returned to their pre-Dorian communities in Abaco (IOM, 2019h). Interviews carried out by IOM found that there were at least 39 single female headed households as well as 20 separated children and 10 unaccompanied children with specific needs. Women reported feeling less safe in settlements to which they had returned than men and children. Specifically, twenty-two per cent of women felt unsafe in their return settlements compared to seventeen per cent of men and twenty per cent of children. Without sanitation and sewage services fully restored, fifty-nine per cent of people were attending to their toiletry needs in public spaces.

Abaconians also reported a number of other protection and security concerns when returning to their pre-Dorian communities. While no data are available specifically on the incidence of GBV, over a quarter of settlements reported security incidents, and only a third of settlements reported having access to safe recreational spaces for children (IOM, 2019h). Recreation spaces and education programmes are essential to help children cope with disasters, and can assist in alleviating long-term developmental, physical and psychological setbacks following these events. Furthermore, only 1 in 10

³⁴ See, for example, The Tribune, 'Insight: One Year On' 31 August 2020, [date of reference: 8 December 2020] <<http://www.tribune242.com/news/2020/aug/31/insight-one-year/>>.

³⁵ The Nassau Guardian, 'PM pleased with restoration efforts on Abaco, GB' 31 August 2020, [date of reference: 8 December 2020] <<https://thenassauguardian.com/pm-pleased-with-restoration-efforts-on-abaco-gb/>>.

respondents stated that there were reporting and referral mechanisms for victims of abuse (IOM, 2019h). This likely had a disproportionate impact on women and girls due to their traditional caregiving roles and heightened risk of GBV.

- *Unequal access to resources and opportunities for return*

In December 2019, around half of the 3,360 respondents to the government's Labour Force Survey indicated that they would not or did not know if they would return to Grand Bahama or Abaco from New Providence, due to uncertainty about living conditions, the cost of rebuilding, and as a result of having found new jobs and homes in New Providence. Twenty-one per cent of respondents said they were afraid of future hurricanes or too emotionally distressed to return. A further thirty-two per cent said they would return within 12 months, while another sixteen per cent said they would return within two years. The main reasons given for a delay in returning were the cost of rebuilding, the availability of building supplies and rental housing, and a lack of own skills or workers to rebuild homes.

While data on respondents' return intentions was not sex-disaggregated, it is likely that women experienced fewer options for returning to their islands. Since more men are employed in the building and construction sectors than women in the Bahamas, men are better equipped to rebuild their own homes after hurricanes. Across the seven government shelters in New Providence, the most common occupation reported for females was housekeeping, whereas for males the most common reported occupations were gardeners, carpenters and security services (IOM, 2019c). In the aftermath of a hurricane, carpenters may lack access to building materials along with other displaced persons but, once materials are available, they can rebuild their own homes.

Furthermore, men are also able to rebuild sooner after disasters due to higher rates of property ownership and better access to credit (Williams, 2015). Although women and men have the same right to own property in the Bahamas, the Department of Gender and Family Affairs has emphasized the need to increase women's ownership of land and businesses and access to credit (Department of Gender and Family Affairs, 2019). Women also experience a significant gender pay gap in the Bahamas, resulting in lower levels of socioeconomic development than men. Over a third of women in the Bahamas work in the tourism, service and sales sectors, which either collapsed or came to a temporary standstill following the disaster. In these circumstances, women were less able to recover from the financial losses brought on by Hurricane Dorian.

5. Conclusion

Hurricane Dorian inflicted catastrophic loss of life and destruction of livelihoods and communities on women, men, girls and boys in the Bahamas. However, the impact of the disaster was amplified for women and girls as well as marginalized communities as a result of their pre-existing inequalities and vulnerabilities.

Not only were women displaced in greater numbers, they also faced heightened safety concerns and the greatest caregiving burden in emergency shelters and temporary accommodations. Women and girls experienced greater barriers to returning to their communities of origin. Inequalities and discrimination experienced by certain groups pre-Dorian, including persons of Haitian descent and the LGBTI community, were also magnified by the disaster reducing the ability of these groups to recover from its impacts. Haitian women and girls were among the most marginalized following Dorian, owing to intersecting forms of discrimination on account of their nationality, socioeconomic status and gender. Many Abaconians have been unable to return to their pre-Dorian communities one year after the disaster, due to shortages of building materials and affordable rental properties (IOM, 2020b). The economic impact of the COVID-19 pandemic has only heightened reconstruction challenges.

Although women experienced the most barriers to disaster recovery, they protected and cared for children and elderly persons and managed the return of their households to pre-Dorian

communities, usually with fewer resources than men. The ability of women to mobilize social networks and lead community groups also contributed to effective shelter management and better outcomes for displaced persons. Stories of the heroism of women and girls, including a young woman who organized rescue missions during Hurricane Dorian using social media, highlight the resourcefulness of Bahamian women in the face of disasters.³⁶ Women of Haitian descent displayed particular resilience in meeting the care and protection needs of families, while rebuilding their lives in new communities and islands amidst marginalization and insecurity.

C. The gendered impacts of Tropical Storm Erika and Hurricane Maria in Dominica

1. Dominica's vulnerability to extreme weather events and climate change

Located along the Atlantic hurricane belt in the Eastern Caribbean Sea, the Commonwealth of Dominica is a SIDS with approximately 72,000 people predominately of Afro descent (Central Statistics Office, 2011). The country also has an indigenous Kalinago population, which represents approximately four per cent of the Dominican population (CSO, 2016). The Kalinago community call the mountainous country 'Wai'tukubuli' (tall is her body) and has its own language and territory in the north-east of the country under the custody, management and control of the Kalinago Council and Chief.

Ninety per cent of Dominica's population lives in coastal cities and villages, which leaves many communities, businesses and infrastructure highly vulnerable to extreme weather events and slow-onset changes to coastal ecosystems, including sea level rise and erosion. The country's nine active volcanoes and frequent seismic and geothermal activity also present additional hazards. The Dominican economy depends heavily on agriculture and tourism, which tend to be hard hit by disasters and are under increasing threat from climate change. Addressing the United Nations General Assembly following Hurricane Maria in 2017, the Honourable Prime Minister Roosevelt Skerrit stated that he came "straight from the front line of the war on climate change" and declared an international humanitarian emergency in Dominica (UNGA, 2017). Following recent disasters, Tropical Storm Erika and Hurricane Maria, the gendered impacts of which is considered in this case study, the country now has an ambitious plan to become the world's first climate resilient country (Commonwealth of Dominica, 2019).

Due to the increased intensity of extreme weather events in the Caribbean, disaster-induced displacements are becoming a familiar occurrence in Dominica. IDMC estimates that there will be an average of 2,393 displacements per year in Dominica due to sudden-onset hazards in the future (IDMC, 2020a).³⁷

Table 3
Disaster-induced displacements in Dominica since 2011

Year	Disaster event	Number of displacements
2011	Flooding and landslides	96
2013	Tropical Storm Ophelia	18
2015	Tropical Storm Erika	710
2017	Hurricane Maria	35 000
2018	Tropical Storm Isaac, floods	350

Source: IDMC, 2020.

³⁶ Based on a news report from Eyewitness News in October 2019.

³⁷ This estimate refers to a number of movements, and not people, as individuals can be displaced several times during a disaster.

2. The impact of Tropical Storm Erika and Hurricane Maria

When Tropical Storm Erika hit Dominica on 27 August 2015, it brought heavy rainfall and rapid flooding resulting in severe damage to the country's transportation, housing and agriculture infrastructure, costing the country ninety per cent of its GDP for the year (Commonwealth of Dominica, 2015b). Tropical Storm Erika storm killed more than 24 people and displaced 710 persons (IDMC, 2020a). Approximately 15,900 persons were directly or indirectly impacted, including 1,034 people who were evacuated from their communities (Commonwealth of Dominica, 2015b).

Just two years after Tropical Storm Erika ravaged the island, category five Hurricane Maria tore across Dominica on 18 September 2017 leaving widespread destruction in its path. The entire population was exposed to intense winds and rainfall for hours, leaving thirty-one people dead and thirty-seven still missing. Approximately 35,000 people were displaced (IDMC, 2018),³⁸ and the country's economy was crippled with damages and losses estimated at approximately USD 1.3 billion or 224 per cent of Dominica's 2016 GDP (Commonwealth of Dominica, 2017). Eighty per cent of the population was directly affected by loss of basic services and severe damage to housing and other infrastructure (Commonwealth of Dominica, 2017).

While Hurricane Maria was a larger-scale disaster than Tropical Storm Erika in Dominica, both disasters caused mass evacuations and displacements and disrupted livelihoods, health, education, housing, security and the environment. Furthermore, women, men, girls and boys experienced the repercussions of these events differently because of their gender-specific vulnerabilities and inequalities, levels of empowerment and access to resources and opportunities.

3. Gender integration in disaster risk management and climate change policies

Dominica's National Policy and Action Plan for Gender Equity and Equality, updated in 2014, highlights the vulnerability of certain groups to disasters. It recognizes the need to include gender advocates in disaster planning, and for national disaster plans to be cognizant of the specific needs of children, older persons, and persons with disabilities and incorporate these approaches in disaster responses. At the time of this study, the policy was being updated to address adverse climatic conditions experienced in the country (UNHCR, 2019).

Introduced in 2018, Dominica's national development plan, the National Resilience Development Strategy 2030, is premised on the country's goal to be the first climate resilient nation in the world. It builds on previous national strategies, such as the National Climate Change Adaptation Policy and the Low Carbon Climate Resilient Development Strategy (LCCDRS). The LCCDRS integrates climate change, disaster risk reduction and gender equality and includes recommendations to address women's vulnerability, including the construction of community emergency shelters, inclusion of women and girls in vulnerability assessments, and the provision of social safety nets in the form of micro-finance and micro-insurance. Furthermore, one of the priorities for building climate resilience contained in Dominica's INDC of 2015 is creating a supportive enabling framework whereby communities and vulnerable segments of society, including women, youth, elderly persons and persons with disabilities, can manage their own climate change risks.

An opportunity may arise to update the country's disaster risk management and climate change plans and policies in a gender-responsive manner following the revision of the National Policy and Action Plan for Gender Equity and Equality. Dominica's National Disaster Plan 2001 highlights that women, men and children are groups vulnerable to disasters. However, the Plan would benefit from being updated to include gender-responsive disaster risk management measures and to mainstream gender considerations.

³⁸ This IDMC estimate is based on damage to housing stock as determined in building assessments conducted by the government in mid-December 2017.

