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Central America and the Caribbean regional synthesis

Climate change, displacement and
the right to education

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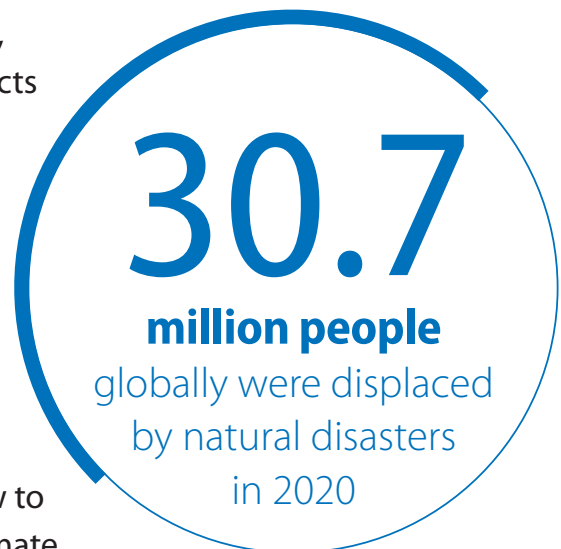
Climate change and displacement: Impact on the right to education in Central America and the Caribbean

From rising sea level to drought and increasingly frequent natural disasters - the effects of climate change are well-known today. However, its effect on human mobility is just coming to the forefront of the political discussion. In 2020 alone, **30.7 million people globally were displaced by natural disasters.**

Central America and the Caribbean region is prone to the effects of climate change and displacement due to its socioeconomic characteristics and geographic location. Country case studies were carried out in **the Bahamas, Cuba, the Dominican Republic, Guatemala, and Jamaica** to examine the impacts on the right to education in the region.

The research shows that **climate change directly threatens education** through the destruction of schools and property. It also leads people across borders where their legal residency and right to education are not guaranteed.

This report aims to guide policy-makers on how to ensure education is protected in the face of climate change and displacement. The report is one of four being developed and will contribute to UNESCO's global initiative on climate change, displacement and the right to education. It will inform the development of a Global Report with policy recommendations.



Central America and the Caribbean regional synthesis

Climate change, displacement and
the right to education

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It was prepared under the guidance of Florencia Saffirio (Programme Assistant, UNESCO Santiago), Rolla Moumné (Programme Specialist, UNESCO Paris) and Allissa Kizer (Consultant, UNESCO Paris).

This report also benefited from review and inputs from Won Jung Byun (UNESCO), Christelle Cazabat (IDMC), Paula Valeria Klenner Forttes (UNESCO), David Knaute (UNESCO), Neven Knezevic (UNICEF), Jean-Claude Ndabananiye (UNESCO-IIEP), Sarah Margono (UNESCO), Luke Pye (UNESCO), Juan Pablo Ramirez-Miranda (UNESCO), Anna Seeger (UNESCO-IIEP), Konstantinos Tararas (UNESCO), and Mathilde Tréguier (UNESCO-IIEP).

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Executive summary

Awareness of the risk of future displacement has increased globally rapidly in recent decades, making it one of the most discussed impacts of climate change. According to the 2021 Global Report on Internal Displacement (GRID) of the Internal Displacement Monitoring Centre (IDMC), between 2008 and 2020, over 284 million persons became displaced as a result of floods, storms, wildfires, droughts, extreme temperatures and landslides (IDMC, 2021). In 2019, roughly 23.9 million people were displaced due to weather-related disasters globally, three times the number of people displaced by conflicts and violence that year (UNESCO, 2020).

There are several global initiatives and international agencies which aim to ensure school safety and resilience of the education sector in the face of climate change, notably the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector (GADRRRES), whose work centres around Comprehensive School Safety as well as UNICEF's work on risk-informed programming, which includes explicitly climate-related risks. However, despite national, regional and international policy frameworks giving growing recognition to climate change as a challenge at both a local and global level, an important dimension that has been underexplored is how climate change and **climate displacement** affect the right to education.

To address this gap, UNESCO has recently introduced a new thematic area building on previous work developed on refugees (UNESCO/OREALC, 2019; UNESCO, 2019; UNESCO, 2020) and embodied in the initiative The Impacts of Climate Change and Displacement on the Right to Education, launched in 2020 through the publication of a dedicated Policy Paper.

To further build upon the literature review in the Policy Paper and gather more detailed evidence on the impact of climate change and displacement on the right to education, specifically in Latin America and the Caribbean, UNESCO conducted deep-dive country case studies in the region. This report synthesizes some of the main findings of the five country case studies from Central America and the Caribbean - namely **the Bahamas, Cuba, the Dominican Republic, Guatemala, and Jamaica** – that were elaborated to further explore findings from UNESCO's Policy Paper. These case studies highlight that climate change has already triggered climate displacement – in various forms – in both regions, which are among the world's most exposed and vulnerable to climate impacts, and is the most vulnerable sub-region in the Americas (Global Americans 2019). The latter range from rapid-onset hazards, such as hurricanes, landslides, and floods which often trigger temporary displacement, to slow-onset events, including droughts and rising sea levels, which can lead to permanent displacement internally and internationally (FAO, n.d.).

The overarching research question for each case study was: To what extent does climate change, particularly climate displacement, threaten the right to education, and how to overcome existing barriers? Specifically, the case studies aimed to (i) Identify the characteristics and profiles of Climate Displaced Persons (CDPs), (ii) Gather empirical data on the barriers to education for CDPs, (iii) Identify patterns of climate displacement and barriers to education for CDPs in the different and unique national contexts, (iv) Investigating whether national and regional policies, strategies, actions, or measures already exist for CDPs in the field of education, (v) Developing tailored policy

recommendations for each country to enhance the quality and inclusiveness of national policy and institutional frameworks including climate policies and education systems and to guarantee education opportunities for CDPs.

Drawing on the five case studies, six types of climate displacement are prevalent in Central America and the Caribbean:

Internal displacement	Cross-border displacement
T1. Internal displacement due to sudden-onset hazards, T2. Internal displacement due to slow-onset events (including climate-related economic migration) ¹ , T3. Planned relocation, T4. Climate-induced trapping ('trapped' populations, unable to migrate due to poverty or other factors or unable to return to their place of origin following a situation of climate displacement)	T5. Cross-border displacement due to sudden-onset disasters (primarily sub-regional displacement in the context of the Caribbean), T6. Cross-border displacement due to slow-onset events (which is difficult to qualify as such given the multi-faceted dynamics leading to international migration in both Central America and the Caribbean)

The five case studies were conducted based on the 5As framework on the right to education, which focuses on five core dimensions of the right to education (availability, accessibility, acceptability, adaptability, and accountability) and key response areas. The following table presents an overall synthesis of the case studies findings, focusing on the main barriers to education for each 5As dimension and the main types of climate displacement associated with each barrier.

