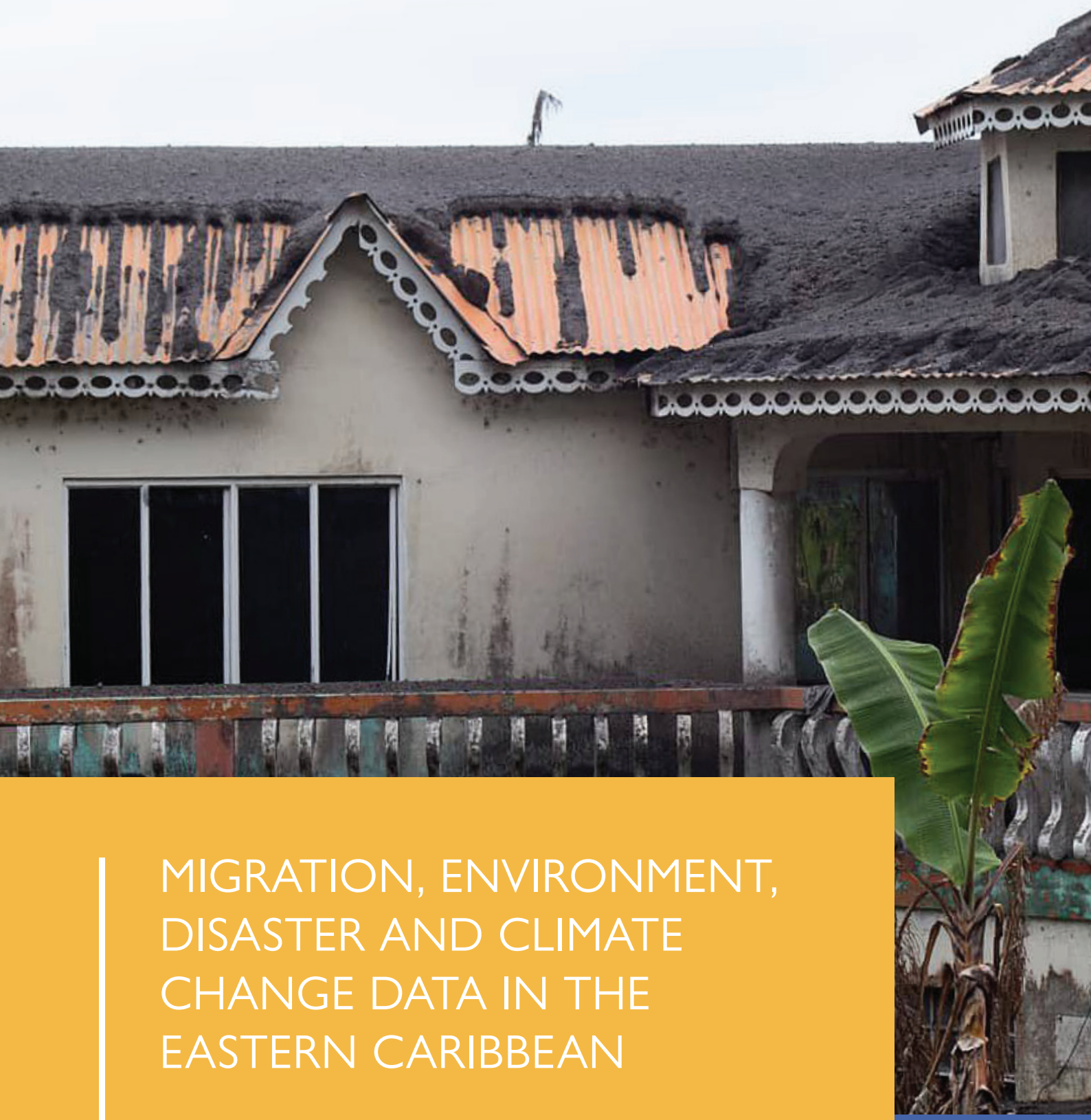

MIGRATION, ENVIRONMENT, DISASTER AND CLIMATE CHANGE DATA IN THE EASTERN CARIBBEAN

Saint Vincent and the Grenadines Country Analysis

IOM
UN MIGRATION

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Cover photo: The eruption of the La Soufrière volcano on the main island of Saint Vincent & the Grenadines, caused the displacement of about 20,000 people, significantly affecting livelihoods and the environment in the Eastern Caribbean. © 2021/Nick SPENCER

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ABBREVIATIONS AND ACRONYMS

BMS	Border Management System
CARICOM	Caribbean Community
CDEMA	Caribbean Disaster Emergency Management Agency
CPA	country poverty assessment
DANA	Damage Assessment and Needs Analysis
DRR	disaster risk reduction
GDP	gross domestic product
IDHNA	Initial Damage and Human Needs Assessment
IOM	International Organization for Migration
ISO	Initial Situation Overview
LSR-CA	Local Situation Report – Complementary Assessment
LSR-I	Local Situation Report – Initial
NAP	National Adaptation Plan
NEMO	National Emergency Management Organisation
OECS	Organisation of Eastern Caribbean States
SIDS	small island developing State
SLC-HBS	survey of living conditions and household budgets
TWG	technical working group

EXECUTIVE SUMMARY

Climate change projections predict that Saint Vincent and the Grenadines 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, Saint Vincent and the Grenadines witnessed a total of 279 disasters and related emergencies between 1718 and 2014, directly affecting 59,000 people. Although the national Government has instituted distinct policy and legal frameworks to enhance migration, climate change and disaster governance nationwide, there is little acknowledgment and there are no comprehensive provisions to address human mobility in the context of climate and environmental change and disasters.

Of the eight policies and legislations related to migration, environment, climate change and disasters that were identified in Saint Vincent and the Grenadines, only two have made some references to the topic of human mobility. The Initial national communication on climate change alludes to the displacement of entire communities due to the potential impacts of sea level rise on infrastructure and population concentrated along the low-lying areas. And the National Adaptation Plan (NAP) calls for the relocation of vulnerable communities from disaster-prone coastal areas to safer locations. On the premise that good policy and planning needs timely and reliable data, and with the goal of enhancing policy and planning, this study assesses the national data systems on migration, environment, disaster and climate change in Saint Vincent and the Grenadines.

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 Saint Vincent and the Grenadines, questionnaires were shared with the Passport and Immigration Department, Statistical Office and the National Emergency Management Agency (NEMO) as relevant sources of data at the national level. 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 Passport and Immigration Department, Statistical Office and the NEMO, the study assessed the extent to which these agencies collect, manage and disseminate data on migration, climate and environmental change and disasters. Based on this assessment, a host of gaps, constraints and opportunities were identified. The analysis reveals that data collected by the Passport and Immigration Department is mainly associated with passengers and visitors arriving or departing from Saint Vincent and the Grenadines. 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. The online pre-arrival travel form asks about purpose of visit or seeking entry into Saint Vincent and the Grenadines, but it does not include climate- and environment-related stressors as options or possible reasons for movement.

Although the Passport and Immigration Department periodically shares the data collected at the various ports of entry and departure with the Statistical Office, there are no established protocols regarding how the data being collected is managed and shared with other relevant national agencies. The Department does not have any official database or established repositories. The data collected are normally hosted in the border management system (BMS) and mainly limited to the number of passengers and residents entering or leaving the country (with no information on immigration and emigration). The BMS does not make any provision that allows for hosting the more general environmental factors as potential drivers for seeking entry or moving.

Despite presenting statistics on the environment, the Statistical Office does not generate indicators on climate change and disasters. As part of its compendiums on environmental statistics, however, the office presented information related to "natural hazards and disasters" in Saint Vincent and the Grenadines between 2002 and 2018 (with data provided mainly by the NEMO). 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 questionnaire that was deployed for the 2012 population and housing census included specific questions on international migration, probing the main reason for moving. However, the questionnaire and embedded options did not take environmental indicators into account. The household and demographic surveys conducted by the office (that is, the country poverty assessment, the labour force survey, and the survey of living conditions and household budgets) also do not ask questions that could result in data on human mobility in the context of climate and environmental change and disasters.

The two Damage Assessment and Needs Analysis (DANA) Continuum templates – provided by the Caribbean Disaster Emergency Management Agency (CDEMA) – that are currently in use by the NEMO to compile data on disasters do not allow for the effective quantification of persons forced to move in the wake of disasters and related emergencies. Whilst the template that is used for the development of the Initial Situation Overview (ISO) details the number of evacuated people (shelters), it does not include fields that could be used to quantify the total number of individuals displaced and/or relocated during the emergency. This notwithstanding, with both templates, there is the potential for the number of displaced persons to be implied from that of the level of housing damages often recorded as part of its assessments. Houses with "major damages" and "destroyed" could respectively be associated with displacement. The number of people moved or given temporary shelter could also be a proxy for evacuation.

Given that effective data collection, management and dissemination are crucial to evidence-based policies related to migration, climate adaptation and disaster management at the national level, recommendations and proposed guidelines to enhance the collection, quality and accessibility of data on climate- and

disaster-related human mobility in Saint Vincent and the Grenadines are outlined. Firstly, this report recommends that the Passport and Immigration Department consider revising the pre-arrival travel form by incorporating environmental factors (for example, weather conditions and disasters) as part of the options on "purpose of the visit". Adjustment could also be made to include gender in order to capture disaggregated data of persons arriving or departing the country. The adjustments could also be made to allow for the collection of data on persons departing or emigrating (whether permanently or temporarily) because of environmental drivers or disaster displacement.

With the BMS already hosting information on passenger arrivals and departures, the system could be upgraded or transformed into 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 as a one-stop national repository with data on human mobility. In this case, other national agencies and the Statistical Office could draw on this proposed repository to inform national development planning and policy processes. Alongside, 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 data management in Saint Vincent and the Grenadines for development planning, disaster preparedness and response.

This report also recommends that the Statistical Office consider facilitating the visibility and capture of data on human mobility categories, such as internal and cross-border migration, displacement, relocation and other forms of movement. This could be done by integrating the topic into questionnaires being designed for the next round of population and housing census. Specific census questions related to the reason or motivation that led to international migration or internal displacement and migration could include environmental aspects (such as weather conditions or disasters) in the response options. Similarly, household demographic and welfare surveys could endeavour to incorporate queries about climate and environmental risks and migration into the respective questionnaires.