Dominica has an ongoing Disaster Vulnerability Reduction Project (DVRP), which aims to reduce vulnerability to natural hazards and climate change impacts through investments in resilient infrastructure and improved hazard data collection and monitoring systems. One component of the DVRP projects is to build disaster-resilient roads, which are projected to displace individuals and businesses in certain areas. As a result, a Resettlement Action Plan was created in 2019 to ensure that displaced persons are afforded the opportunity to improve their livelihoods and standard of living when resettled.

4. Gender inequality and gender-based violence (GBV) in Dominica

Gender inequality persists in Dominica, as a result of traditional gender norms and stereotypes, underrepresentation of women in decision-making and a segmented labour market, among other factors (Bureau of Gender Affairs, 2014). In the wake of disasters, gender inequality can worsen as the pre-existing inequalities of women and girls are reinforced and perpetuated. Challenges experienced by women and girls in Dominica were exacerbated by Tropical Storm Erika and Hurricane Maria, which led to a loss of productive capacity, increased risk of gender-based violence (GBV) and disproportionate numbers of women, children and elderly persons in shelters and other temporary accommodations.

Feminisation of poverty

Poverty has a gender dimension in Dominica, with a higher percentage of poor people living in female-headed households than male-headed households (CDB, 2009). Single-parent families headed by women are more vulnerable to disaster-related shocks, since female heads of households bear the double burden of both reproductive and productive roles and have more limited access to labour markets, support networks and coping strategies.

A 2008/2009 poverty assessment in Dominica showed that female-headed households made up thirty-four per cent of all households, and members of those households made up thirty-nine per cent of all poor persons or those falling below the poverty line (CDB, 2009).³⁹ Although levels of poverty were broadly the same for men and women in Dominica, women had a higher unemployment rate at 17.6 per cent than did men at 11.1 per cent. Similarly, the labour force participation rate for men was 67.2 per cent but only 49.6 per cent for women in 2011 (CSO, 2011). While girls typically outperform boys in education, both poor and non-poor females have higher rates of unemployment than men. Women's opportunities for paid formal employment are limited by the demands of unpaid care work (Bureau of Gender Affairs, 2014).

In addition to women's higher unemployment rates, employed women were found to earn less than men despite having equal education and professional experience (ILO, 2018). The labour market in Dominica is heavily divided along gender lines. Women are overrepresented in certain key sectors, including the services sector and informal economy as hucksters (also known as traders or higglers) selling agricultural produce, tourism products and other commodities. The service and sales sector employs 33.2 per cent of all women employees (CSO, 2011). Approximately 20 per cent of subsistence farmers in Dominica are women, amounting to nearly 2000 women in 1995 (CSO, 1995). As subsistence farmers, women play an important role in improving food security, nutrition and livelihoods in rural and urban communities. While subsistence farming and trading as hucksters can be reasonably profitable, these forms of employment are precarious due to the lack of security and social protection and their vulnerability to climate and disaster-related shocks (Benson et al, 2001).

Women are also underrepresented in political leadership and decision-making in Dominica. Approximately twenty-two per cent of members of parliament were women in 2014 (IPU, 2014). Research has shown that women are more likely to vote for men in Dominica and points to cultural

³⁹ A person was deemed to be poor in this study if he or she lived in a household whose adult equivalent per capita consumption fell below the poverty line. The poverty line was estimated at ECD 6,230 per annum per adult in 2009.

perceptions that the place of women is in the home rather than the public arena (Hendrix, 2010). Women's participation in decision-making in the public service and local government is more gender equal, with sixty per cent of permanent secretaries and forty-one per cent of local government leaders being women in 2013.

Gender-based violence (GBV)

Gender-based violence is a "significant health and social threat" in Dominica (Commonwealth of Dominica, 2017: 126), the risk and prevalence of which increases in disaster situations. The main forms of reported GBV are intimate partner violence and child abuse. In the absence of a current and comprehensive GBV prevalence study, the true extent of gender-based violence in Dominica is unclear. In 2014, the Domestic Violence Registry recorded 91 female cases of physical or sexual violence by an intimate partner compared to 10 male cases. Furthermore, 160 women (0.5 per cent of the population) reported physical or sexual violence by persons other than an intimate partner in 2013 compared to 43 women in 2014 (0.12 per cent of the population) (Commonwealth of Dominica, 2016). Furthermore, administrative data indicates that women make up 86.9 per cent of GBV victims, with one in two of these women reporting sexual assault and two out of five reporting physical assault. 80 per cent of the reported perpetrators are men.

Dominica's Protection Against Domestic Violence Act of 2001 criminalizes physical, sexual, economic, psychological or emotional violence against any person in the family or at the household level. However, enforcement of the legislation is lacking as police are reluctant to become involved in domestic disputes (Toussaint-Green, 2016). Women lack access to justice particularly in rural areas, and violence against elderly persons and women with disabilities often goes unreported. Failure to report gender-based violence is a major issue, since women fear retaliation and lack trust in the police and the judicial system (UN Development Fund for Women, 2005). As of October 2017, the majority of cases being heard in the country's judicial system were GBV-related (Commonwealth of Dominica, 2017).

There are very few openly LGBTI individuals in Dominica as fears of violence and harassment prevent persons from revealing their gender identities and sexual orientation (Human Rights Watch, 2018). Strong societal and employment discrimination also exists against persons who identify as or are perceived to be LGBTI (US State Department, 2016). Police sensitivity to crimes against the LGBTI community is an issue, particularly in cases of gender-based violence (Commonwealth of Dominica, 2017). Dominica's law criminalises consensual same-sex activity.⁴⁰ No laws prohibit discrimination against a person on the basis of their sexual orientation or gender identity. Dominica has an ongoing HIV crisis, and these laws pose a barrier to effective HIV and AIDS health programs (Washington Blade, 2019). In the aftermath of disasters, with health systems strained or near collapse, access to HIV treatment and prevention services can be further hampered increasing the vulnerability of affected populations.

5. Gendered impacts of displacement from Tropical Storm Erika and Hurricane Maria

Tropical Storm Erika displaced 710 persons in Dominica due to the complete loss of or significant structural damage to 484 homes (Commonwealth of Dominica, 2015b). Given that the worst damage was isolated to the south and south east areas of the island, displaced persons tended to seek shelter on other parts of the island. The disaster pushed many below the poverty line, and members of female-headed households were particularly vulnerable on account of their typically larger family size, more limited skills and loss of assets. Members of female headed households represented forty-five per cent of displaced persons in the most affected communities (Commonwealth of Dominica, 2015).

⁴⁰ See Sexual Offences Act 1998 (Dominica).

Seventy-two per cent of the people displaced from Petite Savanne and Dubique, two of the worst affected communities, were women (Commonwealth of Dominica, 2015b).

Still recovering from Tropical Storm Erika, Dominica was ill-prepared for the mass displacement of 35,000 people or approximately fifty per cent of the island's population just over two years later. While many families sought temporary shelter with less-affected households on the island, it is estimated that 15,000 to 20,000 people left Dominica after Hurricane Maria either permanently or temporarily (Commonwealth of Dominica, 2017). Many Dominicans sought refuge in neighbouring Caribbean countries, including temporarily in Trinidad and Tobago on humanitarian grounds (UNHCR, 2019). Three thousand people fled to Antigua and Barbuda (ECP Americas, 2017). In part due to the high number of cross-border displacements, only 3,000 or nine per cent of the estimated 35,000 displaced persons sought accommodation in government-run emergency shelters in Dominica.

It is unclear how many displaced persons returned to their country and communities of origin once access to basic services was restored months later. Between 2001 and 2011, Dominica recorded a population decrease of 0.6 per cent, suggesting that cross-border movements of the population are not uncommon (Commonwealth of Dominica, 2015b). A lack of reliable data on the number of cross-border displacements and trends of return following Hurricane Maria is reported to have hampered disaster assessments and relief provision (ACAPS, 2018).

Differential impact of living conditions in temporary accommodations on female-headed households

Members of female-headed households were more likely to stay longer in emergency shelters following Tropical Storm Erika and Hurricane Maria, as a result of unequal access to resources and economic opportunities in communities of origins (IOM, 2018a). Furthermore, women and girls were at greater risk of gender-based violence and more adversely affected by poor living conditions in temporary accommodations, since they performed the majority of care work and were often responsible for the basic needs of both children and elderly persons (Commonwealth of Dominica, 2017).

Following Tropical Storm Erika, thirteen emergency shelters were opened to accommodate approximately 800 people (Commonwealth of Dominica, 2015b). A number of persons sought shelter in non-government temporary accommodations, including with family and friends. Some days after the disaster, there were 294 males (fifty-three per cent) and 263 females (forty-seven per cent) in shelters.

Table 4
Shelter occupants after Tropical Storm Erika by age and sex

Age group	Male	Female	Total
1-14	69	74	143
15-24	53	43	96
25-34	48	37	85
35-99	124	109	233
	294	263	557

Source: Government of the Commonwealth of Dominica, 2015.

Although shelters accommodated a similar number of males and females, a disproportionate number of shelter occupants were from female-headed households. While the average Dominican family size is small (2.7 persons), it was observed that female-headed households in emergency shelters had between three to thirteen children (Commonwealth of Dominica, 2015b).

After Hurricane Maria, women, elderly persons and children were observed to be the main population groups across the 102 government-run shelters (Commonwealth of Dominica, 2017). According to IOM data collected three months after the disaster, sixty-one per cent of individuals remaining in emergency shelters presented vulnerabilities (IOM, 2017g). The most common

vulnerabilities were old age, being from single-male or single-female headed households and having chronic illnesses. There were also a number of pregnant women, breastfeeding mothers and females with physical disabilities. The remaining population was among the most vulnerable with limited options for durable return to their communities (IOM, 2018a).

- *GBV and security concerns in temporary accommodations*

Shelter occupants slept in open spaces in the aftermath of Tropical Storm Erika, resulting in loss of privacy and increasing the risk of gender-based violence particularly for women and children. It was observed that open sleeping arrangements may have been a cause of conflicts in shelters (Commonwealth of Dominica, 2015b). In some cases, family members were separated and housed at different shelters, which contributed to their pain and distress (Rock et al, 2018). While no official reports of violence were received, there were reports of emergency security forces openly soliciting young women (Commonwealth of Dominica, 2017). Furthermore, vulnerable women and girls are reported to have engaged in transactional sex after the hurricane due to loss of livelihood opportunities (UN, 2018).