Case studies from Central America and the Caribbean: Synthesis of main barriers to education and the associated types of climate displacement, based on the 5As framework on the right to education

5As dimensions and their definition	Barriers to education associated with climate displacement	Type of climate displacement					
		T1	T2	T3	T4	T5	T6
Availability. Education must be available. Governments have to ensure that educational institutions, physical resources, personnel, and programmes are available in sufficient quantity and quality and with the necessary facilities to function properly for both people on the move and host communities	<ul style="list-style-type: none"> • Interruption of education during disasters and destruction of / damage to educational infrastructure or infrastructural damages where facilities are used as shelters for long periods 						
	<ul style="list-style-type: none"> • Loss in teaching time affecting the quality of education 						
	<ul style="list-style-type: none"> • Limited availability of educational infrastructure in rural and remote areas 						
	<ul style="list-style-type: none"> • Suspension of special educational services (e.g. school feeding) and programmes (e.g. education for learners with disabilities) after disasters 						
	<ul style="list-style-type: none"> • Teacher shortages, especially in remote areas 						

¹ NB: For the purposes of this study, economic migration is considered "displacement" as migration was not a completely voluntary choice due to climate-driven loss of livelihoods and loss of assets.

5As dimensions and their definition	Barriers to education associated with climate displacement	Type of climate displacement					
		T1	T2	T3	T4	T5	T6
Accessibility. Education should be accessible to all, physically and economically, without legal discrimination, including migrants, refugees, returnees, asylum seekers, and host communities.	<ul style="list-style-type: none"> • Auxiliary costs (such as books, uniforms and transportation) limiting access to education for displaced families 						
	<ul style="list-style-type: none"> • Lack of legal documentation affecting internal and internationally displaced students 						
	<ul style="list-style-type: none"> • Low digitalization of academic records affecting internally displaced students 						
	<ul style="list-style-type: none"> • Safety issues associated with inadequate risk management (including unsafe buildings) 						
	<ul style="list-style-type: none"> • Problems in recognition of degrees, certificates, and knowledge 						
Acceptability. The form and content of education should be appropriate and coherent with the needs of people on the move and host communities, with relevant curriculum and educational materials and approaches that value difference, ethnic plurality, and intercultural dialogue.	<ul style="list-style-type: none"> • Language barriers affecting the right to education of indigenous communities, internal and internationally displaced populations 						
	<ul style="list-style-type: none"> • Destruction of (or damage to) teaching/learning materials, supplies, and equipment 						
	<ul style="list-style-type: none"> • Lack of training of (and support to) the school community on the psychosocial and educational needs of CDPs (including students, teachers and other school personnel) 						
	<ul style="list-style-type: none"> • Lack of official and continuous measures to attend to the health and psychosocial needs of climate-displaced students 						
	<ul style="list-style-type: none"> • Risks of discrimination and stigma (including violence) against CDPs that are part of indigenous communities, irregular migrants, and women 						
Adaptability. There is an enabling environment and institutional capacities in the education sector to respond to the diverse needs of people on the move and host communities	<ul style="list-style-type: none"> • Lack of prioritization for the development of tailored policies for CDPs 						
	<ul style="list-style-type: none"> • Lack of public funding in the educational sector, especially pre- and post-disaster 						
	<ul style="list-style-type: none"> • Lack of institutional coordination and capacity to cover the educational needs of CDPs 						
	<ul style="list-style-type: none"> • Lack of coordination capacities to reassign students and teachers after sudden-onset events 						
Accountability. Education must be accountable for transparency, social management, and affected populations' participation, as well as responsibility for the actions and public policies undertaken in the response	<ul style="list-style-type: none"> • Lack of mechanisms allowing for the participation of CDPs in the design and implementation of educational policies 						
	<ul style="list-style-type: none"> • Accountability issues associated with a lack of transparent information about climate displacement and climate impacts in the educational sector 						

In addition to the country-specific recommendations included in each case study, this synthesis report proposes the following policy recommendations applicable to all Member States in Central America and the Caribbean:

For all displacement scenarios:

Institutional recommendations

- Improve the access and readiness of educational infrastructure and services, targeting rural areas that can be important receptors of CDPs, through increased funding and increased physical school capacity
- Facilitate the enrolment of CDP students through targeted measures (including financial support, increasing capacity to absorb additional children, flexible curriculum, relaxed administrative procedures, and flexible and non-formal learning opportunities)
- Support teachers and educational staff in addressing the educational and psychosocial needs of CDPs through targeted teacher training on hybrid learning pedagogies, teaching at the right levels, assessment of learning losses, and more

Inclusion recommendations

- Prioritize appropriate responses to already vulnerable groups of learners such as women and girls, youth (secondary), and ethnic, religious, and linguistic groups and minorities
- Create mechanisms to ensure the active participation of (potential) CDPs pre-, during and post-crisis in the design and assessment of policies to support their education, making special efforts to support the participation of vulnerable groups and irregular migrants to ensure accountability to the affected populations.
- Mainstream Education for Sustainable Development, including climate change education, in order to raise knowledge, awareness and action on the scientific and structural causes of these climate-induced disasters to turn CDPs into active agents of change rather than passive victims of disasters
- Improve preparedness to attend to the linguistic needs of climate displaced population by, for example, preparing educational material in the languages of expected CDPs or by training/ supporting teachers in attending to their needs such as Haitian Kreyol or in English, French or Spanish, depending on the country

Policy and coordination recommendations

- Cooperate with national, regional and international organizations providing support to CDPs to make these efforts permanent aspects of the educational policy, and build national and local capacities
- Explicitly integrate and address the relation between climate displacement and the right to education in national and regional educational, climate change, disaster management, and migration policies

-
- Strengthen the capacities of all relevant Ministries, including Ministries of Education in their lead/coordination role to enhance inter-sectoral collaboration in support of CDPs, by, for example, ensuring a representative from the Ministry of Education is present within the Disaster Risk Reduction departments or ministries in a given country and vice-versa.
 - Strengthen horizontal (intersectoral) and vertical (national to local) governance mechanisms to ensure timely responses at all levels (local, national, regional)
 - Develop a comprehensive, joint financing strategy to create a fund for climate displaced persons and their right to education- financed by both the Ministry of Education and the departments concerning disaster risk reduction and management while also leveraging private partnerships

Displacement caused by sudden-onset events:

- Prioritize the use of alternatives to educational infrastructure as shelter and the establishment of temporary facilities to ensure the continuity of education services during disasters
- Plan and implement timely remote learning tools and practices to mitigate school closures and destruction of teaching material, considering the learning experience gained during the COVID-19 pandemic
- Create contingency plans for education services to reduce their suspension during disasters, including provisions for special education
- Improve national systems to respond to sudden increases in demand for additional teaching materials, supplies, and equipment, as well as teachers in regions receiving CDPs. This can be done by, for example, planning the availability of additional educational materials and creating protocols for their rapid delivery. Mechanisms can also be implemented to economically support teachers in regions with CDPs and support volunteer or contract teachers as temporary measures to attend CDPs.
- Improve national systems to respond and prepare schools for accommodating the influx of CDPs after a disaster by, for example, developing school-based contingency plans to respond to such influxes and creating financial support measures, such as grants for receptor schools.

