



Initial Assessment Report Hurricane Beryl: Barbados

12 August 2024

The secondary data in this report is sourced from the Data Entry and Exploration Platform (DEEP) Atlantic-Caribbean Hurricane Season 2024 Project, launched on 03/07/2024, following Hurricane Beryl's impact on four Caribbean islands, including Barbados. Coordinated with DEEP, IFRC, and GRC, the project initially focused on the hardest-hit countries—St. Vincent and Grenadines, Jamaica, Grenada, and Barbados. It later expanded to include baseline data collection in non-crisis countries like the Cayman Islands, Haiti, and St. Lucia. The data categorization follows the IFRC Analytical Framework 2024. As of 12/08/2024, the project database includes 978 documents and 4,660 tagged entries, covering sources such as local and international media, humanitarian documents from ReliefWeb, and academic content.

OVERVIEW

Hurricane Beryl, a category 4 storm, struck Barbados on July 1, 2024, causing heavy damage to fishing infrastructure and assets, particularly along the island's south and southwest coasts. The hurricane's catastrophic winds and heavy rainfall disrupted essential services such as water, power, and healthcare through the start of July and damaged more than 50 homes. The tourism sector, already weakened by the COVID-19 pandemic, faced further setbacks with damage to accommodations. Key livelihoods, including fishing and agriculture, suffered significant losses, exacerbating economic hardships. Vulnerable populations, particularly women, children, and low-income families, were disproportionately affected. Immediate priorities include restoring livelihoods and supporting early recovery and preparedness for future emergencies. Coordinated efforts by national and international agencies, National Societies along with local community involvement, are crucial to this effort.

CRISIS SEVERITY AND PRIORITIES

1. Humanitarian conditions & People in Need

On 1 July, Hurricane Beryl, a category 4 hurricane, approached Barbados before passing 80 miles south, the hurricane brought severe conditions to the island's south and southwest coasts ([Barbados Today](#) 06/07/2024). Hurricane Beryl has led to pressing needs for food, clean water, shelter, livelihood and medical assistance. The Barbados Hotel and Tourism Association (BHTA) audit revealed extensive damage to accommodations and villas due to Hurricane Beryl, compounding the economic challenges Barbados faced from a significant GDP decline and job losses caused by the COVID-19 pandemic ([Barbados Government Information Service](#) 10/07/2024; [World Bank](#) 01/04/2021).

Hurricane Beryl severely impacted livelihoods in Barbados, particularly in the fishing and agricultural sectors. The hurricane caused substantial losses of equipment and some crops, exacerbating economic hardships for fisherfolk and farmers ([Barbados Today](#) 16/07/2024). The housing sector also suffered, with 55 homes damaged necessitating immediate shelter repair efforts ([Barbados Government Information Service](#) 10/07/2024). The storm disrupted essential services, increasing food and water shortages, and raised health concerns, including mental health issues and the spread of waterborne diseases ([IFRC](#) 20/07/2024).

Vulnerable groups, including women, children, the elderly, and low-income families, are also affected by loss of livelihoods suffered by Barbados' fishing communities, as the hurricane caused extensive losses of equipment and supplies. Women who are part of the fisheries value chain suffered increased economic pressures, worsening existing gender inequalities (IFRC 30/07/2024). Rural areas and the agricultural sector struggle with limited water and sanitation access and significant crop losses, threatening food security and income.

The capacity to mitigate these risks involves effective coordination and response by national and international agencies. This includes the Barbados Red Cross Society, international actors, and national authorities. As of early August 2024, relief efforts had evolved into early recovery and preparedness initiatives. Additionally, the UN World Food Programme (WFP) is coordinating support from Barbados to other countries affected by Hurricane Beryl, participating in their relief efforts. Local communities play a crucial role in response efforts, with volunteers assisting in shelters, distributing supplies, and providing first aid (IFRC 30/07/2024). Strengthening community resilience through training and resources is vital for long-term recovery. The disaster has highlighted the need for a coordinated approach that prioritizes the restoration of livelihoods, mental health support, and strengthening community resilience against future disasters.