In Hurricane Maria's aftermath, women and girls accommodated in shelters reported increased vulnerability to gender-based violence as shelters were not designed with gender considerations in mind (Commonwealth of Dominica, 2017). The majority of shelter inhabitants slept in the same area on floor mats. IOM noted that lack of separated areas caused insecurity and resulted in lack of privacy (IOM, 2017i). Sixty-two per cent of shelters had gender separate lockable toilets, but only thirty-eight per cent had separate bathing areas for women (IOM, 2017d). By December 2017, fifty-two per cent of shelters still lacked private living areas for households although the shelter population had significantly reduced (IOM, 2017g).

The Bureau of Gender Affairs developed a Referral Pathway to provide services to survivors of gender-based violence (UN, 2018). However, women and girls were at heightened risk of violence for many months due to a lack of electricity and lighting in shelters and other accommodations. Seventy-six per cent of shelters had no electricity four months after the disaster (IOM, 2018a). At this time, thirty-five per cent of the shelter population were members of single female-headed households, and pregnant and breastfeeding women made up a further nine per cent of the population (IOM, 2018a). Only fifteen per cent of shelters had protection services and site management only existed at twenty-three per cent of shelters (IOM, 2018a). The island's only shelter for victims of GBV remained closed for a period following Hurricane Maria (US State Department, 2018). It is unclear whether it has since reopened.

- *Access to healthcare, WASH facilities and other services*

Healthcare access suffered in the aftermath of both extreme weather events, with many health centres destroyed or damaged. Women were more severely impacted by this situation as the main caregivers for children and elderly persons, and reported being unaware of how to access critical health services (Commonwealth of Dominica, 2017). Signs of trauma were observed in women, men and children in affected communities, and mental health and trauma support was widely requested. Survivors reported developing a fear of rain and feeling a lack of control over their lives as a result of being displaced (Rock et al, 2018). Men were more likely to resort to unhealthy coping strategies, including drug and alcohol use (Commonwealth of Dominica, 2017). However, mental health needs were often overlooked due to the scarcity of psychosocial support workers (Rock et al, 2018).

Access to basic services varied in emergency shelters following Hurricane Maria with dire living conditions reported in twenty-one per cent of shelters (IOM, 2017f). Fifty-six per cent of shelters had access to protection and water, sanitation and hygiene (WASH) services, while sixty-two per cent provided access to health services on site or in communities where they are situated (UN, 2017). Elderly women performed the majority of unpaid care work in shelters, amounting to at least 18 hours per week

per individual. This represented a significant increase on the pre-hurricane unpaid care burden of elderly women. Most of the elderly women were heads of households comprising five persons on average. By contrast, elderly men in shelters were mostly alone and required special care for illnesses, disabilities and mental conditions (Commonwealth of Dominica, 2017).

- *Child protection and special measures*

An estimated 19,800 children required emergency support and services in Dominica following Hurricane Maria (ACAPS, 2018). Many children, including unaccompanied minors, left the country without adequate monitoring of protection concerns (UN, 2017). Nearly two months after the disaster, eighty-seven per cent of children living in shelters were still not receiving any form of education (UNICEF, 2017). Many schools were either damaged or being used as emergency shelters which prevented a return to learning. Four months after the disaster, fifteen per cent of children were yet to return to school.

This prolonged situation likely prevented caregivers, in particular single female heads of households, from pursuing employment and other livelihood opportunities. With many schools closed, there were reports of caregivers leaving children in the communal care of elderly persons in shelters during the day (Commonwealth of Dominica, 2017). This would have posed a protection risk for children given that the majority of shelters did not implement safe recreational spaces. Elevated stress levels of caregivers following disasters affect children who experience higher levels of corporal punishment (Kelley, 2010). The delayed resumption of schooling also limited the reach of child protection services (UN, 2017).

Heightened barriers to return to communities of origin for female-headed households

- *Restoration of services and security concerns*

The restoration of electricity, water and sanitation services across the island occurred slowly after Hurricane Maria. Three months after the disaster, only eight per cent of the population had their electricity restored (IDMC, 2020d). Five months later, eighty-two per cent of the population had access to clean water and twenty per cent had electrical supply (UNICEF, 2018).

Forced to use creeks and other waterways for cooking and cleaning, communities reported the spread of water-borne illnesses, such as diarrhea (IRIN, 2017). This situation would have had a disproportionate impact on women, who perform the majority of reproductive and care work in the wake of disasters and often bear the cost associated with healthcare of children and elderly persons. While data are not available on these illnesses in Dominica, women have higher death rates than men following disasters and suffer from more adverse health outcomes (IUCN, 2009).

While most displaced persons residing in shelters three months after the disaster stated that damage to housing and lack of financial means to repair and rebuild homes were the main factors preventing return to communities, three per cent of persons reported being unable to leave due to a lack of safety in their communities of origin (IOM, 2017g). The prolonged period without electricity and reliable lighting would have contributed to an unsafe situation in communities, especially for women and girls at night.

- *Unequal access to resources and opportunities for return*

Women are less likely to own property and land than men in Dominica. They also receive less pay for similar work than men (Commonwealth of Dominica, 2015b). This affects women's ability to access credit for agriculture and enterprise development on an equal basis with men, especially after disasters. Unequal access to resources impacts women's ability to return to communities of origin, resulting in longer stays in temporary accommodations and disruptions in livelihoods for female-headed households.

After Tropical Storm Erika, some forty per cent of informal economic activities were disrupted and women were engaged in approximately fifty-five per cent of those activities (Commonwealth of Dominica, 2015b). The government gave modest amounts of financial support, including income support of up to ECD 2,500 for subsistence farmers. However, NGOs reported that government resettlement policies were not gender-sensitive, putting single women with children at a greater economic disadvantage (US State Department, 2016).

Similarly, women, in particular elderly female heads of households, reported being unable to leave emergency shelters after Hurricane Maria because they did not have home insurance or savings to pay for housing materials and skilled labour to rebuild homes. Three months after the disaster, twenty-four per cent of shelter occupants reported not having the financial means to leave shelters. It is estimated that 2,800 individuals considered vulnerable prior to Hurricane Maria fell below the poverty line as a result of this event (Commonwealth of Dominica, 2017). Given the high proportion of poor people living in female-headed households, women, children and elderly persons are most likely to have entered poverty as a result of the disaster.

Prior to Hurricane Maria, a high proportion of working women were employed in the services sector or worked as subsistence farmers in Dominica. Seventy-six per cent of women subsistence farmers reported major losses to crops, equipment, tools and farming infrastructure as a result of the disaster (UN Women, 2018). Furthermore, post-disaster needs assessments estimated that the tourism sector would take at least a year to recover (IDMC, 2018). This sector employs a high number of women as housekeepers and waitresses, while men tend to hold managerial or maintenance positions in the sector. Following disasters, it is often the case that housekeepers and waitresses are laid off before those employed in other occupations typically performed by men (Commonwealth of Dominica, 2015b).

Disproportionate impact of Hurricane Maria on Kalinago women

Prior to Hurricane Maria, Dominica had a 3,000 strong indigenous Kalinago community, which was recording steady population increases (CSO, 2016). The Kalinago are highly vulnerable to the impacts of disasters and climate change, since the primary occupations of Kalinago men and women are subsistence farming and fishing. Furthermore, poverty and unemployment are high within the Kalinago Territory compared to the rest of the population (ILO, 2018). The community also relies heavily on tourism, selling traditional crafts and performing cultural displays for cruise ships and other visitors (Tandon, 2012).

Kalinago women experience marginalization twice over due to their gender and their status as indigenous persons. They are also less likely than other Dominican women to leave their partners even if victims of intimate partner violence (Toussaint-Green, 2016). Teenage pregnancies are high among Kalinago girls, which often leads to girls leaving formal education (ILO, 2018). Women experience barriers to entrepreneurship, since access to credit often depends on proof of collateral and the law prevents individuals from holding title to land in the Kalinago Territory (ILO, 2018).

Hurricane Maria hit the Territory directly, leaving ninety per cent of the country's indigenous population displaced and the viability of the community at stake (UNICEF, 2017). With the majority of houses destroyed, many Kalinago families left the country following a trend for community members to leave in search of better living conditions and economic opportunities (IRIN, 2017). It is yet to be seen whether this movement will threaten the long-term viability of the Kalinago community. Furthermore, landowners were provided with transitional shelters, but the Kalinago community was unlikely to have benefited from this policy equally given that individuals are prevented from owning land in Kalinago Territory (IOM, 2018a).

The death of most livestock and destruction of forty per cent of local fishing boats and equipment led to food insecurity for half of the island's population (Heron, 2018). Subsistence farmers, fisher people and

craft makers in the Kalinago community were among the worst affected, given their reliance on farming and tourism, two sectors that were severely impacted by the disaster. Women are the primary makers of indigenous crafts in the Kalinago community, and therefore also the holders of community-sustaining knowledge (Commonwealth of Dominica, 2017). However, the reliance of Kalinago women on the agriculture and tourism sectors resulted in a complete loss of livelihood for many female-headed households in the short and medium terms. Community members reported that the craft business no longer paid the bills following Hurricane Maria (Commonwealth of Dominica, 2019).

Female-owned enterprises were also less likely to recover from the shock of Hurricane Maria, given that Kalinago women have more limited access to economic resources and support to enable them to recover from setbacks (ILO, 2018). While strong recovery of the tourism sector was reported a year after Hurricane Maria, initial available information shows that the sector has now experienced another major disruption due to the COVID-19 pandemic (Caribbean Journal, 2019). This setback is again likely to have a disproportionate impact on Kalinago women.

6. Conclusion

In the aftermath of extreme weather events, women play a pivotal role in mobilizing support networks and ensuring better outcomes for displaced persons in Dominica. The local concept of 'koudmen', which translated to English means 'helping hand', is an important cultural practice on the island (Rock et al, 2018). Women are central to the maintenance of inclusive community structures and practices flowing from this concept (Macfarlan & Quinlan, 2008). The full and effective participation of women in Dominica's plan to become the world's first climate resilient country will therefore be central to its realization. However, women and girls were among the most affected by Tropical Storm Erika and Hurricane Maria given their more limited access to economic resources and opportunities and the high proportion of poor people in female-headed households. The slow resumption of basic services, including electricity and clean water, would have had a disproportionate impact on women and girls given that they perform most of the care work in the aftermath of disasters and are most vulnerable to violence in poorly lit areas. Members of female-headed households had the most limited options for return to communities of origin, and many moved permanently to other countries to build new lives.