Cross-border displacement:

- Simplify administrative and legal requirements for cross-border CDPs in accessing education
- Establish the concept of climate refugee (or an equivalent one) as well as legally binding frameworks to ensure the access to education of CDPs that cross borders
- Review procedures to facilitate the recognition of degrees and certificates of potential cross-border CDPs

Internal displacement:

- Improve educational infrastructure resilience, especially in at-risk areas of sudden and slow-onset disasters as well as in regions potentially receptors of CDPs by, for example, updating and implementing infrastructure assessments and monitoring mechanisms as well as updating building and zoning codes
- Improve the digitalization of academic records with the explicit aim of facilitating the reintegration of CDPs after disasters

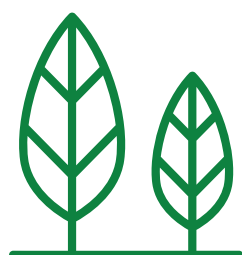
While the country case studies included in the Annex led to the aforementioned national policy recommendations – applicable to all Member States in Latin America and the Caribbean, not just the five countries studied – this regional synthesis report also explores existing regional cooperation mechanisms that impact migration policy, climate change policy, and disaster risk reduction. Subsequently, it provides regional policy recommendations to help ensure the right to education in the face of climate change at the regional level:

- Countries in the Caribbean should support the enforcement of the CARICOM Protocol on Contingent Rights and join regional and bilateral Free Movement Agreements (FMAs) with other Caribbean countries.
- Each Member State should participate in any upcoming CMC consultations and use this space to promote regional dialogue on the right to education for CDPs.
- Regional cooperation can promote collaborative and comparative research efforts to better understand challenges and opportunities to protect the right to education among CDPs to guide policy decisions.
- Regional cooperation should also be used to facilitate sharing good practices about the right to education for CDPs in collaboration with UNESCO, UNICEF, UNHCR, and other institutions.
- Bilateral and multilateral agreements on migration in the region should promote incorporating the notion of climate refugees in their protocols and legal frameworks.
- The RCM, CMC, and SICA, among other regional initiatives, can serve as platforms to promote joint efforts to visualize cross-border climate displacement associated with low-onset climate events, creating shared mechanisms to identify this type of displacement in the region.
- Regional initiatives to promote safe schools and better disaster management practices, such as the Caribbean Safe School Initiative, should more explicitly discuss the challenges of climate displacement and policy ideas that can be promoted.
- A regional protocol on educational access in the context of climate change should be developed. This is important given that although there are many platforms for climate change, migration, and disaster risk reduction in the region, regional efforts are failing to address the relation between education and climate change.
- Develop a cross-country information system to monitor displacement to inform educational planning and management

Key highlights and takeaway messages are summarized as follows:

Highlights

- The Latin America & Caribbean region faces climate-related hazards annually –notably hurricanes and flooding, but also slow-onset impacts of climate change, such as more frequent and intense drought and sea level rise and salinization.
- Climate change is already driving human displacement –directly by affecting human settlements or indirectly through climate-driven loss of livelihood and subsequent forced migration.
- Particularly among the Caribbean countries, out of the six displacement scenarios identified, internal displacement following sudden-onset events and internal displacement following slow-onset events are the most common. Drought and climate-driven loss of livelihoods (particularly in agriculture, fishery, and tourism) are the leading causes of slow-onset, permanent internal displacement.
- Due to drought, international migration is more common in Central American countries and, for this study, Guatemala.
- Each type of displacement scenario entails different barriers to education. However, in all scenarios, one of the major barriers to education is a lack of financial resources following disasters and/or displacement due to climate-related events. Families often prioritize education only after achieving economic security following the loss of assets during disasters and displacement.
- Another major finding is that climate change and displacement exacerbate existing educational inequalities and barriers to education and adversely affect the financially disadvantaged, irregular migrants, girls and women, rural communities, indigenous communities, and the disabled.
- For those facing permanent migration and cross-border migration, administrative barriers, lack of documentation, residency requirements, and language barriers (particularly for the indigenous communities in Guatemala) impede full access to quality education.
- None of the countries studied has an overarching national strategy that expressly enshrines the right to education for persons displaced by climate change or climate-related triggers. However, Cuba is the only country studied that does grant refugee status to those displaced by disasters resulting from natural hazards in national legislation- eliminating the residency-related barriers to education for those displaced by climate change.



List of acronyms and abbreviations

CARICOM	Caribbean Community
CDEMA	Caribbean Disaster Emergency Management Agency
CDPs	Climate displaced persons
CMC	Caribbean Migration Consultations
FMA	Free Movement Agreement
GADRRRES	Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector
IDMC	Internal Displacement Monitoring Centre
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
OECS	Organization of Eastern Caribbean States
SICA	Central America Integration System (in Spanish: <i>Sistema de la Integración Centroamericana</i>)
UNDRR	United Nations Office for Disaster Risk Reduction
UNESCO	United Nations Educational, Scientific and Cultural Organization



Chapter 1

**The right to education
among climate-displaced
persons**

Climate displacement has increased rapidly in recent decades, becoming one of the most notorious impacts of climate change. Broadly defined, climate displacement corresponds to “all forms of human movement, whether internal or cross-border, and whether voluntary to some extent or forced. Movement may be temporary or permanent, and the climate change related-trigger may be a slow onset or rapid onset environmental hazard” (UNESCO, 2020: p.2).² According to the 2021 Global Report on Internal Displacement (GRID) of the Internal Displacement Monitoring Centre (IDMC), between 2008 and 2020, over 283 million people were displaced by climate-related disasters: 156 million by floods, 119 million by storms, 3.4 million by wildfires, 2.4 million by droughts, 1.1 million by extreme temperatures, and 1.1 million by landslides. (IDMC, 2021). In 2019, roughly 23.9 million people were displaced due to weather-related disasters globally, three times the number of people displaced by conflicts and violence that year (UNESCO, 2020).

Climate displacement has gained relevance in the media, policy circles, and international climate forums and institutions. However, an important dimension that has been underexplored is how climate displacement affects the right to education- particularly given that climate displacement disproportionately affects countries already the most fragile socio-economically. CDPs face significant educational barriers, such as schooling infrastructure destroyed by floods, language barriers for persons displaced in linguistically different regions, and risks of dropout to pursue economic activity following climate-induced poverty, among many others. Yet the political discourse surrounding education and climate change remains focused on including climate change and sustainable development in educational curricula.

While some might claim that the right to education for CDPs can be achieved within the existing education framework for refugees and other migrants, CDPs face some unique educational barriers that require tailored responses. First, while refugees are guaranteed residency rights and the right to education under international law, CDPs that cross international borders do not legally qualify as refugees and therefore have no such rights protected in concrete law. Second, migrants, conflict-displaced persons, and refugees are a population widely recognized by and visible to governments and international organizations as vulnerable groups, and therefore ensuring their right to education is a priority. Many of which are displaced internally in their own countries, CDPs tend to remain invisible and without formal recognition in national policies. This political distinction is significant given that according to the UNHCR, at the end of 2021, there were 27.1 million refugees, in comparison to a striking number of internally displaced persons at 53.2 million (UNHCR). If this group remains invisible, national policies will remain unable to address their right to education.

To address this challenge and gap, UNESCO introduced a new thematic area dedicated to the effects of climate displacement on the right to education, building on previous work on refugees (UNESCO/OREALC, 2019; UNESCO, 2019)³. The project “The Impacts of Climate Change and Displacement on the Right to Education”, launched in 2020, aims to improve the preparedness of Member States to ensure the inclusion of all displaced people in quality education, particularly CDPs, through developing policy recommendations following regional case studies and global analysis (UNESCO, 2020). This report synthesizes some of the main findings of five exploratory country case studies developed in Central America and the Caribbean, particularly in the Bahamas, Cuba, the Dominican Republic, Guatemala, and Jamaica.

