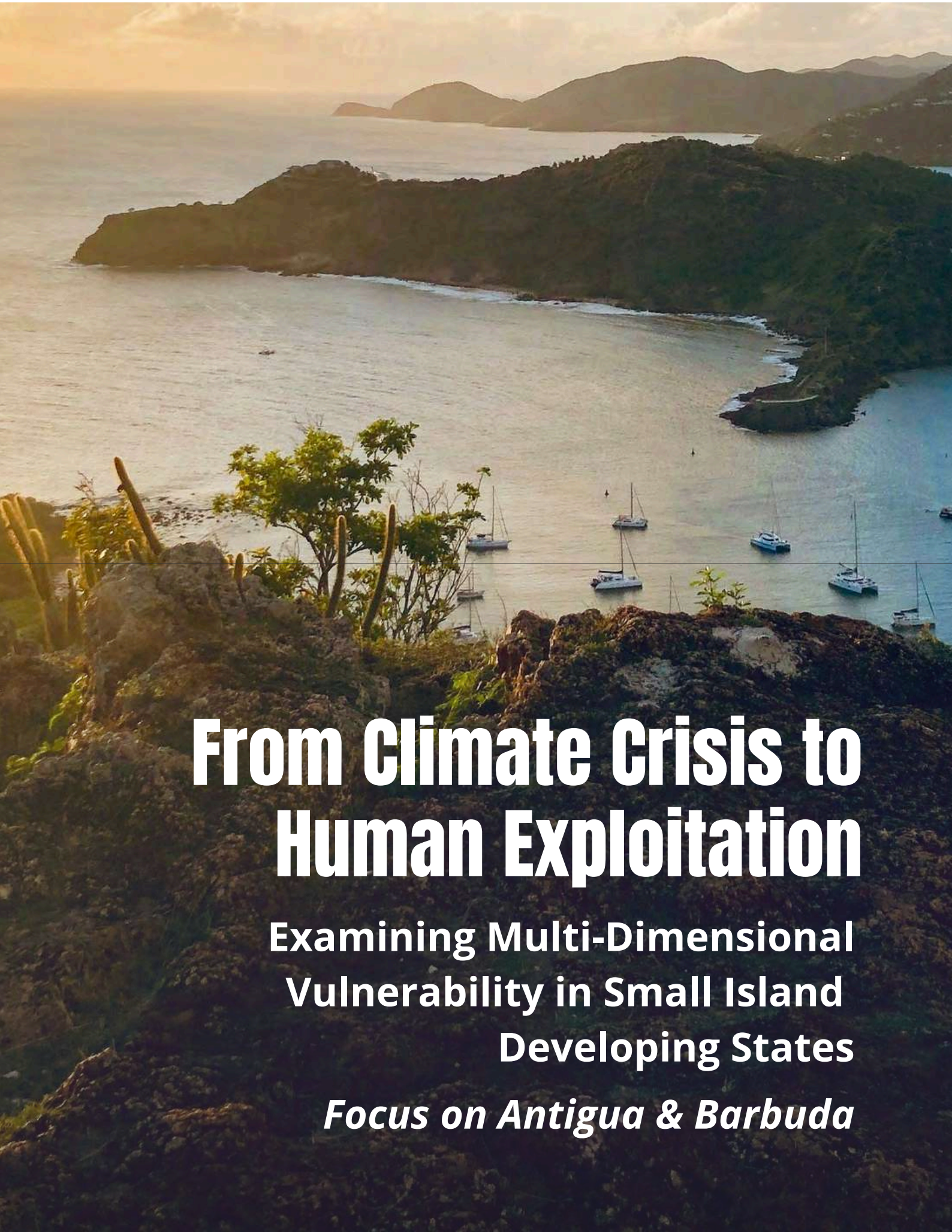
FREE THE SLAVES

CHRI
Commonwealth Human Rights Initiative



From Climate Crisis to Human Exploitation

Examining Multi-Dimensional Vulnerability in Small Island Developing States

Focus on Antigua & Barbuda

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LIST OF ACRONYMS

AOSIS	Alliance of Small Island States
CARICOM	Caribbean Community
CCASAP	Climate Change Adaptation Strategy and Action Plan
CCCCC	Caribbean Community Climate Change Centre
CDEMA	Caribbean Disaster Emergency Management Agency
CSO	Civil Society Organisation
EAG	Environmental Awareness Group
GARD-C	Gilbert Agricultural & Rural Development Centre
IFRC	International Federation of the Red Cross and Red Crescent
IOM	International Organization for Migration
KII	Key Informant Interview
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organisation
OECS	Organisation of Eastern Caribbean States
SIDS	Small Island Developing States
UNEP	United Nations Environment Program
WTO	World Trade Organization

GLOSSARY

Child Labour – Child labour is often defined as work that deprives children of their childhood, their potential, and their dignity, and is harmful to their physical and mental development. It refers to work that:

- Is mentally, physically, socially, or morally dangerous and harmful to children, and/or
- Interferes with their schooling by depriving them of the opportunity to attend school, obliges them to leave school prematurely, or requires them to attempt to combine school attendance with excessively long and heavy work.

(ILO, What is child labour, https://www.ilo.org/topics/child-labour/what-child-labour)

Forced Labour – The term forced or compulsory labour shall mean all work or service which is exacted from any person under the menace of any penalty and for which the person has not offered himself voluntarily.
(ILO, Forced Labour Convention, 1930 (No.129))

Gender-Based Violence – Gender-based violence is any intentional act against a person based on their gender that results (or is likely to result) in physical, sexual, or psychological harm. It may be physical, sexual, emotional (psychological), or even economic. It encompasses harassment, sexual exploitation, reproductive coercion, arbitrary deprivation of liberty, as well as controlling behaviours that isolate an individual or restrict their access to financial resources, employment, education, or medical care. Most gender-based violence is committed against women and girls, but men, boys, and sexual minorities or those with non-binary gender identities may also be subject to it.
(UNFPA, My Body, My Life, My World Operational Guidance, Module 2, 2022, https://www.unfpa.org/sites/default/files/resource-pdf/UNFPA-MBMLMW_MOD2-EN.pdf)

Human Trafficking – Human trafficking or trafficking in persons is the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude, or the removal of organs.
(UNODC, Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, 2000)

Other Forms of Exploitation – The act of taking advantage of something or someone, in particular the act of taking unjust advantage of another for one's own benefit (e.g., sexual exploitation).
(IOM Glossary on Migration, 2004)

Small Island Developing States – Small Island Developing States (SIDS) are a grouping of developing countries that are small island countries and small states, which tend to share similar sustainable development challenges. These include small but growing populations, limited resources, remoteness, susceptibility to natural disasters, vulnerability to external shocks, excessive dependence on international trade, and fragile environments. The SIDS were first recognised as a distinct group of developing countries at the United Nations Conference on Environment and Development in June 1992.
(United Nations, Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States)

Vulnerability - Susceptibility of an individual, or group, to being trafficked, which is determined by environmental or contextual factors (e.g., discrimination) that contribute to creating economic deprivation and social conditions that limit individual choice and make it easier for traffickers and exploiters to operate. More specific characteristics that are commonly cited as relevant to individual vulnerability to trafficking include gender, membership of a minority group, lack of legal status, lack of registration at birth, and unaccompanied movement of minors across borders.
(UNODC, "Abuse of a position of vulnerability and other 'means' within the definition of trafficking in persons," Issue Paper, 2013)

EXECUTIVE SUMMARY

CLIMATE CHANGE AND THE RISK OF HUMAN EXPLOITATION

Climate change and human exploitation are two critical global challenges that are often discussed in isolation. However, there is growing evidence that they intersect in multiple and complex ways. Climate change intensifies environmental degradation and increases the frequency and severity of extreme weather events, transforming everyday living conditions in many regions. Prolonged droughts dry up rivers and wells, floods and storms destroy homes and infrastructure, and rising temperatures reduce soil fertility and agricultural productivity. As water sources become unreliable and crops fail, households face growing food and water insecurity and the erosion of traditional livelihoods such as farming, fishing, and pastoralism. These cumulative pressures push families into poverty, displacement, and climate-induced migration (IPCC, 2022). Under these conditions, individuals and communities become more frequently and more acutely exposed to the risk of exploitation (Jackson, 2023).

WHY SIDS ARE ESPECIALLY AT RISK

While all countries are affected by climate change, its impacts are particularly acute for Small Island Developing States (SIDS), including those in the Pacific and the Caribbean (UNDP, 2024). In these regions, communities maintain deep economic, social, spiritual, and cultural ties to their surrounding ecosystems, making environmental disruption especially destabilising. Geographic exposure, small landmass, and constrained financial and institutional capacity place SIDS on the front lines of climate change, amplifying both the frequency and severity of its impacts.

ANTIGUA AND BARBUDA: CLIMATE-INDUCED VULNERABILITIES

This report focuses specifically on Antigua and Barbuda and is part of a broader research project that examines the nexus between climate change and human exploitation. The project aims to expand the evidence base to inform more targeted prevention and response strategies. Drawing on secondary sources and in-depth interviews with regional experts, the report finds that climate change is generating multi-dimensional vulnerabilities in Antigua and Barbuda.

The most significant link between climate change and human exploitation arises through the loss of livelihoods and subsequent poverty. However, respondents also identified climate change-related health and mental health challenges, inadequate access to safe housing, forced mobility, barriers to quality and continuous education, and food and water insecurity as important pathways to exploitation. These factors are deeply interconnected and frequently reinforce one another, creating a vicious cycle of vulnerability.