D. The Nexus of Environmental Migration, Urbanization and gender in Jamaica

1. Demographics, natural hazards, and gender in Jamaica

With an estimated population of 2,961 million people and covering an area of 11,188 square kilometres, Jamaica has the fourth largest population in the Caribbean and is the third largest island of the subregion in geographical size (United Nations, 2020). Women's participation in the labour force has increased in recent years, especially concentrated in the services sector (85.4 per cent of female employment in 2019). Life expectancy for women in Jamaica is 76 years (compared to 72.8 for men), and adolescent fertility rates have greatly decreased in the last 20 years. In terms of education, 83.4 per cent of Jamaican women in 2018 completed lower secondary degrees, compared to 81.4 per cent of men (World Bank, 2020).

Jamaica is heavily impacted by a variety of hazards related to climate change, including decreased precipitation and droughts, more intense rainfall events, increased land and sea temperatures and sea level rise (USAID, 2017). Climate change projections notably foresee "a warming trend, with the most severe warming occurring in the months from June to August; and an increase in the frequency of very hot days and nights with a concurrent decrease in cold days and nights" (Government of Jamaica, 2018: 19). These changes affect how Jamaicans earn their livelihoods, leading some to migrate internally as a response to environmental pressures.

This case study focuses on the gender dimensions of environmental migration driven by slow onset processes associated with climate change in Jamaica. It does not approach displacement in disaster scenarios – as the case studies on the Bahamas and Dominica do – but addresses longer term processes. Available information and data on these issues remain limited but certain dynamics can be identified using existing research and evidence.

2. Women and agriculture in Jamaica

The agricultural sector in Jamaica remains a key source of employment in rural areas, contributing nearly seven per cent of the country's GDP and employing approximately eighteen per cent of its workforce. Women play an important part in agricultural production in Jamaica, but available evidence highlights that the sector is vulnerable to natural hazards and environmental degradation.

Notable increases in agricultural production have been tied to government interventions but increased agriculture outputs have also been hampered by the impact of extreme events and natural hazards (Government of Jamaica, 2018). The dualistic agricultural system in Jamaica – including large-scale monoculture export plantations and smaller-scale subsistence operating with domestic market practices – is vulnerable to hurricanes, floods and droughts. This is critically important given the agricultural sector's role "in income growth and poverty reduction, in rural development, in the maintenance of the environment and biodiversity, and in food security" (FAO, 2018: 13).

Difficulties in agricultural production tend to facilitate urbanization processes. At the same time, evidence tends to show that in Jamaica migration "generally benefits small-scale farming and domestic food production, increasing food accessibility" for the rural poor (Thomas-Hope, 2017: 1). Various forms of financial and non-financial remittances can have positive impacts on productivity, including through the introduction of innovative production techniques.

Globally, "economic insecurity is a key factor increasing the impact of disasters on women as caregivers, producers, and community actors. The gendered division of labor in households and in the global economy makes most women less able than most men to control economic resources" (Enarson, 2000: viii). Women are generally less fully integrated into the formal labour market than men, tend to earn less than men and suffer from higher unemployment rates (Dunn, 2013).

In Jamaica, it has been reported that droughts and water shortages put additional pressure on women and girls, as they are traditionally responsible for water collection for domestic use (Dunn, 2013). Interviews with women in local agricultural cooperatives in Jamaica highlight the challenges that women face in earning their livelihoods from farming. Environmental factors and the impact of climate change affect their livelihoods and represent a key concern among women farmers (Ishemo and Bushell, 2017). Evidence suggests that women in the agriculture sector often take a coordination-based approach, focusing on helping individuals earn more income, diversifying activities on the farm, engaging partners and accumulating cash reserves.⁴¹

This is not to say that men do not face the impact of climate hazards. It has been mentioned for instance that "in areas where farm roads were destroyed [by disasters], men were exposed to the risks associated with crossing flooded rivers or coping with landslides while attending to their animals" (Stephens, 2013). This would, however, also apply to women and children attending school.

Differences in rates of land ownership between men and women also have consequences in terms of disaster resilience and climate change adaptation. While "women can legally own land, in practice they rarely do" and they tend to be among the poorest households in the country (USAID, n.d.:1). Though land ownership rates may be low for women, they play a significant role in

⁴¹ Based on a personal interview with a gender expert from The University of the West Indies, Mona Campus on 21 April 2020.

agriculture for subsistence and market sales. The sale of Christmas trees has represented a significant income for women, and this industry has been critically affected by climate variability.⁴²

Women experience greater difficulty accessing banking services and loans compared to men, as they are less likely to own land, which can serve as collateral to financial institutions. Women farmers tend to rely on non-banking systems to transfer risk. This enables them to have more control over their finances, limiting interactions with formal banks. However, the lack of access to external financing is also considered to hinder risk transfer, and represents “the hardest hurdle to climb in building resilience especially when looked at from a gender perspective” (Lee Sharpe, 2017: 322). Women-headed households often earn income exclusively from agricultural production, which hampers income diversification and entails a strong exposure to climate variability. Women in rural areas living with husbands or other male family members may have reduced exposure to some of these challenges but may experience limited decision-making power (Ishemo and Bushell, 2017).

3. Gender mainstreaming in national climate change policies

National climate change policies and strategies vary in the extent to which they mainstream gender. Despite references to vulnerable populations, the Jamaican National Determined Contribution to the United Nations Framework Convention on Climate Change (UNFCCC) does not include mentions of women and gender issues (Government of Jamaica, 2015b). The Jamaican Climate Change Policy Framework recognizes the differentiated impacts of climate change (Government of Jamaica, 2015c). Gender issues are reflected more significantly in the Second (Government of Jamaica, 2011) and most powerfully in the Third National Communication to the UNFCCC (Government of Jamaica, 2018), which includes a section specifically dedicated to the gender-differentiated impacts of climate change and a table on the potential gender equality co-benefits of mitigation actions, framing gender as a key component in responses and solutions.

Efforts have also been made in the agricultural sector to promote initiatives and activities focused on women, including for livestock and chicken rearing. The Farming Field School is a successful initiative enabling peer-to-peer learning and exchanges with discussions around climate change adaptation and the promotion of indigenous knowledge for the benefit of women farmers.⁴³ As a vital part of the agricultural sector, women play a critical role in responding to climate change impacts and contributing to national agricultural production.

4. Climate change, urbanization and gender in Jamaica

By 2016, approximately fifty-four per cent of Jamaica’s population lived in urban areas, which are defined as locations with over 2000 inhabitants and featuring “a number of services and amenities which indicates modern living” (Government of Jamaica, 2016: 4). This represents a lower percentage than the 70.4 per cent average for Caribbean countries (United Nations, 2020). Jamaica has witnessed a rapid urbanization process, rising from thirty-nine percent in 1970 to fifty-four per cent in 2016 (Asher Mulling et al., 2013). The urbanization process in Jamaica has notably affected not only the Kingston area but also other smaller towns across the island and has been partially driven by internal migration from rural to urban areas.

While agriculture remains a critical sector of Jamaica’s economy and labour structure, the degradation of rural livelihoods, due in part to the impacts of climate change and natural hazards, can be considered one of the push factors driving internal migration to urban areas. This phenomenon can also be attributed to the limited economic opportunities and lack of infrastructure in rural areas (Asher Mullings et al., 2013).

⁴² Based on a personal interview with a gender expert from The University of the West Indies, Mona Campus on 21 April 2020.

⁴³ Based on a personal interview with an expert from the Department of Geography and Geology, University of the West Indies, Mona Campus on 27 March 2020.

Indeed, the challenges in securing livelihoods due to the impact of climate change and environmental hazards appears to be a key driver of mobility in rural areas of Jamaica. Census data show tendencies towards notable levels of rural mobility, including in the parishes of Portland and Saint Mary. Rural mobility itself may challenge the capacities of women to secure their livelihoods as the available workforce moves. It has thus been affirmed that “migration hampers the availability of farm labour, from the household level, hired labour, and shared labour arrangements” (Ishemo and Bushell, 2017: 23).

When climate hazards affect communities, some individuals stay and adapt, others leave to restart farming elsewhere, and others move to cities and engage in alternative livelihoods. Migration appears as an easier option for younger people when they have acquired skills and especially if they have family ties in other locations. Women from rural areas, especially older women, may have a harder time opting for migration when they are asked or expected to care for their relatives and contribute to agricultural tasks while managing the move. Moving to new locations represents a challenge in the capacity to find employment and access resources.⁴⁴

Urbanization in Jamaica, as in other countries of the Caribbean, entails a range of challenges. Paired with the inadequate management of resources, poverty, limited planning and enforcement of land use regulation, urbanization has enhanced pressure on Jamaica’s resources (Powell, 2009). One of the consequences of inadequate urban planning is “the proliferation of informal/squatter settlement communities that have accompanied urban growth,” and in 2007 it was estimated that approximately 20 per cent of the Jamaican population lived in informal settlements (Government of Jamaica, 2016: 4). These areas have suffered from a lack of adequate housing and limited access to basic services, as limited implementation of regulations has “resulted in rapid and persistent degradation of infrastructure in many older, urban communities” (Asher Mullings et al., 2013: 386).

Enhanced exposure to climate hazards, notably including floods, is another consequence of unplanned urbanization – thus augmenting the risk of further displacement. Globally, natural hazards disproportionately affect women. This includes both sudden onset events and slower onset processes. In the event of a disaster, it is generally observed that additional tasks are attributed to women in excess of those that traditionally accompany their prescribed gender roles. Women’s limited access to resources and decision-making power also tend to hinder their resilience in disaster scenarios. Women may also be particularly vulnerable to gender-based violence in displacement scenarios: as such, Jamaica’s Disaster Risk Management Act mentions that officers should be empowered to take action against sexual or other types of harassment (Government of Jamaica, 2015a).

In Jamaica, “with higher levels of poverty, poor women are more vulnerable to the impact of natural hazards”; indeed “poverty in Jamaica is increasingly feminized. This means that among persons who are poor, there is a higher percentage of females” (UNDP, 2009: 5). Poverty, which affects women disproportionately, strongly increases vulnerability to the impact of natural disasters and women tend to be overlooked in disaster preparedness and response, which adversely affect their resilience. However, looking at the specific case of Jamaica, Dunn (2013: 12) notes as well the specific agency of women in cases of disasters as “women in Jamaica are more likely than men to take charge in responding to disaster preparedness messages and to early warnings about a hurricane or flood warning.” In contrast, men “are more likely to reflect cultural norms of ideal (hegemonic) masculinity, and as a result are more likely to wait until the situation gets bad before moving”.