2. Identified priority Needs

Priority needs #1 Livelihoods	Priority needs #2 WASH	Priority needs #3 Health
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Hurricane Beryl has significantly impacted the livelihoods of people in Barbados, particularly those dependent on food and agriculture. The fishing industry, a cornerstone of Barbados' economy and food supply, has been severely disrupted, with substantial losses of equipment, stock, and supplies among fisherfolk. Two weeks after the hurricane, the south-to-west coast of the island was still reeling from the destruction. Veteran fishermen faced significant losses due to storm surges that wreaked havoc on coastal infrastructure, with every vessel at the Bridgetown marina sustaining varying degrees of damage, and some boats completely sinking (Barbados Today 16/07/2024; Africa News 08/07/2024). The damage to fishing vessels underscores the scale of the disaster, making it difficult for the local industry to maintain previous levels of fish supply (Barbados Government Information Service 12/07/2024). A total of 209 boats were affected by Hurricane Beryl, either damaged or lost, out of 312 registered boats in Barbados in 2024 (Barbados Government Information Service 10/07/2024). This disruption not only impacts their immediate livelihoods but poses long-term economic challenges, reducing their ability to support their families and sustain their businesses (IFRC 30/07/2024). Despite minimal damage to Ministry of Agriculture installations, the loss of banana crops represents a significant setback for local farmers (Barbados Government Information Service 10/07/2024). The storm's impact on infrastructure, including power grids and water systems, has further exacerbated food and water shortages, adding to the hardship faced by these communities (AP 12/07/2024).

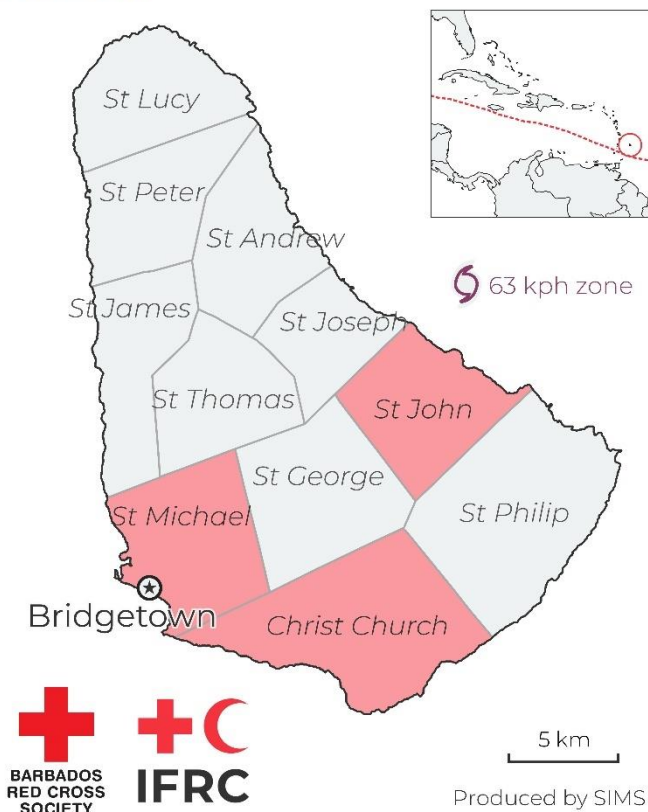
The physical and mental well-being of those affected by Hurricane Beryl is of significant concern, as the disaster has left many community members in a state of heightened stress and anxiety due to the loss of livelihoods and homes (IFRC 20/07/2024). The trauma of the hurricane, coupled with the loss of assets and livelihoods, has led to a significant increase in cases of anxiety, depression, and PTSD (EC 09/07/2024; IFRC 30/07/2024). Disruptions in sanitation services and contamination of water sources have facilitated the spread of pathogens, leading to gastrointestinal illnesses and other health issues (EC 09/07/2024).