Loss of livelihoods is especially evident in climate-sensitive sectors such as tourism—including hotels, yachting, cruise-ship, and diving—where extreme weather events, particularly hurricanes, periodically damage or destroy tourist attractions and accommodation, disrupting the arrival of visitors. Additionally, over the longer term, the declining health of marine ecosystems due to climate change also threatens tourism revenues. Agriculture is similarly at risk, as farmers struggle to sustain traditional crop-growing practices and maintain productivity under changing climatic conditions.

Health vulnerabilities are linked to rising temperatures and heat stress, injuries from extreme weather events, and the spread of infectious diseases facilitated by climate change (WMO & WHO, n.d.). Mental health and psychosocial well-being are also adversely affected, particularly following rapid-onset and traumatic events such as hurricanes. Compounding this is the risk that surges in climate change-related sickness will overwhelm health services and reduce the availability of care. Health infrastructure—including hospitals, medical centres, and pharmacies—is itself vulnerable to damage from tropical storms and hurricanes.

Safe housing represents another critical challenge. Extreme weather events cause widespread damage to residential housing, creating a shortage of safe and suitable accommodation. Similar impacts are observed across public buildings and infrastructure—including schools, hospitals, and hotels—as well as private businesses. These challenges are compounded by rising home insurance costs and the increasing expense of materials needed to strengthen homes against the destructive impact of hurricanes. People living in informal settlements or unsafe housing face heightened risks of forcible displacement, with thousands in Antigua and Barbuda at risk of displacement by sudden onset hazards each year. Similarly, low-lying coastal communities are also at increasing risk from sea-level rise, often forcing them to relocate inland into informal or precarious accommodation. Unsafe housing and forced mobility are therefore closely linked, exposing individuals and communities to multiple, reinforcing vulnerabilities.

Education is also disrupted by climate change. Children and adolescents from displaced communities often face interruptions to schooling, as re-enrolment processes take time and require significant adjustment. More broadly, schools are frequently repurposed as shelters following climate-related events, while excessive heat undermines students' and teachers' ability to concentrate and perform. Respondents also noted increased anti-social behaviour, including violence among students, in contexts where heat-related stress and irritability are prevalent.

Finally, the report finds that climate change significantly exacerbates food and water insecurity in Antigua and Barbuda. Rising temperatures and irregular rainfall place severe pressure on water resources, already scarce in the country. Droughts and extreme weather events reduce agricultural yields, while increasing sea surface temperatures and coral bleaching contribute to declining fish stocks.

PATTERNS OF EXPLOITATION AMONG WOMEN AND GIRLS

Against this backdrop of compounded vulnerability, the risk of exploitation increases. While loss of livelihood remains the primary driver, other factors—particularly those that deepen poverty—play a significant role, especially for women and girls. Interviewees reported that when climate change undermines income-generating opportunities, some women facing limited alternatives may seek work in local bars, where tasks may extend beyond waitressing to include sexual activity for clients who pay for the "extra service". As women and girls become economically dependent on such arrangements, they face heightened risks of systematic sexual exploitation by bar managers or intermediaries seeking to maximise profit.

Interview data also revealed that women and girls are disproportionately exposed to domestic violence. This pattern is closely linked to cultural norms that, under economic strain, may implicitly encourage or exacerbate harmful behaviours. In Antigua and Barbuda, as in many Caribbean societies, men are often socially expected to act as the head of the household and to provide for the family. This role is deeply ingrained, and a man who is unable to fulfil this role can face significant social and psychological pressure. When climate change disrupts livelihoods and undermines this role, feelings of frustration and loss of confidence can manifest in increased alcohol consumption, verbal abuse, and domestic violence.

PATTERNS OF EXPLOITATION AMONG MEN AND BOYS

Interviewees emphasised that men and boys are also vulnerable to exploitation following climate-related events. Many are pushed into informal, low-skilled manual labour, such as construction or gardening. In these roles, it is not uncommon that the employer systematically delays or does not pay their wages. Some boys in their late teens and early twenties are also exploited within the sex industry, although these experiences are less visible and under-reported due to social stigma.

EXISTING NATIONAL AND REGIONAL RESPONSES

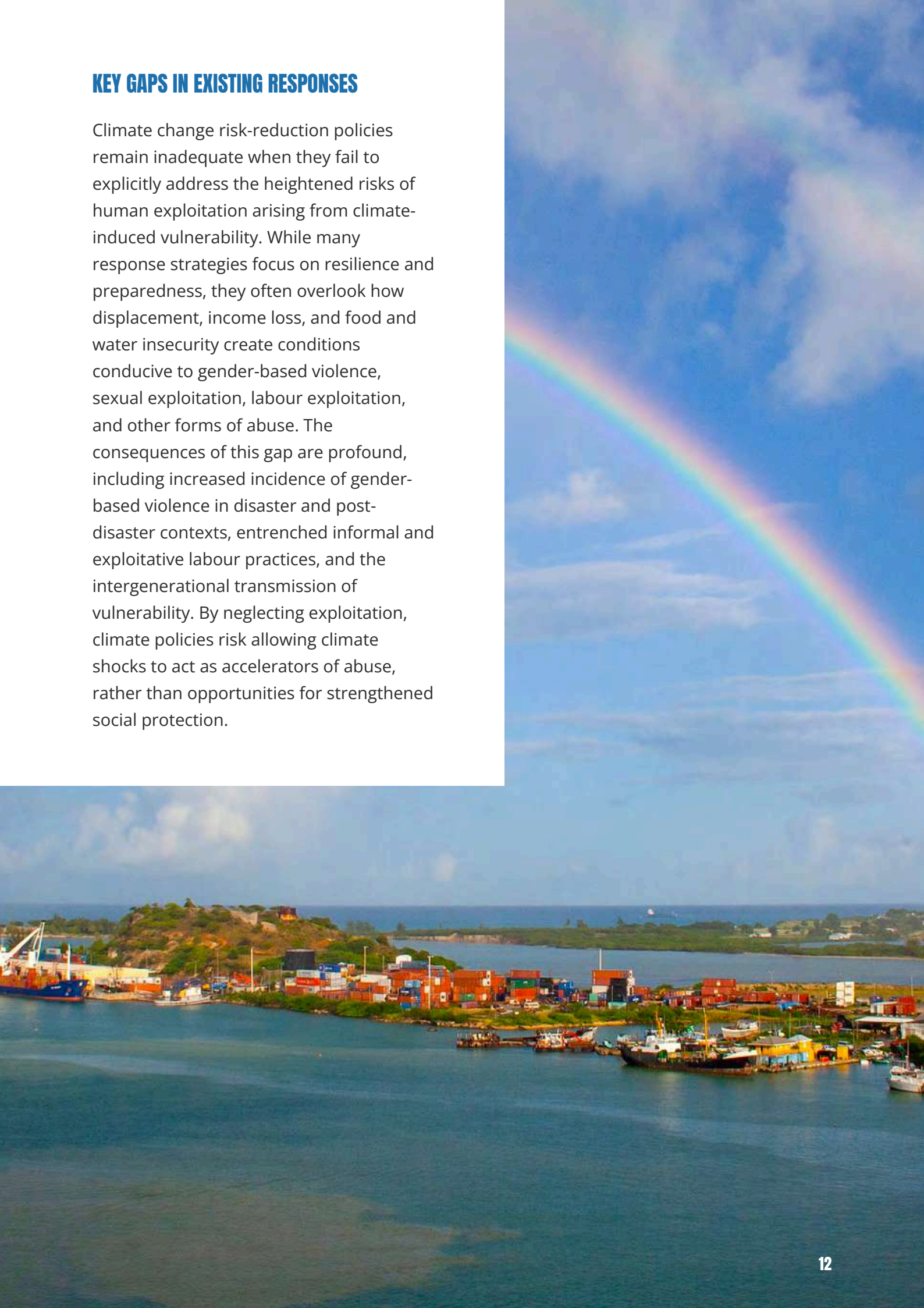
At both national and regional levels, initiatives are underway to address the challenges of climate change and to reduce associated vulnerabilities. In Antigua and Barbuda, the government has introduced a revolving loan programme that enables residents to access low-interest loans to hurricane-proof their homes. Importantly, and in recognition of the gendered impacts of climate change, women—particularly those heading households—are prioritised in the allocation of loans.

Civil society organisations (CSOs) and non-governmental organisations (NGOs) play a critical role, including by building people's skills in climate change-resilient agriculture, by integrating local and traditional knowledge to strengthen the responsiveness of vulnerable sectors to a changing ecosystem, and by providing psychological support to communities affected by climate-related shocks.

Regionally, bodies such as the Caribbean Community (CARICOM), the Organisation of Eastern Caribbean States (OECS), and the Caribbean Disaster Emergency Management Agency (CDEMA) are invested in addressing the link between climate change and multi-dimensional vulnerabilities. However, the research finds that there is still limited understanding of how climate-induced vulnerabilities facilitate human exploitation. As a result, climate responses and anti-exploitation strategies remain insufficiently integrated and coordinated at both national and regional levels.

KEY GAPS IN EXISTING RESPONSES

Climate change risk-reduction policies remain inadequate when they fail to explicitly address the heightened risks of human exploitation arising from climate-induced vulnerability. While many response strategies focus on resilience and preparedness, they often overlook how displacement, income loss, and food and water insecurity create conditions conducive to gender-based violence, sexual exploitation, labour exploitation, and other forms of abuse. The consequences of this gap are profound, including increased incidence of gender-based violence in disaster and post-disaster contexts, entrenched informal and exploitative labour practices, and the intergenerational transmission of vulnerability. By neglecting exploitation, climate policies risk allowing climate shocks to act as accelerators of abuse, rather than opportunities for strengthened social protection.