2 According to the IDMC analytical framework, displacement in the context of climate change not only includes natural hazards, but also loss of livelihoods, water/food insecurity and loss of territory as triggers of displacement linked with climate change, in addition to disasters.

3 The distinction between cross-border climate displaced people and refugees is that the former are not normally qualified as refugees under international law.

Central America and the Caribbean is among the world's most vulnerable regions to climate change. The region is exposed to rapid-onset environmental disasters, such as hurricanes, landslides, floods, and slow-onset climate events, like droughts and rising sea levels (FAO, n.d.). These events are hazardous for Small Island Developing States (SIDS) in the Caribbean, characterized by low-lying coasts and economies that usually rely on agriculture, fishing and tourism, among other activities highly susceptible to the impacts of climate change (Inter-American Development Bank, 2014).

Climate change has already triggered climate displacement in Central America and the Caribbean. In the five countries studied, over 7.5 million people were internally displaced due to weather-related events between 2008 and 2020 (IDMC, 2021). Therefore, rather than a problem that will need future responses, countries need to urgently start addressing the impacts of climate displacement on the right to education.

Globally, climate displacement is not affecting the population evenly. Multiple factors render some groups more vulnerable than others. In Central America and the Caribbean, communities working in agriculture, fishing, and tourism are particularly vulnerable to climate risks, including climate displacement. Islanders are especially susceptible to loss of territory in the context of sea level rise and also subject to the effects of sea temperature rise and ocean acidification, amongst other effects. From a gender perspective, challenges for climate-displaced women and girls can be exacerbated, potentially worsening their right to education. Women, children, people living in poverty, communities with limited resilience and coping mechanisms, rural populations, indigenous groups, black communities, LGBTQI+ people, and disabled persons are generally more vulnerable to the impacts of climate change, such as displacement. In these case studies, special attention was paid to the role of interrelated forms of vulnerability in the relations between climate change and displacement and the right to education.

Special attention was also paid to the impacts that the COVID-19 pandemic has had on the education sector, beginning with the closure of schools in March 2020. In many countries, the pandemic slowed down the recovery process in regions recently affected by extreme weather conditions, creating additional challenges to protecting the right to education of CDPs. However, the pandemic also opened space for new initiatives and learning modes that can offer opportunities to support their education.



Chapter 2

Synthesis Context and Study Methods

2.1 Synthesis context

UNESCO launched in early 2020 a new initiative on Climate Change and Displacement and the Right to Education (UNESCO, 2020). This project aims to investigate existing barriers to the right to education of children, youth and adults displaced by the effects of climate change. The overall expected outcome is to improve the preparedness of Member States to ensure the inclusion of all displaced persons in quality education. The project will culminate with the publication of a guidance toolkit for UNESCO's Member States, which will provide specific and practical policy recommendations and advocacy and communication materials that policy-makers and stakeholders can utilize to protect and fulfil the right to education for CDPs. For the guidance toolkit to be fully informed and practically relevant, the project will include country case studies that analyse the impacts of climate displacement on the right to education in priority selected regions (Asia and the Pacific, Latin America and the Caribbean, and East Africa), as a follow-up to UNESCO's Working Paper The impact of climate displacement on the right to education (UNESCO, 2020).

This report corresponds to the regional synthesis for Central America and the Caribbean, based on five country case studies developed in the region in the Bahamas, Cuba, the Dominican Republic, Guatemala, and Jamaica. The Regional Office of Education for Latin America and the Caribbean carried out these case studies.

The overarching research question was: To what extent does climate change, particularly climate displacement, threaten the right to education in each country, and how to overcome existing barriers?

The specific objectives of each case study were:

- (i) Identifying the characteristics and profiles of CDPs.
- (ii) Gather empirical data on CDP education barriers (and opportunities if they exist).
- (iii) Identifying patterns of climate displacement and barriers to education for CDPs in the different and unique national contexts.
- (iv) Investigating whether national policies, strategies, actions, or measures already exist for CDPs in the field of education.
- (v) Developing tailored policy recommendations for each country to enhance the quality and inclusiveness of national education systems and to optimize education opportunities for CDPs.

2.2 Study methods and limitations

The methodological approach for the case studies was primarily qualitative and based on extensive literature review on journal articles, online news media, and published reports from UN agencies, international organizations, and government institutions. The case studies were also based on the analysis of available statistical and other data from secondary sources, as well as interviews with a few key informants in each country.

To analyze how climate displacement is affecting the right to education in Central America and the Caribbean, the five case studies conducted in the region used the 5A framework on the right to education, which focuses on five core dimensions (availability, accessibility, acceptability, adaptability, and accountability) and key response areas⁴. To define the response areas, priority areas were considered as defined by UNESCO’s Regional strategy for the situation of people on the move in Latin America and the Caribbean 2019–2021 (UNESCO/OREALC, 2019): planning for Access to education systems; inclusive educational and social environments; and recognition of education, degrees, certificates, and prior knowledge.

Table 1. Dimensions of the right to education and key policy response areas

Dimensions of the right to education	Key response areas
Availability: Education is provided in sufficient quantity and quality for people on the move and host communities.	<ul style="list-style-type: none"> ● Educational facilities and basic services ● Provision of quality education ● Availability of both regular and alternative forms of education ● Teachers and other educational personnel
Accessibility: Education is accessible for all without any form of discrimination.	<ul style="list-style-type: none"> ● Economic costs ● Legal documentation ● Safety and protection ● Recognition of degrees, certificates, and knowledge
Acceptability: The form and content of education is adapted to the needs of people on the move and host communities.	<ul style="list-style-type: none"> ● Language and other communication barriers ● Teaching and learning content and practices ● Mental health and psychosocial needs ● Socio-cultural discrimination and exclusion
Adaptability: There is institutional capacity in the education sector to respond to the diverse needs of people on the move and host communities.	<ul style="list-style-type: none"> ● Funding and investment ● Coordination and institutional capacities
Accountability: Relevant stakeholders, including people on the move and host communities, are involved in issues about the right to education.	<ul style="list-style-type: none"> ● Participation ● Monitoring and evaluation

Source: Adapted from Renna & Rossi (2022), pp. 50-51. Available under [CC BY-NC-ND 3.0 IGO](https://creativecommons.org/licenses/by-nc-nd/3.0/)

One study limitation is the lack of robust and empirical research about some of the areas covered by the analysis. These gaps are noted throughout the country cases and this synthesis report. A further limitation was the tight timeframe and limited possibility of collecting empirical data during the COVID-19 pandemic. Fieldwork, for example, was impossible given various travel restrictions and measures. Accessing government officials, school principals and teachers was also difficult because many have been overwhelmed by the rising demands and continuous policy changes caused by the pandemic. In addition, there is a lack of official data on climate migrants and displaced persons, nor relevant proxy included in data that would allow for meaningful statistical analysis. Again, gaps are highlighted as necessary. Only in the case of Guatemala, interviews with CDPs were conducted, particularly with communities affected by the Eta and Iota storms of 2020.

⁴ The original and official framework refers to 4A’s. In recent years, there has been an evolution towards adding accountability, as a fifth dimension. The 5A’s model is also used as part of OREALC/UNESCO Santiago’s broader education and human mobility programme (UNESCO/OREALC 2020a; 2020b; 2020c).