A study in urban neighborhoods of Kingston sheds light on a higher concentration of women in the informal settlements expanded during the urbanization process. Indeed, it was found during the research that “more males lived in communities with better infrastructure, more highly-rated physical conditions, and their homes were more likely to have more green spaces around them (e.g., trees,

⁴⁴ Based on a personal interview with an expert from the Department of Geography and Geology, University of the West Indies, Mona Campus on 27 March 2020.

plants) than their female counterparts" (Asher Mullings et al., 2013: 388). The large share of informality in the economy impacts social protection and creates additional layers of vulnerability.⁴⁵

Women, including those arriving from rural areas as a consequence of environmental degradation and climate change, have limited access to housing in urban areas. Despite heading over forty per cent of Jamaican households, women in 1992 faced grave housing needs and limited access to the National Housing Trust, which was created to facilitate housing financing for those most in need. This limited access appears to arise from "economic obstacles, cultural prejudices and institutional rules that prevent many women, especially poorer ones, from becoming eligible for housing loans" (Klak and Hey, 1992). Increased gender balance in access to housing opportunities has been registered in more recent years, which reflects the increased access of women to home financing.

As a consequence of these different challenges, researchers estimate that the average urban woman in Jamaica living in an informal community is "more likely to face increased stressors due to the characteristics of her environment. In addition to environmental hazards (e.g., floods, disease outbreaks), she was confronted by social hazards, such as inadequate social services, limited social support, and unsafe conditions due to higher rates of crime and violence" (Asher Mullings, 2013: 389).

5. Conclusion: Environmental Migration as a Gendered Phenomenon in Jamaica

The gender dimensions of internal environmental migration in Jamaica appear in different stages of the process, including the situation of women in rural areas and their role in agriculture, as well as the conditions of living in urban areas and the discrimination they suffer compared to men. Indeed, the impact of climate change in rural areas appears to have a strong impact on livelihoods. This prompts urbanization movements, however in urban areas, internal migrants, in particular women, still face difficulties and an increased exposure to disasters. As Jamaican policies increasingly integrate gender equality in their objectives, the particular situation of environmental migrants in the country requires specific attention. The approach of Jamaica's 2030 Vision provides a useful example in this sense, as it calls for "ensuring that development takes place in the context of gender equity and social equity paying full attention to the limits of the natural resources" (Government of Jamaica, 2009: 235).

E. Women's leadership and gender-responsive planning for evacuation and environmental migration in Cuba

1. Gender, mobility and the environment in Cuba

As the reality of environmental migration evolves in the Caribbean, Cuba presents a case study that is both unique and complex. Cuba has the highest ranking on the Human Development Index among Caribbean countries, due to its good standing on measures of health, education and living standards (IOM, 2017a). According to the United National Development Program (UNDP) 2019 Human Development Report, Cuba's Gender Inequality Index value of 0.312 was lower than the regional average of 0.383 for Latin America and the Caribbean, and the country performed well on indicators of reproductive health and family planning (UNDP, 2019a). Women occupy nearly half of all seats in Parliament and rates of women's participation at lower levels of government have also increased in recent decades (PIAL and IUCN, 2014).

Data on displacement and migration in Cuba are extremely limited; while the case studies on disaster displacement in The Bahamas and Dominica are data-driven, this case study is an exploratory analysis of the connections between gender, disaster displacement, and environmental migration in Cuba. Specifically, this case provides a discussion of the ways in which displacement, evacuation, and

⁴⁵ Based on a personal interview with a gender expert from The University of the West Indies, Mona Campus on 21 April 2020.

mobility intersect and highlights women's leadership in emergency response that may serve as a foundation for deeper analysis in the future.

Historically, rates of international migration and internal mobility in Cuba have been significant. Cuba has the largest diaspora community of any Caribbean country (IOM, 2017a). From 1960 to 2006, more women migrated annually than men, with exceptions in some years. In the early 1980s, the primary method of transportation for migration was by boat and fewer women participated because of the perceived risk of sea travel (Rodríguez Javique, et al. 2013).

Cuba embarked on a series of national reforms in the 1960s, resulting in improved educational opportunities for women, and an adult literacy rate for men and women of 99.75 per cent. Enrollment rates for males and females are comparable for primary and secondary schools, but 32 per cent of males are enrolled in tertiary programs compared to 51 per cent of females (World Bank, 2018). Women's high levels of literacy and education attainment have expanded their decision-making capacity, including when making choices about migration. In one study, most of the participating women who migrated were university graduates who traveled alone, and they characterized themselves as "independent" and "prepared" (Núñez Sarmiento, 2010).

The national reforms also led to a substantial increase in the percentage of women participating in the labour force. Still, this did not necessarily lessen their obligations in the home, leading to a "double workday". In Cuba, the proportion of unpaid work per day performed by women is three times higher than for men (World Economic Forum, 2020). As some Cuban women migrate and become members of the diaspora, they bring the double workday with them (Hernández-Truyol, 2017: 17). An alternative framing of the multiple responsibilities of Caribbean women is referred to as their "triple roles" in production, reproduction and in the community.⁴⁶ International migration can be seen as an opportunity to change these traditional gender roles, though that may not always be the outcome (IOM, 2017a).

In addition, international migration may be a pathway to fuller self-actualization for LGBTI individuals who face discrimination: "the ongoing persecution of men and women identified as homosexual in public is also often cited as a reason to want to leave the country." However, some have argued that the overwhelming focus on cross-border migration has limited the understanding of movement between rural and urban spaces for this marginalized group (Hamilton, 2012, pg. 170).

Internal movements are common in Cuba and frequently related to urbanization, access to services, and related economic drivers. A comparison of census data from 2000 and 2010 revealed that men in Cuba relocated internally at higher rates than women. Youth between ages 15 and 29 showed the greatest propensity for migration, and women and men with higher levels of educational achievement were more likely to move (Mora Pérez, et al., 2016). Seventy-seven per cent of the Cuban population currently lives in a few main urban centers on this archipelago of 1,600 islands, islets and cays (IOM, 2017a). Additionally, internal movements are also strongly influenced by environmental factors, particularly natural hazards such as hurricanes and floods.

2. Lessons in disaster preparedness: the role of social capital and women's empowerment

Cuba experiences an average of two hurricanes per year as well as periods of severe and prolonged drought. IDMC figures indicate that more than 2.7 million Cubans moved internally as a result of natural hazards in 2008, when three hurricanes and one tropical storm occurred in a three-week period. During the 2016 and 2017 Atlantic hurricane seasons, 2.8 million new displacements were recorded (IDMC, 2019a). Notwithstanding, data on disaster displacement should be interpreted in its

⁴⁶ Based on a personal interview with a gender expert from the University of the West Indies, Mona Campus on 21 April 2020.

distinct context. In Cuba, these numbers are typically driven by widespread mandatory evacuations when approximately eighty per cent of citizens relocate temporarily to the homes of friends and family, and twenty per cent go to designated shelters (IDMC, 2019b). In national regulations, Cuba generally employs the terms “evacuees” and “protected persons” instead of “displaced” (IOM, 2019a). However, in order to align this case study with the others in this paper, this chapter will use the terms “disaster displacement,” “displacement,” and “evacuation” as they are used throughout the paper.

Evacuation processes in Cuba are systematic and extensive, so while rates of disaster-related mobility are typically very high, mortality rates connected to disasters are remarkably low. For example, Hurricane Ike in 2008 displaced millions of Cubans. More than 300,000 homes were destroyed, and 7 people were killed. The same hurricane led to significantly more deaths in nearby countries (IDMC, 2019b). This situation reflects the complexity of human mobility resulting from disasters, in which evacuations can be a valuable part of disaster risk management and may prevent losses of life and property.

A few key factors contribute to the effectiveness of the Cuban disaster preparedness program, including from a gender perspective. It has been noted that “Cuba has the national framework to reduce social vulnerability and therefore vulnerability to disasters. Legal protections like environmental land zoning are in place, and emergency plans are updated every year after hurricane season, complete with an annual national emergency drill” (UNU-EHS, 2011: 43). With regard to gender mainstreaming, the national strategy for the management and reduction of disaster risk mentions that during disasters, sexual and reproductive health services, and a focus on human rights, are a priority (UNPFA, 2013).

High rates of literacy and universal healthcare have been linked to improved health and security outcomes (Thompson and Gaviria, 2004). A study done in 2013 found a significant correlation between higher educational attainment levels for women and lower mortality from disasters (Pichler and Striessnig, 2013). The study compared outcomes from disasters due to natural hazards in Cuba, the Dominican Republic, and Haiti. In Cuba, where the proportion of women aged 20-29 with at least secondary education was the highest (0.8), the death rate from floods, droughts, and storms was the lowest relative to the Dominican Republic and Haiti (-4 per 1000 inhabitants). In Haiti, the proportion for women aged 20-29 with at least secondary education was the lowest (0.2), and mortality rate for disasters in that group (+0.5 per 1000) was the highest. The authors reasoned that, “where men and women do have equal access to education and women participate fully in the various groups and organizations that respond to catastrophes, their death rates do not differ significantly” (Pichler and Striessnig, 2013: 30).

Social capital also plays a vital role in disaster management, by building local resilience and fomenting collective action. In Cuba, this involves “people’s understanding of the importance of saving lives; their trust that the resources they contribute will be given for the common good; and the relationships of cooperation that have been built up through the experience of collaboration” (Thompson and Gaviria, 2004, pg. 49). Civil society organizations help to develop these forms of social capital in Cuban communities, contributing to a highly organized and efficient approach to disaster preparedness and management. Through these organizations, which include the Cuban Red Cross (CRC), the Committees for the Defense of the Revolution (CDR) and the Federation of Cuban Women (FMC), large networks are created to deliver vital information in emergencies, to organize response, and to support recovery.

The Cuban Red Cross emphasizes that specific considerations for gender and youth are fundamental to the work of their 47,000 volunteers throughout the country, who undertake trainings in first aid, rescue, and shelter operations (IOM, 2019a). The FMC is credited for their leadership before, during and after hurricanes and the organization contributes to building social capital in communities through ongoing risk mapping in their neighborhoods. (Kirk, 2017). FMC volunteers identify women who are considered to be particularly vulnerable, and they go door-to-door

during evacuations to support the safety of each household (Thompson and Gaviria, 2004). In a 2004 study published by Oxfam, one interviewee explained her role as a representative of the FMC in the event of a hurricane (Thompson and Gaviria, 2004: 31):

“I am responsible for this part of the neighborhood... If a hurricane hits, I know that inside one multi-family unit is an old woman in a wheelchair, who is going to need help to leave. I have 11 single mothers on second and third floors of apartment buildings with children under two who will need more support to evacuate and special needs in the shelters. I have two pregnant women, one on that block and one on this one, who will need special attention.”