To address these needs, there is an urgent need for government intervention to rebuild the fishing sector. The need for special funding to replace and repair the lost and damaged boats and to provide essential fishing equipment and supplies to the affected fisherfolk. Additionally, there is a need for financial aid to mitigate the economic losses suffered by the fishing community (Barbados Today 04/07/2024). Providing psychological support and counseling services is also essential to help residents cope with the aftermath of the disaster (IFRC 30/07/2024). Interventions

must include providing psychological first aid, establishing referral pathways for mental health services, and setting up Child Friendly Spaces to support children's emotional needs (IFRC 20/07/2024; IFRC 30/07/2024). In the event of an upcoming emergency, there is a critical need for access to safe drinking water and adequate sanitation facilities to prevent the spread of waterborne diseases such as cholera, dysentery, and leptospirosis (EC 09/07/2024; IFRC 30/07/2024). Restoring clean drinking water supplies, providing hygiene kits, and rehabilitating sanitation facilities will be critical to ensure proper sanitation and hygiene practices (EC 09/07/2024; IFRC 30/07/2024). Developing partnerships with local organizations will strengthen healthcare service delivery and support the recovery of health infrastructure (IFRC 20/07/2024).

3. Priority Geographic Areas

Hurricane Beryl | July 2024 Barbados



Priority geographic area #1 St. Michael	Priority geographic area #2 Christ Church	Priority geographic area #3 St. John
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In Barbados, Hurricane Beryl caused severe disruptions in coastal regions, particularly in St. Michael, Christ Church, and St. John. In St. Michael, the hurricane brought high winds and heavy rainfall, leading to widespread flooding in both residential and commercial areas of Bridgetown, the capital city. This resulted in significant infrastructure damage, temporary business closures, and power outages. Notably, part of the breakwater in Bridgetown Fishing Harbour and the Bridgetown Cruise Passenger Terminal were damaged, while the Barbados Fisheries Division also suffered significant damage (Barbados Government Information Service 10/07/2024). This disruption has hampered the ability of women vendors in the cruise terminal to resume their trade, exacerbating existing gender inequalities (IFRC 30/07/2024). In Christ Church, severe coastal erosion from high storm surges damaged beaches, some

coastal properties, and residential areas, and some damage reported at the Oistins Fish Market and jetties ([Barbados Government Information Service 10/07/2024](#)). Prolonged utility disruptions further inconvenienced residents. In the event of a future cyclone, coastal parishes like St. John may face significant challenges particularly in coastal and hillside area. Flooding, whether coastal or inland, poses substantial risks to freshwater sources and infrastructure. These same events may lead to contamination of water sources and damage to pipelines can exacerbate people’s vulnerability, making it difficult to access clean drinking water. Similarly, sanitation systems are at risk, as floodwaters from waste disposal facilities can increase the likelihood of waterborne diseases spreading ([IFRC 20/07/2024](#)).

4. Priority affected groups

Priority Affected Group #1 Fishing Communities	Priority Affected Group #2 Female-headed household
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Fishing communities in Barbados have experienced significant disruptions to their livelihoods due to various factors exacerbated by recent natural disasters and socio-economic conditions. The destruction caused by Hurricane Beryl heavily impacted the fishing industry, via substantial loss of equipment, stock, and supplies. This disruption has not only affected the immediate income and financial stability of fisherfolk but also poses long-term economic challenges, reducing their ability to support their families and sustain their businesses ([IFRC 30/07/2024](#)). The destruction of infrastructure and supply chain interruptions have also made it difficult for women vendors within fish markets and the Bridgetown Cruise Terminal to resume their trade, further exacerbating existing gender inequalities as these women often serve as primary caregivers and now face additional economic pressures ([IFRC 30/07/2024](#)). Before the crisis, studies indicated that many households within fishing communities were female-headed, with these households often comprising up to three generations and facing economic vulnerabilities such as low human capital, low-paying jobs, and overcrowding ([AquaDocs 19/07/2024](#); [UWI 10/08/2020](#)). The pandemic compounded these challenges by causing severe isolation measures that impacted access to education, slowed economic growth, increased violence, and decreased people's rights, significantly affecting household food security, particularly among vulnerable populations including indigenous people, afro-descendants, the elderly, women heads of households, children, and people with disabilities ([UNDRR, OCHA 01/06/2023](#)).

