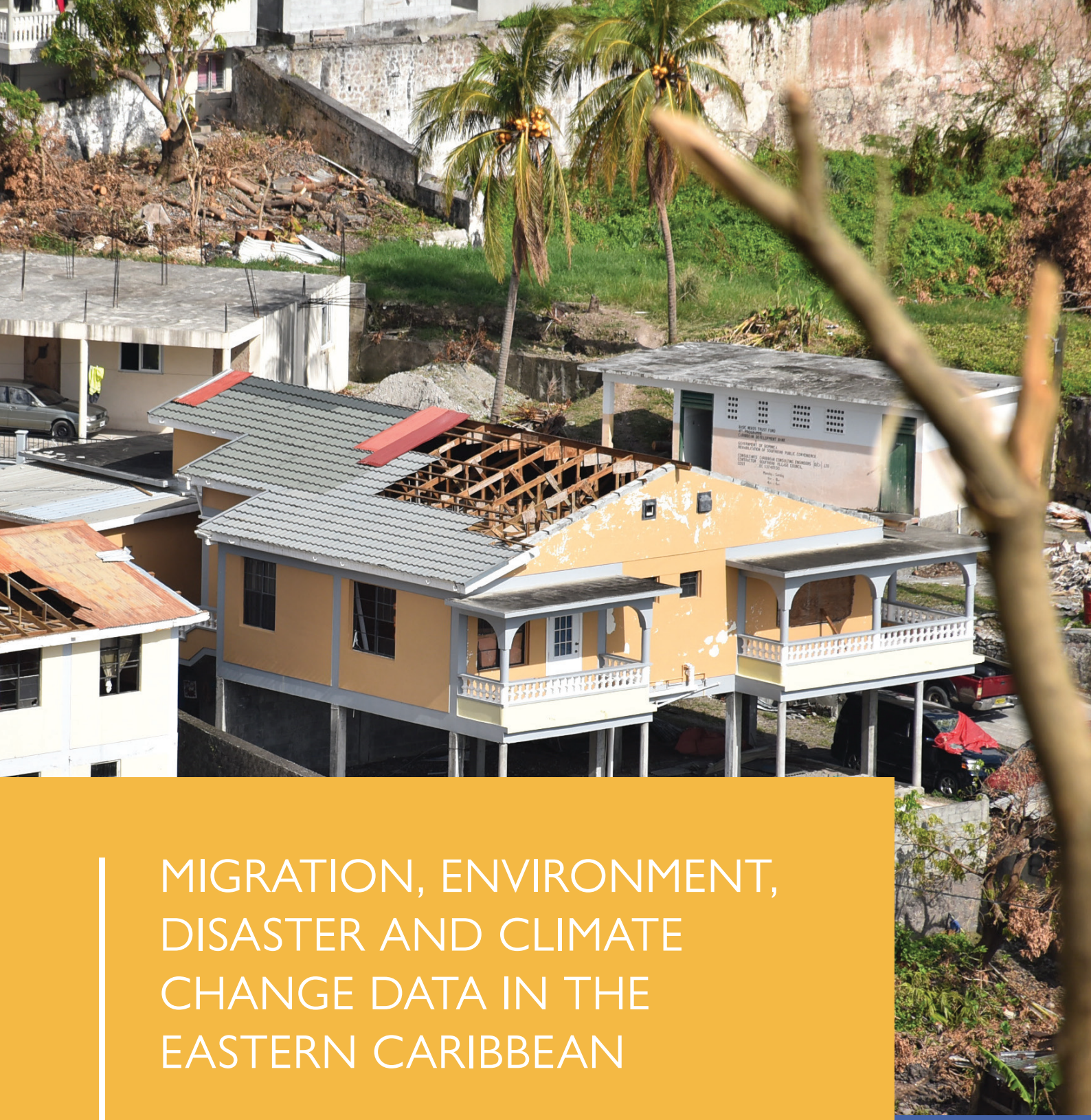

MIGRATION, ENVIRONMENT, DISASTER AND CLIMATE CHANGE DATA IN THE EASTERN CARIBBEAN

Grenada Country Analysis

IOM
UN MIGRATION

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Cover photo: Grenada was badly hit by Hurricane Ivan in 2004. At least 12 people lost their lives and 80 per cent of buildings and critical infrastructure were damaged. © U.N.I.T.E./Sheldon CASIMIR

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GMDAC
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ABBREVIATIONS AND ACRONYMS

BMS	Border Management System
CARICOM	Caribbean Community
CDEMA	Caribbean Disaster Emergency Management Agency
CSME	CARICOM Single Market and Economy
CWIQ	Core Welfare Indicator Questionnaire
DANA	Damage Assessment and Needs Analysis
DRR	disaster risk reduction
ED Card	Embarkation/Disembarkation Card
GMDAC	Global Migration Data Analysis Centre
GTA	Grenada Tourism Authority
IDHNA	Initial Damage and Human Needs Assessment
IOM	International Organization for Migration
ISO	Initial Situation Overview
MoH	Ministry of Health
NaDMA	National Disaster Management Agency
NDC	nationally determined contribution
NDMP	National Disaster Management Plan
NDP	National Disaster Plan
OECS	Organisation of Eastern Caribbean States
RPF	Resettlement Policy Framework
SIDS	small island developing State
TWG	technical working group

EXECUTIVE SUMMARY

Climate change projections predict that Grenada will be negatively affected by the increased frequency and intensity of extreme weather events, as well as by gradual processes such as sea level rise. With climate scenarios pointing to a higher incidence of such events in the near future, (forced) population movements are likely to increase in number and severity in the country. According to statistics developed by UNDRR-DesInventar, Grenada recorded a total of 131 disasters and related emergencies between 1771 and 2014. These disasters and emergencies cumulatively affected over 265,000 people within the period. The national Government has instituted distinct policy and legal frameworks to enhance migration, climate change and disaster governance nationwide. Despite these different governance frameworks, there is little acknowledgement and no comprehensive provisions to address human mobility in the context of climate and environmental changes and disasters in the country.

Of the 16 policies and legislations related to migration, environment, climate change and disasters that were identified in Grenada, only 5 have made some reference to the topic of human mobility. For instance, the National Disaster Plan (NDP) alludes to displacement of populations and mass migration as a result of disasters. The Resettlement Policy Framework (RPF) on the other hand, underscores the need for meaningful consultation and participation of displaced people in the planning and implementation of resettlement programmes. More recently, Grenada's second nationally determined contribution (NDC) registered the need for policy coherence in tackling loss and damage due to climatic impacts. In particular, the NDC also emphasized the need to effectively address the challenges related to human mobility and vulnerable settlements. On the premise that good policy and planning needs timely and reliable data, and with the goal of enhancing policy and planning, this study assessed the national data systems on migration, environment, disaster and climate change in Grenada.

This study is part of the International Organization for Migration (IOM) project entitled "Regional Dialogue to Address Human Mobility and Climate Change Adaptation in the Eastern Caribbean". The project is implemented under the auspices of the IOM Global Migration Data Analysis Centre (GMDAC) in Berlin, Germany, and IOM Dominica, and is funded by the Government of the Federal Republic of Germany. The objective of the project is to assess the national data systems of the six Eastern Caribbean countries in terms of their ability to collect, process and analyse data on migration, climate and environmental change, to identify strengths, weaknesses and opportunities to enhance available evidence on environmental migration.

The study methodology is largely based on a triangulation of methods, including desk reviews and interviews with officials, national agencies, and departments, as well as international/regional organizations. Two distinct sets of questionnaires were distributed to 28 national and regional agencies

identified as relevant sources of data within the initial mapping exercise that was carried out during the desk review. In Grenada, questionnaires were shared with the Immigration and Passport Department, Central Statistics Office and National Disaster Management Agency (NaDMA). As well, several other national agencies and ministries that collect some level of data on the topic – but were not identified during the mapping process – were also engaged as part of the national validation workshop. The analysis and findings of the study and consultation process served as the basis for the critical discussion of the issues that emerged with regard to climate change, environment, disaster and human mobility data in the six Eastern Caribbean countries.

From the consultations with the Immigration and Passport Department, Central Statistics Office and NaDMA, the study assessed the extent to which these agencies collect, manage and disseminate data on migration, climate and environmental change and disasters at the national level. Based on this assessment, a host of gaps, limitations and opportunities were identified. The analysis reveals that data collected by the Immigration and Passport Department are mainly administrative, relating to passengers and visitors arriving or departing from Grenada. The embarkation/disembarkation card (ED card) that is used as the main instrument to collect data at the ports of entry by the Department does not enable the compilation of information related to population movements that may result from climate and other environmental changes, including disasters.

Specifically, the Customs Declaration (c) form that is deployed by the Immigration and Passport Department for data collection at the various ports of entry does not have a field asking about purpose of visit. As a result, the form does not allow for collection of data on reasons for moving or seeking entry into Grenada, including population movements associated with environmental factors. Further, the Immigration and Passport Department does not have any established database or repository on immigration and emigration in which to store the administrative data that is collected on entry and exits. The information hosted in the Border Management System (BMS) is limited to just an inventory on the number of people entering or leaving the country. There are also no protocols or procedures to manage and disseminate the data that are collected. Although the data collected are periodically shared with the Central Statistics Office, it is not clear to what extent data are managed and shared with other relevant national agencies. There is also no indication of how the data collected could be accessed by the public and interested parties.

The Central Statistics Office, as well, does not present a specific cluster or thematic area that deals with statistics on environment. As such, there are no identifiable indicators on climate change and disasters. With regard to statistics and indicators related to human mobility, aside from what is shared by the immigration and tourism national agencies, the office only generates statistics on some general aspects of migration collated as part of the national census. The data that were presented as information collected for the 2011 round of population and housing census included statistics on distinct demographic aspects, but with no information regarding international or internal migration, nor any indication of underlying reasons (such as climate and environmental changes) that may influence movement. However, the Core Welfare Indicator Questionnaire (CWIQ) survey, which was conducted by the office in 2005, dedicated a section to assess the impacts of Hurricane Ivan (2004) on households, capturing information related to displacement.

With regard to NaDMA, the information that is gathered in the context of the Caribbean Disaster Emergency Management Agency (CDEMA) Damage Assessment and Needs Analysis (DANA) Continuum at the national level comes from the situation report template and Form 400.1 – Damage and Needs Assessment Report. Whilst the former form does not enable the collection of data directly linked to human mobility, the latter (deployed to collect quantitative data) helps in terms of collecting information on both the number of displaced and evacuated people. Even though the Form 400.1 allows for the quantification of the number of displaced people and evacuations, the NaDMA indicates that the collection, analysis and storage of data related to the human mobility dimension is not a common practice, except for data on evacuations. Considering that effective data collection, management and dissemination are crucial to evidence-based policies related to migration, climate adaptation, as well as disaster management at the national level, this report outlines recommendations and proposed guidelines to enhance the collection, quality and accessibility of data on climate and disaster related human mobility in Grenada.

Regarding data collection within the Immigration and Passport Department, a revision of the Customs Declaration (c) form to include a specific field on "purpose of the visit" is highly encouraged. This field could include environmental factors (such as weather conditions and disasters) amongst the possible options. That is, climate or disaster-related impacts should be listed amongst reasons for seeking entry. In instances of departure, provision could be made to capture the reasons for departing; this should also include environmental factors. The revision could also be made to enable the collection of detailed demographic and personal information (such as date and country of birth, sex, nationality, home address), helping to identify CARICOM and Organisation of Eastern Caribbean States (OECS) citizens. Whilst this helps to distinguish community citizens, this could also facilitate the collection of disaggregated data on the topic at the various ports of entry. This would help to plan, mobilize resources and target responses in the wake of a disaster.