SUMMARY OF RECOMMENDATIONS

FOR THE GOVERNMENT OF ANTIGUA AND BARBUDA

- **Invest in climate-resilient infrastructure.** Investing in climate-resilient infrastructure reduces vulnerability by safeguarding livelihoods and ensuring access to essential services. This includes secure temporary shelters for displaced populations, which help reduce exposure to exploitation following disasters. Targeted investment in key sectors such as tourism can also limit climate-related disruptions and protect incomes.

- **Enhance water and food security.** Strengthening water and food security reduces vulnerability by ensuring reliable access to basic needs, thereby lowering the risk of displacement and exploitative coping strategies such as debt-bondage or exploitative labour. Measures such as desalination, rainwater harvesting, water-efficient technologies, climate-resilient crops, diversified farming, and improved food storage help stabilise access to food and water, reducing exposure to exploitation.

- **Integrate climate risk reduction into the tourism sector.** Embedding climate risk reduction in tourism policy and planning protects jobs and livelihoods while reducing exploitation risks. Safeguarding natural assets, upgrading tourism infrastructure, and diversifying tourism activities can sustain economic stability and reduce reliance on informal or high-risk employment.

- **Invest in climate-resilient agriculture.** Climate-resilient agriculture strengthens livelihoods and food security by reducing climate shocks. Actions such as diversifying crops and livestock, ensuring efficient water management, developing resilient crop varieties, and using technology to support farm planning improve productivity and resilience.

- **Ensure continuity of education.** Maintaining education in climate-affected areas reduces vulnerability to exploitation by supporting skills development, awareness of rights and risks, and long-term economic resilience. This requires climate-adapted school infrastructure, safe learning environments, and community-based education programmes that function during periods of disruption. Additionally, integrating education on climate change and traditional knowledge related to agriculture, architecture, and cultural survival into the education system could strengthen the country's capacity to respond to climate change.

- **Support livelihood diversification.** Livelihood diversification reduces exploitation risks by expanding stable income options and building economic resilience in climate-affected contexts. Vocational training, wage employment pathways, small enterprise support, and access to seed funding all work to strengthen economic resilience.

- **Cooperate with regional and international partners.** Regional and international cooperation can elevate Caribbean perspectives in global climate and migration forums. Sharing regional evidence and strengthening diplomatic advocacy supports the integration of anti-trafficking measures into climate adaptation and migration governance, including through region-wide initiatives focusing on climate resilience.

FOR CARICOM

- **Introduce exploitation considerations in climate and development policies.** CARICOM should promote a whole-of-government approach that integrates exploitation risks into climate and development strategies, applying a human exploitation lens to address structural drivers rather than treating climate change and exploitation as separate issues.

- **Strengthen regional collaboration.** Enhanced coordination among CARICOM Member States and regional institutions—such as the CARICOM Secretariat and the Caribbean Community Climate Change Centre (CCCCC)—can support the sharing of good practices, resources, and expertise, strengthen capacity building and information exchange, and enable more coherent and sustainable responses to climate-related vulnerability and exploitation.

FOR NON-GOVERNMENTAL AND CIVIL SOCIETY ORGANISATIONS

- **Conduct community education initiatives.** Community education on climate risks and exploitation should target high-risk groups before disasters occur. Early awareness improves preparedness, reduces vulnerability, and strengthens access to information and protection mechanisms.

- **Advocate with government actors.** NGOs and CSOs should advocate for integrating exploitation prevention into national climate plans, including vulnerability assessments, safeguards for at-risk groups and protections during displacement, recovery, and reconstruction processes.

- **Support research and inform evidence-based solutions.** Continued research is essential to understand the links between climate change, vulnerability, and exploitation and to inform effective interventions. Community-based research helps capture lived experiences, identify priority needs, and develop locally grounded solutions that enhance resilience and reduce exploitation risks.

INTRODUCTION

Climate change and climate change-related extreme weather events—such as droughts, floods, landslides, typhoons, glacier melting, sea level rise, and temperature rise—can destabilise individuals, communities, and economies (IPCC, 2022). They can damage private property and public infrastructure, such as schools, healthcare centres, and roads; destroy the natural environment, including water resources and food supplies; disrupt traditional livelihoods, especially agriculture, husbandry, and fishing; cause death and physical injuries, as well as psychological stress and trauma; cause or aggravate illnesses; drive forced mobility and displacement; and contribute to political instability and conflict including competition over scarce resources.

As emerging evidence suggests, individuals and communities who are affected by the adverse impacts of climate change may find themselves more vulnerable to the risk of human exploitation (Jackson, 2023). On the one hand, people affected by climate change may become easier targets for human traffickers eager to exploit their vulnerability and hardships for personal (material or immaterial) profit (Calma, 2017). Sectors such as agriculture and fishing—both highly climate sensitive—are particularly affected. As climate impacts intensify, people who depend on these sectors may be forced by poverty to transition into unfamiliar or informal forms of work, where risks of unsafe, undignified, and exploitative conditions are significantly higher.

Evidence from other regions illustrates how climate-induced livelihood loss can translate into severe forms of exploitation. In Cambodia, for example, rural households struggling to repay loans taken on to cope with climate-related damage to agricultural production have been forced to migrate to urban areas, where many become trapped in debt bondage in brick kilns (Brickell et al., 2018). Climate variability further entrenches this exploitation: when heavy rains halt kiln operations, workers are compelled to borrow additional money from kiln owners to meet basic needs, deepening the cycle of debt (Natarajan et al., 2019). Similarly, in the Philippines, climate change-related disasters such as typhoons have driven families into extreme poverty, in some cases resulting in children being forced into online sexual exploitation or hazardous labour in sectors such as construction and mining (Free the Slaves, 2023).

While comparable, well-documented patterns of climate-induced exploitation have not yet been systematically evidenced in the Caribbean to the same extent, this should not be interpreted as an absence of risk. Rather, it reflects a significant research gap. The structural conditions that have facilitated exploitation in other regions—climate-sensitive livelihoods, limited economic diversification, weak social protection, debt dependence, and repeated exposure to shocks—are also present across much of the Caribbean. With more targeted research and analysis, similar pathways between climate impacts and exploitation are likely to be identified within the region.

To date, what is more commonly documented in the Caribbean following environmental shocks is forced mobility and the erosion of livelihoods and skills. This has included displacement linked to volcanic activity, as seen during repeated eruptions of the Soufrière Hills volcano in Montserrat, as well as large-scale livelihood loss and deskilling following extreme weather events, such as Hurricane Beryl.

In 2024, Hurricane Beryl battered the Eastern Caribbean, affecting over 1.2 million people across Barbados, Grenada, Jamaica, and Saint Vincent and the Grenadines (IFRC, 2024). Barbados' fishing industry was particularly devastated, with over 75% of the fishing fleet damaged—most of it uninsured (IFRC, 2024b). Fishing in Barbados is not only an economic activity but also contributes to the country's cultural identity and heritage, social cohesion and local economies, while providing a modest contribution to national GDP (World Bank, 2024). Many fisherfolk and fish hawkers inherit their occupations intergenerationally and have few options for alternative livelihoods. More than a year after Hurricane Beryl, many remain unable to work or earn at pre-hurricane levels (IFRC, 2024). As storms intensify and ocean conditions change—affecting coastlines and fish stocks—livelihood insecurity is becoming increasingly entrenched (IFRC, 2024b). With little recovery time or access to resources between successive shocks, some fisherfolk have been forced to borrow money to survive, facing difficult trade-offs between basic needs such as rent and food.

On the other hand, climate change may also push individuals and households to adopt harmful coping strategies that ultimately result in the exploitation of them or their family members (UN Women Fiji, 2014; World Bank, 2012). Some people may do so without fully appreciating the risks of trafficking or abuse involved in that decision (Free the Slaves, 2023), while others proceed despite recognising those risks, believing that no viable alternatives exist (Alston et al., 2014).

In Haiti, where approximately half the population lives in rural areas and depends on small-scale, rain-fed agriculture as their main source of income, climate and weather shocks are increasingly frequent and sources of severe disruption to livelihoods. Hurricane Michael, for example, destroyed an estimated 90% of crops nationwide in 2019. Faced with recurring shocks, many farmers prioritise immediate survival over long-term sustainability, selling assets, exhausting savings, taking on debt, or relying on disaster relief to rebuild—strategies that, over time, entrench vulnerability and heighten exposure to future shocks (Staub et al., 2020).

While no country is immune to the effects of climate change, Small Island Developing States (SIDS) are especially vulnerable. SIDS, in fact, have long-standing economic, social, spiritual, and cultural connections to the surrounding ecosystems. Their geographic exposure, small landmass, and constrained financial and institutional capacity further place SIDS on the front lines of climate change, amplifying both the frequency and severity of its impacts.

The Caribbean is one of the regions most affected by climate change, experiencing more frequent and intense hurricanes, rising air and sea surface temperatures, rising sea levels, widespread coral bleaching, and shifting precipitation patterns (Development Bank of Latin America and the Caribbean, 2023). Despite this acute exposure, the nexus between climate change and human exploitation remains relatively under-explored and poorly understood in the Caribbean, as in other regions. As a result, it remains inadequately addressed in policy and practice. Anti-exploitation measures are rarely integrated into climate adaptation and disaster risk reduction frameworks, and climate risks are seldom considered in efforts to prevent and respond to human exploitation.