CRISIS SCOPE AND SCALE

1. Underlying factors (Drivers/aggravating factors)

Underlying factor #1 Geographical and climate change vulnerabilities	Underlying factor #2 Poverty and Socioeconomic inequalities	Underlying factor #3 Vulnerable infrastructures and management
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1.1. Geographical and climate change vulnerabilities

Barbados faces significant humanitarian challenges due to its geographical and climate change vulnerabilities. The island is in the Atlantic hurricane belt, making it highly susceptible to hurricanes and tropical storms, which are becoming more frequent and intense due to climate change. These storms bring heavy rainfall, strong winds, and storm surges, leading to severe flooding and coastal erosion ([World Bank 08/08/24](#)). Additionally, rising sea levels pose a threat to the island’s low-lying areas, exacerbating the risk of flooding and saltwater intrusion into freshwater resources. The combination of these factors disrupts essential services such as water supply, sanitation, and food security, increasing the vulnerability of the population to poverty and food insecurity. The coastal and hilly regions of Barbados are also prone to landslides during heavy rainfall, further complicating the humanitarian response. These

overlapping vulnerabilities create a complex environment for both immediate humanitarian aid and long-term development efforts.

1.2. Poverty and Socioeconomic inequalities

Prior to the crisis caused by Hurricane Beryl, Barbados had been grappling with significant economic challenges exacerbated by the COVID-19 pandemic. The pandemic led to a sharp contraction in Barbados' GDP, with an estimated decline of 17.3% in 2020 (World Bank 01/04/2021). This severe economic downturn was primarily due to the near-total halt in tourism, a major economic driver for the country. The economic slowdown resulted in widespread job losses and therefore high unemployment, particularly in the tourism and construction sectors, increasing the poverty rate and financial vulnerability among the population. In the wake of Hurricane Beryl, the Barbados Hotel and Tourism Association (BHTA) conducted an audit of the coastal and inland damage sustained by their members' properties and businesses. The audit revealed that 73.5% of accommodations and 9.4% of villas suffered damage due to the hurricane. These compound challenges underscore the urgency of addressing both the immediate and long-term needs of the affected communities (Barbados Government Information Service 10/07/2024).

1.3. Vulnerable infrastructures and management

Barbados faces several infrastructure vulnerabilities that exacerbate its socio-economic and climate challenges. Poor road conditions and narrow roads limit accessibility for certain types of vehicles, while inadequate signage at road junctions further complicates transportation. Additionally, the island's infrastructure is becoming outdated, with declining quality of capital stock exacerbated by increasing vulnerability to climate change and natural disasters. Previous Vulnerability and Capacity Assessments pointed towards poor drainage and inadequate stormwater infrastructure lead to frequent flash floods, and intense rainfall and wave action cause small-scale landslides, particularly in the Scotland District (Barbados Red Cross Society 27/06/2010). These issues impact agriculture, transportation, and housing infrastructure, creating significant obstacles for development and resilience efforts.