Another proposition is for the Immigration and Passport Department to also consider developing a comprehensive data system, or, if not, include new variables in the BMS. Given that the BMS already hosts information on passenger arrivals and departures, the system could be upgraded or transformed to a comprehensive data system that also accounts for immigration and emigration, as well as climate- and disaster-related mobility that may be detected at the ports. To support the improvement and expansion of the BMS, the Department could also consider prioritizing or enhancing the collection, analysis, reporting and sharing of environmental-related migration data by designating an officer with responsibilities to monitor the process, as well as facilitating capacity-building. Complementary capacity-building for officials through periodic training, assessment of data-collection processes and acquisition of technology and software tools would contribute to the data-collection and data management system in Grenada for development planning, disaster preparedness and response. The prioritization could be complemented by developing methodologies and common protocols that clarify how data should be collected at the existing ports of entry, as well as how this information could subsequently be managed and disseminated.

Besides the demographic statistics regularly generated at the national level, the Central Statistics Office could also develop specific statistics on the environment, and related indicators on climate change and disasters. The statistics could also focus on the human mobility dimension of climate and environmental changes. With the office already planning to integrate disaster impact as one of the reasons for migration in all upcoming data-collection processes, consideration could be made for detailed disaggregation (such as age and sex) and defined categories (such as displaced, evacuated and relocated people). Similarly, indicators relating to climate change could include different aspects such as drivers, impacts and adaptation, with specific focus on vulnerable communities.

With the upcoming round of population and housing census, the questionnaires could be designed (or revised) to capture data on human mobility categories, such as internal and cross-border migration, displacement, relocation and other forms of movement. Thus, specific questions related to the reason or motivation that led to international migration and/or internal displacement and migration in the census activity could include environmental aspects (for example, weather conditions, disasters) in the response options. Emphasis could also be placed on collecting disaggregated data on a regular basis as part of the upcoming census and related household surveys (see UNHCR, 2019). Depending on the availability of resources, a design to conduct regular surveys would support the development of a comprehensive and reliable database to support informed decision-making and planning.

With the collection of comprehensive and reliable disaster data, the proposition is for NaDMA to consider adjusting its situation report template according to the predetermined form from CDEMA for the development of the situation report at the national level (Initial Situation Overview – ISO – Form). This is because the CDEMA ISO form has a specific field on "no. of people in shelters", "displaced populations", and "others". Although the Form 400.1 had been revised to meet the requirements of the CDEMA IDHNA (Stage 3 of the DANA Continuum) and the country's needs, the form currently in use already provides the possibility to capture general information related to human mobility (displacement and evacuation). As such, in addition to effectively registering the human mobility dimension (number of displaced, evacuated and relocated persons), a revision could also ensure the collection of disaggregated data (by age and sex), human causalities (deaths, injured and missing people), as well as information on

houses damaged or destroyed. This could be complemented by also developing proxies to determine displacement that may be caused by disasters, if statistics on persons who may have fled or been forced to move as a result of an emergency cannot be captured directly.

Another recommendation is for the NaDMA to also consider developing a common national database of disaster data, from which information compiled and kept in the format of reports could be managed and disseminated. The proposed common repository could make provisions to allow for validation of data collected and could also present data on human mobility dimensions of disaster in Grenada. To ensure that the proposed national disaster database is robust and up-to-date, there is the need for established, validated and harmonized methodologies and protocols on how to collect, manage and disseminate raw data on disaster at the national level (with standardized or common categories and definitions). Such protocols should clearly highlight criteria for categorizing human damage (ensuring, amongst other things, the incorporation of a specific category on displacement). This could serve to guide the activities of all the national actors often involved in the collection of disaster data, and also offer opportunities for data cleaning and quality.

This report is organized into to five sections. Section 1 gives an introduction and background to the study. In Section 2, the report discusses the analytical approach to understanding the human mobility outcomes in the context of climate and other environmental changes, including disasters. It further describes the methodological approach of the study. This is followed by Section 3, which provides a brief overview of Grenada's governance frameworks on climate change, disaster, and human mobility, before highlighting the main sources of information and data on climate and environmental change, disaster and human mobility at the national level. It also underlines the main gaps and limitations in data-collection management. These gaps then serve as the basis for offering guidelines for enhancing the availability, quality and accessibility of data on the topic at the national level, in Section 4. The discussion then concludes by emphasizing the importance of and need for reliable data for informed decision-making and planning in Section 5. It highlights opportunities and makes recommendations for improved data collection, management and dissemination to facilitate climate change adaptation, disaster preparedness and response, and sustainable development in the country.

1. INTRODUCTION

In the face of ongoing global climate change, the scale and impact of climate-related disasters in the Caribbean and other SIDS have drawn considerable international attention (UNFCCC, 2005; Collymore, 2007; Thomas and Benjamin, 2020; Vinke et al., 2020). The growing concern is perhaps informed by the fact that not only have climate change–related risks and hurricanes increased in frequency and severity, but also a significant majority of the population, as well as livelihoods, cities and critical infrastructure in most SIDS, are situated within 1.5 km off the coasts (Lewsey et al. 2004; Gallina, 2010; UN-OHRLLS, 2015). Hence, they remain exposed and vulnerable to these extreme climate change events (Schicklinski and Noorali, 2011). As a consequence, vulnerable populations in SIDS, such as in the Eastern Caribbean, have continued to suffer from the impact of climate-related risks and disasters (Thomas et al., 2020). During the hurricane season of 2017, for example, about 3 million people across 16 countries in the Caribbean and the United States of America were reportedly displaced by Hurricanes Irma, Harvey and Maria (IDMC, 2018).

Generally, discussions on the climate and environmental change, disaster, and human mobility nexus has drawn divergent perspectives across both scientific and policy divide over the years (Black et al., 2011; Piguet, 2013). This notwithstanding, it is undeniable that climate change impact across Caribbean countries could potentially aggravate widespread displacement and accentuate existing mixed mobility patterns in the region (ACP, 2013; IPCC, 2014; Kelman, 2018; Vinke et al., 2020). With specific reference to the Eastern Caribbean region, many people have been affected and displaced by disasters and hence forced to move internally or to other States and territories within the region (IOM, 2017; Aragón and El-Assar, 2018). Besides the already established mobility patterns in the region (Thomas-Hope, 2002; ACP, 2013; Kelman, 2018), existing free movement arrangements within the framework of the OECS, and provisions under the CARICOM Single Market Economy (CSME) initiative, have facilitated inter-State mixed migration of people in the region (Thomas-Hope, 2002; Aragón and Mawby, 2019; Francis, 2019). As such, migration and displacement in the Eastern Caribbean are complex phenomena driven by a multiplicity of interrelated factors (ACP, 2014).

1.1. Migration, climate and environmental change and issues of data in Grenada

As a tri-island State located in the southern part of the Lesser Antilles, Grenada remains exposed and vulnerable to climate change and related natural hazards (UNEP, 2008; Glasgow et al., 2018). Amidst ongoing changes in global climatic and ecological systems, Grenada has witnessed an increase in mean annual temperature of 0.14°C within the period 1960–2006 (Simpson et al., 2012). The projections based on both general and regional climate models point to an increase in annual mean temperature of between 0.7°C and 3.7°C by 2080 (Simpson et al., 2012). The country has experienced recurring episodes of severe drought, whilst total annual rainfall has also witnessed fluctuations since 2000 and a strong decline recorded in 2009 (Government of Grenada, 2017a). Although projections on the nature of precipitation across the country seem to vary and remain uncertain (Government of Grenada, 2001), the estimation is that annual rainfall will witness a decline of between 22 per cent and 29 per cent by 2080 (Simpson et al., 2012). Besides the impact of sea level rise and the associated impact of storm surges on coastal ecosystems, settlements, livelihoods and infrastructure, the occurrence of hurricanes and tropical storms have also increased in frequency and intensity in the last 30 years, often causing widespread destruction (Day et al., 2016).

In September 2004, for example, Grenada was badly hit by Hurricane Ivan. At least 12 people lost their lives, whilst there was damage to more than 80 per cent of buildings and critical infrastructure in the country (The Guardian, 2004; World Bank 2009). This greatly affected the health, tourism and agricultural sectors, with the cost of damage caused to the country estimated at USD 900 million (World Bank 2009; Government of Grenada, 2017a). Whilst still recovering from Hurricane Ivan, Grenada was also hit by Hurricane Emily (July 2005). Hurricane Emily resulted in the destruction of houses, whilst several parishes were inundated by flood water. In all, more than 2000 people were reportedly evacuated, with 1,408 persons relocated to 30 shelters (Ali, 2005). Despite the direct impacts and costs from disasters, climate-related risks will mostly interact with a multiplicity of complex socioeconomic factors and existing vulnerabilities, in aggravating the displacement and forced migration of people in the Caribbean (Glasgow et al., 2018; Vinke et al., 2020).

Given that ongoing global warming and climatic changes will continue into the future, the impact of extreme events such as hurricanes, tropical storms and storm surges will contribute to widespread displacement and increase in population movements across Grenada (Hamza et al., 2017). Besides the threats to the tourism and agricultural sectors, as major contributors to the economy, Grenada is particularly vulnerable because the majority of the population, settlements and key national infrastructure are situated within the disaster-prone coastal zone (Day et al., 2016). In view of the need to enhance climate change and disaster resilience, as well as promote effective climate change governance and (im)migration management in the country, the national Government has been proactive in instituting legislation and governance frameworks, including the Immigration Act (Chapter 145 of 1969), National Climate Change Strategy and Action Plan (NCCSAP) (2007–2011), National Climate Change Policy (2017–2021), and the National Climate Change Adaptation Plan (NAP) (Government of Grenada, 2017b, 2017c).

The recent IOM migration governance and needs assessments, conducted in the ten island States of the Commonwealth Caribbean revealed that Grenada and all the other Member States have national plans to guide the effective management of emergencies and disasters. Also, the national Government has designated agencies and institutions in charge of implementing the proposed actions and interventions (Aragón and El-Assar, 2018). Despite the relative strides that have been made, there is still a limited integration of human mobility issues into climate change and disaster plans and strategies.

Even in instances where the Immigration and Passport Department is deployed to handle issues of human mobility as part of emergency committees, their involvement is often on an ad hoc basis. This is because there are often no formally documented protocols for coordinating with immigration authorities (Aragón and El-Assar, 2018: 51). This limitation is further compounded by the lack of data and evidence on climate and environment-related mobility as critical elements that could be accessed in a timely manner for effective planning or deployment of interventions. At the national level, available information on migration is mostly based on census data collected by the Central Statistics Office,

as well as administrative data on entries and exits, visas and residence permits generated by the Immigration and Passport Department. Alongside these data sources, there are scanty statistics from other national agencies – like the GTA, MoH, Ministry of Social Development, Housing and Community Development and NaDMA – that also capture or present information on the number of people affected or displaced by climate-related disasters in the country.

Although data at the regional level and from other global sources provide information on climate risks, disaster and impacts across the region, there is a need for country-specific, disaggregated and comprehensive data on climate change and disaster-related human mobility. More importantly, there is a need to assess the reliability of data by probing the data-collection, data management and data sharing mechanisms at the national level. The availability of adequate and reliable data is crucial to helping the national Government of Grenada to plan and develop evidenced-based policies to effectively address the adverse impacts of climate and environmental change and disasters on human mobility in the country.