Building on these considerations, this report focuses on Antigua and Barbuda to examine the intersection between climate change and vulnerability to human exploitation in SIDS. Specifically, it seeks to identify how climate change contributes to conditions that facilitate exploitation and to highlight interventions that can help to address this nexus. In doing so, the report provides context-specific evidence that deepens understanding of how climate change shapes vulnerability to exploitation and offers guidance for more comprehensive and effective responses to human exploitation in climate change-affected contexts.

Several factors informed the selection of Antigua and Barbuda as a case study. First, the country has been significantly affected by climate change, including through hurricanes, droughts, rising temperatures, and changing rainfall patterns. Second, as most Antiguans and Barbudans rely on income-generating activities that depend on the surrounding ecosystem, environmental challenges have directly undermined economic security and well-being. Third, Antigua and Barbuda faces documented instances of human exploitation, particularly forced labour, labour exploitation, and sex trafficking—including the exploitation and trafficking of minors. Gender-based violence against women and girls also remains a serious human rights concern in the island nation. Taken together, these factors make Antigua and Barbuda a compelling case through which to examine the linkages between climate change and human exploitation.

This report is a collaborative effort between Free the Slaves (FTS) and the Commonwealth Human Rights Initiative (CHRI), informed by contributions from stakeholders across the Caribbean. It is intended for a broad range of stakeholders, including policymakers from SIDS and CARICOM, members of the Commonwealth 8.7 Network, UN offices at national and regional levels, local and regional civil society organisations, the media, and the wider public.

RESEARCH METHODOLOGY

RESEARCH QUESTIONS

Examining the intersection between climate change and human exploitation, this report seeks to address the following questions:

1. What vulnerabilities does climate change introduce and exacerbate?

2. How do climate change-related vulnerabilities contribute to human exploitation?

3. What responses, if any, are currently in place to address the intersections of climate change and human exploitation?

4. What further actions could be taken to strengthen the response to climate change and human exploitation?

RESEARCH METHODS

The research employed a qualitative approach, including the following methods:

DESK REVIEW

The research interrogated existing literature on climate change and human exploitation to understand how they intersect, identify gaps in knowledge, and inform the research framework. Sources included government reports, NGO studies, academic literature, and media reports.

KEY INFORMANT INTERVIEWS

In-depth key informant interviews (KIIs) were conducted with 12 respondents with well-documented knowledge of and expertise on climate change and human exploitation in Antigua and Barbuda, as well as the wider Caribbean region. Participants included government officials, NGO and civil society representatives, academics, and representatives of local and regional UN agencies. The interviews were conducted remotely between January and March of 2025, with participants identified through a combination of expert sampling and snowball sampling.

DATA ANALYSIS AND LIMITATIONS

All interviews were transcribed in an anonymised format and analysed thematically through ATLAS.ti. A deductive approach was applied using predefined codes such as “climate change”, “forced labour”, “sex trafficking”, and “vulnerability”, alongside an inductive approach that generated new codes such as “gender-based violence”, “tourism”, and “education”.

While this research provides much-needed evidence on the links between climate change and exploitation in SIDS using Antigua and Barbuda as a case study, time and resource constraints meant that fieldwork with affected communities was not possible.

We believe that future research would benefit from a deeper engagement with community members directly affected by climate change and its impacts. Community engagement would enable the integration of perspectives of people with direct experience of vulnerability and/or resilience in contexts of climate crisis; enhance understanding of the complex vulnerability and resilience dynamics; and inform more responsive and community-driven support mechanisms.

BACKGROUND

Antigua and Barbuda is an independent Commonwealth country comprising its two namesake islands and several smaller ones. With a total area of 440 km^2, it is one of the smallest countries in the Caribbean. The country is known for its reef-lined beaches, rainforests, and tourism-oriented economy, with English Harbour serving as a major yachting hub that attracts visitors from around the world. Antigua and Barbuda shares maritime borders with Anguilla, Saint Barthélemy, and Saint Kitts and Nevis to the west, Montserrat to the southwest, and Guadeloupe to the south. It is a member of the United Nations, the Organisation of Eastern Caribbean States (OECS), the Regional Security System, the Caribbean Community (CARICOM), and the World Trade Organization (WTO).

The country has a population of approximately 94,209 people (UN DESA Population Division, 2024) - the majority of whom reside on Antigua, with only around 1,600 permanent residents on Barbuda. Over 60% of the population lives in coastal areas, increasing exposure to climate-related hazards (Antigua and Barbuda Red Cross, 2024).

Antigua and Barbuda has a tropical maritime climate, characterised by wet and dry seasons, with minimal variation apart from the hurricane season, which typically runs from June to November. Tourism is the country's dominant economic sector, accounting for approximately 80% of GDP. Its sustainability is closely linked to the country's natural environment and ecosystems (WMO and WHO, n.d.).

The Caribbean is one of the regions most affected by climate change and extreme weather events. The region is seven times more likely to experience natural disasters than larger states and twice as likely as other SIDS (IMF, 2018). Despite contributing a negligible share of global greenhouse gas emissions, Caribbean countries are disproportionately more vulnerable to climate risks (IMF, 2018). On average, they suffer annual storm-related losses equivalent to 17% of GDP, with impacts varying widely depending on the severity of the storm and the size of the country's GDP—from around 1% loss in Trinidad and Tobago to as much as 74% in Dominica. These losses are compounded by other extreme natural events, including earthquakes, floods, and droughts (UNDP, n.d.).

Within the Caribbean region, Antigua and Barbuda is particularly vulnerable to climate change. Between 1950 and 2014, the country experienced more than 503 disasters that directly affected 33,874 people (Othering & Belonging Institute, n.d.). Climate change is also expected to further increase the frequency and intensity of extreme events such as droughts, hurricanes, and flooding (IOM, 2023).

The most common climate-change related impacts in Antigua and Barbuda include (Othering & Belonging Institute, n.d.):

- Rising sea surface and air temperatures
- Rising sea levels
- More frequent hurricanes
- Coral bleaching, with consequent disruption to maritime ecosystems
- Changing precipitation patterns

Climate change projections for Antigua and Barbuda suggest that (FAO, n.d.):

- the country will likely receive less overall rainfall – possibly up to 40% less
- the country can expect more frequent and more intense downpours, increasing the risk of flooding
- increased risk of more extreme hurricanes.

The year 2017 marked a particularly severe period, when Antigua and Barbuda was affected by three major hurricanes - Irma, Jose, and Maria. Hurricane Irma was the strongest storm ever to hit the Caribbean Leeward Islands, causing widespread devastation (WMO & WHO, n.d.).

CLIMATE CHANGE-INDUCED VULNERABILITIES

HOW CLIMATE CHANGE INTRODUCES AND EXACERBATES HUMAN VULNERABILITY

> There are many non-physical impacts of climate change that are not well-documented and need to be understood.
> (CSO Representative, KII10)

LOSS OF LIVELIHOOD

Once based primarily on agriculture, Antigua and Barbuda's economy has transitioned into a service-based, tourism-driven economy. Tourism accounts for approximately 80% of the country's GDP and generates more than half of national employment, directly and indirectly. Yachting, cruise ship tourism, and diving tourism are key components of the sector and major sources of income for the country (The Commonwealth, n.d.).

Tourism is particularly vulnerable to the impacts of climate change due to the exposure of tourist infrastructure to extreme weather events and sea-level rise, as well as the declining health of marine ecosystems—such as coral reefs and beaches—on which tourism activities depend (Bradshaw et al., 2020). As a result, climate change poses significant risks to the livelihoods of those employed in the sector (Antigua and Barbuda Red Cross, 2024).

> A couple years ago we had a huge situation with the Sargasso seaweed. Most beaches were touched, especially on the northern side of the island. It was horrible. It has a very iodine smell...strong and potent and very uncomfortable. Of course, you can't get in the water. That was an issue a few years ago, which impacted the tourism sector.
> (Trade Union Representative, KII1)

Beyond tourism, other contributors to the country's GDP include fishing, manufacturing, construction, mining, and quarrying. Agriculture continues to play an important role, with key products including cotton, livestock, vegetables, pineapples, and fish. Many of these activities are highly climate-sensitive, exposing workers in these sectors to growing risks of disruption to their livelihoods.

Climate change has also caused significant losses to land-based industries through tropical storms and cyclones (Shelton et al., 2024; Cetina-Heredia & Allende-Arandía, 2023). One respondent reported that many women have entered the beauty industry in recent years. However, when extreme weather events occur, their shops and informal workplaces are easily damaged or destroyed, leaving those women without stable income (KII3, CSO represenative). Similar challenges affect small roadside businesses selling fast food. If their premises are destroyed or damaged, livelihoods are immediately disrupted, putting pressure on incomes. In addition, produce from Dominica arrives by boat once or twice a week. When rough seas disrupt shipping schedules, vendors in Antigua and Barbuda have nothing to sell, and thus no income (KII3, CSO representative).

Despite Antigua and Barbuda's high-income status, approximately 18% of the population lives below the national poverty line, including 3.7% who are indigent (food poor). An additional 10% are vulnerable to poverty in the event of a significant socio-economic shock or natural hazard. When such shocks are taken into account, the portion of the population at risk of falling into poverty rises to 28% (UNFCCC, 2021).

> Take, for example, the fisherfolk; their livelihood is impacted because the marine life has been disrupted
>
> (CSO Representative, KII3)

> For a country that's tourism-dependent, when you have an entire island decimated [as occurred with Hurricane Irma in 2017] the impact on the tourism and people's livelihoods is significant. For weeks, if not months, no one was inhabiting Barbuda, and everyone working in fishing or small-scale farming lost their livelihoods.
>
> (CSO Representative, KII4)

Households affected by the loss of livelihoods are at greater risk of falling into poverty. This risk is compounded by rising costs of goods and services linked to extreme weather events, including insurance premiums, food prices, and building supplies (UNFCCC, 2021). Capital flight can further exacerbate vulnerability to poverty, for example, when international financial institutions close or sell their local branches to limit exposure to climate-related risks.