RESPONSE CAPACITY

1. National Society Capacity and Responses

The Barbados Red Cross Society (BRCS) plays a pivotal role in disaster response and humanitarian assistance within Barbados. As a key actor in the national emergency response system, BRCS collaborates closely with the Department of Emergency Management (DEM) and is part of the Caribbean Disaster and Emergency Management Agency (CDEMA) network (IFRC 30/07/2024). In response to Hurricane Beryl, BRCS demonstrated significant surge capacity by rapidly mobilizing volunteers and resources. Pre-positioned supplies, consisting of hygiene and cleaning kits, were facilitated by pre-existing agreements and regional partnerships (IFRC 04/07/2024). The society's involvement in the National Emergency Operations Centre (NEOC) ensured a coordinated effort during the hurricane, supporting eight government hurricane shelters. Volunteers provided first aid, mental health, and psychosocial support services, which were critical for the affected populations (IFRC 20/07/2024). Volunteers were active on the ground, providing first aid in emergency shelters/collective centres despite challenges in accessing scattered and isolated areas. This community-level engagement was further supported by the distribution of hygiene kits in affected communities, such as Friendship (IFRC 29/06/2024).

While BRCS demonstrated strong initial response capabilities, there are areas for improvement, including comprehensive coverage in remote areas and sustained support for mental health services. Additionally, there is a need for enhanced training programs for volunteers to maintain high preparedness and response efficiency (IFRC 30/07/2024).

2. National Actor Capacity and Responses

The Barbados Defence Force and the Ministry of the Environment and National Beautification played significant roles in response efforts. The Defence Force contributed to the Regional Security System's disaster relief by sending

supplies to affected islands (CBC 08/07/2024). The Ministry of the Environment received bulk donations of garbage bags for clean-up efforts (Barbados Government Information Service 08/07/2024).

The Ministry of Housing, Urban Development Commission (UDC), Rural Development Commission (RDC), and National Housing Corporation (NHC) will coordinate to provide immediate relief, including social assessments, foodstuff, and temporary accommodation. These agencies collaborated to repair and rebuild affected homes (Barbados Today 09/07/2024).

The Fisheries Division undertook significant efforts to restore the fishing industry. Volunteer divers removed sunken boats, and approximately 123 boats were lifted in less than two weeks (Barbados Government Information Service 15/07/2024). The Prime Minister announced a comprehensive rescue plan worth BDS 500,000 (USD 250,000) to restore the fishing industry and rebuild coastal defences. This plan included extending the Business Interruption Benefit to affected fisherfolk, regardless of their National Insurance contribution status (IFRC 20/07/2024).

The Government is focused on improving business facilitation and ensuring the continuity of essential services. Emergency shelters remained open, and efforts were made to address power and water outages in the first week of crisis (PAHO 02/07/2024). The Prime Minister outlined immediate clean-up steps and secured areas for public safety (Barbados Government Information Service 02/07/2024). The Government provides several incentives and services to support the fishing community, including tax and duty concessions, free registration, licensing, inspection services, and subsidies for boat maintenance. The Barbados National Union of Fisherfolk Organizations (BARNUFO) offers training and collaborates with organizations like FAO and CERMES to enhance fisherfolk's capacity (FAO 19/07/2024). To accommodate those displaced by the storm, 33 collective shelters were activated by the Ministry of Education, housing 398 people in total.

3. International and other humanitarian partner's capacity and response

Barbados has served as a logistical hub for the regional response to Hurricane Beryl. The international response has been robust, with significant contributions from international organizations, UN agencies, and foreign governments. The World Food Programme (WFP), in collaboration with the Caribbean Disaster Emergency Management Agency (CDEMA), led the logistics and distribution of essential supplies. WFP rapidly mobilized 5,000 food kits, sufficient to feed 15,000 people for 10 days, with half of these supplies packed in Barbados before being shipped to Saint Vincent and the Grenadines for swift distribution. (WFP 11/07/2024). In Barbados, the response was further strengthened by the active presence of CDEMA, which, along with WFP, co-led the Relief and Logistics Thematic Group. They established a Relief Transshipment Hub at the Barbados Port, supported by the Barbados Defence Force, Red Cross, and other local organizations. This hub played a critical role in managing the flow of aid to the affected islands, showcasing Barbados' capacity to serve as a regional hub during crises. (CDEMA 06/07/2024).