With several actors often involved in collecting data during a disaster, this report recommends that the NEMO consider building capacity by way of regular training for the team(s) responsible for the DANA Continuum procedures, as well as orienting them on national plans and protocols. This would help to build knowledge and awareness of the need to capture comprehensive data on all the human mobility dimensions of disaster for informed planning, management and response. In regard to disaster data collection, the report proposes that the NEMO make adjustments to both the LSR-I and LSR-CA forms to facilitate the effective accounting of the human mobility dimension (number of displaced, evacuated and relocated persons). This could be complemented by also developing proxies to determine displacement that may be instigated by both rapid- and slow-onset disasters, if statistics on persons who may have fled or been forced to move as a result of an emergency cannot be captured directly. The recommendations and proposed guidelines outlined in this report would contribute to improved data collection and availability, which would in turn inform and improve climate policy, human mobility governance, disaster response and management in Saint Vincent and the Grenadines.

The report is organized into five sections. Section 1 provides an introduction and background to the study. In Section 2, the report discusses the conceptual approach to understanding the human mobility outcomes in the context of climate and other environmental changes. It further describes the methodological approach of the study. In Section 3, the discussion narrows down to the issues of data on climate and environmental change, disasters and human mobility in Saint Vincent and the Grenadines. This section highlights the main sources of information and data on these themes at the national level. It also outlines the gaps and limitations in data collection, management and dissemination in Saint Vincent and the Grenadines. The report offers guidelines for improved data collection and management systems in Section 4. The discussion then concludes in Section 5 by emphasizing the need for reliable data for informed decision-making and planning. It highlights opportunities and offers 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

1.1. Migration, climate and environmental change and issues of data in Saint Vincent and the Grenadines

Like many other Eastern Caribbean countries, the geographic location of Saint Vincent and the Grenadines as part of the Windward Island chain of the Lesser Antilles renders it exposed and vulnerable to climate risks and hazards (Government of Saint Vincent and the Grenadine, 2000; Murray, 2014). As an archipelagic State consisting mainly of 32 islands, islets and cays, Saint Vincent and the Grenadines has been exposed and consistently plagued by a host of natural hazards including floods, hurricanes and sea level rise (Fielding and Ollivierre, 2017). In October 2010, for example, the country was hit by Hurricane Tomas. More than 5,000 people in the country were affected, with the estimated damage and loss caused by the impact of the hurricane pegged at USD 49.2 million (UN-ECLAC, 2011). The country also recorded widespread floods and landslides in December 2013 (Government of Saint Vincent and the Grenadines, 2019). The floods and landslides resulted in damages and losses of between USD 108.4 million and USD 122.2 million. Critical infrastructure, houses and livelihoods across the country were destroyed, with 11,000 people estimated to have been directly affected (ibid.).

In the face of ongoing global changes in climatic and ecological systems, the Second national communication on climate change of Saint Vincent and the Grenadines has projected (based on 15 global climate models) that the country will witness a significant increase in mean temperature of 0.15°C per decade over the next century. Cold days and nights are expected to also significantly decline, becoming non-existent by the 2060s (ibid.). Alongside the corresponding decline in rainfall, with negative median values expected to range from 10 per cent to 22 per cent by 2090, there will be an increase in frequency and intensity of hurricanes.

Because of the mountainous and rugged topography of the multi-island State, about 85 per cent of the population and 80 per cent of the country's total infrastructure are clustered along a narrow coastal strip that lies less than 5 meters above sea level and less than 5 kilometres from the high-water mark[1] (Government of Saint Vincent and the Grenadines, 2000; Fielding and Ollivierre, 2017). In effect, extreme climate change-related events like hurricanes, storm surges and floods due to sea level rise and rainstorms, as well as landslides and freshwater scarcity, will likely result in the aggravated displacement and forced movement of people, with adverse implications for the national economy (Smith, 2018; Thomas and Benjamin, 2018).

[1] High water refers to the highest level of water reached over land at high tide or during flooding.

Climate change and related natural hazards will continue to pose great risks for the country. This has informed the need for proactive measures and strategies on disaster risk reduction and climate change adaptation (Enríquez-de-Salamanca, 2019). In line with this recognition, the national Government has developed several legislation and policy frameworks including the Immigration (Restriction) Act (Chapter 114, amended by No. 16 of 2017), National Adaptation Plan (2019), National Disaster Response Plan (2005), and Emergency Powers Act (Act No. 45 of 1970) (see Table 3). These governance frameworks and legislations have been aimed at facilitating effective mobility and disaster management, as well as climate adaptation and resilience in the country. Nevertheless, recent IOM migration governance and needs assessments, conducted in the 10 island States of the Commonwealth Caribbean, showed that Saint Vincent and the Grenadines 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 limited integration of human mobility issues into climate change and disaster plans and strategies. Even in instances where the Passport and Immigration Department is drawn or 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 Statistical Office, as well as administrative data on entries and exits, visas and residence permits generated by the Passport and Immigration Department. Alongside these data sources, there are scanty statistics from other national agencies, like the NEMO, Department of Labour, Saint Vincent and the Grenadines Tourism Authority and related Ministries, which 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 the other global sources provide information on climate risks, disaster and impacts across the region, there is the need for country-specific, disaggregated and comprehensive data on climate change and disaster-related human mobility. More importantly, there is the need to assess the reliability of data by probing the data collection, management and sharing mechanisms at the national level. The availability of adequate and reliable data is crucial to helping the national Government of Saint Vincent and the Grenadines to plan and develop evidence-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 this report

This study is part of the IOM project entitled "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.

In general, interisland mobility across the Eastern Caribbean States is facilitated through the two main free movement arrangements established under CARICOM and OECS. Alongside these regional mobility frameworks, there are other existing regional climate change and disaster governance and institutional structures that seek to enhance climate change adaptation, as well as disaster response and management in the region. Given that this assessment focuses on human mobility in the context of climate and environmental change and disasters, the CDEMA is also of importance in understanding climate- and disaster-related mobility management in the region. A detailed discussion of these aforementioned mobility, climate and disaster governance frameworks is outlined in Section 3 of the Regional Report. This study report focuses exclusively on Saint Vincent and the Grenadines.

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 disaster risk reduction (DRR) and climate change adaptation policy has invigorated calls to mainstream the human mobility dimensions of climate and disaster impact in political, development and climate action (Mercer, 2010; 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[2] 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 evidence in collecting, analysing and using reliable data on patterns of mobility, as well as understanding the links with environmental degradation, climate change and crises 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 Saint Vincent and the Grenadines.

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/regional organizations. For the data collection, the study began with an extensive desk review, identification and mapping of global, regional and national sources of information and data sharing systems, and of governance frameworks on migration, climate and environmental change across the OECS. A description of the whole research process is further detailed in the Regional Report (see Section 2).

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

In Saint Vincent and the Grenadines, 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 Passport and Immigration Department, Statistical Office and the NEMO. 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 were deployed to cater for the distinct stakeholders identified (see Annex V for the national level questionnaire). 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 openended 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, 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 Department of Labour; Ministry of Education and National Reconciliation, Ecclesiastical Affairs and Information; Ministry of Foreign Affairs and Foreign Trade; and Ministry of Tourism, Civil Aviation, Sustainable Development and Culture (Saint Vincent and the Grenadines Tourism Authority). 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 Saint Vincent and the Grenadines.

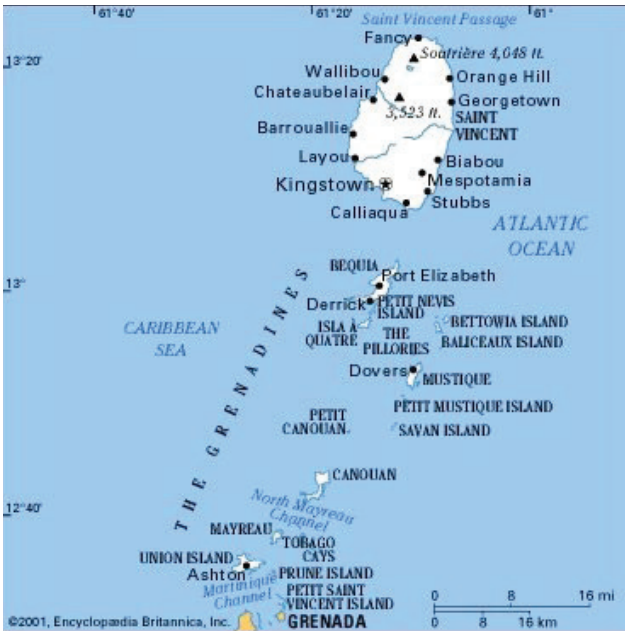
With the analysis, the secondary quantitative data and information helped to ascertain the availability of data on the topic, and to what extent these data were being collected in Saint Vincent and the Grenadines. The quantitative data also served as reference in discussing the issues that came up in 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 Saint Vincent and the Grenadines have also been formulated. Alongside, a checklist of proposals or recommendations has been outlined to assist in building national capacities, and to facilitate a better understanding in contributing to effectively addressing climate change and disaster impact on human mobility at the national level.

3. DATA ON CLIMATE AND ENVIRONMENTAL CHANGE, DISASTERS AND HUMAN MOBILITY: A FOCUS ON SAINT VINCENT AND THE GRENADINES

3.1. Country profile

Saint Vincent and the Grenadines is an archipelagic State in the Lesser Antilles (South-Eastern Caribbean) composed of 32 islets and cays. In addition to Saint Vincent, the main island, there are eight inhabited islets in the Grenadines (Fielding and Ollivierre, 2017). These are: Young Island, Bequia, Mustique, Union Island, Canouan, Mayreau, Palm Island and Petit Saint Vincent (Figure 1). With a total land surface area of 359 km2, the islands together host a total population of 111,000 people (mid-2019) (Government of Saint Vincent and the Grenadines, 2015b; Government of Saint Vincent and the Grenadines, 2019; UN DESA, 2020) (Table 1). Like other Eastern Caribbean States, the country relies on a small open economy, which is susceptible to external shocks and disasters (CDB, 2019). Whereas economic production is focused on a narrow range of goods and services, nationals rely on imports to satisfy local demand for consumer and producer goods. Furthermore, the tourism industry has proven to be a significant driver of the economy and source of employment, overtaking the agricultural sector (Government of Saint Vincent and the Grenadines, 2015b). Together with the construction sector, tourism contributed to the marginal annual gross domestic product (GDP) growth of 1.0 per cent recorded in 2019 as compared to 2.2 per cent in 2018 (CDB, 2019). Whilst real GDP growth has generally fluctuated since 2015, the World Bank (2020) estimates that the annual GDP growth in the country declined to 0.5 per cent as of the end of 2020 due to the impacts of COVID-19.