1.2. Scope and objective of the study

This study is part of the IOM Regional Dialogue to Address Human Mobility and Climate Change Adaptation in the Eastern Caribbean, under the auspices of the IOM GMDAC (Berlin, Germany) and IOM Dominica, and funded by the Government of the Federal Republic of Germany. The project seeks to build a regional dialogue series in Eastern Caribbean States that will enhance the capacities of governments to collect, analyse and utilize data on human mobility and vulnerability derived from climate and environmental change. It is being implemented by IOM in six independent Member States of the OECS: Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines. Its objective is to assess the national data systems of the six countries in relation to migration, climate and environmental change in order to identify strengths, weaknesses and opportunities to enhance available evidence on environmental migration. The ultimate goal is to enhance the availability of reliable data on environmental migration for informed planning and policy. This study report focuses exclusively on Grenada.

2. ANALYTICAL AND METHODOLOGICAL FRAMEWORK

2.1. Conceptual framework: Understanding the climate and environmental change, disaster, and human mobility nexus and outcomes

The role of environmental factors in influencing patterns of human mobility has long been a focus of scientific research and policy (Piguet, 2011, 2013; Ionesco et al., 2017; Flavell et al., 2020). However, recent attention to DRR and climate change adaptation policy has invigorated calls to bring the human mobility dimensions of climate and disaster impact into political, development and climate action (Mercer, 2010; Black et al., 2011; Wilkinson et al., 2016). The increasing policy attention and evolving perspectives on the climate and environmental change, disaster, and human mobility nexus indicate the extent to which climate change impact and DRR has gained traction.

The broad distinction between the different types of human mobility (that is, "migration", "displacement" and "planned relocation") in the context of climate change also highlights the complexity of multiple factors that come into play in precipitating movements under circumstances of real or perceived climate and environmental risks (Renaud et al., 2011; Warner et al., 2013; IOM, 2018, 2019; Bower and Weerasinghe, 2021). The conceptual framework developed as part of the Foresight project provides a good point of entry to understanding mobility outcomes or decision-making in the context of climate and environmental change and disaster (Government Office for Science, 2011; Black et al., 2013). The Foresight framework[1] explains that mobility outcomes (including displacement and the decision to stay or being unable to leave) are influenced by a multiplicity of complex interrelated forces operating at the macro (social, economic, environmental and political), meso (mostly intervening obstacles and facilitators) and micro (personal and household characteristics) levels.

The emphasis on the need for collecting, analysing and using reliable data on patterns of mobility, as well as understanding the links with environmental degradation, climate change and crisis to inform and foster policy coherence (IOM, 2014a), is of particular relevance for the purposes of this study. In this regard, IOM recognizes as one of its key commitments the need to link research and policy in support of efforts by national governments towards achieving effective migration governance (Melde et al., 2017). It is thus within the remit of enhancing policy, based on the availability and importance of timely and reliable data, that this study assesses the national data systems on migration, environment, disaster and climate change of Grenada.

2.2. Methodological approach and data

The research approach for this study is based largely on a triangulation of methods including desk reviews, interviews with officials, national agencies and departments, as well as international and regional organizations. For the data collection, the study began with an extensive desk review (October–November 2020). The desk review involved the identification and mapping of global, regional and national sources of information and data sharing systems, and governance frameworks on migration, climate and environmental change across the OECS. A detailed description of the whole research process is further elaborated in Section 2 of the Regional Report.

[1] See Section 2 of the Regional Report for detailed discussion of the Foresight Mobility Framework.

In Grenada, three main national agencies were identified as relevant sources of data and statistics on climate and environmental change, disasters and human mobility. These agencies are the Immigration and Passport Department, Central Statistics Office and NaDMA. These agencies received 3 out of the 18 questionnaires that were distributed to all the national agencies identified as relevant sources of data across the six OECS countries of focus. Ten other questionnaires were sent to regional stakeholders (Annex I). Two different questionnaires[2] were deployed to cater for the distinct stakeholders identified. Although the questionnaires were developed in this way to allow for distinction between the different stakeholders, the questions did not differ much. The questions presented were mostly open ended and allowed for the collection of qualitative data. Both questionnaires solicited information relating to climate change impacts at both regional and national levels, existing climate, disaster and migration governance frameworks, available official and secondary sources of data at the national and regional levels, as well as gaps in the data and in data collection and management, and options to enhance data on migration, environment, disaster and climate change at all levels.

As a follow up to the questionnaires distributed, complementary online interviews were conducted with the three national agencies that had received the questionnaires. With the support of IOM Dominica, several other national agencies and ministries that collect some level of data on the topic, but were not identified during the mapping process, were also engaged. These included: the GTA; MoH; and Ministry of Social Development, Housing and Community Development. Together with the three main national agencies, these other agencies and ministries were extensively consulted as part of the national validation workshop that was held in March 2021. The national workshop provided critical insights into the issues of climate and environmental change, disasters and human mobility data in Grenada.

With the analysis, the secondary quantitative data, statistics and information helped to ascertain the availability of data on the topic, and to what extent these data were being collected in Grenada. The quantitative data also served as a reference in discussing the issues that came up in the qualitative interviews and data. Based on the findings of the study and consultation process, technical guidelines for enhanced data collection, management and dissemination on migration, environment, disaster and climate change in the country have also been formulated. Alongside, a checklist of proposals or recommendations have been formulated to assist in building national capacities, and to facilitate a better understanding of what is required to effectively address climate change and disaster impact on human mobility at the national level.

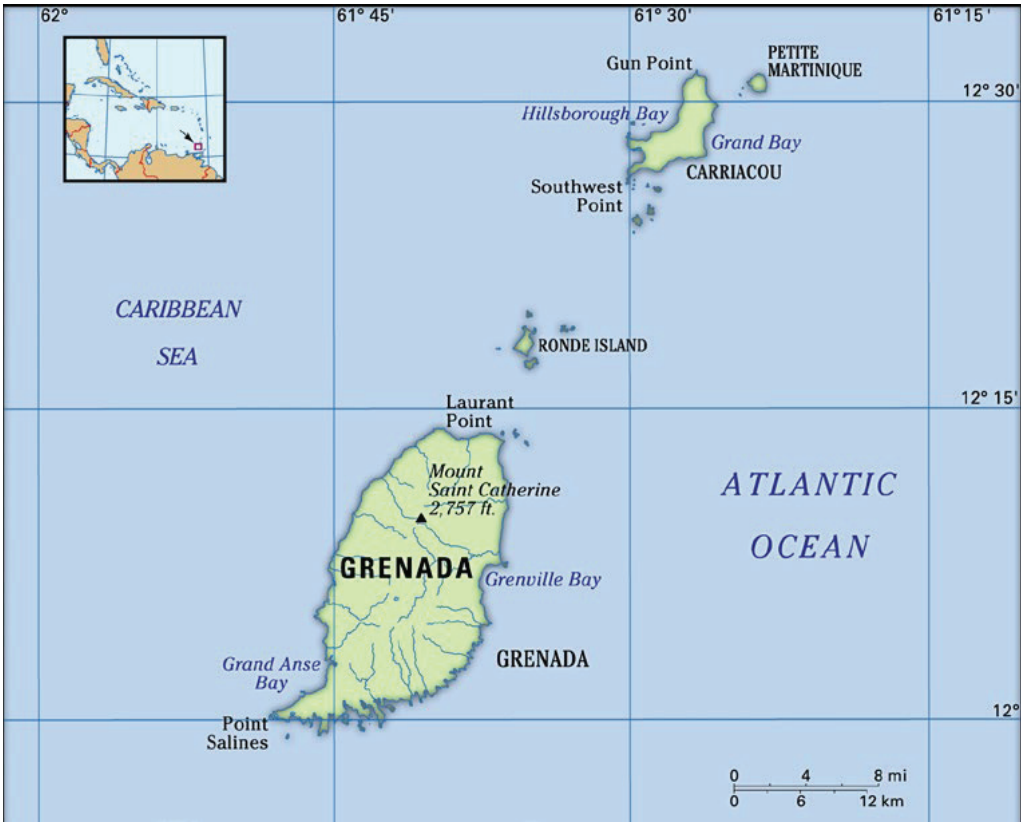
[2] The questionnaire deployed for the national level is presented in Annex V of this report.

3. DATA ON CLIMATE AND ENVIRONMENTAL CHANGE, DISASTER AND HUMAN MOBILITY: A FOCUS ON GRENADA

3.1. Country profile

Grenada, also known as "the Spice Isle", is a sovereign commonwealth Eastern Caribbean State and consists of the Island of Grenada itself and the dependency islands of Carriacou and Petite Martinique (Figure 1). As highlighted in Table 1, the country covers a total land area of 344 km2 and its 2019 mid-year population was estimated at 112,000 people, with a density of 325 persons per km^2 (Allen, 2017; UN DESA, 2019). The country has a small open economy primarily dependent on agriculture and tourism. Between 1981 and 2015, the economy witnessed an average annual growth of 3.4 per cent (Charles, 2014). But by the end of 2019, the annual growth in gross domestic product (GDP), which had been 4.1 per cent in 2018, fell to only 1.9 per cent, with the value of the national economy estimated at USD 1.211 billion (2019) (World Bank, 2020). The country's economy, which was largely based on agriculture and related exports, has transitioned over the last forty years to being a service-oriented one. In particular, tourism has become the main source of foreign exchange to the country (Charles, 2014).

Figure 1. Map of Grenada



Source: Encyclopædia Britannica, 2021.

Note: This map is for illustration purposes only. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the IOM.

Table 1. Background of key socioeconomic information on Grenada

Capital	Saint George's
Form of government	Constitutional monarchy
Location	Lesser Antilles – Eastern Caribbean
Total land area	344 km
Population	112 000 (2019)
Main economic activities	Agriculture and tourism
GDP (annual growth)	1.9% (2019)
Hazards that may lead to displacement	Hurricanes, floods, earthquake, droughts

Source: World Bank, 2020; UN DESA, 2019; Allen, 2017; Charles, 2014.

Akin to other Eastern Caribbean States, Grenada has suffered from the impacts of climate change and related disasters (CARIBSAVE Partnership, 2012). The country's National Climate Change Policy alludes to the devastating effects that the national territory has endured due to the increasing occurrence of hurricanes across the region (Government of Grenada, 2017b). As shown in Table 2, Grenada recorded 131 disasters between 1771 and 2014, with over 265,000 people reportedly affected during the period (UNDRR-DesInventar Sendai, 2020).

Table 2. Impact of disasters by event type: Grenada (1771–2014)

Event	No. of occurrences	Deaths	Injured	Missing	Houses destroyed	Houses damaged	Directly affected	Indirectly affected	Relocated	Evacuated
Accident	1	9	3							
Biological	8		1				28			
Coastal erosion	6				16	31	255			46
Coastal flood	1		12		12		40			
Drought	4							106 500		
Earthquake	10									
Epidemic	10	4 940					6 350			
Fire	9	2	12		5		992			
Flood	17	41	7		15	58	118			40
Forest fire	1									
Hurricane	27	116	1 182		327	33 017	94 166	157 708		9 163
Landslide	5	3	6		53	499	10			238
Storm	19				1	113	45	1 000		
Thunderstorm	3					1	2			2
Tsunami	4									
Volcano	3									
Total	131	5 176	1 223		429	33 719	102 006	265 208		9 489

Source: UNDRR-DesInventar Sendai, 2020.

Despite being ranked as 178th on the 2020 World Risk Index – meaning low exposure and vulnerability to the adverse effects of climate change (Behlert et al., 2020) – the national Government has been emphatic in conceding that its economy is still recovering from the damage caused by Hurricanes Ivan (2004) and Emily (2005) (Government of Grenada, 2017c). Generally, the nature and extent of ongoing global climate change and impacts across Grenada in the near future remain uncertain. Nevertheless, long-term projections of climate change in the country point to a potential amplification of impacts due to increase in hurricane events and damage, severe and frequent droughts and floods, increase in sea surface temperatures and significant decline in annual rainfall (Government of Grenada, 2017c). In the quest to address the impacts of climate and environmental changes and disasters, the national Government has been proactive in developing several distinct policy and legal frameworks to facilitate comprehensive climate and disaster governance in the country.