> Climate change contributed to the loss of jobs. That is of particular significance because Antigua is now rated as a middle-income country, which says that our cost of living is above some of our sister Caribbean countries. So, being without a job puts severe pressure on individuals.
>
> (CSO Representative, KII3)

It is important to recognise that, across SIDS, people's capacity to recover from the impact of adverse climatic events varies significantly based on several factors such as occupation, gender, age, disability, and wealth.

> Your vulnerability obviously depends on your profession, on your financial life. Everybody is being affected, but the ability to cope is different... People in more affluent areas of Antigua are better able to cope because they have the financial resources to prepare themselves, for instance, by making their houses more resistant to hurricanes.
>
> (Government Official, KII5)

Women are often disproportionately affected, as tourism and small business sectors employ a high proportion of women. Moreover, women are disproportionately represented among those living in poverty and indigence in Antigua and Barbuda. Climate change impacts are therefore experienced unevenly, with poor women—particularly single heads of households in rural areas—facing greater vulnerability to economic and climate shocks compared to more affluent, educated, urban women (IDB, 2020). Respondents further noted that men are often able to return to work more quickly after disasters due to greater access to alternative employment options (KII5, government official).

> For example, women might be stuck at home. If the school is closed, women tend to stay home with the kids, while men might go back to work in reconstruction, rebuilding the country… men get back to work because they are able to move from fishing, they might be able to go work as a day laborer on a construction site. They might have some skills in terms of doing other things, working with heavy equipment, moving the debris, and so on, while women remain without income for significantly longer periods of time.
>
> (Government Official, KII5)

While this study focuses on Antigua and Barbuda, many of the dynamics identified are shared across Caribbean SIDS. One respondent—an Antiguan national with experience working in Dominica—highlighted how climate change has contributed to the loss of shorelines and beaches, directly affecting tourism-dependent business located along the Dominican coast, including restaurants, hotels, and souvenir shops (KII5, government official).

As another interviewee noted, the consequences of such disruption are stark:

> What alternatives do people have to make an income if there are less opportunities in tourism? There is no other sector to divert to! Poverty is rampant.
>
> (CSO Representative, KII10)

Heavy reliance on climate-exposed sectors such as tourism leaves Caribbean societies vulnerable to exploitation in broader and more systemic ways. Recent experiences from the region illustrate how climate shocks can disrupt not just individual businesses, but the entire tourism product on which livelihoods depend. Following Hurricane Melissa in 2025, which severely affected parts of Jamaica, hotels, tourist attractions, transport infrastructure, and sites of natural and cultural heritage were damaged or destroyed (UN News, 2025). Large segments of the tourism sector ceased operating, leaving many residents without income and with limited alternative employment options (Sreeharsha and Charles, 2025). With recovery expected to take several years, affected workers remain exposed to heightened economic insecurity and risks of exploitation. This underscores how climate impacts on tourism reverberate across Caribbean economies, amplifying vulnerability well beyond the immediate disaster zone.

HEALTH

Human health and well-being in Antigua and Barbuda are also increasingly threatened by climate change. Climate-related health impacts may be direct, indirect, or diffuse. Direct impacts include heat stress resulting from rising temperatures and physical injury caused by extreme weather events. Indirect impacts include the spread of vector-borne, waterborne, and foodborne diseases driven in part by saltwater intrusion into freshwater aquifers (WMO & WHO, n.d.). Diffuse impacts include deteriorating mental health and psychosocial well-being, as well as an increase in non-communicable diseases (WHO, 2020).

Rising temperatures are of particular concern. Climate change is expected to increase mean annual temperatures as well as the frequency and intensity of heat waves, thus heightening the risk of heat-related illness. Heatwaves also pose risks to human, animal, and plant health, resulting in loss of life and livelihoods, reduced labour productivity, increased demand for and cost of cooling, as well as contributing to the deterioration of environmental determinants of health, including air quality, soil conditions, and water supply (WMO & WHO, n.d.).

One respondent noted that higher temperatures have also altered daily behaviour, with people exercising outdoors less frequently, and not everyone able to afford alternatives such as gym memberships. The result is a less healthy population overall. These pressures are compounded by the risk that climate-related illness surges may overwhelm health services and reduce access to healthcare. Health infrastructure itself is also vulnerable to damage or destruction from extreme weather events, including tropical storms and hurricanes (Antigua and Barbuda Red Cross, 2024).

Two respondents further highlighted that climate change does not affect all populations equally. Members of the LGBTQI+ community, for example, may face pre-existing barriers to accessing healthcare, which can be exacerbated in climate change-affected contexts, leaving them more vulnerable and with fewer recovery options at their disposal (KII6, academic).

> Mental health is impacted because, during and after a hurricane, it's like being under a bombing - eight hours there without moving, without knowing if your family is alive. It is extremely hard for people to function after those episodes. The lack of support for mental health in Antigua and Barbuda and the fact that mental health is seen as a taboo only adds to the hardships. (CSO Representative, KII10)

HOUSING

As climate change drives increasingly frequent and intense hurricanes in the Caribbean, housing has become a pressing concern in Antigua and Barbuda. Extreme weather events cause widespread damage to residential properties, displacing residents and creating shortages of safe and adequate accommodation. Public buildings and infrastructure—including schools, hotels, and businesses—are similarly affected, compounding housing insecurity and disrupting essential services (UNFCCC, 2021).

Against this backdrop, questions of housing resilience are not new in the Caribbean context. Traditional architectural practices in Antigua and Barbuda, as elsewhere in the region, have long reflected adaptive responses to environmental conditions (Watson, 1998). These practices offer important insights into how housing can support resilience in the face of climate-related hazards.

One notable example is the chattel house —an indigenous architectural form that emerged following emancipation and was, for a time, the primary housing option available to formerly enslaved persons (UNESCO, 2005; Ostroukh, 2015, p. 393). Designed to be lightweight and movable, chattel houses enabled households to relocate in response to changing economic and environmental circumstances. Their design also facilitated natural ventilation and cooling, making them well suited to the Caribbean climate and adaptable to coastal living and periodic displacement (Watson, 1998).

Photo: Robert Warner

Despite these adaptive qualities, many features that once supported the climate resilience of chattel houses are increasingly being lost, largely due to their limited ability to withstand extreme weather events—particularly hurricanes and the high winds, heavy rain, and flooding that accompany them. As Antigua and Barbuda has modernised its housing stock in pursuit of development, improved living standards, and disaster resistant architecture, newer housing models have often prioritised permanence and conventional construction materials over flexibility, ventilation, and environmental responsiveness. This shift away from traditional housing forms has, in some cases, reduced households' capacity to adapt to climate-induced risks such as shoreline erosion and displacement—particularly in coastal and low-lying areas (Watson, 1998; Ostroukh, 2015).

At the same time, contemporary housing challenges linked to climate change have intensified. Rising climate risks have driven up the costs of home insurance, while materials needed to strengthen homes and improve resilience to hurricanes have become increasingly expensive (UNEP, 2023).

> It is very disconcerting when you are in your house and you have water past your ankle. I've experienced that on two occasions and had to be evacuated from my home because of the floodwaters. Therefore, I know that disasters are real.
> (Government Official, KII8)

Droughts and saltwater intrusion due to sea-level rise further threaten freshwater supplies, undermining sanitation and making it difficult to maintain adequate living conditions at the household level (WMO & WHO, n.d.). Displacement due to climate-related disasters can also lead to overcrowding in unaffected areas, placing additional strain on housing availability and social cohesion.

Following Hurricane Irma in 2017, 95% of housing stock in Barbuda was damaged or destroyed, and the entire population of approximately 1,600 persons was evacuated to Antigua (UNFCCC, 2021). The eye of the hurricane passed directly over the island, severely damaging most of its infrastructure—including basic services such as roads, electricity transmission, water treatment, telecommunications, and wastewater treatment.

In the longer-term, sea level rise is likely to force relocation away from coastal areas. However, such relocation presents significant practical and economic challenges (UNDP Climate, 2021).

> Relocation from the shoreline is not an easy feat, given that the topography of our land dictates that… the inner parts of the country are very mountainous, very expensive to build on, [and] very expensive to construct roads. And so, the coastlines have always been where persons locate because of ease and because of the lower cost of construction. But that is changing now as well.

(Government Official, KII5)

HUMAN MOBILITY

Climate-related disasters are widely recognised as drivers of migration and displacement (Berlemann & Steinhardt, 2017), a trend of growing relevance to the Caribbean (IMF, 2018). Existing mobility patterns in the region include voluntary migration for economic opportunities, education, and tourism; displacement; and migrant smuggling within and beyond the region. Climate change is expected to intensify these dynamics, increasing forced and involuntary mobility (IOM, 2023).

> We have also noticed that because of the impact of climate change, there is a lot of migration [of] displaced persons. That could be within the country, with persons moving from rural to urban and vice versa, but also across borders, with persons moving to other Caribbean countries. So that is something that we have observed, and we are monitoring it closely.