Figure 1. Map of Saint Vincent and the Grenadines



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 Saint Vincent and the Grenadines

Capital	Kingstown
Form of government	Constitutional monarchy
Location	Lesser Antilles – South-Eastern Caribbean
Total land area	359 km^2
Population	111 000 (2019)
Main economic activities	Tourism, agriculture and manufacturing
GDP (annual growth)	0.5% (2020)
Main hazards that may lead to displacement	Cyclonic wind, storm surge, volcanic and seismic activity
Estimated number of people at risk of future displacement	1 086 people per year

Source: IDMC, 2020; World Bank, 2020; UN DESA, 2020; CDB, 2019; Government of Saint Vincent and the Grenadines, 2015b; Government of Saint Vincent and the Grenadines, 2019.

Saint Vincent and the Grenadines is located within the Caribbean hurricane belt and, as such, it is vulnerable to the occurrence of tropical cyclones during the Atlantic hurricane season (Government of Saint Vincent and the Grenadines, 2015b). Climate change projections predict that the country will be negatively affected by the increased frequency and intensity of extreme weather events, decrease in precipitation, and sea level rise (World Bank, 2010; Murray, 2014). Even though the country's rank of 179th by the World Risk Index 2020 (Behlert et al., 2020) – meaning a relatively low level of exposure and vulnerability to the impacts of climate change – available records indicate a total of 279 disasters of various kinds between 1718 and 2014 in the country, directly affecting more than 59,000 people within the period (UNDRR-DesInventar Sendai, 2020).

In addition to the impacts of climate change across its territory, Saint Vincent and the Grenadines is also afflicted by geophysical phenomena, such as volcanic eruptions and seismic activities. In this regard, during April and May of 2021, for example, the volcano La Sufrière erupted after 40 years of dormancy. The eruption affected not only nationals residing in the surrounding areas, but also neighbouring countries (that is, Barbados, Grenada and Saint Lucia). An estimated 23,000 people have so far been temporarily evacuated to the southern part of the island of Saint Vincent, as well as to the surrounding islands. In this context, the national Government of Grenada has agreed to receive up to 1,600 evacuees (IFRC, 2021).

Table 2. Impact of disaster by event type: Saint Vincent and the Grenadines (1718–2014)

Event	No. of occurrences	Deaths	Injured	Missing	Houses destroyed	Houses damaged	Directly affected	Indirectly affected	Relocated	Evacuated
Biological	12		11				1 068			
Coastal erosion	4				11	5	100			
Coastal flood	15				17	32	45	20 000		9
Drought	6									
Earthquake	6									
Epidemic	3	2 000								
Eruption	9	1 623				600		99 000		20 000
Explosion	2	5								
Flash flood	12	12	39	3	61	601	16 885	58 015		2 325
Flood	47	5	7		184	497	46	20 000		142
Forest fire	1									
Hurricane	50	306	6		395	2 506	39 850	92 500		1 533
Landslide	60	8	7		39	442	42	1 000		52
Other	9			7				35 000		2
Rains	4				1	12				
Storm	32	3	11		208	1 358	770	10 000		1 500
Thunderstorm	6		1		19	10	200			
Tsunami	1									
Total	279	3 962	82	10	935	6 063	59 006	335 515		25 563

Source: UNDRR-DesInventar Database, 2020.

The Internal Displacement Monitoring Centre (IDMC, 2020) estimates that approximately 1,000 people are at risk of future displacements in the context of sudden onset hazards every year in Saint Vincent and the Grenadines. In the effort to address the impacts of climate and environmental change and disasters, the national Government has been proactive in developing distinct policy and legal frameworks to facilitate comprehensive climate and disaster governance in the country. These governance frameworks are further elaborated and discussed in the following section.

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

Saint Vincent and the Grenadines has instituted distinct policy and legal frameworks that have primarily focused on enhancing migration governance, as well as climate change and disaster impacts in the country. However, as shown in Table 3, there is limited acknowledgement of – and no comprehensive provisions to address – human mobility in the context of climate and disaster impact. Also, none of the governance frameworks identified has been proactive in advocating or making any provisions for the establishment of databases on migration, climate and environmental change and disasters across the different sectors and relevant agencies at the national level.

Table 3. Policies related to migration, environment, climate change and disaster risk reduction in Saint Vincent and the Grenadines

Governance sphere	Year	Policy	Acknowledgment of the climate and environmental change, disaster, and human mobility nexus	Provisions on data sharing mechanisms
Migration	2017	The Immigration (Restriction) Act (Chapter No. 114, amended by Chapter No. 16 of 2017)[a]	No	No Provisions
Climate change	2000	Initial national communication on climate change[b]	Yes	No Provisions
	2015	Intended nationally determined contribution[c]	No	No Provisions
	2015	Second national communication on climate change[d]	No	No Provisions
	2019	National Adaptation Plan[e]	Yes	No Provisions
Disaster risk reduction	1970	Emergency Powers Act (Act No. 45 of 1970)[f]	No	No Provisions
	2005	National Disaster Response Plan[g]	No	No Provisions
	2006	National Emergency and Disaster Management Act (Act No. 15 of 2006)[h]	No	No Provisions

Source: [a]Government of Saint Vincent and the Grenadines, 2017; [b]Government of Saint Vincent and the Grenadines, 2000; [c]Government of Saint Vincent and the Grenadines, 2015a; [d]Government of Saint Vincent and the Grenadines, 2015b; [e]Government of Saint Vincent and the Grenadines, 2019; [f]Government of Saint Vincent and the Grenadines, 1970; [g]Government of Saint Vincent and the Grenadines, 2005; [h]Government of Saint Vincent and the Grenadines, 2006.

3.2.1. (Im)migration policies and legislation

The Immigration (Restriction) Act (Chapter No. 114, amended by Chapter No. 16 of 2017) spells out the legal provisions dealing with the critical issues of documentation for entry, criminality, smuggling immigrants and the treatment of immigration offenders at the national level (Government of Saint Vincent and the Grenadines, 2017). Aside from visa waivers and visa upon entry to certain countries, however, there is not much information regarding migration governance (of both immigration and emigration), nor regarding how (and what) data on entries and departures are collected. However, free movement agreements developed under the OECS and CARICOM grant free entry or stay in Saint Vincent and the Grenadines for nationals coming from other (Eastern) Caribbean States. In this regard, nationals from other Eastern Caribbean countries who may be affected by climate change and related hazards may exercise the right to entry and stay under these existing protocols. Essentially, the Immigration (Restriction) Act does not offer clarity on the collection of any visitor or entry data. It also does not provide for any data sharing systems at the national level.

3.2.2. Climate and environmental change policies and legislation

Amongst the existing national climate and environmental change policy and legal frameworks, only the Initial national communication on climate change and NAP have made references to human mobility. Specifically, the Initial national communication on climate change alludes to potential impacts of sea level rise on infrastructure and population concentrated along low-lying areas, whilst agricultural activities in the Grenadines will be affected by coastal erosion and salt-water intrusion. Such processes may lead to the displacement of entire communities across the country (Government of Saint Vincent and the Grenadines, 2000).

Considering that the habitable areas are mostly around the low-lying areas along the coast, there is concern that sea-level rise and saltwater intrusion will significantly affect agricultural livelihood systems and inland river valleys like the Buccamnet Valley, which will result in the displacement of dependent communities (ibid.). The initial national communication on climate change acknowledges the importance of data collection, management and national reporting as a critical expectation in being a signatory to the UNFCCC (September 1996). It also highlights financial constraints and the lack of capacity to adequately fulfil these expectations. Though there is in general a lack or paucity of data, what data collection there has been and what available data there is has mostly focused on climatic parameters and an inventory on greenhouse gas emission in the country. There is no perceptible emphasis or recommendation on integrating data on human mobility in the context of climate and disaster impact.

The country's NAP emphasizes the need for relocating vulnerable communities from coastal areas prone to disasters to less vulnerable areas (Government of Saint Vincent and the Grenadines, 2019). Areas like Kingstown have generally been identified as hotspots for storm surges, whilst some settlements along the western coastal section of Saint Vincent have been identified as being hotspots for coastal erosion (Murray, 2014). In these areas, for example, it is reported that some homes have already been relocated to safer areas from the coast. Despite having been relocated, it is observed that many will still need to be relocated again to significantly minimize exposure and risk (Murray, 2014:48). The obvious challenge in this regard is ensuring that communities relocated from vulnerable areas do not return. Overall, the NAP recommends the need to bring climate change adaptation into mainstream national development planning. It also stresses the need to improve disaster response in order to effectively address the enormous devastation that is often recorded in the wake of disasters in the country. To this end, the NAP has outlined as one of its important objectives the need for continuous collection, management and sharing of reliable data and information to enhance adaptation to climate risk and disaster impact. As such, it advocates for capacity-building, financing, technology, as well as research programmes on climate change impacts and adaptation options.

Both of these climate policy frameworks allude to climate and disaster impacts on human mobility across the country. Though they both also recognize the importance of data, capacity-building and technology and the need for established data sharing systems, neither policy addresses data on human mobility as critical to comprehensive climate change adaptation. In these policy and legal frameworks,

references to sources of information and data sharing mechanisms are mostly related to greenhouse gas inventories.

3.2.3. Disaster management policies and legislation

There is no explicit reference to or acknowledgement of the climate and environmental change, disaster, and human mobility nexus in the different national DRR policy and institutional frameworks examined in Saint Vincent and the Grenadines. There are also no explicit provisions to effectively address displacement or to respond to specific needs of migrants in the wake of a disaster or related emergency at the national level. Documents like the Emergency Powers Act (Act No. 45 of 1970) and National Emergency and Disaster Management Act (Act No. 15 of 2006) are, for example, mainly focused on governing disaster management and response (Murray, 2014). These policy frameworks do not explicitly make provisions related to establishing data sharing mechanisms on disasters at the national level.