3.2. National governance of the climate and environmental change, disaster, and human mobility nexus

In response to Grenada's vulnerability to climate change and disasters, distinct national policy and legal frameworks have been developed at the national level. The existing policies and legislations are primarily aimed at enhancing ongoing efforts to promote disaster mitigation, as well as disaster risk reduction, management and recovery. To examine to what extent climate change and disaster-related population movements are addressed at the national level, many different governance frameworks were identified and analysed as part of the study. The different policies and legislations that were analysed, and the extent to which they address and make provisions for the establishment of data sharing mechanisms on climate and disaster human mobility are hereby highlighted in Table 3.

Table 3. Policies related to migration, environment, climate change and disaster risk reduction in Grenada

Governance sphere	Year	Policy	Acknowledgment of the climate and environmental change, disaster, and human mobility nexus	Provisions on data sharing mechanisms
Migration	1969	The Immigration Act (Chapter 145 of 1969)[a]	No	No Provisions
Environment	2005	Environmental Management Act[b]	No	No Provisions
	2012	Grenada Vision 2030[c]	No	No Provisions
	2019	National Sustainable Development Plan (2020–2035)[d]	Yes	No Provisions
Climate change	2001	Initial National Communication on Climate Change[e]	Yes	No Provisions
	2011	Strategic Program for Climate Resilience[f]	No	No Provisions
	2016	Nationally Determined Contribution[g]	No	No Provisions
	2017	Second National Communication on Climate Change[h]	Yes	No Provisions
	2017	National Climate Change Policy for Grenada, Carriacou and Petite Martinique (2017–2021)[i]	No	No Provisions
	2017	National Climate Change Adaptation Plan (NAP)[j]	No	No Provisions
	2020	Second Nationally Determined Contribution[k]	Yes	No Provisions
Disaster risk reduction	1955	Agriculture (Hurricane Rehabilitation) Act[l]	No	No Provisions
	1957	Housing (Hurricane Damage) Loans Act[m]	No	No Provisions
	1984	National Disaster (Emergency Powers) Act (Act No. 3 of 1984)[n]	No	No Provisions
	2005	National Disaster Plan (NDP)[o]	Yes	No Provisions
	2011	Disaster Vulnerability Reduction Project's Resettlement Policy Framework[p]	Yes	No Provisions
	2012	National Disaster Management Plan (Draft)[q]	No	No Provisions

Source: [a]Government of Grenada, 1969; [b]Government of Grenada, 2005a; [c]Government of Grenada, 2012a; [d]Government of Grenada, 2019; [e]Government of Grenada, 2001; [f]Government of Grenada, 2011a; [g]Government of Grenada, 2016; [h]Government of Grenada, 2017a; [i]Government of Grenada, 2017b, [j]Government of Grenada, 2017c; [k]Government of Grenada, 2020; [l]Government of Grenada, 1955; [m]Government of Grenada, 1957; [n]Government of Grenada, 1984; [o]Government of Grenada, 2005b; [p]Government of Grenada, 2011b; [q]Government of Grenada, 2012b.

As shown in Table 3, not much attention has been given to the key issue of human mobility in the context of climate and other environmental changes (including disasters) and associated need for data at the national level. Out of the 17 documents examined, only 6 acknowledged human mobility. Each theme, as addressed in the various frameworks examined as part of the study, is further elaborated on the next page.

3.2.1. (Im)migration policies and legislation

Migration, and in particular immigration, in Grenada is governed by the Immigration Act (Chapter 145 of 1969). The Immigration Act stipulates the legal requirements and conditions in relation to "entry" and "stay" in Grenada. With the exception of OECS citizens, all persons are required to submit passports and valid documentation upon entry (Bayat, 2020). There are no references to or specific provisions for the consideration of persons who may be moving in the context of climate or other environmental changes. Despite the seeming lack of recognition, the existing free movement agreements developed in the context of the OECS and CARICOM offer the basis for legal "entry" and "stay" in Grenada for all citizens from other (Eastern) Caribbean States that may be affected by climate and environmental change and disasters. The Act does not provide for any means to collect or share data on migration patterns (in and out of the territory).

3.2.2. Climate and environmental change policies and legislation

Amongst the 10 environmental and climate policy and legal frameworks examined for Grenada, only 3 made reference to human mobility. The initial national communication on climate change highlighted that planned relocation as an adaptation strategy should involve formulating the necessary legislation and mechanisms for vulnerable and affected persons to resettle in less vulnerable areas. This would help avoid and minimize the impacts associated with being displaced (Government of Grenada, 2001: 64). But in areas where the cost involved in instituting protection measures is high, relative to the benefits that may be accrued, then outright abandonment and relocation is to be pursued as an adaptation option. With the second national communication on climate change, the Government, in its assessment of climate change impact, affirmed that extreme weather events will lead to direct impacts, including displacement, mass migration and conflicts (Government of Grenada, 2017c). In addressing the country's vulnerability, the second NDC registers the need for policy coherence in tackling loss and damage due to climatic impacts. The Government aims to strengthen resilience and respond to impacts beyond the limits of adaptation, as well as help address challenges related to human mobility and vulnerable settlements (Government of Grenada, 2020).

Regardless of the generic mentions or recognition of the topic, the three policy documents do not give any indication of data availability, nor make any specific attempts to collect and share data on the mobility dimensions of climate and environmental change. The lack of systems, expertise and facilities to promote data collection tend to undermine actions to reduce vulnerability to the impacts of climate change at the national level. However, the resolve is to facilitate public sector capacity-building in the area of data management, risk modelling and climate smart approaches towards sustainable livelihoods development (Government of Grenada, 2016, 2017c).

3.2.3. Disaster management policies and legislation

In regard to disaster management in Grenada, several policies and legislation, as well as actors, variously work to complement each other to enhance disaster management and preparedness in the country. Whilst emergency responses and disaster preparedness in Grenada are solely handled within the framework of the National Disaster (Emergency Powers) Act (Act No. 3 of 1984) and NaDMA, there are other complementary normative instruments focused on disaster risk reduction at the national level. In particular, the National Disaster (Emergency Powers) Act makes provision for emergency powers.[3] Specifically, the Act makes provision for the maintenance of supplies and services that are essential to the life of the community in the wake of a national disaster. It also empowers the Prime Minister

[3] According to Section 2, national disaster is defined as "a disaster occurring as a result of an earthquake, hurricane, flood, fire, outbreak of pestilence or of infectious disease or other calamity" (Government of Grenada, 1984).

to declare that a national disaster has occurred in the country (Government of Grenada, 1984). The other legislation related to the Emergency Powers Act are the Agriculture (Hurricane Rehabilitation) Act (1955) and the Housing (Hurricane Damage) Loans Act (1957). The former stipulates post-disaster actions to assist owners of agricultural properties to access loans to re-establish and maintain land after a hurricane disaster, and the latter is concerned with hurricane rehousing. It allows for establishment of an Authority for the purposes of granting loans to affected persons with funds provided by the national Government. In this regard, persons eligible for loans are those who experience hardship in terms of financing the repair and reconstruction of houses damaged or destroyed by tropical storms (Government of Grenada, 1955, 1957).

The NaDMA, on the other hand, is the main institution responsible for the management of disasters and emergency situations in Grenada. The Agency's mission is to reduce the loss of life and property within the country by ensuring adequate preparedness, response and mitigation measures are place to deal with the impacts of climatic and other environmental hazards. The operations of NaDMA dovetail with the mandate of the CDEMA, which promotes a comprehensive approach to disaster risk management. Besides these institutional and governance frameworks, the draft National Disaster Management Plan (NDMP) is the main planning tool that places emphasis on disaster preparedness and response (Government of Grenada, 2012). The plan has widened its scope to include natural hazards such as earthquakes, volcanic eruption, floods, landslides, as well as human-induced hazards. In particular, the NDMP outlines responsibilities, specific plans and procedures for all stakeholders in the disaster management process. Furthermore, it explains the responsibilities and functions of the thematic committees. The ultimate goal is to establish the threshold for considering events as disasters, whilst also outlining the type of response, recovery and mitigation measures available to assist communities that have been affected by a disaster across the country (Government of Grenada, 2012b).

As shown in the Table 3, the issue of human mobility has only been recognized within the framework of the Grenada NDP, as well as the Disaster Vulnerability Reduction Project's RPF. Whereas the NDP alludes to displacement of populations and mass migration as a result of disasters (Government of Grenada, 2005b), the RPF underscores the need for meaningful consultation with, and participation of, displaced people in the planning and implementation of resettlement programmes. It is envisaged that the effective participation of displaced persons will ensure sustainability and improvement of their livelihoods and wellbeing (Government of Grenada, 2012a). Nevertheless, neither the NDP nor RPF has outlined any provisions to effectively address human displacement in the context of disasters.

3.3. Sources of information and/or data on migration, climate and environmental change and disaster risk reduction in Grenada

Given that not much attention has been given to climate change and disaster impact on human mobility and related data in the policy arena, several other national agencies and departments in Grenada were also consulted to determine the extent to which they collect, manage and disseminate data on the subject. The agencies and departments that were examined as part of the study included the Immigration and Passport Department, Central Statistics Office and NaDMA.

3.3.1. The Immigration and Passport Department

As is the case with other (Eastern) Caribbean States, all residents and visitors entering or leaving Grenada, either by air or sea, are required to complete the same entry form, called Customs Declaration (c) (Government of Grenada, 2021). This form collects personal information such as name and date of birth, as well as providing fields for the declaration of personal goods and commercial merchandise upon entry. Importantly, however, the form does not register fields like "length of stay" nor "purpose of the visit". As a result, the form cannot be used to capture population movements that result from conflicts or disasters. Despite this shortcoming, the Department indicated during the national validation workshop that it also captures information on purposes relating to: "vacationers", "business", "medical students", "research", "study", "sports", "convention", "meeting", "returning nationals" and "other". The latter option of "other" presents an opportunity that could enable the indirect collation of data on the topic.

The free movement arrangements under the OECS and CARICOM present a good opportunity for easy migration or relocation of persons who may seek entry in the context of climate or disaster impacts. However, the lack of mechanisms to adequately collect information or determine the precursors for movement within the regional frameworks also makes it difficult to quantify the number of people who move or are temporarily displaced due to environmental factors. It is not clear how the national agency collects and manages information associated with immigration and emigration in the country. The data collected is mostly related to the border control of passengers and visitors arriving and departing from the territory of Grenada. This information is often stored in the BMS. Whilst this information is sometimes shared with other national agencies, such as the statistics and tourism departments, and airport authorities, it is not available or shared with the public or any interested parties. Aside from the data that is hosted within the BMS, there is no national database that hosts disaggregated data on immigration and emigration. This has translated into a lack of reliable information on population movements in the context of climate and other environmental changes (such as weather conditions and disasters).

3.3.2. The Central Statistics Office

According to the Central Statistics Office, Grenada does not develop specific statistics and indicators on the environment and migration. Whilst some data on migration has been gathered through national censuses (for instance, population distribution and migration patterns), information that could be associated with the topic is frequently provided by secondary sources. For example, the Immigration and Passport Department reports on the number of passengers and visitors arriving and departing the island nation whilst the Tourism Authority informs on the number of cruise ship arrivals.