(Government Official, KII3)

The Organisation of Eastern Caribbean States (OECS) has recognised that the region is "severely affected by a wide range of environmental and climate hazards, notably including extreme tropical storms and hurricanes, water scarcity, environmental degradation, sea level rise and volcanic eruptions which drive multiple forms of human mobility—migration, displacement, planned relocation—and create vulnerability patterns for most exposed populations." (OECS, 2023). In Antigua and Barbuda alone, approximately 3,366 people are at risk of displacement from sudden onset hazards each year (IOM, 2023). Those living in informal settlements and low-lying coastal areas face particularly high risks of forced displacement due to sea-level rise, which can lead to coastal erosion, flooding, and saltwater intrusion into freshwater sources (WMO & WHO, n.d.).

> After major natural hazards, those that are able to leave the region, try to secure jobs elsewhere. Climate hazards tend to force a greater exodus of those who are able to leave and seek support elsewhere.
> (Regional NGO, KII7)

As noted earlier, Hurricane Irma forced the entire population of Barbuda to relocate to Antigua. One year later, only a portion of residents had returned (WMO & WHO, n.d.).

EDUCATION

Education is also disrupted by climate change-related hazards, as schools are frequently repurposed as emergency shelters and therefore unavailable for teaching. These disruptions can last weeks or even months, interrupting students' learning and affecting educational outcomes.

Displacement further complicates schooling. When students are evacuated to new locations, as occurred in the aftermath of Hurricane Irma, integrating displaced children into new classrooms takes time and disrupts educational activities for both incoming students and host schools.

Many school buildings in Antigua and Barbuda were designed to rely on natural ventilation. Rising temperatures have made this increasingly difficult, yet access to air conditioning is uneven. In some cases, classes are held outdoors for better ventilation, which negatively affects concentration. Teachers are also impacted, struggling to perform effectively in increasingly hot conditions.

Reflecting on the challenges associated with schooling in the context of climate change-related events, one respondent described an increase in violence and behavioural issues in schools, linked to heat-related stress and frustration. She also noted that children who remain out of school for extended periods are at heightened risk of involvement in criminal activity (KII06, academic).

FOOD AND WATER SECURITY

Antigua and Barbuda is one of the most water-stressed countries in the Caribbean (IWECO, n.d.). Climatic change is intensifying pressure on water resources through an increasingly drier environment, rising temperatures, salination linked to sea-level rise, and increasingly erratic rainfall patterns (Othering and Belonging Institute, n.d.). Together, these factors exacerbate water scarcity for households, agriculture, construction, and tourism (Antigua and Barbuda Red Cross, 2024).

> Our agriculture is impacted as well [by climate change]. The consequence is that farmers remain without jobs and we, the citizens, remain without a good supply of food products. So, food security is a challenge as well.
>
> (CSO Representative, KII3)

In 2014, the Potworks Dam—the largest reservoir in the Caribbean and a source of two-thirds of Antigua's water supply—fell to just 10% capacity. By 2015, reliance on desalinated water increased from 60% to over 90% of national consumption (Othering and Belonging Institute, n.d.).

Drought-related declines in agricultural productivity have serious implications for food security. Climate change has also significantly affected fisheries, as rising sea surface temperatures and coral bleaching undermine fish health and reproduction. Reduced agricultural yields and fish catch may contribute to rising food prices, further weakening food security (Antigua and Barbuda Red Cross, 2024).

> We are vulnerable. We don't produce the food we eat. Rather, we depend upon imports. If the ships are delayed coming out of Miami, if the boat is delayed bringing provisions from Dominica, we are in a bad situation. And so, with the effects of climate change, Antigua and Barbuda is very, very vulnerable.
>
> (Government Official, KII8)

HUMAN EXPLOITATION

HOW CLIMATE CHANGE-INDUCED VULNERABILITIES LEAD TO HUMAN EXPLOITATION

The multi-dimensional vulnerabilities outlined above create conditions in which opportunities for exploitation are pervasive. The most significant link between climate change and human exploitation appears to be the loss of livelihoods and the resulting descent into poverty. Other vulnerability factors can further exacerbate this risk, particularly when they deepen or prolong economic hardship. All interviewees expressed serious concern about these dynamics, especially in relation to women, girls, and young boys.

These findings are also consistent with the Antigua and Barbuda Review of the Beijing Declaration and Platform for Action Report 2020-2024, which notes that the country's repeated exposure to natural disasters and climatic events disproportionately affects women's lives and livelihoods. Women are reported to be more susceptible to death and gender based violence during disaster events, and damage to housing that is not climate resilient due to economic constraints.

As noted above, women's income is often more directly affected by climate change, as women are highly represented in the tourism, cultural and creative industries, and small business sectors. This is particularly true for single mothers. When climate change-related extreme weather events such as hurricanes disrupt income-generating activities, some women, facing limited alternatives, may seek work in local bars, where duties can extend beyond waitressing to include sexual services for paying clients. While this practice involves only a limited proportion of women, and remains socially sensitive, and often unacknowledged, research indicates that forms of autonomous sex-work have historically been utilised as a means of earning income since the pre-independence period (Kempadoo, 2001). As women and girls become financially dependent on commercial sex, they face heightened risks of exploitation– particularly in contexts where bar owners or intermediaries exercise control over working conditions, hours, and interactions with customers, and where economic pressure limits the ability to refuse unsafe or coercive arrangements.

> To supplement their income, some women take on 'those other types of work' [sex-work]. To make quick money, they go into the areas that give quick money. I know this because guys in my job talk about it, that when they go to these types of bars, the women will rub on them and entice them to drink more. Some of them have an area at the back where they provide [sexual] services. Now, if you are a young woman and your income has been impacted, those bars are probably an option that you will turn to. But then, there is the risk of trafficking.
>
> (Trade Union Representative, KII1)

Beyond commercial sex, many women whose incomes are disrupted by adverse weather events are also vulnerable to labour exploitation in sectors such as fast food and informal service work. A trade union representative reported that she often assists young women who had signed exploitative contracts, often requiring the women to work every day without paid sick days or holidays. These contracts were often accepted out of desperation and lack of alternatives. In some workplaces, women and girls were also reported to face sexual exploitation by the business owners, other staff, or clients (KII1, trade union representative).

> When many people, because of natural disasters, cannot sustain themselves financially in the tourist industry - which in general does not pay a lot of money - that creates a potential risk for trafficking
>
> (Government Official, KII2)

In addition, interviews revealed that domestic violence constitutes a serious form of exploitation against women and girls in Antigua and Barbuda, and that it is further exacerbated by the impacts of climate change.

According to respondents, domestic violence is closely linked to certain socio-cultural norms that may implicitly encourage or exacerbate harmful behaviours, particularly during periods of economic hardships. Caribbean family types are often characterised as matrilocal with men being 'visiting' or 'common-law' partners rather than residents in the households (Roopnarine, 2012). Despite this, existing literature confirms that, as in other Caribbean countries, in Antigua and Barbuda there is a prevailing societal expectation that the man is the head of the household and is the primary provider for his family (Brown & Chevannes, n.d.). This expectation is deeply ingrained and results from Eurocentric gender norms that emerged during colonisation (Beckles, 1995). When a man is unable to fulfil this role as provider—such as when climate change disrupts economic activities and livelihood opportunities—social and psychological pressures can manifest in harmful coping behaviours, including increased alcohol consumption, verbal abuse, and domestic violence (KII3, CSO representative; KII4, CSO representative).

Other sources similarly highlight that climate change exacerbates existing gender inequalities. Antigua and Barbuda's 2022 submission to the United Nations Framework Convention on Climate Change reports increased exposure of women to gender-based violence in the context of climate change (Government of Antigua and Barbuda, 2022, 51). Far from being a Caribbean phenomenon, globally the Spotlight Initiative has found that every 1°C rise in global temperature is associated with a 4.7% increase in intimate partner violence, alongside higher risks of child marriage, human trafficking, and sexual exploitation (UN News, 2025). Likewise, UN Women notes that "as communities are plunged into recurrent crises, tensions within families and between partners rise and gender-based violence escalates." (UN Women, 2023).

Boys and men whose livelihoods are adversely affected by climate-related events are also exposed to exploitation. Climate shocks are re-creating conditions of limited employment opportunities and deteriorating social conditions reminiscent of the 19th century Caribbean, when men from the Eastern Caribbean were compelled to seek low-skilled work abroad —including on the Panama Canal—to support their families (Newton, 2004). During this period, many reported harsh working conditions, excessive hours, and prolonged separation from their home countries (Newton, 2004).

In this study, respondents described men entering low-skilled manual labour—such as construction or gardening—driven by desperation rather than specific skills or experience. Employers were reported to exploit the situation by withholding or delaying wages. Some young men and boys in their late teens and early twenties were also reported to experience sexual exploitation, although these cases remain less visible and under-reported due to social stigma and entrenched gender norms (KII1, trade union representative).

> Lives are disrupted. There have been instances where one partner may have to leave the island and go to another island to seek a livelihood. And coming out of that, we have seen instances of exploitation.
> (CSO Representative, KII3)

Overall, interviewees consistently emphasised that the primary pathway linking climate change to human exploitation is loss of livelihood, which often pushes individuals and families into acute and prolonged poverty. This economic insecurity—often compounded by displacement, food and water insecurity, and housing instability—deepens poverty and narrows the range of safe and dignified options available to affected individuals and households. Although respondents shared fewer details on the interaction between these factors, they stressed that vulnerabilities reinforce one another in ways that increase dependence on exploitative forms of work. Women, girls, young boys, and persons from LGBTQI+ communities are particularly affected due to pre-existing gender and age-based inequalities that heighten susceptibility to coercion and exploitation.