3.3. Sources of information and/or data on migration, climate and environmental change and disaster risk reduction in Saint Vincent and the Grenadines

To further ascertain the availability of data – and the prospects for any databases – at the national level, distinct national agencies and departments were interviewed. The Passport and Immigration Department, the Statistical Office and the NEMO were consulted to assess the extent to which they collect, manage and disseminate data on human mobility in the context of climate and environmental change and disasters. The insights drawn from the assessment are discussed in this section.

3.3.1. The Passport and Immigration Department

The issues of entry, stay and departure from the territory of Saint Vincent and the Grenadines are managed by the country's Passport and Immigration Department. All persons arriving either by air or sea are required to fill out the same pre-arrival travel form (Government of Saint Vincent and the Grenadines, n.d.). Irrespective of nationality or residence, the same generic form is used to collect personal information such as age, sex, marital status, date and country of birth, nationality and home address. The form also asks questions on the intended length of stay and the purpose of the visit.

With regard to the question on the purpose of visit, the options presented are limited to "vacation", "study", "convention", "business", "visiting friends/relatives", "honeymoon/wedding", "meeting", "sports event" and "other", without recourse to any climate or environmental factors. In effect, the form is not able to capture population movements that might result from climate or disaster impacts. Given that citizens from the CARICOM and OECS member States complete the same form, it is difficult to specify when such citizens, exercising their right to entry based on the existing free movement protocols across the region, might be doing so for reasons associated with environmental factors. Whilst it is unclear in how far the Department collects, manages and disseminates information on immigration and emigration, no existing database on the topic can be identified. Hence, the data collected by the national agency seems to be limited to the number of passengers and visitors arriving in the country. This basic information is gathered and managed by the BMS and often shared with statistics and tourism departments.

3.3.2. The Statistical Office

The Statistical Office develops statistics and indicators on different socioeconomic and environmental aspects for informed national planning. Statistics dealing with socioeconomic parameters include information on "families and households", "human settlement and housing", "population and demography", as well as "travel and tourism", with no reference to migration and related topics.[3] The country also generates environmental statistics, which are mostly related to electricity generation and distribution, selected agricultural stations, as well as some aspects of weather conditions such as rainfall patterns and recorded temperature and humidity (Statistical Office, 2018a).

[3] Tourism and travel statistics include data on stay-over visitors by country of residence and purpose of visit (2017–2019), as well as visitor arrivals by visitor type (2015–2019).

Regarding the environmental statistics published as part of the compendiums on environmental statistics (2010, 2012, 2014, 2016 and 2018) (Statistical Office, 2018a), the chapters on natural hazards and disasters are particularly relevant. These chapters present a matrix of disasters recorded in Saint Vincent and the Grenadines spanning the period between 2002 and 2018 (Statistical Office, 2011, 2018b). In addition to information related to economic losses, the chapters provide details on human losses (deaths) and other social impacts (injured, missing and other affected people). Whereas the national agency does not host any identifiable database or system other than the periodic publications of the compendiums and census reports on its website, data specific to disaster impact on human mobility could be derived from the information listed under the sections on human losses and social impact. In this vein, it may then safely be inferred that the office, by regularly publishing information on disaster and environmental parameters, recognizes the importance of data on the topic. Since no database and sharing mechanism could be identified, the only means of information and data sharing relates to the reports that are shared online and available to the general public and relevant stakeholders.

Another credible source of data on important socioeconomic parameters is the national censuses that have been conducted in the country over the years. In particular, the latest 2012 population housing census, which was carried out under the mandate of the Census and Statistics Act (No. 24 of 1983), was examined as a potential repository of data on migration, climate and environmental change in Saint Vincent and the Grenadines (Statistical Office, 2012a). The 2012 population and housing census collected information and data on housing, demographic and other social aspects in the country. Despite offering a section on population redistribution and patterns of migration in the final census report (Chapter 3), the information captured does not mention or make any reference to human mobility in the context of climate and other environmental changes. The data or records presented highlight only population distribution by age, foreign-born population, and emigration by country of destination and sex. Hence, the census report fails to record or at least present any data that can be linked to the topic.

Both the 2012 census household and person questionnaires pose questions on (international) migration, and collect information on household members who may have moved abroad during the intercensal period (between 2001 and 2011) (Statistical Office, 2012b, 2012c). The questions further probe the main reasons for migration at the time of departure, with these options for response: "family reunification", "employment", "study", "crime rate", "medical", "don't know" and "other".[4] The options do not include environmental reasons as possible drivers for movement. Nevertheless, the option of "other" could be exploited to record or solicit information on the likely impact of disaster or climate change as a reason for migration. That would depend on the individual's perception of environmental stressors in the decision to move.

Regarding demographic (population-based) activities developed by the office, the following assessments and surveys deserve attention: (i) Saint Vincent and the Grenadines country poverty assessment (CPA) 2007/2008; (ii) labour force survey; and (iii) Survey of living conditions and household budgets (SLC-HBS). Initially, the CPA was undertaken to evaluate the conditions that affect the welfare of individuals. This is to enable the development of informed policies and strategies that would reduce poverty at the national level. Despite presenting a specific section on "migration and population growth" focused on net migration and the role of remittances in the national economy, the report does not refer to population movements that may result from climate or environmental and disaster impacts (Statistical Office, 2008). Similarly, the labour force survey is aimed at measuring the economically active population in the country to provide guidance in the formulation and implementation of labour-market policies and programmes. In spite of collecting data on demographic characteristics of those (un)employed, the survey did not target aspects related to workers' migration patterns (Statistical Office, 2019a).[5] Finally, the SLC-HBS looked at the spending patterns of Saint Vincent and the Grenadines' residents to better understand living conditions and to improve the life quality of the population. The final report of the SLC-HBS remains under preparation and thus has not yet been published (Statistical

[4] See questions 24 to 32 from Statistical Office, 2012b and 2012c.

[5] Data generated by the survey includes: employed population by industrial group and sex (2015–2017); employed population by occupational group and sex (2015–2017); employed population by status in employment and sex (2015–2017); labour force participation rate by age and sex (2015–2017); and labour market indicators (2015–2017).

Office, 2019b). According to the office, although the survey did not include queries directly related to population movements in the context of climate change and other environmental impacts, it captured some general information linked to vulnerability due to climate-related risks.

3.3.3. The National Emergency Management Organisation

In the wake of a disaster in the country, the NEMO automatically activates the procedures established as part of the CDEMA DANA Continuum. Thus, within 24 hours of the emergency, the NEMO conducts an Initial Situation Overview (Stage 2 – ISO) to give a qualitative impression of the impacts caused by the event. Afterwards, within seven days of the emergency, the NEMO works on a quantitative assessment (Stage 3 – IDHNA) to assess the immediate needs of the country for a targeted response. In reference to data collection, the NEMO has adjusted the CDEMA predetermined forms to address the specific national context and needs. As such, the processes mentioned above draw largely on the revised Local Situation Report – Initial (LSR-I) (Annex II) and Local Situation Report – Complementary Assessment (LSR-CA) (Annex III) forms. The fields in these forms do not deviate much from those in the templates presented by CDEMA.

The LSR-I form enables the collection of data disaggregated by age and disabilities. It also captures information on the number of deaths and injured people, without accounting for those missing. The template records the number of evacuated people (under the section on shelters), but not the number of individuals displaced or relocated during the emergency. Nevertheless, the quantification of human displacement can be determined from the number of houses damaged in the field on housing and public buildings, as well as from the "level of damage" (minor, major and destroyed). In instances where the assessment records information on major damages or houses completely destroyed, the numbers recorded could be associated with evacuation and displacement.

The LSR-CA form facilitates the capture of data disaggregated by age, sex and disabilities. Whilst it enables the quantification of human casualties (deaths, injured and missing people), this template does not allow for the compilation of information on human mobility (for example, displacement, evacuation and relocation). Nevertheless, the number of affected people can be determined from the page on family information in the LSR-CA form, in which the number of family members affected are listed. Similarly, the number of displaced people could be estimated from the number and level of housing damages. For instance, if a house is recorded as suffering major damages or destroyed, it could be assumed that all household members are displaced.

Within the NEMO, there are no observed or identifiable databases on disasters. The information that is generated as part of the ISO and IDHNA is not hosted by the NEMO in an established database. The information is rather exclusively held and managed by CDEMA. The reports generated as part of the ISO are often submitted to the CDEMA and subsequently published on its website. However, the assessments produced as part of the IDHNA are submitted to the CDEMA only after Cabinet approval. This suggests that the information gathered during this stage circulates only amongst national agencies and departments. That is, CDEMA is not allowed to share the assessments as part of the IDHNA with any interested parties unless approved by the competent national authority. The lack of data sharing mechanisms hampers efforts at effective planning and comprehensive disaster management and climate adaptation in the island.

3.3.4. Other national agencies

Aside from the Passport and Immigration Department, Statistical Office and the NEMO, several other national agencies were examined 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 Saint Vincent and the Grenadines. These other national agencies examined included: (i) Department of Labour; (ii) Ministry of Education and National Reconciliation, Ecclesiastical Affairs and Information; (iii) Ministry of Foreign Affairs and Foreign Trade; and (iv) Ministry of Tourism, Civil Aviation, Sustainable Development and Culture (Saint Vincent and the Grenadines Tourism Authority).

All of these ministries and national agencies were engaged as part of the national validation workshop, and they undertake some form of data collection on different forms of population mobility in Saint Vincent and the Grenadines. Whereas some of the ministries collect information including labour mobility and international migration, none of these agencies specifically collect data on climate- and disaster-related mobility. The kinds of data and sharing mechanisms that these aforementioned 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 elaborated in Annex IV.

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. Because of their location and exposure as SIDS, Eastern Caribbean countries like Saint Vincent and the Grenadines will bear the brunt of extreme events due to ongoing climate change. 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. Aside from the gaps, the section also identifies opportunities as a basis to outline guidelines and recommendations to enhance the availability, quality and accessibility of data on climate change and disaster-related human mobility in Saint Vincent and the Grenadines.

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

The generation of data on human mobility in the context of climate and environmental change and disaster by the Passport and Immigration 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 Passport and Immigration Department, the following limitations were identified:

i. Despite including purpose of visit or seeking entry into Saint Vincent and the Grenadines, the pre-arrival travel form does not include climate- and environment-related stressors as options or possible reasons for movement.

ii. The Department does not have established protocols or procedures related to the management and sharing of collected data. Although the data collected is periodically shared with the Statistical Office, the extent to which data is managed and shared with other relevant national agencies is not clear.

iii. The Passport and Immigration Department does not have any official database or established repositories. The data collected is normally hosted in the BMS and mainly limited to the number of passengers and residents entering or leaving the country (with no information on immigration and emigration). It does not make provision to capture environmental factors as potential drivers for seeking entry or moving.