Chapter 3

Climate displacement is rising in Central America and the Caribbean

This chapter presents evidence on the linkages between the impact of climate change and human mobility in Central America and the Caribbean, with a specific focus on the five studied countries.

3.1 Causes of climate displacement

Although there is a vast diversity of climate conditions within Central America and the Caribbean, some general tendencies create similar extreme climate events related to climate change. First, the climate in the region is mainly tropical and temperatures tend to be constant throughout the year, with a range of less than 2°C - 5°C. Moreover, there is a dry and a wet season, with the latter running from May/June to November/December and coinciding with the hurricane season. Heat stress is higher during the wet season and the cooler and breezy dry season (Caribbean Regional Climate Centre, n.d.).

The table below summarizes some of the main risks of extreme weather events related to climate change in each of the five case studies.

Table 2. Impacts of climate change and climate displacement in the studied countries

	The Bahamas	Cuba	The Dominican Republic	Guatemala	Jamaica
World Risk Index (WRI) (2021)^a	4.27	5.75	11.49	22.23	12.02
WRI rank^a	128	105	32	10	29
Average expected number of displacements per year – for sudden-onset hazards^b	23,206	24,425	41,777	42,763	14,903
Expected causes of displacements^b	Storm surge (76.1%); Cyclonic wind (23.8%)	Storm surge (73.4%); Cyclonic wind (23.2%)	Cyclonic wind (45.1%)	Earthquake (70.4%); Flood (29.4%)	Cyclonic wind (56.6%); Storm surge (32.1%)
Common climate-related events	Storms and hurricanes; drought and water stress; sea-level rise.	Storms and hurricanes; drought and water stress; sea-level rise.	Storms and hurricanes; drought and water stress; sea-level rise.	Storms and hurricanes; drought and water stress.	Storms and hurricanes; sea-level rise.

Data Sources: World Risk Index (2021) https://weltrisikobericht.de/wp-content/uploads/2021/09/WorldRiskReport_2021_Online.pdf. Available under CC BY 4.0 and IDMC Disaster Risk Model, <https://www.internal-displacement.org/disaster-risk-model> [Accessed 04/17/2023]. Available under CC BY 3.0 IGO

Hurricanes and Tropical Storms. Hurricanes are recurrent weather events in Central America and the Caribbean. However, climate change has increased the severity of these events, primarily because of the effects of ocean warming (Pan American Health Organization, 2019). In 2019, Hurricane Dorian was the most intense on record striking the Bahamas. The 2020 Atlantic Hurricane season faced 31 hurricanes and tropical storms, representing the highest number of storms ever recorded in the region (Probst et al., 2020). The two major hurricanes were Eta and Iota, aggravated by La Niña. These hurricanes caused significant impacts in Guatemala, Cuba, and the Dominican Republic (Probst et al., 2020).

Hurricanes and tropical storms in the region are usually accompanied by heavy winds, heavy rains, floods, and landslides, which have caused damage to infrastructure and agriculture. In 2016, for example, Hurricane Matthew passed near Jamaica's shores causing falling rocks, landslides, and flooding. Many roads were blocked, houses were destroyed, and essential utilities were disrupted, triggering the creation of emergency shelters in the country. Hurricane Matthew also impacted the Bahamas, Cuba, and the Dominican Republic. The following year, Hurricane Irma caused devastating torrential rains, floods, and landslides in these three countries (ReliefWeb, 2018).

Drought and water stress. Climate change is affecting water availability in Central America and the Caribbean, given the frequency and severity of droughts, which are linked to increased temperatures and decreased precipitations (IBD, 2014). In Guatemala, the exacerbation of the El Niño Southern Oscillation caused by climate change results in an unprecedented drought during the dry season and unusually extreme rainfall during the wet season (Steffens, 2018). Due to this phenomenon, the 2015-2016 drought was the worst Guatemala experienced in more than 35 years, and future predictions show an even bleaker picture (USAID, 2017). The worsening of El Niño has also increased the risk of drought in the more arid regions of the Dominican Republic (Ministry of Environment, 2015), a country that in 2019 faced the worst drought in over 30 years (Dominican Today, 2019). The Bahamas, just like other Caribbean SIDS, is already dealing with more frequent episodes of droughts, which is especially concerning in a country where freshwater resources are already limited and vulnerable (Government of The Bahamas, 2020). In 2014-2015, Jamaica experienced the worst drought in over 50 years, which resulted in a 30% decline in agriculture production and losses estimated at USD 7.2 million. Meanwhile, according to the Climate Knowledge Portal, Cuba is experiencing the worst drought in a century (Climate Change Knowledge Portal, 2021).

Storms and hurricanes in Central America and the Caribbean are also causing significant damage to water storage, treatment, and distribution infrastructure. Moreover, an important source of freshwater contamination is due to the salinization caused by sea-level rise, which is creating additional problems in the Bahamas (University of the Bahamas, 2021), Cuba (Stone, 2018), the Dominican Republic (Mejía, 2018), and Jamaica (UNICEF, 2020).

Many causes beyond climate change exacerbate drought and water stress in the region. In the Bahamas, for example, the tourism industry is exacerbating water scarcity and pollution through the private operation of wells. Likewise, practices in the agriculture sector, such as flushing pesticides and fertilisers, negatively impact water quality (Government of The Bahamas, 2020).

Sea-level rise. Sea level in Central America and the Caribbean is currently rising by 2 to 4 cm per decade and it is expected to rise at an even faster pace within the following years, resulting from warmer ocean temperatures (Marto et al., 2014). Since Caribbean countries have large coastal plains, they are highly exposed to flooding, coastal erosion, and freshwater salinisation. The Bahamas is one of the top four most-at-risk countries in the world: 32% of its land, corresponding to 25% of the population, is below 0.5 m (IPCC, 2014). In Jamaica, the sea level has increased by 1.66 mm/year over 17.8 years, threatening 95% of its beaches (Simonelli, 2018).

Since 60% of Jamaica's population lives within 2 km of the coast and more than 70% of all major industries are located within the coastal zone, human settlements and economic activities are significantly threatened by sea-level rise and beach erosion. In the case of Cuba, most beaches are affected by sea-level rise, which causes them to regress 1,2 meters each year, flooding numerous villages (Coastal Care, 2011). Similar impacts of sea-level rise are faced in the Dominican Republic, such as coastal erosion, floods, and water salinization (Mejía, 2018). In the Bahamas, Cuba, the Dominican Republic, and Jamaica, sea-level rise is also destroying mangroves, a natural barrier that reduces the risk of flooding caused by hurricanes and storms.

3.2 Types of climate displacement

The effects of climate change in Central America and the Caribbean do not only pose risks to the economy and infrastructure of the region. As the impact of climate change continues to intensify, they are now leading to widespread displacement of the population when extreme weather events occur – both internally and internationally, temporary and permanently, in numbers that have never been seen. Climate change-related impacts have already caused human displacement in the region. This section describes some of the main types of climate displacement identified in the case studies.

3.2.1 Internal displacement by sudden-onset disasters and slow-onset events

Most CDPs are expected to stay within their countries of origin given that displacement is often triggered by unpredictable climate hazards that force a rapid displacement as a response. Moreover, many affected people lack the resources to cross international borders (UNESCO, 2020). Cases of internal displacement by slow-onset events related to climate change are also increasing in the region, mainly due to water stress and sea-level rise.