RESPONSES

WHAT ARE CURRENT RESPONSES TO THE INTERSECTION OF CLIMATE CHANGE AND HUMAN EXPLOITATION

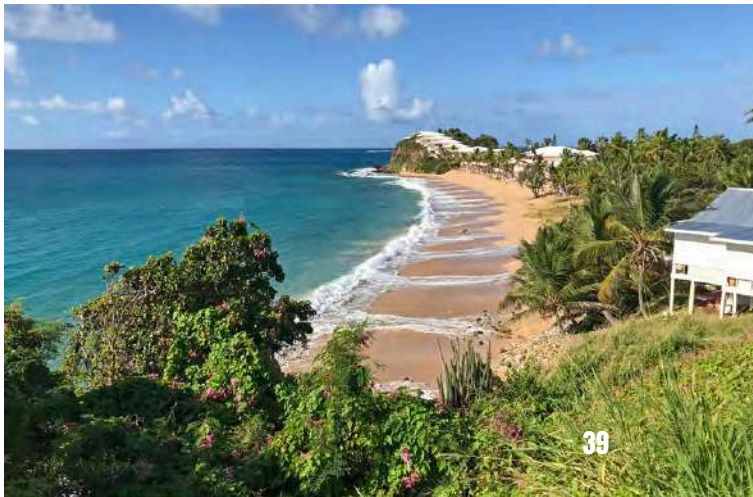

Photo: Robert Warner

This research found that government and non-governmental actors in Antigua and Barbuda have taken a range of steps to address climate change and the vulnerabilities it creates at the societal level. However, there remains limited understanding of how these vulnerabilities intersect with risks of human exploitation. As a result, climate change responses and anti-exploitation efforts are not sufficiently integrated and coordinated.

GOVERNMENT OF ANTIGUA AND BARBUDA

The Government of Antigua and Barbuda has been a prominent global advocate in climate change, raising the issue in international fora including the Conference of the Parties (COP), the UN General Assembly, the Inter-American Court of Human Rights, and the International Court of Justice. In these spaces, it has consistently called for greater international climate action and for the recognition of differentiated responsibilities between major emitters and countries—such as SIDS—that contribute least to climate change yet bear its most severe impacts.

At the national level, the government has taken a number of measures to respond to both the direct and indirect effects of climate change. Among the most significant are financial adaptation mechanisms aimed at reducing the social and economic impacts of climate change on vulnerable populations. In collaboration with the United Nations Environment Programme (UNEP), the government has implemented a revolving loans programme that provides low-interest loans for hurricane-proofing homes (UNEP, n.d.). Once repaid, funds are reinvested to support additional households, creating a cycle of community resilience. Notably, the program prioritises female-headed households, recognising the heightened vulnerability of women and girls to climate impacts.



> The fact that you are able to make your home resilient - just the peace of knowing that even in a hurricane setting, you are still able to get power from the sun, and you can just keep going on and on for days until the government system comes back.
>
> (Antigua Resident, UNEP n.d.)

In addition, the government has established the Sustainable Island Resource Framework Fund (SIRF Fund) as a financial mechanism to support vulnerable groups and communities with disaster preparedness, recovery, and rehabilitation (Government of Antigua & Barbuda, n.d.).

Investments have also been made in early warning systems to alert residents in flood-prone areas of rising water levels and evacuation orders. Community preparedness initiatives focus on educating communities about emergency supplies, evacuation procedures, and awareness of hurricane-resistant shelters (Adaptation Fund, n.d.). Climate change education is also integrated across primary to tertiary levels as part of broader government community education efforts (UNFCCC, 2021).

> The collaboration between the government and UNEP offers the homeowner a very long period of time to pay back the loan, and they don't have to provide collateral... The default rate is very low in this community-run system.
>
> - Diann Black-Layne, Director of the Department of Environment (UNEP, 2023)

As noted earlier, gender has been prioritised within national climate responses. The Directorate of Gender Affairs and the National Office of Disaster Services have delivered joint training on gender-responsive early warning systems to ensure gender considerations are embedded in preparedness and response efforts (Government of Antigua and Barbuda, 2024). The Department of Environment has similarly supported women's participation in climate action as the government's lead body for implementing the Paris Agreement (Government of Antigua and Barbuda, 2024).

Children have also been identified as a priority group. In collaboration with UNICEF, Antigua and Barbuda is applying the Children's Climate Risk Index-Disaster Risk Model (CCRI-DRM) to strengthen understanding and management of climate-related risks affecting children, young people, families, and their communities. (UNICEF Eastern Caribbean, 2023).

To address housing challenges and climate-change vulnerability, several departments within the Government of Antigua and Barbuda have partnered with the Government of China to implement a Climate Resilient Chattel Homes Project. The initiative will support the construction of 50 homes in response to wastewater management and broader environmental concerns (Antigua News Room, 2025).

Despite these efforts, the government's capacity to act remains constrained by limited and sometimes unsuitable funding.

> "... there is a void in the whole delivery of goods and services, as it were. So, while the technical knowledge is there, we do not necessarily always have enough funding or the right type of funding to help prepare persons—both men and women—prior to the event or assist them post-event.
> (Government Official, KII3)

Additionally, the Government of Antigua and Barbuda has taken steps to address human exploitation through the enactment of legislation, including the Trafficking in Persons (Prevention) Act, 2010 and the Trafficking in Persons (Prevention) (Amendment) Act, 2018. Despite this legislative framework, Antigua and Barbuda has not yet secured a conviction for trafficking-related offences. Nevertheless, the United States Department of State Annual Trafficking in Persons Report 2025 notes that the government monitored the implementation of an agreement with a foreign government under a seasonal agricultural workers program, which included oversight mechanisms to protect Antiguan and Barbudan workers from exploitation (United States Department of State, 2025). This reflects an awareness that the agricultural sector may present heightened vulnerabilities to exploitation. However, no explicit linkages between climate change and human exploitation have yet been made in government policy or practice.

CARIBBEAN REGIONAL BODIES

Effective climate action requires more than national-level responses. Antigua and Barbuda is actively engaged in regional initiatives through its membership in the Caribbean Community (CARICOM), which has repeatedly recognised climate change as an existential threat requiring close regional and international cooperation (CARICOM, 2022).

CARICOM's engagement with the climate-exploitation nexus has largely focused on climate-induced displacement and vulnerability, although explicit links to human exploitation is not always articulated. Nonetheless, there is growing recognition that climate-related displacement, livelihood loss, and economic disruption increase exposure to trafficking and exploitation, particularly among vulnerable populations. In response, efforts are underway to integrate human mobility considerations into climate and disaster risk reduction policies.

In May 2025, Caribbean government representatives convened in Saint Kitts and Nevis for a workshop on Mainstreaming Human Mobility and Human Security in Climate and Disaster Risk Reduction Policies (IOM, 2025). Organised with the International Organization for Migration (IOM), the workshop explored the integration of human mobility into national climate policies, including National Adaptation Plans (NAPs), Nationally Determined Contributions (NDCs), and disaster risk management frameworks. While some countries, including Jamaica and Grenada, have made some progress, it was acknowledged that gaps remain between policy commitments and implementation. Lessons from the Pacific Regional Framework on Climate Mobility highlighted the importance of inter-agency cooperation and investment in local resilience.

> CARICOM [representatives] visited us sometime last year, and they said that they are setting up a system to document whatever we see or think might be a suspicious case of trafficking. We have had [training] presentations from persons working within that department that deals with trafficking. So now there's a basic understanding of the differences between what is trafficking, what is smuggling, who is a refugee, and who is an asylum seeker.
>
> (CSO Representative, KII3)

Photo: Robert Warner

A further pillar of CARICOM's climate governance architecture is the Caribbean Community Climate Change Centre (CCCCC), which was established to coordinate the region's response to climate change. The CCCCC provides climate policy advice, technical guidance, and strategic support to Member States, including on adaptation planning, climate finance, and resilience-building. Its existing mandate and expertise position it as a potentially important platform for integrating considerations of vulnerability, displacement, and exploitation into regional climate responses.

Interviewees also stressed the importance of solidarity and regional cooperation among Caribbean states in responding to climate shocks. One example cited was Antigua and Barbuda's support to Dominica, one of Antigua's close sister islands, following a hurricane which destroyed several schools. Antigua helped by hosting displaced students so they could complete the academic year and sit their examinations.

Beyond CARICOM, Antigua and Barbuda is a member of the Organization of Eastern Caribbean States (OECS) and participates in the OECS Climate Change Adaptation Strategy and Action Plan (CCASAP), which aims to increase the region's resilience to climate variability and change. The government also collaborates with the Alliance of Small Island States (AOSIS) on initiatives such as the roadmap for Debt-for-Climate swaps, highlighting the role of financial mechanisms in addressing climate vulnerability. Antigua and Barbuda is also a member of the Caribbean Disaster Emergency Management Agency (CDEMA), a regional inter-governmental agency for disaster management. In collaboration with CDEMA, Antigua and Barbuda launched a gender-responsive early warning system, reinforcing its commitment to gender-sensitive climate adaptation and mitigation.

> One strength within the region is CARICOM, as a convening body for member states for discussion and cooperation. This is an opportunity that this region can continue to build upon.
> (Government Official, KII2)

NON-GOVERNMENTAL ACTORS

Civil society organisations (CSOs) across Antigua and Barbuda play a vital role in addressing the impacts of climate change and reducing community vulnerability. The Environmental Awareness Group (EAG), the country's oldest environmental non-governmental organisation (NGO), leads conservation, education, and community engagement initiatives while also influencing environmental policy. The Gilbert Agricultural & Rural Development Center (GARD-C) supports young people aged 16 to 30 to establish and operate viable agricultural and rural enterprises, while the National Parks Authority integrates local and traditional knowledge across fisheries, agriculture, and construction sectors.