In regard to the climate and environmental change, disaster, and human mobility nexus in the country, details gathered from authorities indicate that the office has recently started to compile disaster-related information as part of its efforts to produce environmental statistics. In 2005, the national agency conducted the CWIQ survey (Central Statistics Office, 2005). As part of this survey, the questionnaire dedicated a module to assessing the impacts of Hurricane Ivan (2004) on households (Central Statistics Office, 2005). Based on the data collected, the CWIQ report presented a statistical summary of people who were displaced by the event (Table 4).

Table 4. Summary (%) of households displaced by hurricane Ivan (2004)

	Period of displacement (%)						Did household split up (%)			
	% Displaced	Several days	Several weeks	Several months	Still there	Total	No	Yes, for a while	Yes, still split	Total
Total	**49.0**	**56.0**	**23.7**	**13.3**	**6.9**	**100.0**	**90.1**	**8.2**	**1.7**	**100.0**
Place of residence	% Displaced	Several days	Several weeks	Several months	Still there	Total	No	Yes, for a while	Yes, still split	Total
Rural	48.9	55.7	23.8	13.5	7.0	100.0	90.1	8.2	1.6	100.0
Rural poor	79.0	49.0	18.7	27.8	4.5	100.0	83.8	13.6	2.6	100.0
Urban	50.2	62.9	22.1	9.4	5.5	100.0	88.9	7.7	3.4	100.0
Parish of residence*	% Displaced	Several days	Several weeks	Several months	Still there	Total	No	Yes, for a while	Yes, still split	Total
St. George's urban	50.2	62.9	22.1	9.4	5.5	100.0	88.9	7.7	3.4	100.0
St. George's rural	48.8	39.8	22.8	28.5	8.9	100.0	86.9	11.1	2.0	100.0
St. Patrick's	50.8	69.0	15.5	13.8	1.7	100.0	93.3	5.0	1.7	100.0
St. John's and St. Mark's	36.1	62.1	28.1	3.9	5.9	100.0	94.6	4.6	0.7	100.0
St. Andrew's	52.5	69.1	22.0	5.7	3.3	100.0	91.2	8.4	0.4	100.0
St. David's	61.1	53.8	33.8	0.0	12.3	100.0	88.8	6.5	4.7	100.0
Carriacou	31.9	65.0	15.0	10.0	10.0	100.0	91.7	8.3	0.0	100.0
Welfare quintile	% Displaced	Several days	Several weeks	Several months	Still there	Total	No	Yes, for a while	Yes, still split	Total
First quintile	79.1	49.5	18.7	27.4	4.5	100.0	84.0	13.4	2.5	100.0
Second quintile	66.6	52.0	28.7	10.3	9.0	100.0	87.0	11.2	1.7	100.0
Third quintile	53.7	56.3	26.2	6.1	11.5	100.0	90.4	8.4	1.1	100.0
Fourth quintile	41.8	69.1	18.0	7.1	5.8	100.0	91.6	6.6	1.7	100.0
Fifth quintile	23.3	57.3	30.6	10.0	2.1	100.0	93.9	4.5	1.6	100.0

* The Island of Grenada is divided into six regions – territorial units – known as "parishes".

Source: Central Statistics Office, 2005: 125.

As illustrated in Table 4, the number of people who were displaced by Hurricane Ivan was disaggregated by rural and urban areas, administrative units, as well as welfare quintile and period of displacement. Aside from these statistics on displaced persons, generated in the aftermath of Hurricane Ivan as part of the 2005 Grenada CWIQ, other national data-collection exercises, such as the 2011 round population and housing census, have captured only limited information on human mobility in the context of climate and other environmental changes.

The 2011 round of population and housing census did not collect information on the climate and environmental change, disaster, and human mobility nexus. The data that have been presented as information collected for the 2011 census in Grenada encompasses statistics on demographic characteristics by age, sex parish, ethnicity, religion, employment and other social indicators (Central Statistics Office, n.d.). Apart from the statistical report that is generated and hosted by the Central Statistics Office, there is no identifiable formal data storage and sharing mechanisms at the national level. What this implies in the instance of Grenada is that, except for the scant data that was captured as part of the 2005 CWIQ on persons that were displaced in the aftermath of Hurricane Ivan (2004), there is no reliable data on the topic that could be used to inform disaster response or as a basis for addressing climate and disaster impact in Grenada. The paucity of data on the mobility dimensions of disaster and climate change impact could have adverse implications in terms of the national Government's preparedness and capacity to respond to mass migration and displacement in the wake of a disaster or emergency.

3.3.3. The National Disaster Management Agency

In the wake of a disaster in Grenada, the NaDMA begins its response by observing the procedures stipulated within the framework of the CDEMA DANA Continuum. The first action taken corresponds with the development of a situation report (Stage 2 – ISO), which is a qualitative assessment generated within the first 24 hours after the national emergency. The next stage is to conduct an IDHNA (Stage 3), a quantitative analysis of the impacts within the first seven days after the event. Data is thus collected both quantitatively and qualitatively, including damage related to individuals, infrastructure and livelihoods, among other categories.

According to NaDMA, the information that is gathered in the context of the CDEMA ISO and IDHNA stages respectively comes from the following forms: the situation report template (Annex II) and Form 400.1 – Damage and Needs Assessment Report (Annex III). The situation report template does not enable the compilation of disaggregated data (for example, by age, sex, disabilities). However, it accounts for the number of fatalities, injured and missing people. As the template is designed to provide an overview of the situation at the time of the disaster or emergency, it does not provide any information on the number of evacuated people or the number of shelters provided – which could serve as proxy for evacuation. Furthermore, the template does not include fields that could help to capture any of the human mobility dimensions, such as displacement or relocation.

Form 400.1 – Damage and Needs Assessment Report collects data that is not disaggregated. However, the field on "population affected" enables the quantification of the number of deaths, injured and missing people. The form also helps in terms of collecting information on both the number of evacuated and displaced people. Importantly, data on the number of displaced people could also be extracted from the number of houses that have been totally or partially destroyed.4 The NaDMA has confirmed that the Form 400.1 had previously been revised to adequately meet the requirements of CDEMA and the needs of the country. This notwithstanding, the template still provides the opportunity to capture information related to the climatic conditions, characteristics of the disaster event, and secondary effects associated with human damages and economic losses. Even though the Form 400.1 also allows for the quantification of evacuated and displaced people, NaDMA emphasized that the collection, analysis and storage of data related to the human mobility dimension is not a common practice,

[4] The description to be included in the field "Housing and human settlements" involves: "Houses destroyed totally or partially. Type of damage. Location. Population displaced. Number of official/unofficial shelters activated. Number of shelter trees. Areas flooded or destroyed. Needs in terms of shelters, shelter management personnel, relief assistance for the population displaced: water, food, blankets, other items for shelters: generators, cooking utensils, toiletries, toys, etc. Number of tarpaulins and type of building materials needed. Action taken" (Annex III).

except for data on evacuations. Most of the information is compiled manually, and there is not a specific person assigned to the task, indicating the lack of a skilled team trained to this end.

Whereas the submitted situation report is often published via the website of CDEMA, the availability and accessibility of the data captured is restricted to the qualitative information presented. The generated IDHNA report circulates only amongst national agencies and departments, and is submitted to CDEMA only after approval by Cabinet. Thus, the data gathered during this stage of the DANA Continuum is initially not available or cannot be accessed by the public or any interested parties. Another critical observation is that the NaDMA does not have any established or official database on disaster and related issues (such as human mobility). Although the Agency collects data in the wake of a disaster through the CDEMA DANA Continuum procedures, there are no identifiable national repositories in which the information that is initially compiled and translated in the format of reports could be managed and disseminated. Given that this information is also directly shared with CDEMA, the management of any data falls under the responsibility of the intergovernmental agency.

What could then be implied from the foregoing discussion is that there are obvious limitations in terms of reliable data on disaster and climate-related mobility at the national level. Whilst the approval of the IDHNA by the Cabinet before onward circulation with CDEMA and national agencies may suggest that not all information collected is published, the limited accessibility comes with other challenges. In effect, no other CDEMA Participating Country can draw on information or lessons learnt from Grenada's IDHNA to help in planning or designing possible interventions in addressing disaster and emergency situations.

3.3.4. Other national agencies

Besides the Immigration and Passport Department, Central Statistics Office and NaDMA, several other national agencies were engaged to ascertain the extent to which data on human mobility in the context of climate and environmental change and disasters are being collected, managed and disseminated in Grenada. These other national agencies included: GTA, MoH and the Ministry of Social Development, Housing and Community Development.

For all these ministries and national agencies that were engaged as part of the national validation workshop, it became apparent that each of them also undertake some form of data collection on different forms of population mobility in Grenada. While some of the ministries collect information ranging from labour mobility to international migration, they do not specifically collect data on climate and disaster-related mobility. The kinds of data and data sharing mechanisms that these ministries and national agencies present, and the corresponding gaps and opportunities to promote the effective collection of data on climate and disaster-related mobility, are further elaborated in Annex V.

3.4. Gaps in and limitations to enhanced data collection, analysis and dissemination on human mobility in the context of climate and environmental change and disaster

Given that global warming is projected to continue into the future, the expectation is that climate change risks and impacts will become more frequent and widespread – and will have increasingly devastating outcomes – in vulnerable regions of the globe. Eastern Caribbean countries like Grenada will bear the brunt of extreme events. Addressing climate change and disaster impacts on human mobility across the country will require strategic planning and appropriate measures. In this regard, the need for effective data collection and management systems remains key to informed policies, climate adaptation, and disaster preparedness, response and recovery. To promote coherent data collection where that has not yet been streamlined, this section gives an overview of the major gaps and limitations in data availability that have been identified amongst the distinct national agencies and departments examined as part this study.

3.4.1. Identified data gaps in relation to the Immigration and Passport Department

The generation of data on human mobility in the context of climate and environmental change and disaster by the Immigration and Passport Department could be facilitated by adjusting the established procedures at the various ports of entry. With all persons arriving or departing either by air or sea expected to fill out the generic entry/departure form, the established procedures at the various ports of entry/departure provide the opportunity to revise the data-collection processes to allow for the capture of information on these themes. With regard to data collection on the topic by the Immigration and Passport Department, the following gaps and limitations were identified:

i. A major gap identified in the instrument deployed to collect data at the ports relates to the lack of specific question on climate and environmental factors as drivers of movement. The Customs Declaration (c) form (see Annex IV) does not include a field that asks about the purpose of the visit. As a result, the form is not able to capture reasons for moving or seeking entry into Grenada, including population movements associated with environmental factors. There is also no indication as to whether persons departing complete the same form or any other departure form and if questions about reasons for departure are asked.

ii. The Immigration and Passport Department does not also have any established database or repository for information on immigration and emigration. The information hosted in the BMS is limited to just an inventory on the number of people entering or leaving the country.

iii. The Department does not have protocols or procedures in terms of the management and dissemination of data that is collected. Although the data collected is periodically shared with the Central Statistics Office, the extent to which data is managed and shared with other relevant national agencies is not clear. There is also no indication of how the data collected could be accessed by the public and interested parties.