3.4.2. Identified data gaps in relation to the Statistical Office

Generating data on human mobility in the context of climate and environmental change and disasters depends not only on enhanced data collection, but also on the development of statistics and indicators on 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 acknowledge other aspects of mobility (such as evacuation and relocated or resettled populations). In this context, gaps and limitations on how the Statistical Office collects, manages and disseminates data on the topic include:

i. Although the Statistical Office develops statistics on the environment, there is no indication of any compilation of data and indicators on climate change and disasters.

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

iii. The 2012 census person and household questionnaires present questions related to migration, and specifically probe the reasons for moving. However, the census questionnaires do not make provisions that allow for the capture of environmental factors as reasons for migration. As exemplified in the 2012 population and housing census report, the collection of data on migration is not comprehensive. The primary focus is often on the number of foreign-born individuals (net migration) without attention to environmental factors as potential drivers for movement.

iv. In household and other demographic (population-based) surveys conducted by the office at the national level (such as the CPA, labour force survey and SLC-HBS), the questions presented often do not enable the collection of data on the climate and environmental change, disaster, and human mobility nexus. For instance, the labour force survey does not consider the role of environmental stressors in the decision to stop or quit an employment, and the CPA and SLC-HBS do not consider the extent to which environmental stressors deteriorate living conditions and enhance poverty (often leading to population movements).

3.4.3. Identified data gaps in relation to the National Emergency Management Organisation

As the main agency that deals with disaster management, impact assessment and response, the development of data on the human mobility dimensions of disaster by the NEMO is vital to planning, as well as ensuring a holistic approach to disaster response, in Saint Vincent and the Grenadines. In view of this, there is a need to examine the state of disaster data collection and find ways to promote the availability, quality and accessibility of information on disaster-induced displacement in the context of the NEMO. In terms of data collection, management and dissemination on the topic of disaster and its impact on human mobility, a host of gaps and constraints that have come to light:

i. The Local Situation Report (LSR-I Form – used for Stage 2 of the DANA Continuum) does not collect data directly linked to the human mobility dimension, other than the number of evacuated people.

ii. The Damage Assessment and Needs Analysis – Local Situation Report – Complementary Assessment (LSR-CA) that is deployed to collect quantitative data as part of the Stage 3 (IDHNA) of the DANA Continuum does not account for the human mobility dimension. Hence, it is not possible to directly capture data on persons who may have been displaced, evacuated or forced to relocate.

iii. The NEMO 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 SAINT VINCENT AND THE GRENADINES

The need for enhanced data collection and to establish reliable databases have 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 the collection and availability of data on human mobility in the context of climate, disaster and other environmental changes in Saint Vincent and the Grenadines. 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: *Contribute to evidence-based 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 (Passport and Immigration Department, Statistical Office and the NEMO) could consider establishing a TWG. The TWG could also be envisioned in the form of an inter-agency working group. This proposed working group 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 Saint Vincent and the Grenadines. 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 the participating agencies as basis for building and sharing reliable data for informed policymaking 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 the Global Migration Data Analysis Centre (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 Passport and Immigration Department, Statistical Office and the NEMO, 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.[6]

[6] 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 that harmonize with international and regional standards on migration, disaster, and climate and environmental change data.*

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 could be developing protocols with harmonized methodologies to be employed by the national agencies. The common protocols and methodologies could be guided by or aligned with international standards, and they could be drafted using 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 also serve as pointers or reference for the collection of data on climate and environmental change and disaster-related mobility at the national level.

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

Objective: *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 Passport and Immigration Department could coordinate the collection of data on cross-border movements associated with climate and other environmental changes, including disaster at the regional scale. By revising its Pre-Arrival Travel Form, 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 (for example, weather conditions, food scarcity, soil erosion and fertility, deterioration of livelihoods) as reasons for seeking entry, as well as a focus on post-disaster displacement and emigration.

On the part of the NEMO, the focus could be more on gathering data on (forced) internal population movements as a result of disasters and related emergencies. As earlier noted, 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 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 Statistical Office through regular household and other demographic (population-based) surveys or environmental statistics compendiums.

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 Passport and Immigration Department and the NEMO could be integrated and synchronized in a common database under the responsibility of the

Statistical Office. In this way, the Statistical 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 (UN-Stats, 2019).

Step 4: *Arrange for the Statistical Office to disseminate statistical outputs on human mobility in the context of climate change and other environmental impacts, and to raise awareness.*

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

Once the data have been processed, the Statistical 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 Saint Vincent and the Grenadines. This analysis, and the generation of compendiums and reports, could take place in close collaboration with other data providers like the Passport and Immigration Department and the NEMO. 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 vein, the development of (extra) internal reports could guarantee the confidentiality of possible sensitive information.

As a start, the Statistical 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.*

Implementation of these steps would enable the development of a country-specific profile on human mobility in the context of climate change and other environmental impacts in Saint Vincent and the Grenadines. This could 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 could 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 Saint Vincent and the Grenadines. Besides establishing adequate funding mechanisms, the national Government could consider providing and applying the 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 adaptations strategies at the national level.

5. CONCLUSION AND RECOMMENDATIONS

This report assessed the national data systems of Saint Vincent and the Grenadines in relation to migration, disaster, and climate and environmental change 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 calls for coordination, collaboration and proactive actions amongst national agencies and departments (especially the Passport and Immigration Department, Statistical Office and the NEMO).

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 Saint Vincent and the Grenadines. 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 to promote adequate disaster management at the national level. To facilitate the realization of this vision and to promote the collection and availability of data on the climate and environmental change, disaster, and human mobility nexus in Saint Vincent and the Grenadines, the following strategies and recommendations are outlined for the three main relevant data-collection national agencies.

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

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

i. Consider revising the pre-arrival travel form by integrating environmental factors (such as weather conditions and disasters) amongst the options available in the field "purpose of the visit". In this regard, climate- or disaster-related impacts could be listed amongst reasons for seeking entry. Adjustment could also be made to allow for the collection of data on persons who may also be departing or emigrating (whether permanently or temporarily) because of environmental drivers or disaster displacement.

ii. The pre-arrival travel form already collects personal information relating to date and country of birth, nationality and home address, which helps to identify CARICOM and OECS citizens. Whilst this helps to distinguish community citizens, the Department could consider integrating a field to allow for the capture of information on the gender of persons arriving into or departing from the country. 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, in the spatial planning of settlements and shelters, as well as by informing planning in terms of health-care delivery.

iii. 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. With the BMS already hosting 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 Statistical Office could draw on this proposed repository to inform national development planning and policy processes.

iv. To support the improvement and expansion to the BMS, the Department could also consider prioritizing or enhancing 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 process and acquisition of technology and software tools would contribute to data collection and management systems in Saint Vincent and the Grenadines 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 be subsequently managed and disseminated.

v. The BMS could 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 (including 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 Statistical 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, disaster, and climate and environmental change in Saint Vincent and the Grenadines:

i. Promote the inclusion of statistics and indicators on climate change and disasters in the cluster dealing with the environment. The development of environmental statistics and subsequent publications (such as environmental compendiums) should specifically integrate or give consideration to indicators on disasters and climate-related issues, with a priority to capture the human mobility dimension. Whereas indicators related to disasters could be detailed with disaggregated data (such as age and sex) and defined categories (such as displaced, evacuated and relocated people, as well as those unable to move), those related to climate change could be holistic. That is, comprehensive data could be compiled by including critical aspects on drivers, impacts, adaptation and mitigation, with a specific focus on communities most vulnerable to the effects of climate change (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 could 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 Saint Vincent and the Grenadines. This would also help capture data that also accounts for environmental factors as drivers of 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-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). In particular, the next labour force survey could, for instance, consider integrating queries on both the role of environmental factors in the decision to migrate or possible reasons for quitting/changing jobs. This could enable the collection of data on people who became unemployed because of climate and other environmental changes. Similarly, the next CPA and SLC-HBS to be conducted by the Statistical Office could ask specific questions that allow for data on the individuals' perceptions of environmental factors and disasters, as well as on the impacts of those factors on livelihoods, economic situation, security and possible influence on the decision to move.

iv. To ensure that data collected is of good quality and reflect 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 national Government and Statistical Office could consider (depending on availability of necessary resources) dedicating a section in specific surveys to only assessing human mobility patterns. This would enable the production of detailed information associated with climate and other environmental changes (including disasters and slow-onset events), contributing to decision-making and planning at the national level.

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

In reference to the data gaps and constraints in the context of the NEMO, the following actions are recommended for improved and standardized data on disaster displacement:

i. The NEMO could consider adjusting its LSR-I form according to the predetermined form from CDEMA for the development of the Situation Report at the national level (Initial Situation Overview – ISO – Form).7 The ISO form has a specific field on "no. of people in shelters", "displaced populations", and "others".

ii. Other than the information on houses damaged and destroyed, as well as on human casualties (deaths, injured and missing people) that the LSR-CA form collects as part of the IDHNA (Stage 3 – DANA Continuum), the form could be revised to facilitate the effective accounting of the human mobility dimension (number of displaced, evacuated and relocated persons). This could be complemented by developing proxies to determine displacement instigated by both rapid and slow-onset 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 NEMO may 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 Saint Vincent and the Grenadines.

[7] See Annex III in the Regional Report.

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 should 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.

v. With several actors often involved in collecting data during a disaster, the NEMO could build capacity by offering regular training for the team(s) responsible for DANA Continuum procedures, as well as orienting them on national plans and protocols. This would help to build knowledge and awareness of the need to capture comprehensive data on all the human mobility dimensions of disaster for informed planning, management and response.

GLOSSARY

Country of usual residence: "The country in which a person has his or her usual or habitual residence." (IOM, 2019:40)

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)

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).