The Bahamas

Internal climate displacement in the Bahamas has been mostly caused by extreme weather events, such as Hurricane Dorian in 2019, which displaced at least 9,840 people, mostly temporary (UNICEF, 2019; IDMC, 2020). In cases of internal climate displacement, the majority of the population concentrates on the capital island. In the case of slow-onset events, although displacement has been less discernible, it is expected that sea-level rise will lead to the displacement of tens of thousands of people. Moreover, like other Caribbean SIDS, the Bahamas is already dealing with more frequent episodes of drought, which are expected to worsen with climate change, increasing internal displacement.

Cuba

Cuba has been heavily affected by internal displacement caused by extreme weather events. Most of these displacements, however, are temporary, with people staying in shelters provided by the government and then returning to their places of residency. Hurricane Gustav in 2008 displaced 2.5 million people (UNIFEC, 2008). More recently, Irma (2017) displaced 1.7 million people in Cuba

(IDMC, 2021). Regarding slow-onset events, sea-level rise is one of the main threats to internal climate displacement, which is expected to displace up to 41.300 people by 2050 (Towel, 2020). The drought is another slow-onset event increasingly affecting Cuba, which could create internal displacement in the future.

The Dominican Republic

Internal displacement in the Dominican Republic has been mainly caused by rapid onset events like hurricanes and floods. In 2007, hurricanes Maria and Irma were particularly important, which displaced more than 67,000 people in the country (IDMC, 2021). Sea level rise has been another critical cause of internal displacement. Around 100,000 people live less than 0.5 meters above sea level and are at risk of displacement (Strauss & Kulp, 2018). The severe drought affecting the country, especially in Northwest regions, is another important cause of internal displacement (OIM, 2016). This has increased rural-urban migration, as well as the concentration of the population in the central region and the decrease of the rural population.

Guatemala

Internal displacement in Guatemala has been usually caused by rapid onset events, such as hurricanes and floods, where many displaced groups have had to stay in emergency shelters for weeks and months (Plan International, 2020). For example, after hurricanes Eta and Iota (2020), more than 250.000 people were living in shelters, of which only 4.2% were official (IDGT, 2021). The main slow-onset weather even creating displacement in Guatemala is the severe drought affecting several rural regions, which could be one of the reasons for the increase in rural-urban migration within the country.

Jamaica

Internal climate displacement in Jamaica has mainly responded to extreme weather events and has been characterized by short-term evacuations. There has also been climate displacement as a result of slow-onset events, such as sea-level rising and recurring droughts. This kind of displacement, however, is at most times more challenging to recognize and not always possible to distinguish from economic migration. It can also be related to rural-to-urban migration, which has increased in Jamaica in recent years and urban density simultaneously.

3.2.2 Planned Relocation

Across Central America and the Caribbean, planned relocation in response to climate threats is unavoidable in many at-risk areas. In these contexts, planned relocation has represented an adaptation strategy that usually takes place reactively (after the occurrence of climate-related disasters). Permanent forms of relocation are expected after the occurrence of slow-onset events. For example, entire communities affected by slow-onset events have been relocated to the Dominican Republic. This was the case of Boca de Cachón, a town impacted by the expansion of Lake Enriquillo, and La Barquita, an informal settlement localized on the hillside of the Ozama river in the city of Santo Domingo. In the Bahamas, Hurricane Irma relocated the entire population of Ragged Islands (72 people) after the government declared it “uninhabitable”.

Cases of preventive relocation, however, have been scarce in the region and most of them have taken place in Cuba. The example of Cuba is exciting given the relevance that its climate change policy, Tarea Vida, gives to preventive forms of relocation. The first programme for the permanent relocation of the population affected by extreme weather conditions in Cuba took place in 2005, when 40 families of Playa Rosario, affected by constant flooding, were relocated, first to a temporary shelter and then to a new settlement 8 miles away from Playa Rosario (Pickett, 2017).

Relocation is undoubtedly a challenge for governments because these processes demand high levels of coordination and involve high economic and social costs. Social opposition is a common challenge for relocation programmes. Very often, low-income families and communities return to hazard-prone areas in search of jobs and better livelihood conditions, increasing the chances of a second displacement. This was the case, for example, of the Ragged Island in the Bahamas. In Playa Rosario in Cuba, most relocated families, which previously depended on fishing, now work in the fields surrounding the new settlement, growing corn, sugar, and cabbage. However, after relocation, some residents decided to commute to the beach to continue fishing (Pickett, 2017).

3.2.3 Trapped populations

The term “trapped populations” refers to people forced to stay in their usual residence despite extreme weather or slow-onset events due to the inability – financial or otherwise – to leave. Many examples of trapped populations have been registered in Central America and the Caribbean, with several communities remaining trapped due to storms, landslides, and hurricanes that caused severe damage to not only their houses but also the main roads, restricting the capacity to rescue and evacuate the population. In 2019, thousands of people remained trapped in the Bahamas after Hurricane Dorian. In 2020, after hurricane Eta, a landslide killed eight people in the Quejá village in Guatemala, and 50 others went missing. This village’s population was trapped for ten days before the landslide occurred, given that heavy rains drowned the main access roads (AP Noticias, 2021). In Jamaica, there are several examples of populations trapped by the effects of hurricanes. For instance, at least 2,000 people were isolated due to flooding after Hurricane Michele (2001), 30 families were isolated after hurricane Charley (2004), and more than 100 fishermen were stranded in Pedro Cays after Hurricane Sandy (2012).

3.2.4 Cross-border displacement by sudden-onset disasters and slow-onset events

International forms of climate change displacement are also common in Central America and the Caribbean. Particularly notorious is the case of Guatemala, the country with the most significant number of cross-border climate displacements in the region. The first massive displacement from Guatemala to the United States due to extreme weather occurred in October 1998. Hurricane Mitch destroyed 60,000 homes and affected 49,795 people. Massive displacement to the United States occurred again in 2005 after Hurricane Stan, which destroyed 38,058 homes and affected 495,900 people (SIINSAN, 2018). More recently, Hurricanes Eta and Iota created food vulnerability among more than 200,000 families in the country, and many Guatemalans migrated to the United States (Morales, 2021). In contrast, the number of cross-border displacements after extreme weather events in the other countries studied has been much lower. For example, in the aftermath of Hurricane Dorian (2019), estimations show that between 600 and 700 Bahamians arrived in the United States.

In the case of Guatemala, more people have left the country because of slow-onset weather events, particularly the severe drought that has affected an important part of the rural population. Although most of the international migration occurs to the United States, there are also minor migratory flows to Belize and El Salvador. At the same time, residents of the so-called “Dry Corridor” (particularly Guatemala, Honduras, and El Salvador) account for an important part of the migrants that recurrently transit through Guatemala to reach North America. A significant group of Salvadorans migrates to Guatemala (90% of the migrant population in the country) in search of better opportunities, many times also motivated by the impacts the drought has generated on their livelihoods (IOM, 2019). In 2020, there were also caravans of migrants from Honduras crossing the Guatemalan border to reach Mexico and the United States and affected by poverty, lack of employment and violence, situations that the COVID-19 pandemic has exacerbated, and hurricanes Eta and Iota- demonstrating how climate change has a compounding effect on already vulnerable populations (IOM, 2021).