For the other islands affected by Hurricane Beryl, such as Saint Vincent and the Grenadines, Grenada, and Saint Lucia, the international response and coordination led by CDEMA from Barbados and supported by agencies like WFP and PAHO were crucial in ensuring timely and effective relief efforts. The strategic positioning of these organizations in Barbados, along with the active clusters, provided a significant advantage. Should another disaster occur, the established logistical and operational frameworks, along with the experience gained during this response, would undoubtedly be assets in enhancing preparedness and response capabilities across the region. The presence of these international bodies in Barbados, along with their coordinated efforts, not only bolstered the immediate response to Hurricane Beryl but also strengthened the overall disaster resilience of the Caribbean region.

PRE-CRISIS OVERVIEW IN AFFECTED AREA

1. Socio-Economy Vulnerability

Barbados faces significant socio-economic vulnerabilities that compound its climate and geographical challenges. The Country Assessment of Living Conditions (CALC) study highlights several key features of poverty in Barbados, including larger household sizes, a higher number of children under 15, overcrowded living conditions, low human capital, low-paying jobs, and high unemployment rates. Additionally, many households are female-headed, and poverty is prevalent in both urban and rural areas, with a notable engagement in informal sector activities (UWI 10/08/2020).

Furthermore, Barbados experiences a high rate of adolescent fertility, and the labor force participation rate is 58.5% for females and 66% for males as of 2023 (World Bank 01/01/2024). These socio-economic factors, combined with the island's climate vulnerabilities, create a complex environment that requires comprehensive and sustained efforts for effective humanitarian response and long-term development.

2. Health Risk Profile

The COVID-19 pandemic has had negative economic impacts across the Caribbean, causing damage to key sectors including tourism and resource exports. This has resulted in some of the largest single-year declines in growth ever recorded for the region, and it has forced governments to think seriously about economic structures, diversification and vulnerabilities. The pandemic highlighted some of the unique challenges that these countries face in dealing with new and unprecedented crises (IFRC 07/01/2023). The impact of the pandemic continues to overlap with existing vulnerabilities – lives and livelihoods are at risk and many people will remain vulnerable for the foreseeable future. Due to the multi-dimensional vulnerabilities of Caribbean small island developing states, exacerbated by economic, social and environmental factors, as well as the frequency of disasters in this region, recovery from crises will take years.

In the case of Barbados, some reports were highlighting challenges such as access to resources, and participation in decision-making bodies, especially for vulnerable populations. Access to education, healthcare and sanitation were not readily available and were identified as particularly vulnerable to disasters (UWI 01/01/2019).

3. Infrastructure Vulnerabilities

Before Hurricane Beryl, Barbados already faced significant infrastructure vulnerabilities. Poor road conditions and narrow roads limited accessibility for certain types of vehicles, while inadequate signage at road junctions further complicated transportation (World Economic Forum 08/10/2024). The island's aging infrastructure, including roads, hospitals, and water facilities, made it more susceptible to damage during extreme weather events

Economic crises, growing inequality and exclusion, increasing numbers of people falling into poverty each year, chaotic urbanization patterns and the indiscriminate exploitation of natural resources and environmental degradation have worsened at an alarming pace. Consequently, the human and economic losses associated with disasters continue to escalate (UNDRR,OCHA 01/06/2023).

281,635

Total Population (2022)
(HDX 27/06/2024)

47.96%

Male Population (2022)
(HDX 26/07/2024)

52.04%

Female Population (2022)
(HDX 26/07/2024)

77.6

1.19%

Under-five mortality rate (2021)

31.32%

Life Expectancy at Birth (2021), in years
(HDX 26/07/2024)

(HDX 26/07/2024)

Population living in urban areas (2022)
(HDX 26/07/2024)

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