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)

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, 2011:33)

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)

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)

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
Saint Vincent and the Grenadines	Passport and Immigration Department
	Statistical Office
	National Emergency Management Organisation (NEMO)

ANNEX II. LOCAL SITUATION REPORT – INITIAL (LSR-I)

DAMAGE ASSESSMENT AND NEEDS ANALYSIS
LOCAL SITUATION REPORT – Initial

DETAILS

DATE: YEAR _____ MONTH _____ DAY _____ TIME _____ : _____
PRESENTED BY (Name/Institution) _____

GEOGRAPHIC LOCATION

REGION (PROVINCE) _____
PARISH: _____
AREA/ZONE: _____

ACCESS

TYPES OF ROUTES

	CONDITION			
	UNAFFECTED	AFFECTED	DESTROYED	COMMENTS
AIR				
GROUND				
RIVER				
MARINE				
OTHER				

LOCATION: ***(using point of reference...)***

DISTANCE _____ FROM _____ TO _____
TIME _____ FROM _____ TO _____

CLIMATIC CONDITIONS:

CLEAR ☐ CLOUDY ☐ TEMPERAT. ☐
RAINY ☐ TORRENTIAL RAIN ☐ WINDS ☐
OTHER: _____

CHARACTERISTICS OF THE EVENT:

TIME: ***(Date)***

YEAR _____ MONTH _____ DAY _____ PROBABLE STARTING TIME ____ : ____

TYPE OF GENERATING EVENT:

EARTHQUAKE ☐ STORMS / HURRICANES ☐
TSUNAMI ☐ FLOODS ☐
VOLCANIC ERUPTIONS ☐ DROUGHTS ☐
LANDSLIDES ☐ OTHER: _____ ☐

DESCRIPTION OF THE EVENT:

_____
_____
_____
_____
_____

SECONDARY EFFECTS: ***(Landslides from rains, fires after an earthquake...etc.)***

_____
_____
_____

IMPACT OF THE EVENT: **Level I** | **Level II** | **Level III** | **Level IV**

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LOCAL SITUATION REPORT – Initial

ADVERSE EFFECTS

HEALTH

INJURED
- IN HOSPITALS _____
- ON FOOT _____

DEAD
- MORGUE _____
- OTHER PLACES _____

HOSPITALS / HEALTH CENTRES

FUNCTIONAL CONDITION_____

PHYSICAL CONDITION_____

_____

AFFECTED HEALTH AND EMERGENCY RESOURCES

	DOCTORS	NURSES	POLICE	FIREMEN	OTHERS
INJURED					
DEAD					

SHELTERS

OPENED _____ CAPACITY _____

STATUS _____

PEOPLE EVACUATED _____

_____

LIFE LINES

	UNAFFECTED	AFFECTED	DESTROYED	FUNCTIONING	NOT FUNCTIONING	DEFFICIENT	LOCAL SOLUTION	OUTSIDE HELP	OBSERVATIONS
DRINKING WATER									
SEWERS									
ENERGY									
TELECOMMUNICATIONS									
TRANSPORTATION									

HOUSING AND PUBLIC BUILDINGS

	UNAFFECTED	AFFECTED	DESTROYED	FUNCTIONING	NOT FUNCTIONING	DEFFICIENT	LOCAL SOLUTION	OUTSIDE HELP	OBSERVATIONS
COMMUNITY CENTRES									
GOVERNMENT OFFICES									
TEACHING CENTRES									
CHURCHES									
HISTORICAL SITES									

	Minor Damage	Major Damage	Destroyed
HOUSING			

PRODUCTIVE INFRASTRUCTURE

PRIMARY SECTOR	UNAFFECTED	AFFECTED	DESTROYED
FORESTRY			
AGRICULTURE			
LIVESTOCK & POULTRY			
FISHERY & AQUACULTURE			
SECONDARY SECTOR			
FACTORIES			
INDUSTRIES			
TERTIARY SECTOR			
TRADE			
BANKS			
HOTELS			

COMMENTS:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

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LOCAL SITUATION REPORT – Initial		
AVAILABLE RESOURCES		
	TYPE	QUANTITY
HUMAN		
MATERIAL		
ECONOMIC		

NEEDS ANALYSIS			
	TYPE	QUANTITY	PRIORITY
HUMAN			
MATERIAL			
ECONOMIC			

COMMENTS:

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ANNEX III. LOCAL SITUATION REPORT – COMPLEMENTARY ASSESSMENT (LSR-CA)

DAMAGE ASSESSMENT AND NEEDS ANALYSIS
LOCAL SITUATION REPORT – Complementary Assessment

DETAILS

DATE: YEAR _____ MONTH _____ DAY _____ TIME _____ : _____

PRESENTED BY (Name/Institution): _____

GEOGRAPHIC LOCATION

REGION (PROVINCE): _____

PARISH: _____

AREA/ZONE: _____

ACCESS

TYPES OF ROUTES

	CONDITION			
	UNAFFECTED	AFFECTED	DESTROYED	COMMENTS
AIR				
GROUND				
RIVER				
MARINE				
OTHER				

_____

_____

LOCATION: ***(using point of reference...)***

DISTANCE _____ FROM _____ TO _____

TIME _____ FROM _____ TO _____

CLIMATIC CONDITIONS:

CLEAR ☐ CLOUDY ☐ TEMPERAT. ☐

RAINY ☐ TORRENTIAL RAIN ☐ WINDS ☐

OTHER: _____

CHARACTERISTICS OF THE EVENT:

TIME: ***(Date)***

YEAR _____ MONTH _____ DAY _____ PROBABLE STARTING TIME ____ : ____

TYPE OF GENERATING EVENT:

EARTHQUAKE ☐ STORMS / HURRICANES ☐

TSUNAMI ☐ FLOODS ☐

VOLCANIC ERUPTIONS ☐ DROUGHTS ☐

LANDSLIDES ☐ OTHER: _____ ☐

DESCRIPTION OF THE EVENT:

_____

_____

For earthquakes, indicate magnitude:

Magnitude: ☐ Epicentre: _____

Distance from epicentre to Zone being assessed: _____

SECONDARY EFFECTS: ***(Landslides from rains, fires after an earthquake)***

_____

_____

_____

IMPACT OF THE EVENT: **Level I** | **Level II** | **Level III** | **Level IV**

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ADVERSE EFFECTS

HEALTH

INJURED

Initial Medical Attention Outside Hospital

Patients referred to hospitals/health centres

AGE	Under 1	1-4	5-14	15-44	45-65	More than 65	Total
Male							
Female							
SubTotal							

Patients on foot (ambulatory)

AGE	Under 1	1-4	5-14	15-44	45-65	More than 65	Total
Male							
Female							
SubTotal							

Patients who received initial medical attention outside hospital

AGE	Under 1	1-4	5-14	15-44	45-65	More than 65	Total
Male							
Female							
SubTotal							

Patients Attended to at Hospitals/Health Centres

Ambulatory Patients

AGE	Under 1	1-4	5-14	15-44	45-65	More than 65	Total
Male							
Female							
SubTotal							

Hospitalized

AGE	Under 1	1-4	5-14	15-44	45-65	More than 65	Total
Male							
Female							
SubTotal							

Referred

AGE	Under 1	1-4	5-14	15-44	45-65	More than 65	Total
Male							
Female							
SubTotal							

Total patients Attended to at Hospitals/Health Centres

AGE	Under 1	1-4	5-14	15-44	45-65	More than 65	Total
Male							
Female							
SubTotal							

DEATHS

OFFICIAL	MALE	FEM.	Total
Adults			
Children			
Total			

NON OFFICIAL	MALE	FEM.	Total
Adults			
Children			
Total			

MISSING

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LIFE LINES

Drinking water

	UNAFFECTED	AFFECTED	DESTROYED	FUNCTIONING	NOT FUNCTIONING	DEFICIENT	LOCAL SOLUTIONS	OUT. HELP	OBSERVATIONS
Dam or well									
Intake									
Pipes leading to treatment or storage tanks									
Storage									
Silt traps									
Tanks									
Chlorinators									
Water mains									
Distribution network									

WATER QUALITY AT:	
Intake	
Outlet from aqueduct	
Distribution network	
Final consumers	

Sewers

	UNAFFECTED	AFFECTED	DESTROYED	FUNCTIONING	NOT FUNCTIONING	DEFICIENT	LOCAL SOLUTIONS	OUT. HELP	OBSERVATIONS
Sewerage system									
Rain water system									
Final discharge									
Presence of chemical substances									

Energy

	UNAFFECTED	AFFECTED	DESTROYED	FUNCTIONING	NOT FUNCTIONING	DEFICIENT	LOCAL SOLUTIONS	OUT. HELP	OBSERVATIONS
Power generating stations									
Interconnection networks									
Transformer stations									
Distribution networks									
Household installations									

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Telecommunications

	UNAFFECTED	AFFECTED	DESTROYED	FUNCTIONING	NOT FUNCTIONING	DEFFICIENT	LOCAL SOLUTIONS	OUT. HELP	OBSERVATIONS
Repeater stations									
Telephone networks									
Radio communications									
Telegraph									
Telex									
Lighthouses									
Radio aids									
Private radio communications									
Television									

Transportation

	UNAFFECTED	AFFECTED	DESTROYED	FUNCTIONING	NOT FUNCTIONING	DEFICIENT	LOCAL SOLUTIONS	OUT. HELP	OBSERVATIONS
Primary ground routes									
Secondary ground routes									
Bridges									
Railway lines									
Ports / Harbours									
Airports / Airfields									
Public transp. services									
Heavy machinery									
Other air									
Other ground									
Other marine									

Others (Specify) _____

HOUSING AND PUBLIC BUILDINGS

	UNAFFECTED	AFFECTED	DESTROYED	FUNCTIONING	NOT FUNCTIONING	DEFICIENT	LOCAL SOLUTIONS	OUT. HELP	OBSERVATIONS
Community centres									
Government offices									
Teaching centres in general									
Churches									
Historic sites									

Housing	Minor Damage	Major Damage	Destroyed
Urban			
Rural			
Total			

Observations: _____

_____

_____

_____

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PRODUCTIVE INFRASTRUCTURE

Agriculture and Livestock Sector (Primary Sector)

	UNAFFECTED	AFFECTED	PERCENTAGE	DESTROYED
Forestry				
Agricultural production areas				
Livestock & poultry development areas				
Fishing & aquaculture development areas				
Means of transportation				
Sawmills, storage and preservation				
Distribution				

Type and quantity of what has been affected: _____

Economic estimate of losses: _____

Industrial and Manufacturing Sector (Secondary Sector)

	UNAFFECTED	AFFECTED	PERCENTAGE	DESTROYED
Raw materials production				
Processing and production areas				
Means of transportation				
Storage				
Distribution				