The detailed knowledge that volunteers from these civil society organizations have of the vulnerabilities in their neighborhoods and the needs of their neighbors, allow for a very effective response to disasters from natural hazards and to improved safety outcomes. Women in Cuba take on leadership roles in these events and serve as decision-makers, planners, and agents of change.

However, it is also necessary to address whether these structures perpetuate traditional gender roles. Women may act as the helpers, care-givers, cooks, and cleaners, while men may typically be assigned functions related to security and protection, resource allocation, and post-disaster reconstruction. Disaster planning should take care not to entrench the accumulation and division of feminine and masculine responsibilities, or exacerbate the related personal and collective stress that disasters can produce.

3. Climate change and gender equity in national policy

Cuba combines its experience in conducting evacuations with a relatively strong climate change policy framework. While these areas of work have not yet led to the creation of a gender-responsive policy to guide environmental migration, this case study highlights the policy foundation that currently exists. Cuba is one of the first Caribbean countries to institute comprehensive plans and policies related to climate change adaptation and planned relocation. In 1991, the Cuban Academy of Sciences founded a Climate Change Commission. In 1997, the Commission was incorporated into the National Climate Change Group under the Ministry of Science, Technology and the Environment (Planos Gutierrez, et. al, 2013). Among the policies relevant to climate change are the National Strategy and National Action Plan to Combat Desertification and Drought (2000), the National Environment Strategy (2007-2010), and the Tarea Vida plan (2017). Tarea Vida has become Cuba’s central strategy to comply with the Paris Agreement Under the United Nations Framework Convention on Climate Change and to reduce greenhouse gas emissions. It also provides the country’s primary framework for climate change adaptation and mitigation.

Researchers in Cuba who contributed to Tarea Vida, working together with the Caribbean Community Climate Change Center (CCCCC), estimate that air temperatures in the country could rise as much as 4.5°C. Rainfall and cloud cover are expected to decrease, while solar radiation will increase. The Tarea Vida plan includes measures such as the fortification of coastal defenses along Cuba’s 6,000 kilometres of coastline, relocation of communities that are vulnerable to sea level rise and erosion, and a ban on new construction in some of these areas. If no measures are taken, the Cuban Ministry of Science, Technology and the Environment (CITMA) estimates that nearly 29,000 homes will be lost and 569 hectares of forested and agricultural lands will be affected by sea level rise (CITMA, 2017). Currently, ten per cent of the Cuban population lives along the coast at low elevations, and the government has identified 574 settlements and 263 fresh water sources as vulnerable (CITMA, 2019). Human mobility is a key component of Tarea Vida, notably through the priority of relocating communities in the most exposed areas.

Map 1
Tarea Vida priority zones based on potential flood impacts



Source: adapted from <http://citmatel.cu/noticias/califican-de-favorable-estado-del-medio-ambiente-cubano>.

Note: The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

Public documents on Tarea Vida showcase a relatively limited integration of gender dimensions in the plan. Summary documents are available in both Spanish and English; neither version contains terms related to gender. Women are considered active participants in climate planning and hold numerous positions in government and civil defense that deal with climate change⁴⁷, nevertheless it is still important to formally include gender dimensions in planning. At the civil society level, Tarea Vida is well-recognized, and Cuban women readily discuss the plan and participate in activities related to it. They express pride and a sense of empowerment in confronting climate change.⁴⁸

A 2014 report, *Climate Change Gender Action Plan for Cuba*, noted the advances the country has made in terms of gender equity policies. The 2014 report also highlights opportunities for advancing gender mainstreaming in climate change policies. Gender was not mentioned in the National Climate Change Group's First National Communication on the United National Convention on Climate Change, nor was it integrated into the National Scientific Program on Climate Change in Cuba (PIAL and IUCN, 2014). In the framework for the Second National Communication in 2015, it was noted that the rise in temperatures could make the domestic environment uncomfortable and have health repercussions, mainly for women and vulnerable sectors of the population such as children, and elderly people. In a concluding remark, the Second National Communication recognizes the limitation of its own coverage of the themes of gender and climate change. Moving forward, the government recommends an improved and tailored approach based on the unique "sociocultural realities" of each vulnerable group (Republic of Cuba, 2015).

4. Conclusion: implications for environmental migration and gender in Cuba

Estimates of environmental migration flows remain quite low in Cuba. The Cuban National Center for the Study of Population and Development (CEPDE) reports that one per cent of internal migrants list environmental factors as their primary motivation for migration (IOM, 2019a). Some planned relocation efforts have already taken place, and others are underway (IOM, 2019a). However, there is not yet a record of international migration due to environmental causes, and there is a very limited understanding of the gender-specific impacts of climate change.

⁴⁷ Based on a questionnaire filled in by an expert from Facultad Latinoamericana de Ciencias Sociales (FLACSO), Cuba on 18 May 2020.

⁴⁸ Based on an interview with the Mujeres Tarea Vida Project, Cuba on 16 June 2020.

Further investigation into the effects of climate change on traditional gender roles in Cuba, and how decision-making capacity about migration might be altered by climate change, are also warranted. In terms of planned (or unplanned) relocation, questions arise related to the evolution of social capital and the potential impacts on the safety and access to resources of women, men and LGBTI persons.

Cuba has been a leader among Caribbean countries for preparing for and responding to sudden-onset hazards; the country's proactive and inclusive strategies for disaster risk reduction are widely recognized. Cuba has also made significant progress in climate change adaptation and mitigation planning, and Cuban women have described themselves as independent and empowered in challenging situations related to natural hazards and mobility. While the country has not yet created a gender-responsive framework for environmental migration, it may be able to draw from its experience in conducting evacuations and its strong climate change policy framework to advance policies and programs that support safe migration and resilience for people of all genders.

III. Findings and recommendations

A. Main findings

Important findings that are applicable across the Caribbean can be drawn from this study. These findings are more relevant in some contexts than in others, but they aim to provide overall conclusions related to the gendered impacts of environmental migration and disaster displacement in the Caribbean. They also serve as a foundation for recommendations to improve public action and policymaking in the following areas.

1. Gender is a fundamental factor for understanding environmental migration and disaster displacement

Evidence suggests that an individual's experience of migration and/or displacement as a result of extreme weather events and climate change is largely influenced by gender. Traditional gender structures and roles not only amplify the particular vulnerabilities of women and girls, indigenous persons, and LGBTI persons in times of crisis or transition, but also determine access to resources in communities of origin, during migration, in the temporary or long-term destination and in potential return processes. While available information focuses on women and girls, a more comprehensive analysis of gendered impacts would imply a more nuanced understanding of the impacts of environmental migration and disaster displacement on men and boys, non-binary people and LGBTI people as well. Overarchingly, the topic would benefit from additional research with an intersectional lens.

In order to create policies and practices to address environmental migration and disaster displacement that better mainstream gender, the roles and conditions of women and girls, indigenous persons and the LGBTI community in origin, transit and destination countries require additional attention. The impacts of climate change are often gender-determined, as limited access to resources, to the labour market and to decision-making power tends to affect resilience and coping capacities. Women are often marginalized in rural and coastal areas that suffer degradation from climate change impacts. The gender division of labour markets in the Caribbean, including, for instance, the large

percentage of women employed in the services sector, influence their capacity to migrate from vulnerable areas. In migration and displacement processes, evidence also points to specific vulnerabilities related to difficulty accessing assistance and support and often the multiplication of obligations based on traditional gender roles.

The situation of women and girls as internal migrants, notably to cities, remains under-addressed across the Caribbean. Urbanization policies and practices should explicitly integrate gender-responsive provisions to address women's vulnerabilities and facilitate their economic and social integration into urban life. Adequate access to services – health, education, social protection – remains a key concern to protect the rights of women migrants. The need for psychosocial support appears as a concrete priority to respond to the challenges migrants experience when settling in informal neighborhoods, often with limited access to formal employment and with high rates of crime and violence. Psychosocial support is a necessity not only for women and girls, but across the gender spectrum.

2. Disaster situations, displacement and temporary accommodations require gender-responsive interventions

Disasters, especially sudden-onset events like hurricanes, disproportionately affect women and girls. Disasters amplify pre-existing marginalization and create obstacles to rebuilding lives or finding durable solutions for displacement. A review of the impact of Hurricane Dorian in the Bahamas shows that women were displaced in larger numbers than men. The same was true for some communities in Dominica after Tropical Storm Erika hit the island in 2015. Underlying drivers include traditional gender roles of care and support for women and security and rebuilding/repair homes for men. Limited access to healthcare, WASH and child education services further strains the care giving obligations attributed to women.

Limitations in emergency shelter standards, vulnerability to GBV and security concerns in displacement scenarios compound the gender-differentiated impacts of disaster displacement. In Dominica, gendered vulnerabilities in shelter settings after the impact of Hurricane Maria were attributed to the lack of gender-sensitive measures and provisions. Compliance with Sphere Standards in emergency shelters in the Caribbean is often inadequate, and shelters are not commonly designed in a gender-responsive manner, which affects the safety and protection of women and girls.

3. Limited access to resources and opportunities influences gender-specific vulnerabilities and capacities to return to communities of origin after displacement

Mitigating or eliminating the impact of gender inequality on access to resources is key to preventing forced or involuntary migration. This includes the capacity of women and girls to access livelihoods to ensure their wellbeing and the resources required to build resilience. Women and girls have on average more limited access than men to the labour market, which affects their resilience and their capacity to recover from shocks. Their employment in the agricultural sector in Jamaica, for instance, is challenged by multiple constraints which affect coping capacities to climate hazards.

Post disaster assessments in countries such as the Bahamas and Dominica also show that returning to communities of origin is also more difficult for women and girls. This is due to multiple factors, including more limited access to land ownership, more limited financial resources and access to credit and restrained employment opportunities. In Dominica, it has been reported that members of female headed households tended to stay longer in shelters due to these constraints in returning to communities of origin.

Security concerns also appear as a key driver preventing an easier return for women to their communities. The Dominican case study highlighted that the slow resumption of basic services, including electricity and clean water, would have had a disproportionate impact on women and girls.

The study noted that many female-headed households moved permanently to other countries to build new lives.