In this case, the Dominican Republic is also experiencing an increase in cross-border climate displacement through the arrival of migrants from Haiti given slow-onset events. This type of displacement is challenging to quantify given that a significant part is irregular. Moreover, migrants from Haiti tend to be considered economic or political migrants, being difficult to estimate the number of people arriving for climate-related reasons. However, probably, the environmental crisis in Haiti (which has created problems such as lack of drinking water, deforestation, land degradation, and disasters caused by extreme weather events) is interrelated with the current economic and political crisis, playing an essential role in the growing number of emigrants from this country (OBMICA, 2020).

One of the main challenges for identifying cross-border climate displacement in the region is that, especially under slow-set weather events, it is hard to distinguish climate, economic, and political reasons to migrate, as they usually occur simultaneously. Therefore, many times internationally displaced people are seen and accounted as economic migrants (e.g., many people displaced from the Dry Corridor) or political migrants (e.g., many people displaced from Haiti).

This is also an important challenge for Cuba, which is among the world’s top 8 countries with the highest number of emigrants in Latin America and the Caribbean, heading to countries like Panama, Mexico, and Colombia (OIM, 2018). The main causes of international migration from Cuba relate to political and economic factors and not necessarily to climate-related events. However, due to the consequences of climate change in some of the country’s main economic activities, such as agriculture and tourism, it will become more relevant to identify the role of climate change in Cuba’s emigration patterns.



Chapter 4

Vulnerabilities and vulnerable groups

Different vulnerabilities can cause barriers to education among CDPs. Based on the five case studies in Central America and the Caribbean, in this section, we describe some of the main forms of vulnerability and vulnerable groups whose right to education may be affected by climate displacement. Normally, many of these forms of vulnerability interact, creating compounded and multidimensional vulnerabilities that can produce additional challenges.

Children. Children are particularly vulnerable to climate displacement due to their specific developmental needs and physiology. In the Caribbean, this problem is exacerbated because they are disproportionately represented among the poor (Pegram, J. and Knaute, D., 2019). Climate displacement may subject children to a greater risk of exploitation and abuse and jeopardize their access to essential services such as health and education. In the Bahamas, only two of the government shelters established in New Providence in the aftermath of Hurricane Dorian had designated safe spaces for children's recreation and child protection checks were not performed by shelter volunteers, increasing the risk of abuse (Bleeker, A. et al., 2021). Moreover, children are increasingly vulnerable to dangerous attempts to cross borders irregularly, especially in countries such as Guatemala and Haiti. These processes, which can extend for months, interrupt their education and create multiple situations of violence and trauma that affect their capacity to reintegrate into the educational system.

Poverty. People living in poverty are generally more vulnerable to the impacts of climate change, including displacement, due to a lack of enough resources. In Central America and the Caribbean, large portions of the population live in poverty, therefore, are particularly vulnerable. Especially high are the poverty rates of Guatemala (59,3% in 2014) and the Dominican Republic (21% in 2019) (World Bank, 2021). The poverty rate in the Bahamas is 12.5% (Gostovic, O., 2021), meaning that close to 50,000 people are estimated to live in poverty, usually multidimensional poverty, defined as multiple overlapping deprivations related to health, education, standards of living, etc., to which many people may be subjected on top of income-related poverty.

Communities that are economically dependent on agriculture and fishing. Families living in rural areas and economically dependent on agriculture and fishing are particularly at risk of climate displacement in the region. The impacts of the drought and multiple storms that destroyed agricultural production have profoundly affected the economic conditions of rural communities, increased food insecurity and malnutrition, and impacted their capacity to attend and perform in the educational system. This problem is particularly evident in Guatemala, where agriculture provides more than 30% of total employment (Climate Change Knowledge, 2021). In this context, many adolescents privilege work rather than education, a problem affecting all the countries studied except for Cuba, where universal and mandatory education is more strongly enforced. The emigration of families dependent on agriculture from rural areas in Central America and the Caribbean and the related decline in population in these areas are further reducing their capacity to cope with the climate crisis (ONEI, 2018).

It should be noted that indigenous communities are at an even more heightened risk within the category of populations dependent on agriculture- a population already facing particular vulnerabilities to climate change. Due to their strong connection to land and agriculture, typically pre-existing political and economic marginalization, and often rural, remote locations, any forced displacement resulting from slow or rapid onset events could result in mobility that leaves indigenous populations in a community which does not speak or teach in the indigenous language- posing barriers to employment, livelihood, social integration, and most importantly- education.

In the case of fishing, warmer temperatures and ocean acidification have created significant impacts in the sector. The destruction of coral reefs in the Caribbean has reduced the availability of marine fauna (Caribsave, 2012). In addition, warmer waters increase the risk of certain species migrating north. Sudden and extreme weather events, such as hurricanes and tropical storms, have also impacted families working in fishing through damages to fishing fleets, landing sites, and other fishing infrastructures (Caribsave, 2012).

Communities that are economically dependent on tourism. Tourism represents a critical economic activity in most countries studied (but with a lower degree in Guatemala). This sector is particularly vulnerable to the impacts of climate change through, for example, the destruction of infrastructure after climate-related disasters, sea-level rise, and coastal degradation. Many people who lost their jobs in tourism and are impoverished by the impacts of climate change in the sector may need to migrate to other regions. In some cases, these impacts can disproportionately affect women, representing a larger portion of people working in tourism. This is the case in the Bahamas, where the impacts of Hurricane Dorian on the tourism sector may have disproportionately affected women, who represent almost 60% of employment in accommodation and food service activities in the Caribbean (Bleeker, A. et al., 2021).

Urban poverty. In the five case studies, many communities vulnerable to climate displacement reside in informal and precarious settlements in urban areas, which are mainly at risk by living in poorly built houses with a lack of essential services, and located in disaster-prone sites. Moreover, the impacts of climate change on agriculture are accelerating urbanization rates in the region. For example, the Bahamas has the highest urbanization rate in the English-speaking Caribbean, which involves increasing numbers of people living in displacement-prone conditions in the main cities. In Guatemala, after hurricane Mitch (1998), the 2001's drought, and the tropical storm Stan (2005) and Agatha (2010), many rural populations migrated to large urban areas (Sisivaca et al.: 2015). In some cases, such as in Havana in Cuba, the city receiving rural migrants is also highly vulnerable to climate-related disasters (ONEI, 2018).

Islanders. As the majority of the countries studied in the regional synthesis report are islands, as well as the majority of the Caribbean nations, it is worth noting the particular vulnerabilities of islanders. Certain socio-economic aspects of islanders have already been touched upon above. Notably, many islanders rely on agriculture, fishery and tourism or live in urban poverty. As a result, islanders' economic stability and livelihoods are severely threatened by climate change and, due to climate-driven livelihood losses, risk being forced to migrate which, for this report, is considered displacement. However, as aforementioned, islanders face one vulnerability that mainland countries do not to the same extent: loss of territory due to rising sea levels. Displacement due to rising sea levels has already been seen in multiple Caribbean countries and, for this study, Cuba. By 2050, over 40,000 Cubans are expected to lose their homes as a result of loss of territory and, in the Dominican Republic, the threat of sea level rise to human settlements is very real- with over 100,000 persons living less than 0.5m above sea level.