Type and quantity of affected products: _____

Economic estimate of losses: _____

Banking, Tourist and Trade Sectors (Tertiary Sector)

Banks and Financial Institutions	UNAFFECTED	AFFECTED	PERCENTAGE	DESTROYED
Physical infrastructure (buildings, offices)				
Customer service				
Means of transportation				
Storage and preservation				
Distribution				

Type and quantity of customers affected: _____

Economic estimate of losses: _____

Hotels and Tourist Centres	UNAFFECTED	AFFECTED	PERCENTAGE	DESTROYED
Physical infrastructure (buildings, offices)				
Customer service				
Means of transportation				
Storage and preservation				
Distribution				

Type and quantity of customers affected: _____

Economic estimate of losses: _____

Commerce/Trade	UNAFFECTED	AFFECTED	PERCENTAGE	DESTROYED
Physical infrastructure (buildings, offices)				
Customer service				
Means of transportation				
Storage and preservation				
Distribution				

Type and quantity of customers affected : _____

Economic estimate of losses: _____

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ACTIONS PERFORMED UP TO NOW:

Date	Time	

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NEEDS ANALYSIS

	TYPE	QUANTITY	LOCAL SOLUTIONS	OUTSIDE HELP	PRIORITY
Medication					
Analgesics					
Anesthetics					
Antibiotics					
Cardiovasculars					
Steroids					
Vaccines					
Others					
Health Supplies/Equipment					
Human resources					
Medicine/Dentistry					
Surgery					
Blood bank/X rays					
Patient transportation					
Others					
Water and Environmental Sanitation					
Human resources					
Water treatment					
Water distribution					
Vector control					
Garbage and excrement handling					
Others					

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NEEDS ANALYSIS

Food

	TYPE	QUANTITY	LOCAL SOLUTIONS	OUTSIDE HELP	PRIORITY
Human resources					
Cereals/legumes/grains					
Oils/fats					
Dairy products/Meats					
Water/Other beverages					
Others					

Shelter/Housing/Electricity/Construction

Human resources					
Shelter/Housing					
Electricity					
Construction					
Others					

Logistics/Administration

Human resources					
Logistics/Administration					
Transportation					
Radio communications					
Others					

Personal Needs

Human resources					
Clothing					
Bed linen/blankets					
Personal hygiene					
Kitchen utensils					
Others					

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NEEDS ANALYSIS

Search, rescue, fire-fighting and special operations needs (Local Solution)

Human resources: Equipment:

Urban search and rescue ☐
Open area search and rescue ☐
Operations with chemical products ☐
Others _____ ☐

Search, rescue, fire-fighting and special operations needs (Outside Help)

Human resources: Equipment:

Urban search and rescue ☐
Open area search and rescue ☐
Operations with chemical products ☐
Others _____ ☐

Economic resources needs

Item	Local Contrib.	Outside Contrib.	Sub-total

PRIORITIES

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FAMILY INFORMATION FORM

DETAILS

DATE YEAR ____ MONTH ____ DAY ____ TIME ____

PRESENTED BY: (Name)

EVENT

GEOGRAPHIC LOCATION

REGION (PROVINCE):

PARISH:

AREA/ZONE:

INDIVIDUAL INFORMATION

SPECIFIC AREA OF CENSUS:

SECTOR

FAMILY #	NAME OF PERSON RESPONSIBLE FOR FAMILY	LOCATION IN THE AREA (EX. HOUSE NO. 12)	FAMILY MEMBERS				HEALTH CONDITION		HOUSING					NEEDS		
			ADULTS		CHILDREN				RURAL	URBAN	CONDITION			FOOD	CLOTHING	OTHERS SPECIFY
			M	F	M	F	RA	DNRA			INHABITABLE	UNINHABITABLE	DESTROYED			
TOTAL																

CHILDREN = UNDER 15 YEARS
ADULTS = 15 YEARS OR MORE

M = MALE
F = FEMALE

RA = REQUIRES ATTENTION
DNRA = DOES NOT REQUIRE ATTENTION

ANNEX IV. COLLECTION OF DATA BY OTHER NATIONAL AGENCIES IN SAINT VINCENT AND THE GRENADINES

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
Department of Labour	No	Data associated with the human mobility dimension includes the number of work permits granted to foreigners and the number of nationals participating of "overseas migrant workers programmes" (mainly seasonal agricultural workers in Canada). With regard to the latter, the following information is also gathered: current occupation, education and family backgrounds, potential employer.	Labour Administration Application (formerly known as Labour Market Information System)	Lack of human, financial and technological capacities.	The Department could also focus on gathering information on the number of foreign workers coming to the country to assist response and recovery during or in the aftermath of a disaster, as well as the number of nationals leaving Saint Vincent and the Grenadines in direction to other Eastern Caribbean for the same purpose or relocating entirely abroad. Still, the Department could also strive to include indicators/variables in the data-collection processes on the movement of workers into and out country. This would enable the identification and effective account of environmental factors as triggers to the movement of workers within the CARICOM and OECS member States.
Ministry of Education and National Reconciliation, Ecclesiastical Affairs and Information	No	Data compiled by the Ministry comprises school attendance, dropouts, enrolments, performance/repetition, transfers, as well as information on schools' personnel and funds.	No	Lack of human, financial and technological capacities.	Queries on the reasons for school transfers and dropouts could also enable data on climate or disaster-related mobility. In addition to taking migration into account, such queries could go further by including environmental stressors (e.g. food insecurity, weather conditions, disasters) as triggers for movement.
Ministry of Foreign Affairs and Foreign Trade	No	Data associated with the human mobility dimension includes the number of nationals living abroad, with emphasis on students and individuals on seasonal international work programmes.	No	Lack of human, financial and technological capacities.	Data on climate or disaster-induced mobility could be captured by probing questions on the reasons/purposes for living abroad or returning to Saint Vincent and the Grenadines. These questions could include environmental factors, such as weather conditions and disasters, as possible options.

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
Ministry of Tourism, Civil Aviation, Sustainable Development and Culture (Saint Vincent and the Grenadines Tourism Authority)	No	Existing data relates to arrivals by visitor type (stay-over, same day, excursionist, yacht, cruise ship), visitor expenditure, as well as visitors by country of residence and purpose of the visit (the Tourism Authority uses the information provided by the Passport and Immigration Department through the pre-arrival travel form).	No	Lack of human, financial and technological capacities.	In collaboration with the Passport and Immigration Department, the national Tourism Authority could consider revising the pre-arrival travel form. The revision could incorporate environmental factors (e.g. weather conditions and disasters) among purposes of the visit. Furthermore, the mandate of the national Tourism Authority in primarily focusing on tourism development could be revised or extended to include the collection of data on the human mobility dimensions of disasters and related emergencies.

ANNEX V. STUDY QUESTIONNAIRES

Regional Dialogue to Address Human Mobility and Climate Change Adaptation in the Eastern Caribbean

Migration, Environment and Climate Change Data

Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines

Diogo Andreola Serraglio

Stephen Adaawen

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September 2020

Project
Regional Dialogue to Address Human Mobility and Climate Change Adaptation in the Eastern Caribbean – Migration, environment and climate change data.

Duration
From September 2020 to April 2021.

Organizational Context and Scope
Established in 1951, IOM is the leading UN Agency in the field of migration and works closely with governmental, intergovernmental and non-governmental partners. IOM is dedicated to promoting humane and orderly migration for the benefit of all. It does so by providing services and advice to governments and migrants.

The "Regional Dialogue to Address Human Mobility and Climate Change Adaptation in the Eastern Caribbean" project aims to build a regional dialogue series in Eastern Caribbean States that will enhance governments' capacities to collect, analyse and utilize data on human mobility and vulnerability derived from environmental change. The project is implemented by IOM in six independent member states of the Organization of Eastern Caribbean States (OECS), namely Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines.

Objective
Assessment of national and regional data systems of the six countries in relation to migration, environment and climate change to identify strengths, weaknesses and opportunities to enhance available evidence on environmental migration.

Methodology
Conduct six migration, environment and climate change data assessment through a questionnaire for expert interviews and desk review of existing sources of information and data sharing mechanisms on environmental migration for each of the six countries: Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines.

Expected Results
Development of technical guidelines on migration, environment and climate change data, as well as a data workshop for each of the six countries.

QUESTIONNAIRE

National Level

This questionnaire aims to investigate existing sources of information and data sharing mechanisms on migration, environment and climate change in the Eastern Caribbean States, with special attention to six selected countries – Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines – providing an overview of how data related to human mobility in the context of climate and other environmental changes has been collected, managed and disseminated.

IOM Glossary

Key definitions on migration, environment and climate change[1]

Climate migration: "The movement of a person or groups of persons who, predominantly for reasons of sudden or progressive change in the environment due to climate change, are forced to leave their habitual place of residence, or choose to do so, either temporarily or permanently, within a State or across an international border. *Note:* This is a working definition of the International Organization for Migration with an analytic and advocacy purpose which does not have any specific legal value. Climate migration is a subcategory of environmental migration; it defines a singular type of environmental migration, where the change in the environment is due to climate change. Migration in this context can be associated with greater vulnerability of affected people, particularly if it is forced. Yet, migration can also be a form of adaptation to environmental stressors, helping to build resilience of affected individuals and communities."

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. *Note:* Such displacement results from the fact that affected persons are (i) exposed to (ii) a natural hazard in a situation where (iii) they are too vulnerable and lack the resilience to withstand the impacts of that hazard. It is the effects of natural hazards, including the adverse impacts of climate change, that may overwhelm the resilience or adaptive capacity of an affected community or society, thus leading to a disaster that potentially results in displacement. Disaster displacement may take the form of spontaneous fight, an evacuation ordered or enforced by authorities or an involuntary planned relocation process. Such displacement can occur within a country (internal displacement), or across international borders (cross-border disaster displacement)."

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. *Note:* The International Law Commission adopted the following alternative definition of disaster, which includes an express reference to mass displacement: 'disaster' means a calamitous event or series of events resulting in widespread loss of life, great human suffering and distress, mass displacement, or large-scale material or environmental damage, thereby seriously disrupting the functioning of society."

Environmental migration: "A person or group(s) of persons who, predominantly for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are forced to leave their places of habitual residence, or choose to do so, either temporarily or permanently, and who move within or outside their country of origin or habitual residence. *Note:* There is no international agreement on a term to be used to describe persons or groups of persons that move for environment related reasons. This definition of environmental migrant is not meant to create any new legal categories. It is a working definition aimed at describing all the various situations in which people move in the context of environmental factors."