Indigenous women or migrant women with irregular status face the significant barriers to returning to their communities of origin, due to higher poverty levels, the threat of GBV and other personal security concerns, more limited social capital, and other sources of insecurity, such as threats of deportation in the case of Haitian migrants with irregular status in the Bahamas.

4. Gender-based violence is a critical issue to be addressed in environmental migration and disaster situations

GBV is a prevalent threat to women and girls in areas of origin and through the mobility continuum. The case studies of Dominica and the Bahamas show continued difficulties in addressing GBV concerns, but these challenges are believed to be shared by countries across the subregion. GBV has been described as a pervasive concern and a major public health issue, which requires strong policymaking and public interventions.

Vulnerability to GBV also heightens women and girls' risks in situations of extreme weather events and climate change. Limitations and lack of confidence in police and judicial systems are a common concern in situations to GBV and becomes even more problematic in mobility scenarios. Specific factors, such as the irregular migration status of many Haitian migrants in the Bahamas, create further challenges for accessing the justice system, due to potential mistreatment of victims or migrants' fears of deportation when confronted by public authorities.

GBV may be especially prevalent in displacement shelters and temporary accommodations. This may be due to limited attention to gender-sensitive protection needs and design considerations, such as inadequate lighting, limited separation of genders, open spaces lacking privacy, and lack of safe access to separate toilet and bathing facilities. Being forced to move to access water facilities puts women at an amplified risk of GBV.

Collecting specific data on violence against women and GBV in disaster displacement and environmental migration situations, as well as in destination countries remains a key priority. Underreporting of GBV may be common across Caribbean countries and becomes even more challenging in disaster circumstances.

GBV concerns continue in areas of destination of internal migration. Security concerns and GBV risks are related to the longer stay of women and women headed households in displacement shelters. Internal migrants arriving to urban areas in conditions of vulnerability and settling in informal areas may be confronted with risks of violence that affect women and girls differently and require protection measures.

5. Improved evidence and data are required to facilitate gender-responsive policymaking

As recognized in various global frameworks, further evidence is required with regard to different aspects of the migration, environment and climate change nexus. In particular, the case studies of Jamaica and Cuba put into perspective the limited information available on the drivers, trends and patterns of migration and their relation to environmental degradation and climate change. These limitations are amplified further when it comes to the gender dimensions of environmental migration, where available studies in slow-onset scenarios are almost non-existent.

Gender disaggregation of statistics on displacement and other disaster impacts is also crucial to highlight inequalities between women and men before, during and after disaster situations, and to allow government agencies and other organisations to respond with gender-responsive strategies and

programmes to meet the specific needs of displaced populations. Detailed data collection enables a stronger understanding of the consequences of disasters and a more focused response to meet the needs of different groups. An analysis of the case studies demonstrated that not all displacement sites collected sex- and age-disaggregated information on their populations, and when collected, it was rarely stored in a centralized database.

There are opportunities to mainstream gender indicators in post-disaster assessments and in environmental and climate impact assessments relevant to human mobility. Building data collection capacities related to environmental migration in the context of slow-onset processes may be more challenging than in sudden-onset situations, but it is equally important and a key priority in major global frameworks on disaster risk management. Improved data collection, interpretation and sharing at the local, regional and international levels is the first step to creating policies that reduce vulnerabilities.

6. Create opportunities to promote and recognize women's knowledge, empowerment and leadership

As women often play a central role in creating inclusive community structures in the Caribbean, their involvement in disaster preparedness and response management is a key factor to prevent harm and losses. Examples of countries with women in management positions and in community organizations demonstrate the positive impact of these trends. In Jamaica, women's associations in agriculture promote resilience and gender equality. Building a culture of women in leadership can help in mainstreaming gender concerns in disaster prevention and response and in climate change adaptation. Investments in women's education have also been shown to improve safety outcomes after disasters.

It is critical to understand gender-based vulnerabilities to inform gender-responsive disaster prevention, response, and recovery processes. However, these processes should also support the ways in which women are already acting as leaders in their families and communities. The example of Cuba showcases the added value of women's leadership in disaster risk reduction. Available evidence points to a correlation between higher educational levels for women and lower mortality from disasters. In the Cuban case, strong structures enable the thorough involvement of women in disaster preparedness, response and recovery. Coupled with well-tested evacuation mechanisms, this approach contributes to effective disaster response.

The case studies, therefore, show the importance of promoting gender equality in management structures and the agency of women and girls as actors of their own resilience. In this sense, it is important not to consider women and girls from a vulnerability perspective only, but also to put into perspective and leverage their coping and adaptative capacities and their contribution to resilient societies.

7. Specific policies are still required on the gender aspects of environmental migration in slow-onset scenarios

Evidence and policy responses are still missing with regard to the gendered dimensions of slow-onset environmental migration. On one side, gender integration in climate and disaster policies is nascent and, on the other, climate policies also scarcely incorporate mobility elements. As a result, actual gender considerations in environmental migration strategies are non-existent. This study found that whenever environmental migration and disaster displacement are mentioned in national plans and policies, the gender aspects remain largely unaddressed. Disaster risk reduction plans may include considerations of forms of human mobility (displacement and shelters) with limited gender focus (for instance, protection measures in shelter scenarios), but their application remains weak and unequal. Furthermore, national and regional frameworks on human mobility (migration laws, free movement protocols, cross border protection systems) and climate strategies (NDCs, adaptation plans) rarely mainstream gender considerations. This requires a stronger approach to addressing environmental migration from a gender perspective.

While the Caribbean is considered to have “unique and particular vulnerabilities” to extreme weather events and climate change, it is also a subregion with unique and particular strengths and opportunities. Existing subregional cooperation systems, such as the Free Movement Agreements within the Caribbean Community (CARICOM) Single Market and Economy (CSME) and the Organisation of Eastern Caribbean States (OECS) Eastern Caribbean Economic Union (ECEU), offer potential avenues to develop a networked approach to disaster and climate resilience. These agreements have been used in the past to facilitate the mobility of persons affected by natural hazards. Other national provisions, including the use of discretion in facilitating entry, are also proof of the subregion’s willingness to protect the rights of displaced persons. However, these frameworks and policies are often not developed and implemented with gender considerations in mind, which may limit their effectiveness.

8. Responding to the needs of marginalized groups requires accounting for multiple, compounded vulnerabilities

As documented in this study, people may experience multiple layers of vulnerability, and gender-based discrimination may interact with other forms of marginalization, such as irregular migration status or lack of access to resources. Persons with disabilities, indigenous populations, LGBTI persons, migrants with irregular status, and other vulnerable groups are especially impacted by disaster and climate shocks and experience poorer recovery outcomes.

Women may experience multiple factors that increase their vulnerability in contexts of displacement, including for instance the situation of Haitian women in the Bahamas and indigenous population in Dominica. Elderly populations can also be particularly affected by the consequences of disasters and the adverse impacts of climate change. When disasters strike, compounded vulnerabilities translate into heightened protection needs, amplified losses, longer stays in precarious displacement situations and more difficulties in recovering. Pre-existing vulnerabilities and limited coping capacities appear to be drivers of the disproportionate displacement of these populations in both countries. Comprehensive solutions are often required to address the multifaceted vulnerabilities of these specific groups.

Considerations for the LGBTI community and non-binary people are largely absent from climate and mobility strategies in the Caribbean. This is especially so for environmental migration and disaster displacement policies, strategies and research. Yet initial evidence shows that the exclusion and discrimination that LGBTI populations face may put them in situations of vulnerability, including heightened risk of violence. Additional attention to how these different factors interact with each other in creating compounded vulnerabilities or enabling specific adaptive capacities is required.

B. Recommendations

Considering the findings of study, a set of specific recommendations can be identified to improve action on the gendered dimensions of environmental migration and disaster displacement across the Caribbean. These recommendations are made in alignment with the major international frameworks relevant to these subjects, including the Global Compact for Migration, the Sendai Framework, and the recommendations of the Task Force on Displacement adopted at the UNFCCC COP24. The findings presented in this study enable the identification of the following priority areas for action:

Gender-responsive policies, plans and actions to address disaster displacement

- **Ensure gender-responsive design, construction and management of emergency shelters and other temporary accommodations in accordance with the Sphere Standards:**⁴⁹ In displacement settings, women and girls are exposed to a wide range of risks and impacts, including GBV, a disproportionate caregiving burden, and poorer recovery outcomes. While the case studies show some progress, further efforts are required to support national emergency management organisations (NEMOs), national gender machineries, community representatives and NGOs to plan for and implement gender-responsive temporary accommodations in the event of disasters and extreme weather events. A review of shelter systems and displacement management plans should be conducted to ensure that relevant protection measures are in place and all people affected by disasters benefit equally from emergency accommodations. Issues, such as shelter design and site selection, child protection, equal participation of women and groups with specific needs, family separation, actions to prevent GBV and collection of gender-disaggregated data, are of critical importance. Grounded in a right to life with dignity, the Sphere Handbook's minimum standards and key indicators offer gender-responsive guidance to meet the differential needs of women, girls, men and boys in emergency settings.
- **Address the protection needs of cross-border displaced migrants from a gender perspective through a review of free movement protocols and national migration policies:** Research shows that most disaster displacement occurs within the boundaries of affected countries. However, Caribbean countries have also witnessed many instances of cross-border displacement facilitated by free movement protocols and national migration policies. While these provisions are useful in enabling affected persons to seek protection abroad, they do not take into account or cater for the specific needs of women and girls in displacement and migration settings. Free movement protocols and national migration legislation on cross-border displacement should be reviewed to identify and act upon opportunities to improve protection and increase options for women and girls in crisis situations, bearing in mind the gendered impacts of displacement and migration and special needs of certain groups based on their gender, age and other characteristics.
- **Mainstream gender into livelihood training, recovery and reconstruction assistance and other support for people and communities that are displaced or evacuated for long periods of time:** Case studies in disaster affected countries show that women and female-headed households tend to stay longer in temporary accommodations in displacement situations. This is due to their reduced ability to recover from shocks and heightened barriers to returning to areas of origin, some of them related to the lack of resources and opportunities to reconstruct homes and rebuild livelihoods. While women generally have equal rights to housing, land title and inheritance in the Caribbean, in practice they have lesser access to credit and lower levels of property ownership. Addressing structural causes for women's reduced access to resources can help women and female-headed households pursue better recovery outcomes and achieve lasting change. Disaster recovery responses should seek to identify opportunities to overcome obstacles to equal access to housing and financial services, for example, by ensuring that property owners are not the only groups that benefit from reconstruction and rebuilding programmes and targeting disaster relief programmes to meet the specific needs of at-risk groups. This can be facilitated through systematic use of gender analyses incorporating sex-disaggregated data following disaster events.
- **Promote stronger involvement of women and other groups with specific needs, such as indigenous and LGBTI persons, in disaster risk reduction (DRR) but also in climate change adaptation and urban planning departments:** The case studies show that including women in DRR at all levels improves disaster responses and recovery outcomes. Promoting the meaningful

⁴⁹ Sphere Association (2018), The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response, 4th ed., Geneva, Switzerland. <www.spherestandards.org/handbook>.

representation of women and marginalized populations in emergency agencies and community preparedness groups is an important input for the adoption of stronger gender-responsive interventions. Provisions on participation in relevant plans and policies can facilitate the involvement of women's and other community groups in DRR and climate change planning and decision-making. Leadership and capacity building programmes targeting women leaders can also be promoted within the DRR and climate adaptation communities, as well as a change in management culture across the Caribbean. The case studies show the pervasive compounded impacts of multiple vulnerability drivers in disaster scenarios. Ensuring the integration of these multiple factors in disaster planning and response is crucial to uphold the protection of the most vulnerable. This can be achieved through the establishment of cross-government working groups including agencies that target vulnerable populations.