3.4.2. Identified data gaps in relation to the Central Statistics Office

Generating data on human mobility in the context of climate and environmental change and disaster depends not only on enhanced data collection, but also on the development of statistics and indicators on the environment and human mobility. Whereas statistics on the environment may encompass variables on climate risks and disasters, statistics on human mobility should include variables on migration, displacement and planned relocation, as well as acknowledging other aspects of mobility (such as evacuation and relocated or resettled populations). In this context, gaps and limitations on how the Central Statistics Office collects, manages and disseminates data on the topic include:

i. Despite being the main national agency in charge of developing statistics for national development planning and policy formulation, the Central Statistics Office does not develop statistics on the environment nor present any indicators on climate change and disasters and related migration.

ii. Aside from the collection and presentation of statistics on distinct demographic aspects, there are no statistics and indicators on climate-related migration and other forms of human mobility.

iii. The 2011 round of population and housing census did not collect information on the climate and environmental change, disaster, and human mobility nexus. The data presented statistics by parish, ethnicity, religion, employment and other social indicators. Beyond these statistics, there is no information regarding international and/or internal migration, nor any indication of underlying reasons or drivers (for example, climate and environmental changes and disaster) that may be influencing movement.

3.4.3. Identified data gaps in relation to the National Disaster Management Agency

As the main agency that deals with disaster management, impact assessment and response, the data that NaDMA collects on disaster and human mobility disaster remains vital to planning, as well as ensuring a holistic approach to disaster response in Grenada. In this light, there is a need to examine the state of

disaster data collection, as well as ways to promote the availability, quality and accessibility of information on disaster-induced displacement in the context of NaDMA. In terms of data collection, management and dissemination on the topic of human mobility in the context of climate and environmental change and disaster, a host of gaps and limitations come to light:

i. The situation report template used for Stage 2 of the DANA Continuum (ISO) does not present fields that allow for the collection of data directly linked to the distinct forms of human mobility (such as displacement, evacuation, relocation).

ii. The Form 400.1 – Damage and Needs Assessment Report that is deployed to collect quantitative data as part of the Stage 3 (IDHNA) of the DANA Continuum accounts for the human mobility dimension by capturing information on displacement and evacuation. However, the Form 400.1 used for the collection of quantitative data in the aftermath of a disaster is a form initially provided by the Caribbean Disaster Emergency Response Agency (CDERA), which transitioned to CDEMA in 2009. In effect, the template currently used by the NaDMA may be somewhat outdated, or may vary from the current CDEMA templates.

iii. Concerning data management, the NaDMA does not have any identifiable or established official database or repository on disaster that could serve as a reference or portal that could be readily accessed by any interested party.

4. GUIDELINES FOR IMPROVED AND STANDARDIZED DATA ON THE CLIMATE AND ENVIRONMENTAL CHANGE, DISASTER AND HUMAN MOBILITY NEXUS IN GRENADA

The need for enhanced data collection and establishing reliable databases has widely been acknowledged as critical to evidenced-based policies, development planning, climate adaptation and effective disaster preparedness and response. Given the lack of clear definitions and parameters surrounding the climate and environmental change, disaster, and human mobility nexus, the generation of data and evidence on the topic calls for proactive actions. In addition to establishing harmonized databases, the recommendation is also for the distinct national agencies to consider developing common methodologies and protocols to enable harmonized data collection, management and dissemination. The following activities or guidelines are proposed to enhance data on human mobility in the context of climate, disaster and other environmental changes in Grenada. They include the necessary first steps and effective ways to identify and develop a baseline for data availability, quality and accessibility at the national level. This would allow for collaboration, as well as a system to support the generation of comparable data, analysis and reports for policy. These guidelines and opportunities are further elaborated in the Regional Report.

Step 1: *Coordinate and exchange information for improved decision-making.*

Objective: *For improved decision-making process through the development of a TWG to promote regular information exchange and strengthened coordination of migration, environment, disaster and climate change data at the national level.*

Developing a common set of protocols and methodologies for data collection, using similar indicators, requires effective coordination and cooperation amongst national agencies. As a first step, therefore, the three main national agencies (Immigration and Passport Department, Central Statistics Office and NaDMA) could consider establishing a TWG. This TWG could be tasked with coordinating or having oversight over data collection in relation to questions of human mobility in the context of climate and environmental change and disaster in Grenada. A national TWG of this kind could contribute to maintaining focus on addressing the impact of climate change and disaster on human mobility. The activities of the TWG could also allow for transparency across agencies as a basis for building and sharing reliable data for informed policy and decision-making. This could be done in collaboration with, or with the support of, international and regional organizations (such as IOM and in particular GMDAC) to help establish the structures and build capacity.

To facilitate its work, the TWG could be a network of national migration, environment, disaster and climate change data focal points. This could include officers from the Immigration and Passport Department, Central Statistics Office and NaDMA, as well as representatives from all national agencies dealing with data collection, management and dissemination. The TWG could designate an official with expertise in data management as a liaison between national authorities and the TWG. Alternatively, a regular task force could foster cooperation and promote effective liaison between the TWG and other national agencies producing data.[5]

[5] See Section 6 of the Regional Report for elaboration on this activity.

Step 2: *Adopt new practices and common protocols that harmonize with regional and international standards.*

Objective: *Assist in establishing new practices and developing common methodologies and protocols for enhanced collection of data on migration, environment, disaster and climate change.*

Procedures that guide the collection, management and dissemination of data on the topic of climate and disaster-related mobility at the national level could be standardized. The focus for this would be to develop protocols and harmonized methodologies that could be employed by the national agencies. The common protocols and methodologies could be guided by or aligned with international standards, as well as glossaries with standardized indicators, categories and concepts for data collection (see Section 6 of the Regional Report for further details, as outlined by the United Nations Statistical Commission's Decisions on International Migration Statistics [UNSC, 2021: 19], as well as the ILO guidelines concerning statistics of international labour migration [ILO, 2018]). As an example, data indicators highlighted in Box 2 of the Regional Report could serve as pointers or reference for the collection of data on climate/environmental change and disaster-related mobility at the national level.

Step 3: *Establish thematic data-collection and management processes.*

Objective: *To foster availability and quality of migration, environment, disaster and climate change data management process.*

In regard to aspects of data collection and compilation at the national level, the Immigration and Passport Department could take up responsibility as the lead agency for coordinating the collection of data on cross-border movements associated with climate and other environmental changes, including disaster at the regional scale. By revising its Customs Declaration (c) form, for example, the Department could incorporate distinct environmental factors amongst the options on purpose of visit or stay. That is, state explicitly not only disaster-related impact, but also other environmental changes (such as weather conditions, food scarcity, soil erosion and fertility, deterioration of livelihoods) as reasons for seeking entry.

On the part of the NaDMA, the focus could be more on gathering data on (forced) internal population movements as a result of disasters and related emergencies. The predetermined form that CDEMA provides for the development of IDHNA (Stage 3 of the DANA Continuum) presents an opportunity in terms of quantifying disaster impact. As such, revising or adapting the current forms being used could facilitate the collection of disaggregated data (such as by age and sex), information related to human casualties (such as deaths, injured and missing people) and houses that have been damaged or destroyed. It could also facilitate effective accounting of human mobility (number of displaced, evacuated and relocated persons) at the national level.

Additionally, the collection of data related to human mobility in the context of slow-onset processes could also be strengthened. This aspect has been proven to me more difficult to capture by national departments related to migration and disaster management. Available data is usually related to rapid-onset events and focused more on the emergency moment. The focus is mostly on evaluating, for instance, evacuation numbers and housing damages. Nevertheless, attention may also be shifted to promoting data collection and analysis on population movements that are more likely instigated by slow-onset events like drought, which most often tend to affect more people on aggregate as compared to rapid-onset events. In view of their distinct nature, information on human mobility related to slow-onset processes could be captured by the Central Statistics Office through regular household and other demographic (population-based) surveys or environmental statistics compendiums. For instance, the office could consider (depending on availability of necessary resources) conducting regular surveys dedicated to only assessing human mobility patterns, where the associated slow-onset processes (such as sea level rise, coastal erosion and salinization, land degradation) and impact on mobility could be one critical thematic focus.

As revealed by this study, none of the three national agencies have a specific repository for data storage. But with financial constraints often a challenge to enhanced data collection, management and dissemination, the data initially compiled by the Immigration and Passport Department and the NaDMA could be integrated and synchronized in a common database under the responsibility of the Central Statistics Office. In this way, the Central Statistics Office could take up the responsibility for processing all the information provided in a systematic way. As part of the process, provision could be made to enable the production of statistics and indicators on all the dimensions of human mobility in the context of climate change and other environmental impacts. For this reason, data collected should easily be convertible to statistics, in line with the recommendations advanced by EGRIS (European Union and United Nations, 2018b), as well as on international migration statistics (UNSC, 2019).

Step 4: *Dissemination of statistical outputs on human mobility in the context of climate change and other environmental impacts and raising awareness.*

Objective: *To enhance knowledge on the linkages between migration, environment, disaster and climate change and to make the statistics produced/generated by the Central Statistics Office available and accessible for wider use.*

Once the data have been processed, the Central Statistics Office could – in its periodic reports – dedicate specific sections to analysis and presentation of the human mobility situation in the context of climate change and other environmental impacts in Grenada. This analysis, and the generation of compendiums and reports, could take place in close collaboration with other data providers like the Immigration and Passport Department and NaDMA. In line with this, establishing a timetable, as well as a uniform format or structure for the reports, would be desirable. This could facilitate the production of a national profile when it comes to data on the topic. These reports could be designed in a way that enables their (electronic) availability to the general public and other relevant stakeholders. In this sense, the development of (extra) internal reports would guarantee the confidentiality of possible sensitive information.

As a start, the Central Statistics Office could take advantage of already-existing data on the topic, mostly provided by international databases (see Annex I in the Regional Report) to create a national portal or platform. This could serve as a first step and basis to continuously refine and integrate critical aspects or themes of interest in building a robust and reliable thematic national database.

Step 5: *Develop comprehensive legal and policy frameworks at the national level for enhanced mobility governance.*

Objective: *To effectively manage human mobility in the context of climate change and other environmental impacts.*

Implementing the aforementioned steps would enable the development of a country-specific profile on human mobility in the context of climate change and other environmental impacts in Grenada. This would in turn foster evidence-based policy formulation that considers all relevant aspects related to human mobility. Hence, in addition to acknowledging the topic in national policy and legal frameworks, the robust and reliable set of data generated in the country would facilitate the establishment of effective measures and strategies through informed planning and decision-making. For instance, disaster preparedness measures, as part of broader DRR strategies, can significantly increase resilience and reduce the need to move.

Further, measures or strategies could also be instituted to enhance knowledge and data production through capacity-building, extensive scientific research and data collection on the impacts of climate and other environmental changes in Grenada. Besides establishing adequate funding mechanisms, the national Government could consider providing and applying state-of-the-art technology to support research, data collection and management as crucial elements to enhance data reliability and security. Regular, extensive research and use of different methodologies could facilitate better insights into the dynamics of human mobility in disaster or emergency situations, as well as a much more comprehensive capture of data on the topic. The availability of credible and reliable data would contribute to disaster response, planning and development of adaptation strategies at the national level.

5. CONCLUSION AND RECOMMENDATIONS

This report has assessed Grenada's national data systems in relation to migration, environment, climate change and disasters in order to identify strengths, weaknesses and opportunities to enhance the collection, management and dissemination of data on human mobility in the context of climate and environmental change and disasters. Whilst data on the topic is still scant at the national level, the development of country-specific, disaggregated and comprehensive data on climate- and disaster-related human mobility in Grenada calls for coordination, collaboration and proactive actions amongst national agencies and departments (especially the Immigration and Passport Department, Central Statistics Office and NaDMA).

Generating information on climate change and disasters as potential drivers for population movements could be enabled by adjusting established forms and procedures at the existing ports of entry and departure in Grenada. This could involve developing specific statistics and indicators on the environment and human mobility, as well as considering the status of human displacement and other forms of human mobility (such as evacuation and relocation) in the collection of disaster data. The availability, quality and accessibility of data on the topic is key in supporting the national Government to plan and develop evidence-based and holistic policies and strategies. This would help to effectively address the negative impacts of climate and other environmental changes, as well as promote adequate disaster management at the national level. To facilitate the realization of this vison and to promote the collection and availability of data on the climate and environmental change, disaster, and human mobility nexus, the following strategies and recommendations are outlined for the three main relevant data-collection national agencies in Dominica.