[1] See 'International Organization for Migration (2019), Glossary on Migration, IML Series No. 34.'

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. *Note:* Each year millions of people are displaced by the adverse effects of natural hazards, such as floods, tropical storms, earthquakes, landslides, droughts, saltwater intrusion, glacial melting, glacial lake outburst floods, and melting permafrost. Of these, the great majority is displaced by weather- and climate- related hazards. The largest increases in displacement resulting from the effects of natural hazards are related to sudden-onset weather and climate-related hazards, and floods in particular. In addition, people are increasingly forced to move because of the slow-onset effects of sea level rise, desertification or environmental degradation. Climate change, combined with people's increasing exposure and vulnerability, is expected to magnify these trends, as extreme weather events become more frequent and intense in the coming decades."

Human mobility: "A generic term covering all the different forms of movements of persons. *Note:* The term human mobility reflects a wider range of movements of persons than the term 'migration'. The term is usually understood as encompassing also tourists that are generally considered as not engaging in migration. As an example of the emergence of this term, the international organizations members of the Advisory Group on Climate Change and Human Mobility created in the context of the Parties of the UN Framework Convention on Climate Change have started to use the term human mobility to cover all the broad range of types of movements that can take place in the context of climate change."

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. *Note:* The term is generally used to identify relocations that are carried out within national borders under the authority of the State and denotes a long process that lasts until relocated persons are incorporated into all aspects of life in the new setting and no longer have needs or vulnerabilities stemming from the Planned Relocation."

Vulnerable group: "Depending on the context, any group or sector of society (such as children, the elderly, persons with disabilities, ethnic or religious minorities, migrants, particularly those who are in an irregular situation, or persons of diverse sex, sexual orientation and gender identity (SSOGI)) that is at higher risk of being subjected to discriminatory practices, violence, social disadvantage, or economic hardship than other groups within the State. These groups are also at higher risk in periods of conflict, crisis or disasters."

'Trapped' populations: "Populations who do not migrate, yet are situated in areas under threat, [...] at risk of becoming 'trapped' or having to stay behind, where they will be more vulnerable to environmental shocks and impoverishment. *Note:* The notion of trapped populations applies in particular to poorer households who may not have the resources to move and whose livelihoods are affected."

Personal and contact information

1. Respondent information

   1.1. Name of respondent: _____

   1.2. Gender of respondent: _____

   1.3. Job title of respondent: _____

   1.4. National department/agency of respondent: _____

   1.5. Country: _____

General overview on the impacts of climate change at the national level

2. How would you assess the severity of the impact of climate change in the country?

No/hardly any impact	Little impact	Medium impact	Severe/significant impact	Very severe/devastating impact
1	2	3	4	5

Comments:

_____

_____

3. What are the current/recurring impacts of climate change – disasters – in the country? Please tick as appropriate.

Climate-related "disaster"/"hazard" in the region	Frequency in the past two decades (2000–2020)		
	Does not/hardly occurs[2]	Occurs occasionally[3]	Occurs frequently[4]
Hurricane			
Drought			
Heat wave			
Coastal inundation (sea level rise)			
Flash flood			
Landslide			
Fires			
Others:[5] _____			

4. Are you aware of any scientific projections on the nature and impacts of climate change in the country? (a) Yes _____ (b) No _____

   4.1. If yes, please describe, and please share relevant documents.

   _____

   _____

[2] "Does not/hardly occurs" – not occurring at a regular interval, not often, seldom, rarely.
[3] "Occasionally" – occurring from time to time, now and then, once in a while, irregularly at infrequent intervals.
[4] "Occurs frequently" – frequent intervals.
[5] Others may include geophysical activities (earthquakes, volcanic activity), disease or civil strife.

5. What are the main sources of information about the impacts of climate change and other climate-related risks in the country? (If possible, please list some of the relevant documents.)

_____

_____

5.1. Do you know if these sources capture or account for human mobility in the context of climate and other environmental changes? If yes, how?

_____

_____

6. Do these sources account and/or capture "human mobility" related to climate and other environmental changes? (a) Yes _____ (b) No _____

6.1. If yes, how is the impact of climate and other environmental changes on mobility captured (e.g. by event, type or nature of mobility)? Please explain.

_____

_____

6.2. If no, why not? Please explain.

_____

_____

7. At the national level, are there certain groups of people/communities that are most vulnerable to climate and other environmental changes? If yes, which groups of people/communities, and why?

_____

_____

National Disaster Risk Reduction (DRR) Policy Framework

8. Does the country have specific policy and legal frameworks dealing with DRR?

(a) Yes _____ (b) No _____

8.1. If yes, please name and list them.

_____

_____

9. Do these national legal frameworks recognize and address "human mobility" in the context of climate and other environmental changes (rapid and/or slow onset events/processes)?

(a) Yes _____ (b) No _____

9.1. If yes, in what context and how?

_____

_____

10. Which state actor is responsible for reporting the implementation of the United Nations Office for Disaster Risk Reduction (UNDRR) at the national level?

_____

_____

National Migration Policy Framework

11. Does the country have specific policy and legal frameworks dealing with migration and related issues? (a) Yes _____ (b) No _____

    11.1. If yes, please name and list them.

    _____

    _____

12. Do these national legal frameworks recognize and address "human mobility" in the context of climate and other environmental changes (rapid and/or slow onset events/processes)?

    (a) Yes _____ (b) No _____

    12.1. If yes, in what context and how?

    _____

    _____

13. Which state actor is responsible for reporting the implementation of the Global Compact on Safe, Orderly and Regular Migration at the national level?

_____

_____

14. In the case of cross-border movements, who is responsible for data collection?

_____

_____

Official Sources of Information and Data Sharing Mechanisms at the National Level

15. Do national legal frameworks on DRR and migration – listed above – establish or make provisions for **data sharing mechanisms** on migration, environment and climate change?

    (a) Yes _____ (b) No _____

    15.1. If yes, please indicate.

    _____

    _____

16. Which are the main agencies or actors on DRR and migration responsible for collecting, managing and disseminating data on migration, environment and climate change at the national level?

_____

_____

16.1. Which are – please name – the main actors in the field of:

(a) Migration, population statistics and related issues? Do they collect data related to 'human mobility' in the context of climate and other environmental changes?

_____

_____

(b) Climate and other environmental changes? (Eg. Climate/Environment Agencies/Departments) Do they collect data related to "human mobility" in the context of climate and other environmental changes?

_____

_____

(c) How do the existing actors at the national level cooperate and/or exchange information about data and data collection?

_____

_____

17. To the best of your knowledge, what are the methodologies and means by which data and related information on environment/climate change-related migration is collected, analyzed, shared and disseminated? (e.g. Format: anonymized, report, raw data; Collection: paper and/or electronic record.)

_____

_____

18. Are there any specific forms or templates to collect the data? (a) Yes _____ (b) No _____

* If yes, please attach a sample to the (submitted) questionnaire.

19. How do the national legal frameworks on DRR and migration (if at all) define or conceptualize "human mobility" related to climate and other environmental changes?

19.1. Migration:

_____

_____

19.2. Displacement:

_____

_____

19.3. Planned Relocation:

_____

_____

20. In what way or to what extent do the legal framework on DRR and migration integrate data on climate/environmental-related "human mobility" (migration, displacement and planned relocation) in the existing data sharing mechanism or related source of information?

_____

_____

21. Is the data on "human mobility" – if existing – disaggregated? (e.g. age, duration, location, nationality, sex, others.) (a) Yes _____ (b) No _____

    21.1. Please outline disaggregation categories.

    _____

    _____

22. Is human mobility data monitored and updated, or is it limited to the emergency moment – post-disaster? If yes, how frequently is data revised and updated?

_____

_____

23. What are the main constraints or challenges to effective data collection, analysis and sharing on climate-related migration?

_____

_____

Secondary Sources of Information and Data Sharing Mechanism at the National Level

24. Are you aware of any secondary – or unofficial – sources of information and data-sharing mechanisms for "human mobility" (migration, displacement and planned relocation) in the context of climate and other environmental changes at the national level? (a) Yes _____ (b) No _____

    24.1. If yes, please list them:

Source	Responsible agency/actor for collecting data	Type/kind of data collected	Frequency of data collection	Disaggregated? (Yes/no)	Climate/environment-related data? (Yes/no)

25. Do you or your agency make use of these data sources? (a) Yes _____ (b) No _____

    25.1. If yes, how or for what purposes?

    _____

    _____

Overview of Information and Data Sharing Mechanisms at the National Level

26. Looking at the available sources of information and data sharing mechanisms on "human mobility" (migration, displacement and planned relocation) in the context of climate and other environmental changes at the national level:

    26.1. What synergies do you see?

    _____

    _____

    26.2. What are the gaps and inconsistencies?

    _____

    _____

27. How do you see or rate the status of data on "human mobility" in the context of climate and other environmental changes at the national level? Please insert a check mark in the appropriate box:

1. Insufficient	2. Bit better	3. Adequate	4. Sufficient	5. Very sufficient

Comments:

_____

_____

Options at enhancing effective data collection and sharing

28. What options, strategies or measures could be considered in improving data collection and sharing on "human mobility" in the context of climate and other environmental changes at the regional level and regionally?

_____

_____

29. In what way could the strategies listed be deployed to adequately capture climate/environment-related migration for informed decision or policymaking?

_____

_____

30. Do you have any other suggestions, comments or opinions to add?

_____

_____

Case Studies of Human Mobility in the Context of Climate and Environmental Changes Involving Sources of Information and/or Data Sharing Mechanisms

31. List examples of cases of "human mobility" associated with climate and other environmental changes at the national level, with the following information:

    31.1. Location of the event: _____

    31.2. Type of event (rapid- or slow-onset process): _____

    31.3. Duration of the event: _____

    31.4. Source of information and/or data sharing mechanism used to collect data on "human mobility" (migration, displacement and planned relocation) in the context of climate and other environmental changes at the national level?

    _____

    _____

    31.5. Number of displaced people: _____

    31.6. Measures taken by national authorities (if any):

    _____

    _____

    31.7. Current displacement situation (return, relocation, shelters, other):

    _____

    _____

* Add other relevant references and sources related to the case study.

Thank you!

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