Gender-responsive policies, plans and actions to address environmental migration

- **Advance efforts to better map and understand the gender implications of environmental migration in slow onset processes, such as those related to sea level rise, coastal erosion and land degradation:** Caribbean SIDS should be supported to conduct gender analyses on the specific impacts and needs of women, men, girls and boys as a result of slow onset environmental processes. The gender dimensions of environmental migration and disaster displacement remain largely absent from public policies, planning and processes across the Caribbean. This gap requires strong commitment from national and regional actors, with support from the international community, to advance policymaking and implement gender-responsive initiatives to ensure both women and men have equal access to the benefits of migration and are empowered to pursue transformative mitigation and adaptation responses. Capacity building efforts are essential to facilitate adequate public intervention with meaningful participation from women and marginalized groups, including indigenous people, LGBTI persons and persons with disabilities.
- **Address specific gender vulnerabilities in climate sensitive economic sectors, such as agriculture and tourism:** The gender dimensions of climate change require strong action to address the structural causes of gender inequality, in particular from an economic point of view. The case studies show how the labour market integration of men and women and gendered division of labour impact their vulnerability levels. This includes, for example, the situation of women in the agricultural sector, due to limited access to land ownership and credit, the concentration of women in the climate-sensitive tourism/services sector, and the disproportionate caregiving burden of women. Sectoral gender analyses can provide an evidence base for addressing these issues in national development plans as well as climate change adaptation planning. At present, few Caribbean countries mainstream gender in national development plans in a transformative way (ECLAC, 2019b).
- **Advance gender-responsive support for women migrants in urban centers:** The Caribbean is projected to become increasingly urbanized as disasters and climate change degrade and reduce livelihood opportunities in coastal and rural communities. There is still limited engagement with regard to the situation of women migrants in Caribbean cities. Yet initial research points to the vulnerabilities of women who leave degraded areas and often have limited options but to settle in informal areas with poor access to services, violence and insecurity concerns, labour market informality and lack of social protection. The integration of women migrants in the informal labour market should be further addressed as a key area of vulnerability related to the lack of access to social protection. Engaging local authorities and civil society actors appears as a key path forward in identifying vulnerable groups and developing adequate public interventions that can facilitate protection measures, address gender inequalities and promote social cohesion.

- **Tackle the impacts of environmental migration on gendered division of labour and women's disproportionate caregiving responsibilities:** Initial research shows that environmental migration has an important impact on the tasks assigned to genders. This can include the role of female migrants in certain labour market sectors (e.g. services and care) and women's triple burden of reproductive, productive and community managing roles. This burden is amplified in disaster and migration situations, with women having additional responsibilities in communities impacted by natural hazards. In shelters, ensuring separate spaces for affected families and adequate access to WASH, education and healthcare services can encourage sharing of caregiving responsibilities and enable women to pursue livelihood opportunities that meet their recovery needs. In transit and receiving countries, women migrants buttress health-care systems and carry out essential care work, yet little attention is paid to their own health care needs and lack of labour market protections. Further efforts are required to build the capacities of authorities in transit and receiving countries to provide decent work opportunities to migrant women. Access to health care – including mental health as well as sexual and reproductive health services – is crucial in transit and destination areas.
- **Ensure and recognize persons of all genders' capacities as active agents and leaders in disaster recovery and climate mitigation and adaptation responses:** Disaster responses and climate change action represent a window of opportunity to challenge gender inequalities and build resilience of women and men over time. Disaster risk reduction and climate change policies, planning and responses should build on the capabilities, knowledge and unique perspectives of all genders, share mutual benefits among genders, and empower marginalized groups to meaningfully participate in mitigating climate change and pursuing adaptation responses. Such documents can adopt language that promotes women's resilience and leadership opportunities in addition to or instead of highlighting their vulnerability in environmental migration and displacement situations. While women are often more vulnerable than men in disasters and as a result of climate change impacts due to pre-existing inequalities, relevant frameworks can focus on ensuring the specific needs of certain groups are met, avoid portraying women and girls as passive victims, and enshrine opportunities for women's leadership in response and recovery. The potential for transferability of women's leadership initiatives should take into consideration the variability of local contexts and community structures to advance gender equality in disaster displacement and environmental migration.

Improving the availability and use of gender-disaggregated data on disaster displacement and environmental migration

- **Build the capacities of national stakeholders to collect, analyze and utilize gender-disaggregated data in disaster and environmental migration situations for evidence-based policy making:** More needs to be done to strengthen National Statistical Offices in the Caribbean and cross-sectoral collaboration among government departments at all levels in order to improve data collection and analysis capacities as an input to evidence-based policies and programming, so that no one, including women and girls, are left behind, and all groups can benefit from migration (ECLAC, 2017). Better data sharing within the government and other strategic partners will also improve policy coherence, by strengthening and supporting sector specific and targeted services for vulnerable groups, which is a key condition to achieving the SDGs.
- **Mainstream gender in data collection and processing as part of disaster preparedness and response, with the integration of specific needs and factors relating to resilience:** If policy interventions on environmental migration and climate-induced displacement are to be effective and inclusive, they must be based on robust evidence. Gender-transformative approaches rely on a number of enabling factors to ensure more efficient and effective emergency response and recovery,

such as building capacity to generate timely, reliable, and comparable gender-disaggregated data on migration. Creative and purposive sampling methodologies can be used to target the hardest to reach and most marginalized women. Data on displaced and migrant populations should also be disaggregated by age and other important characteristics, including disability status, ethnicity, and migration status, to inform evidence-based policymaking targeting groups with specific needs. Gender-related variables and baseline demographic information on vulnerable groups should be included in national labour and household surveys, censuses and administrative sources in order to provide baseline data for disaster and environmental impact assessments.

- **Improve understanding on GBV at all stages of the mobility continuum:** GBV is demonstrated to be a major concern across the subregion and becomes particularly pervasive in disaster and migration scenarios. Better data and information are still required to facilitate policymaking and public action and protect vulnerable populations against GBV. This effort should aim at limiting the underreporting of GBV occurrences in areas of origin, enabling access to justice, offering women and girls protection measures and developing gender-transformative measures in displacement settings and areas of destination. National gender machineries in areas of origin should conduct regular GBV prevalence surveys in partnership with law enforcement authorities, national statistical offices and other government bodies with gender equality-related portfolios to provide reliable baseline data highlighting the underlying causes of GBV and facilitating appropriate responses in disaster and environmental migration settings.
- **Implement policies and systems to ensure privacy standards and protection of sensitive data on migrant and displaced persons:** Disaggregated data on gender identity, sexual orientation, GBV and irregular migration status should not compromise the security and well-being of migrants and LGBTI persons in countries and regions where discriminatory laws and policies exist and discrimination and violence against these groups are persistent. All data collection and usage should mainstream data protection systems and mechanisms to protect confidentiality and uphold the highest safety, privacy and protection standards.
- **Leverage existing frameworks and initiatives to harmonize data collection mechanisms on the gender dimensions of environmental migration and disaster displacement:** The specific need for standardized, systematic gender-disaggregated data collection procedures in displacement shelters and temporary accommodations requires urgent attention. Subregional frameworks under CDEMA can help in pushing for more harmonized data collection and sharing mechanisms that can facilitate subregional policymaking and avoid the use of inconsistent methodologies across the subregion. ECLAC and IOM have implemented capacity building initiatives on data capture and sharing in emergency and displacement situations.
- **Promote synergies with research institutions that have advanced the study of environmental migration and disaster displacement in the Caribbean and are at the forefront of the integration of gender considerations into data collection and analysis:** This could be carried out through the development of capacity building programmes, creating partnerships between academic institutions, national statistical offices and national emergency management organizations. Training and technical assistance should be offered to governments, disaster response teams and other entities working on the ground with women, girls, indigenous people, migrants and refugees to collect, analyze and use data disaggregated by migratory and indigenous status, gender, age, sexual orientation, and disability.

- **Further research opportunities to identify the specific needs of women and girls in environmental migration and disaster displacement contexts and address data gaps:** Gender-disaggregated data on displacement and environmental migration in Caribbean SIDS is generally lacking and a coordinated approach to fill this gap is needed. Additional research is needed on:
 - The specific legal and protective measures for women and girls who are forced to migrate due to natural hazards and the impacts of climate change. This is key to a better understanding of protection gaps and targeting measures to correct them during the relief, recovery and reconstruction efforts and arrangements (ECLAC, 2017a).
 - How disaster displacement and environmental migration exacerbate gendered disparities in the prevalence of chronic diseases, including diabetes, respiratory diseases and hypertension, which is one of the most common vulnerabilities of displaced persons across the Caribbean.
 - The role of social capital in disaster and climate resilience. As some Caribbean coastal communities increasingly face the prospect of planned relocation due to sea level rise and the impacts of intensified hurricane activity, the implications for social capital and community cohesion could be profound. A focus on resilience building rather than gender-specific vulnerabilities could empower people of all genders to pursue transformative recovery and outcomes.
 - How gender roles are influenced by disaster displacement and environmental migration, with an emphasis on ensuring that response, recovery and mitigation measures do not reinforce patriarchal norms and gender roles and therefore produce negative impacts in terms of gender equality.

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