Strategies and recommendations for enhanced data collection, analysis and dissemination in relation to the Immigration and Passport Department

The following actions are recommended to improve and standardize data-collection processes and data sharing systems on human mobility in the context of climate and environmental change and disaster within the Immigration and Passport Department:

i. Encourage the revision of the Customs Declaration (c) form to include a specific field on "purpose of the visit". This field could include environmental factors (such as weather conditions and disasters) amongst the possible options. That is, climate or disaster-related impacts could be listed amongst reasons for seeking entry. In instances of departure, provision could be made to capture the reasons for departing, and this could also include environmental factors.

ii. The Custom Declaration (c) form could also be revised to enable the collection of detailed demographic and personal information (such as date and country of birth, sex, nationality, home address), helping to identify CARICOM and OECS citizens. Whilst this helps to distinguish community citizens, this could facilitate the collection of disaggregated data on the topic at the various ports of entry. This would help to plan, mobilize resources and target responses in the wake of a disaster. It could also help, for example, to ascertain housing needs, spatial planning of settlements and shelters, as well as inform planning in terms of health-care delivery.

iii. The Department may also consider developing a comprehensive data system, or including new variables in the BMS. This will allow for hosting data not only on passenger arrivals and departures, but also immigration and emigration. Given that the BMS already hosts information on passenger arrivals and departures, the system could be upgraded or transformed as a comprehensive data system that also accounts for immigration and emigration, as well as climate and disaster-related mobility that may be detected at the ports. This could serve to be a one-stop national repository with data on mobility. In this case, other national agencies and the Central Statistics Office could draw on this proposed repository to inform national development planning and policy processes.

iv. To support the improvement and expansion of the BMS, the Department could also prioritize or enhance the collection, analysis, reporting and sharing of environment-related migration data by designating an officer with the responsibility for monitoring the process, as well as facilitating capacity-building. Complementary capacity-building for officials through periodic training, assessment of data-collection processes and acquisition of technology and software tools would contribute to data collection and management systems in Grenada for development planning, disaster preparedness and response. This arrangement could contribute to a comprehensive database, and improved data quality, availability and dissemination. The prioritization could be complemented by developing methodologies and common protocols that clarify how data could be collected at the existing ports of entry, as well as how this information could subsequently be managed and disseminated.

v. The BMS could also be harmonized with the systems of other national agencies or Eastern Caribbean States that collect related data on mobility. Expanding and harmonizing the BMS with other national agencies could help to establish a common database that covers the different dimensions of mobility (such as climate and environmental change and disaster mobility). This common data system could help mitigate information duplication and hence improve the quality of the data being collected.

Strategies and recommendations for enhanced data collection, management and dissemination in relation to the Central Statistics Office

In view of the gaps and constraints in terms of data collection and availability, the following recommendations are proposed to strengthen statistical information on migration, environment, disaster and climate change in Grenada:

i. In addition to the demographic statistics regularly generated at the national level, the office could also develop specific statistics on the environment, and related indicators on climate change and disasters. These statistics could also focus on the human mobility dimension. With the office already planning to integrate disaster impact as one of the reasons for migration in all upcoming data-collection processes, consideration could be made for detailed disaggregation (such as age and sex) and defined categories (such as displaced, evacuated and relocated people). Similarly, indicators relating to climate change could include different aspects such as drivers, impacts and adaptation, with specific focus on vulnerable communities (see UNSC, 2018a).

ii. The next census questionnaires could be designed (or revised) to allow for the visibility and capture of data on human mobility categories, such as internal and cross-border migration, displacement, relocation, as well as other forms of movement. Thus, specific questions related to the reason or motivation that led to international migration and/or internal displacement or migration in the census activity could include environmental aspects (for example, weather conditions, disasters) in the response options. Examples may be drawn from the successful integration of these themes in the population censuses of Colombia and Ethiopia (2018), Djibouti (2005), and Somalia (2013/2014) (see UNSC, 2020: 51–54).

    With the questionnaire that was prepared for the Ethiopia population census, for example, there was a specific question on "reasons for migration". The options or responses presented included: "search for job"; "join family"; "education, marriage/divorce"; "drought/environmental degradation"; "dispute/conflict"; "health" and "other". Similarly, the 2005 Djibouti population census also asked about "years at place of residence. Last place of residence, reason for move." The options provided as responses included: "professional reasons (hiring, transfer, establishment of business)"; "urgent reasons (drought, flooding, food shortages, war)"; "personal reasons (family reunification, health reasons)"; "school reasons"; "seeking amenities". These are national censuses that could provide good and practical references in formulating the questionnaires of upcoming population censuses in Grenada. This would also help capture data that also accounts for environmental factors as precursors for movement.

iii. In regard to upcoming and subsequent household surveys and other demographic (population-based) surveys, emphasis could be placed on not only the collection of data on the human mobility dimension, but also disaggregated data collected on a regular basis (see UNHCR, 2019). As already successfully piloted in the Péten Department of Guatemala (Grandia et al.,

2001; Laczko and Aghazarm, 2009), household demographic and welfare surveys could endeavour to incorporate queries about climate and environmental risks and migration into the respective questionnaires (UNSC, 2018b).

iv. To ensure that data collected is of good quality and reflects current developments, population-based surveys (such as poverty assessments and the population's living conditions) could be conducted on a regular basis. Depending on the availability of resources, a design to conduct regular surveys would support the development of a comprehensive and reliable database to support informed decision-making and planning. As a strategy, the Central Statistics Office could consider allocating some funding and resources to conduct specific surveys that may be dedicated to only assessing human mobility patterns. This would enable the production of detailed information associated with climate and other environmental changes (including disasters), contributing to decision-making and planning at the national level.

Strategies and recommendations for enhanced data collection, management and dissemination in relation to NaDMA

The following actions are recommended for improved and standardized data on disaster displacement, evacuations and planned relocation in the context of the NaDMA:

i. The NaDMA could consider adjusting its situation report template according to the predetermined form from CDEMA for the development of the situation report at the national level (Initial Situation Overview – ISO – Form).[6] The ISO form has a specific field on "no. of people in shelters", "displaced populations", and "others". This opportunity could be exploited to enhance the collection of data on the human mobility dimensions of disaster.

ii. Even though the NaDMA indicated that the Form 400.1 had already been revised to meet the requirements of the CDEMA IDHNA (Stage 3 of the DANA Continuum) and the country's needs, the form currently in use already provides the possibility to capture general information related to the human mobility dimension (displacement and evacuation). As such, in addition to the effective accounting of the human mobility dimension (number of displaced, evacuated and relocated persons), a revision could also ensure the collection of disaggregated data (by age and sex), data on human casualties (deaths, injured and missing people), and information on houses damaged or destroyed. This could be complemented by also developing proxies to determine displacement instigated by disasters, if it is not possible to directly capture data on persons who may have fled or been forced to move as a result of an emergency.

iii. The NaDMA could also consider developing a common national database on disaster data, from which the information compiled and kept in the format of reports can be managed and disseminated. This common repository could allow for the validation of data collected, and could also present data on human mobility dimensions of disaster in Grenada.

iv. To ensure that the proposed national disaster database is robust and current, there is the need for established, validated and harmonized methodologies and protocols on how to collect, manage and disseminate raw data on disaster at the national level (with standardized/common categories and definitions). The harmonized methodologies and protocols would clearly outline the criteria for categorizing human damage (ensuring, among other things, the incorporation of a specific category on displacement) (see European Union and United Nations, 2018a). This could guide the activities of all the national actors involved in the collection of disaster data, and also offer opportunities for data cleaning and for ensuring high quality data.

[6] See Annex III in the Regional Report.

GLOSSARY

Disaster: "A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts." (IOM, 2019:50)

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

Disaster risk reduction (DRR): "Policy objective to prevent new and reduce existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development." (IOM, 2019:52)

Displacement: "The movement of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters." (IOM, 2019:55)

Emigration: "From the perspective of the country of departure, the act of moving from one's country of nationality or usual residence to another country, so that the country of destination effectively becomes his or her new country of usual residence." (IOM, 2019:64)

Entry: "In the migration context, any crossing of an international border by a non-national to enter into a country, whether such a crossing is voluntary or involuntary, authorized or unauthorized." (IOM, 2019:64)

Environmental migration: "The movement of persons or groups of persons who, predominantly for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are forced to leave their places of habitual residence, or choose to do so, either temporarily or permanently, and who move within or outside their country of origin or habitual residence." (IOM, 2019:65; see also IOM, 2014b:33)

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

Forced migration: "A migratory movement which, although the drivers can be diverse, involves force, compulsion, or coercion." (IOM, 2019:77)

Hazard: "A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation." (UNGA, 2016:18; see also IOM, 2019:89)

Human mobility: "A generic term covering all the different forms of movements of persons." (IOM, 2019:93)

Immigration: "From the perspective of the country of arrival, the act of moving into a country other than one's country of nationality or usual residence, so that the country of destination effectively becomes his or her new country of usual residence." (IOM, 2019:103)

Migration: "The movement of persons away from their place of usual residence, either across an international border or within a State." (IOM, 2019:137)

Migration governance: "The combined frameworks of legal norms, laws and regulations, policies and traditions as well as organizational structures (subnational, national, regional and international) and the relevant processes that shape and regulate States' approaches with regard to migration in all its forms, addressing rights and responsibilities and promoting international cooperation." (IOM, 2019:139)

Migration management: "The management and implementation of the whole set of activities primarily by States within national systems or through bilateral and multilateral cooperation, concerning all aspects of migration and the mainstreaming of migration considerations into public policies. The term refers to planned approaches to the implementation and operationalization of policy, legislative and administrative frameworks, developed by the institutions in charge of migration." (IOM, 2019: 139)

National: "A person having a legal bond with a State." (IOM, 2019:143)

Net migration: "Net number of migrants in a given period, that is, the number of immigrants minus the number of emigrants." (IOM, 2019:146)

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

Residence: "The act or fact of living in a given place for some time; the place where one actually lives as distinguished from a domicile. Residence usually means bodily presence as an inhabitant in a given place." (IOM, 2019:184)

Visitor: "In the migration context, the term is used in some national legislation to designate a non-national authorized to stay temporarily on the territory of a State without participating in a professional activity." (IOM, 2019:228)

ANNEXES

ANNEX I. LIST OF REGIONAL STAKEHOLDERS AND NATIONAL DEPARTMENTS INVOLVED IN THE QUESTIONNAIRE ACTIVITY

REGIONAL	
Stakeholder	Department
Organisation of Eastern Caribbean States (OECS)	Climate Change and Disaster Resilience Unit (CCDRU)
Caribbean Community (CARICOM)	Secretariat
Africa Caribbean Pacific (ACP) Group of States	Special Committee on Disaster Risk Reduction
Global Climate Change Alliance (GCCA)	Caribbean Planning for Adaptation to Climate Change Project (CPACC)
Caribbean Portal for Migration Governance (CPMG)	Secretariat
Caribbean Disaster Emergency Management Agency (CDEMA)	Secretariat
Caribbean Natural Resources Institute (CANARI)	Secretariat
University of the West Indies (UWI)	The Disaster Risk Reduction Centre (DRRC) – Institute for Sustainable Development
Caribbean Policy Development Centre (CPDC)	Secretariat
United Nations Office for Disaster Risk Reduction (UNDRR)	Regional Office for the Americas and the Caribbean

NATIONAL	
Country	Department
Antigua and Barbuda	Department of Immigration
	Statistics Division
	National Office for Disaster Services (NODS)
Dominica	Immigration Division
	Central Statistics Office
	Office of Disaster Management (ODM)
Grenada	Immigration and Passport Department
	Central Statistics Office
	National Disaster Management Agency (NaDMA)
Saint Kitts and Nevis	Immigration Department
	Statistics Department
	National Emergency Management Agency (NEMA)
Saint Lucia	Immigration Department
	Central Statistical Office
	National Emergency Management Organisation (NEMO)
Saint Vincent and the Grenadines	Passport and Immigration Department
	Statistical Office
	National Emergency Management Organisation (NEMO)

ANNEX II. SITUATION REPORT TEMPLATE

National Disaster Management Agency (NaDMA)
Fort Frederick, Richmond Hill, St. George
Tel: (473)-440-8390-4/440-0838
Email: nadma@spiceisle.com

SITUATION REPORT

EVENT	

DATE OF EVENT	

SITUATION REPORT NO.	