One CSO reported providing psychosocial support to individuals affected by climate-related events—an especially critical service given the mental health impacts associated with climate shocks.

> We provide psychosocial support…While we do not have a physical space, like a shelter, for those whose homes have been partially or totally destroyed, we do provide psychosocial support—at individual, community, or group levels.
> (CSO Representative, KII3)

The Antigua and Barbuda Red Cross delivers first aid, emergency health services, and comprehensive climate resilience programmes, including community education on preparedness, provision of early warning systems, and support for local infrastructure that is resilient to extreme weather. Through locally led action, the voices of vulnerable communities are amplified in decision-making to address the impacts of climate change (Antigua and Barbuda Red Cross, 2024). These efforts are supported by the International Federation of the Red Cross and Red Crescent (IFRC), which promotes disaster preparedness, ecosystem-based approaches, as well as community ownership of climate action initiatives (IFRC, 2021).

Interviewees highlighted the importance of mutual social support in mitigating the impacts of climate change and preventing human rights violations.

> Support is available throughout the year, not just after a particular event. There are a lot of social programs, so persons may not feel abandoned or left to their own devices. After [Hurricane] Irma, the entire island [of Barbuda] was evacuated to Antigua, and they were supported with housing. That kind of support contributes directly to keeping [instances of] human rights violations down.
>
> (CSO Representative, KII4)

CONCLUSION

Photo: Jeffrey Beall

This research provides insight into how climate change shapes and exacerbates vulnerability to human exploitation in Small Island Developing States (SIDS), whose physical geography–characterised by low-lying terrain, small landmass, and extensive coastlines–combined with limited resources, fragile economies, dependence on imports and tourism, and geographic isolation, renders them disproportionately vulnerable to climate impacts. The report focuses specifically on Antigua and Barbuda.

The findings reveal that climate change and climate-related events, such as hurricanes, create multi-dimensional vulnerabilities at both individual and community levels. These include loss of livelihoods and descent into poverty; physical and mental health challenges; displacement and unsafe housing; disrupted access to education; and food and water insecurity. Under such conditions of compounded vulnerability, exposure to exploitation increases significantly.

This is particularly the case for women and girls, who face heightened risks of domestic violence and commercial sexual exploitation in local bars. Beyond commercial sex, women whose incomes are disrupted by adverse weather events are also vulnerable to labour exploitation in small, informal businesses, where they may be required to work long hours, without paid sick leave, or holidays.

Boys and men whose livelihoods are similarly affected by climate change-related events can also experience exploitation, particularly in low-skilled manual labour where employers may withhold or delay wages. Some boys and young men in their late teens and early twenties were also reported to experience sexual exploitation, although these cases remain less visible.

Recognising that climate change heightens the vulnerability of individuals and communities to exploitation, addressing climate-related vulnerabilities must therefore be understood as a critical prevention strategy. Building on the findings of this report, measures that strengthen community resilience to the adverse impacts of climate changes are also fundamental to reducing vulnerability to exploitation.

As climate-related disasters continue to increase in both frequency and severity worldwide—and as SIDS remain on the front lines—understanding their vulnerability to exploitation and addressing its root causes has become an urgent priority.

RECOMMENDATIONS

WHAT ACTIONS COULD BE TAKEN TO STRENGTHEN THE RESPONSE TO THE INTERSECTION OF CLIMATE CHANGE AND HUMAN EXPLOITATION

The findings of this research indicate that climate change and climate-related extreme weather events in Antigua and Barbuda generate multi-dimensional vulnerability. This, in turn, increases exposure to various forms of exploitation, including commercial sexual exploitation and exploitation in the informal labour market. At the same time, the research shows that both the government and civil society actors are taking important steps to address climate change and its impacts. However, their respective capacity to address the intersection between climate change and human exploitation could be further strengthened.

Building on these findings, the report argues that addressing the multi-dimensional vulnerabilities introduced or exacerbated by climate change is a primary pathway for reducing the risk of exploitation. The recommendations below propose actionable measures that address interconnected drivers of vulnerability and promote more integrated, prevention-oriented responses.

Photo: Hectorio

RECOMMENDATIONS

FOR THE GOVERNMENT OF ANTIGUA AND BARBUDA

- **Invest in climate-resilient infrastructure.** Climate-resilient infrastructure can reduce vulnerability by supporting stable livelihoods and improving access to essential services. This includes the creation and management of secure temporary shelters to protect displaced populations during and after disasters, thus minimising the risk of exploitation for displaced individuals forced out of their houses. Investment in climate-resilient infrastructure within key economic sectors—such as tourism—can also help limit climate-related disruptions to tourist-related activities and protect livelihoods. This can also include education and the use of more traditional knowledge and architectural practices.

- **Enhance water and food security.** Strengthening water and food security reduces vulnerability by addressing the desperation that often drives people into exploitative situations. When people have reliable access to basic needs, this lowers the likelihood of harmful coping strategies, such as long-distance travel for resources, debt-bondage, or exploitative labour. This security also helps prevent displacement that can lead to vulnerability. Key water security measures include expanding desalination capacity, promoting rainwater harvesting, and encouraging water-efficient technologies.Food security initiatives should prioritise diversified crop systems, climate-resilient agricultural technologies, and improved food storage.

- **Integrate climate risk reduction into the tourism sector.** Incorporating climate risk reduction in tourism policy and planning can help ensure sustainable livelihoods for those working in the sector and reduce vulnerability to exploitation. In Antigua and Barbuda, protecting critical natural assets such as beaches and coral reefs, upgrading tourism-related infrastructure, and diversifying tourism offerings can help maintain the country's attractiveness as a tourist destination, thereby supporting economic stability and reducing reliance on informal or high-risk employment.

- **Invest in climate-resilient agriculture.** Promoting climate-resilient agricultural practices can strengthen livelihoods in the farming sector while contributing to food security. Priority actions would include building on current government efforts including diversifying crops and livestock, improving water management through efficient irrigation and harvesting methods, developing climate-resilient crop varieties, and using technology to support farm planning and productivity (Emmanuel, 2025; Ministry of Agriculture, Fisheries and Barbuda Affairs, n.d).

- **Ensure continuity of education.** Maintaining access to education in climate-affected areas reduces vulnerability to exploitation by supporting skills development for stable and decent employment in the formal sector; increasing awareness of rights, risks, and avenues to seek support; and fostering long-term economic resilience through greater opportunities. This requires adapting school infrastructure to withstand climate-related extreme weather events, investing in adequate learning environments, and developing community-based education programmes that can continue during periods of disruption. One proposed adaptation to infrastructure would be integrating traditional architectural building methods and materials for cooling and stability.

- **Support livelihood diversification.** Livelihood diversification builds economic resilience and reduces vulnerability to exploitation in climate-affected contexts. By expanding alternative and stable income-generating options, individuals are less likely to accept exploitative work. Examples of livelihood diversification include combining agricultural or on-farm activities with non-farm employment (getting a wage job) or starting a small business. Investment in vocational training and access to seed money are critical to supporting these efforts.

- **Cooperate with regional and international partners.** Engagement with international partners can help raise the visibility of the climate-trafficking nexus in global climate and migration forums. This includes contributing Caribbean-specific evidence, strengthening diplomatic advocacy, and supporting multilateral efforts to integrate anti-trafficking considerations into climate adaptation and migration governance frameworks. For example, in June 2025, seven other Caribbean countries formed and signed onto the Regional Platform for Catalysing Resilience and Climate Action in the Caribbean which ‘aims to identify and deliver country-focused game-changing investment opportunities while enhancing a regional approach to resilience building in the era of a climate crisis’ (Green Climate Fund, 2025).

RECOMMENDATIONS

FOR CARICOM

- **Introduce exploitation considerations into climate and development policies.** CARICOM should encourage its Member States to adopt a whole-of-government approach that addresses structural drivers of exploitation across policy areas. This includes applying a “human exploitation lens” to climate change strategies and sustainable development programmes, rather than treating these issues in isolation.

- **Strengthen regional collaboration.** CARICOM and related regional institutions should further enhance coordination among Member States to ensure more coherent, integrated responses to climate-related vulnerability and human exploitation. Building on existing mechanisms—including the work of the CCCCC—regional collaboration can support the sharing of good practices and data, strengthen capacity-building and information exchange, and promote integrated planning that embeds exploitation risk and human security considerations into climate adaptation, disaster risk reduction, and mobility frameworks.

RECOMMENDATIONS

FOR NON-GOVERNMENTAL AND CIVIL SOCIETY ORGANISATIONS

- **Conduct community education initiatives.** Education initiatives on the links between climate change, natural hazards, and exploitation should be conducted in climate-affected areas, with a particular focus on communities with greater exposure to the adverse effect of calamities and, therefore greater risk of exploitation—such as farmers, low-income households, and children. Importantly, these education initiatives should take place before disasters occur, as post-hazard contexts often limit access to information and services.

- **Advocate with government actors.** NGOs and CSOs should advocate for the integration of human exploitation prevention into national climate plans, including vulnerability assessments, safeguards for at-risk communities, and measures to reduce exploitation risks during displacement, recovery, and reconstruction.

- **Support research and evidence-based solutions.** Continued research is needed to deepen understanding of the links between climate change, vulnerability, and exploitation. Investing in such research is critical to inform effective and targeted evidence-based interventions, as well as to guide the design of relevant awareness and educational campaigns. Community-based research is particularly important to capture lived experience, identify priority needs and vulnerabilities of those most affected, and inform local, grounded solutions that enhance resilience and reduce exploitation risks.

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