DATE	
TIME	

NATURE OF EVENT	
CASUALITITES	Fatalities: Missing: Injured:
STATISTICS	National: Regional: Global:

National Disaster Management Agency (NaDMA)
Fort Frederick, Richmond Hill, St. George
Tel: (473)-440-8390-4/440-0838
Email: nadma@spiceisle.com

NEOC Status	
Law Enforcement	
Ports	
Airports	
Customs	
Welfare/ Social Services	
Health	
Education	

NEEDS ASSESSMENT	

SPECIFIC REQUEST/S	

Information for the General Public	

ANNEX III. FORM 400.1 – DAMAGE AND NEEDS ASSESSMENT REPORT

National Disaster Management Agency. NaDMA.

Form 400.1 – Damage and Needs Assessment Report. (Stages 1 and 2).

Report No. ___ Date_____ Time _____ Name _____ Position _____ _____ _____	Area/sector/services/facilities covered by this report: _____ _____ _____ _____
Damage and Needs per Sector.	Type, quantification and location of damage and needs. Action taken.
Population affected: • Deaths, missing, injured, type of injuries, location. • Needs in terms of: medical attention, counseling, medicines, doctors, nurses, first aids, medical equipment/materials. • Action taken.	Description:
Housing and human settlements: • Houses destroyed totally or partially. Type of damage. Location. Population displaced. Number of official/unofficial shelters activated. Number of shelterees. Areas flooded or destroyed. • Needs in terms of shelters, shelter management personnel, relief assistance for population displaced: water, food, blankets, other items for shelters: generators, cooking utensils, toiletries, toys, etc. Number of tarpaulins and type of building materials needed. • Action taken.	Description:
Education and Culture: • Schools and education facilities destroyed or damaged. Location. Type, extent of damage. Cultural-Historical sites, libraries, community centres, sports facilities affected and type/ extent of damage. Information lost. • Needs in terms of tarpaulins, building materials, school furniture, equipment; books, etc. • Action taken.	Description:

Health: a) Medical Attention Infrastructure • Specific structural damage to hospitals, clinics, home of the elderly, psychiatric hospital, etc. Medicines and medical equipment lost/ damaged. Damage to other buildings and transportation. • Needs in terms of specific medical attention to patients/injured. Counselling. Medical personnel/nurses, etc. Medical equipment, medicines. Food, water, tarpaulins, building materials, generators, etc. • Action taken. b) Environmental health • Damage to environment and consequences to public health: adequate quality and quantity water supply, food safety, basic sanitation, adequate waste disposal, vector control, epidemiological surveillance in specific affected areas and shelters. Interruption of services. Adequate management and disposal of dead people and animals. • Needs in terms of water, food, water testing kits, chlorinated tablets, pesticides, spraying equipment, protection equipment, other equipment. Experts. Location of needs. • Action taken.	Description: a) b)
Agriculture, livestock and fisheries: • Damage in terms of crops destroyed/affected, area, livestock lost/ affected, location, damage to fisheries, propagation units, nurseries, farms. Irrigation and drainage. • Needs in terms of food, agriculture/fisheries equipment, materials. • Action taken.	Description:
Tourism: • Damage in terms of structural damage, reduction of hotel capacity, communications, injured, energy, employees affected. Shipping industry. Tour operations. Marinas and yachting. • Needs in terms of tarpaulins, building materials, food, water, equipment and materials. • Action taken.	Description:
Trade and Industry: • Damage in terms of facilities, equipment, materials, products, and stock damaged/lost. Employees affected. Operations interrupted. Looting. • Needs in terms of tarpaulins, building materials, water, food, security, etc. • Action taken.	Description:

Energy: • Damage in terms of electricity interrupted in specific areas to specific sectors facilities. Damage to fuel storage and distribution. • Needs in terms of equipment, materials, generators, personnel (CARILEC), etc. • Action taken.	Description:
Water supply and sewerage: • Damage in terms of destruction of specific distribution/collection systems/equipment pipelines, reservoirs, pumping systems, in specific areas. • Needs in terms of repairs, equipment, personnel, water, electricity, etc. • Action taken.	Description:
Telecommunications and Broadcasting: • Damage in terms of loss of services in specific areas (cellular and landlines). Damage/loss of poles, lines, antennae, broadcasting equipment and facilities. • Needs in terms of repairs to damaged equipment, specific equipment for rehabilitation and continuation of communications/broadcasting. Radios. • Action taken.	Description:
Roads and drainage: • Damage in terms of roads/bridges damaged/obstructed by debris or land slippages, fallen trees, wave affects. • Needs in terms of clearing roads and specific areas. Heavy-duty equipment. Key priorities. • Action taken.	Description:
Airports: • Damage in terms of structural damage, loss/damage of facilities/equipment: control tower, communications, radars, antennae, lights, power, and general state of the runaway. Interruption of commercial activities. • Needs in terms of specialized personnel, equipment, materials; repairs and resumption of commercial flights. • Action taken.	Description:
Seaports: • Damage to docks, sheds, lighthouse, buildings, personnel; loss of equipment, materials, cargo, etc. Interruption of services. • Needs in terms of personnel, equipment, materials for the repair of buildings/equipment and for the restoration of activities/services. • Action taken.	Description:

Environmental impacts:	Description:
• Damage in terms of specific areas damaged forest, lakes, coasts, and habitats. Loss/ endangerment of flora and fauna. • Needs in terms of specific mitigation/protection measures. • Action taken.	

Final Comments:

_____

_____

_____

_____

Signature _____

ANNEX IV. CUSTOMS DECLARATION (C) FORM – GRENADA

NOTICE TO PASSENGER
CUSTOMS DECLARATION (C)

Every passenger, or head of the family travelling together with a spouse and children under the age of 18 is required to complete this section.

1. Spouse and children under age 18 accompanying you:

Name	Date of Birth (dd-mm-yy)	Relation

2. Number of pieces of luggage

Accompanied ☐☐☐ *(checked luggage and hand luggage)*

Unaccompanied ☐☐☐ *(Luggage sent by air or sea freight)*

3. I am (We are) bringing:	**Yes**	**No**
(a) fruits, plants, cut flowers, vegetables, soil, meat, live animals and organisms, honey, wildlife products, plant material, food, animal products or live birds	☐	☐
(b) pharmaceuticals, narcotics and other illicit drugs and biological substances	☐	☐
(c) arms, ammunitions, explosives, fireworks, toy guns or other weapons.	☐	☐
4. I have (we have) commercial merchandise: (articles for sale, samples used for soliciting orders or goods that are not considered personal effects)	☐	☐
5. I am (we are) carrying currency or monetary instruments over (US$10,000) or equivalent.	☐	☐

DUTY-FREE ALLOWANCES TO PASSENGERS

1. All persons entering Grenada shall be relieved from payment of duty and tax on articles of the quantities mentioned hereunder, namely:

(a) Tobacco Goods - 200 Cigarettes or 50 Cigars or 250 Grammes of Tobacco
(b) Alcohol - 1 Litre of Wine or 1 Litre of Spirits
(c) Perfumed Spirits - 10 Fluid Ounces
(d) Other Goods - To the value of $300 EC

2. No relief shall be afforded to:

(a) Any person who enters Grenada after an absence therefrom of less than twenty-four (24) hours or
(b) Any person under the age of eighteen (18) years in respect of spirits (other than perfumed spirits), tobacco goods or wine.

3. No relief shall be granted if the articles are brought in to be used for any commercial purposes.

All persons should declare all dutiable articles in excess of the above allowances, whether remaining in Grenada, or for subsequent re-export.
(If you are in doubt, declare all items to the Customs Officer)

Description of Articles	**Value in $EC**	**For Customs Use Only**

I certify that all statements I have made in this declaration are true, correct and complete. I understand that failure to make a full declaration is an offense and can result in seizure of the goods, fines and/or imprisonment.

Signature _____ Date _____

FOR OFFICIAL USE ONLY

Signature: _____ ID#: ☐☐☐☐☐☐☐☐

ANNEX V. COLLECTION OF DATA BY OTHER NATIONAL AGENCIES

Department	Data on the climate and environmental change, disaster, and human mobility nexus	Data collected associated with the human mobility dimension	Data storage (Database)	Limitations to enhanced data collection, management and dissemination	Recommendations for enhanced data collection, management and dissemination
Grenada Tourism Authority (GTA)	No	The GTA counts with a subdivision on statistics that collates the following data: (i) visitors arrivals per month and by country of residence, either by air and sea; (ii) accommodation type; (iii) cruise ships arrivals per month and per year; (iv) excursions per month, per year and per residence; (v) passengers arrivals by type (stay over visitor, same day visitor, returning residents) and port of entry; (vi) students arrivals; and (vii) yacht visitors per month and per year. Importantly, data on visitors arrivals take the purpose of the visit into account: business, convention, festival, honeymoon/ wedding, meeting, short study/research, sport, study, vacation, visiting friends and relatives, other visitor, as well as returning residents are among the categories displayed.	Tourism Information Solution (TIS)	Lack of human, financial and technological capacities.	In collaboration with the Immigration and Passport Department, the GTA could consider revising the ED Cards currently in use at the national level. The revision could incorporate environmental factors (e.g. weather conditions and disasters) among purposes of the visit. Furthermore, the mandate of the GTA in primarily focusing on tourism development could be revised or extended to include the collection of data on the climate and environmental change, disaster, and human mobility nexus.
Ministry of Health (MoH)	No	The information gathered by the Ministry focuses strictly on human health data, such as births, mortality, chronic diseases, morbidity and lab results.	No	Lack of human, financial and technological resources.	Information gathered by the MoH could be further explored, enabling the collection of data on the number of people in need of health assistance in the wake of a disaster, i.e. the number of injured and dead people as a result of an emergency. This could be done in collaboration with established agencies, like the NaDMA, which already collates data on the number of injured and dead people during and in the aftermath of disasters.

Ministry of Social Development, Housing and Community Development	Yes	Whilst the Ministry occasionally conducts hazard and other risk assessments in the attempt to minimize the impacts of disasters on vulnerable communities, it is mainly focused on collecting data in the aftermath of emergency events for response and recovery purposes. Regarding the human mobility dimension, the Ministry gathers information related to: (i) the number of individuals in emergency shelters or in temporary housing; (ii) homeless people; and (iii) communities forced to relocate due to disasters.	No	Lack of human, financial and technological resources.	The Ministry could develop procedures to also collect data related to risk assessment (pre-impact); as well as establish methodologies and protocols on how to work with the NaDMA when it comes to the collection, management and dissemination of data on disaster.

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