Women. Climate-displaced women are particularly vulnerable to suffering different forms of violence and discrimination (Tower, 2020) outside and within schools, which can affect their right to education. Globally, challenges for climate-displaced women and girls can be worsened by overlapping issues of poverty, marginalization in decision-making, and control over land and resources. In Jamaica, for example, women represent 70% of the population living below the poverty line (Government of Jamaica, 2020) and are particularly susceptible to climate impacts. Concerns about violence risks and enough protection of women in government-run shelters have been raised in the Bahamas after Hurricane Dorian (ECLAC, 2020). The gendered impacts of climate displacement are not fully understood in the five countries studied due to a lack of gender-disaggregated data.

Other vulnerable groups. Other groups in the region that are particularly vulnerable to climate displacement as well as to suffer different forms of discrimination and violence that can affect their right to education include LGBTQI+ communities, different indigenous and ethnic groups, black and other racial communities, international migrants (especially irregular migrants), and people with disabilities.



Chapter 5

Displacement Scenarios and Policy Recommendations

To analyze how climate displacement is affecting the right to education in Central America and the Caribbean, the five case studies conducted in the region used the 5A framework on the right to education, which focuses on five core dimensions (availability, accessibility, acceptability, adaptability, and accountability) and key response areas (see Section 2.2). This section presents the key findings of the country cases according to the five main types of climate displacement scenarios relevant to the region:

- T1.** Internal displacement by sudden-onset disasters
- T2.** Internal displacement by slow-onset events (internal economic migration)
- T3.** Planned relocation
- T4.** Trapped population
- T5.** Cross-border displacement by sudden-onset disasters
- T6.** Cross-border displacement by slow-onset events (international economic migration)

The results are summarized in the following table, which shows that although many of these challenges are related to all four types of climate displacement, there are specific challenges to specific kinds of displacement that require tailored responses.

The following sections describe the barriers to education for the CDPs organized according to the four types of displacement, which are aggregated based on common barriers to education. Some policy recommendations, as well as examples of promising practices, are also included.

Table 3. Barriers to education according to the 5As and the six types of climate displacement

5As	Main barriers to education	Type of climate displacement					
		T1	T2	T3	T4	T5	T6
Availability. Education must be available. Governments have to ensure that educational institutions, physical resources, personnel, and programmes are available in sufficient quantity and quality and with the necessary facilities to function properly for both people on the move and host communities	• Interruption of education during disasters and destruction of educational infrastructure, or important damages if used as shelters for long periods						
	• Loss in teaching time affecting the quality of education						
	• Limited availability of educational infrastructure in rural and remote areas						
	• Suspension of special educational services after disasters						
	• Teacher shortages, especially in remote areas						
Accessibility. Education should be accessible to all, physically and economically, without legal discrimination, including migrants, refugees, returnees, asylum seekers, and host communities.	• Costs of supplies, books, uniforms, and transportation limiting access to education for displaced families						
	• Lack of legal documentation affecting internally and internationally displaced students						
	• Low digitalization of academic records affecting internally and internationally displaced students						
	• Safety risks associated with inadequate school buildings and disaster management						
	• Problems in recognition of degrees, certificates, and knowledge						

5As	Main barriers to education	Type of climate displacement					
		T1	T2	T3	T4	T5	T6
<p>Acceptability. The form and content of education should be appropriate and coherent with the needs of people on the move and host communities, with relevant curriculum and other educational materials and approaches that value difference, ethnic plurality, and intercultural dialogue.</p>	<ul style="list-style-type: none"> • Language barriers affecting the right to education of indigenous communities and internationally displaced populations 						
	<ul style="list-style-type: none"> • Destruction of teaching materials, supplies, and equipment reducing capacity to teach required learning contents 						
	<ul style="list-style-type: none"> • Lack of teachers' capacity on the phycological and educational needs of CDPs 						
	<ul style="list-style-type: none"> • Lack of official and continuous measures to attend to the health and psychosocial needs of climate-displaced students 						
	<ul style="list-style-type: none"> • Increased risks of discrimination and violence against CDPs that are part of indigenous communities, from Haiti and Central America, and women 						
<p>Adaptability. There is an enabling environment and institutional capacities in the education sector to respond to the diverse needs of people on the move and host communities</p>	<ul style="list-style-type: none"> • Lack of prioritization for the development of tailored policies for CDPs 						
	<ul style="list-style-type: none"> • Lack of enough public funding in the educational sector, especially after disasters 						
	<ul style="list-style-type: none"> • Lack of institutional coordination and capacity to attend to the educational needs of CDPs 						
	<ul style="list-style-type: none"> • Lack of coordination capacities to reassign students and teachers after extreme weather events 						
<p>Accountability. Education must be accountable for transparency, social management, and affected populations' participation, as well as responsibility for the actions and public policies undertaken in the response</p>	<ul style="list-style-type: none"> • Lack of enough mechanisms to allow the participation of CDPs in the design and implementation of educational policies 						
	<ul style="list-style-type: none"> • Accountability issues associated with a lack of enough transparent information about climate displacement and climate impacts in the educational sector 						

5.1 For all displacement scenarios

5.1.1 Main barriers to education

Limited availability of educational infrastructure in rural and/or remote areas. Problems of availability and access to the regular educational system are especially important for displaced people in rural regions in Central America and the Caribbean. In many of these regions, especially those located in remote areas, limited educational infrastructure availability was already a concern before CDPs arrived. This is particularly evident in the case of Guatemala, where rural areas are the most affected by the impacts of climate change and, at the same time, the ones with lower levels of availability of educational services (Naciones Unidas Guatemala, 2016). In many remote areas, it is unclear if CDPs would be able to participate in the regular educational system without travelling

to other villages, which in many cases can be impossible if roads are destroyed, or the weather conditions do not allow it.

Lack of financial resources and costs of supplies, books, uniforms, and transportation limit CDP education access. One of the most prominent barriers to education in the face of climate change is a lack of financial resources for displaced families, who often lose access to their land, assets, and livelihoods when they are displaced. Facing economic hardship, and even if school tuition is free, auxiliary costs to education, such as school supplies, books, uniforms, and transportation, are an important barrier that discourages displaced families, which are normally extremely vulnerable economically, from sending their children to school. This is particularly important in cases where the public system does not cover these costs. Moreover, additional charges can create other barriers when private education is the only option for CDPs. In these scenarios, some families might prefer that their children drop out of school in pursuit of economic activity due to the lack of financial resources upon displacement and loss of assets.

In the Bahamas, for example, in the aftermath of Hurricane Dorian, some families in the town of Marsh Harbour in Abaco could not send their children to school as the only ones still operating were privately run. Some families also did not send their children to schools in Nassau or Freetown, either because of the travel costs or to stay close to a parent (typically the father) looking for a job in the construction sector. In Guatemala, while public education is free, private education (whose coverage increases at higher levels of the education system) usually cannot be afforded by CDPs. Other challenges may relate to additional costs. For instance, many residents of Campur, a town in the north-central department of Alta Verapaz, who were relocated after the hurricanes of 2020 to a relatively nearby village, needed to commute to their original places of residence to attend education, which involved high transportation costs that many families cannot afford.

Since education in Cuba is free, economic costs are not a major problem for CDPs. However, government subsidies covering expenses such as transportation, school materials, supplies, uniforms, and meals, have decreased in recent years, which increases the probability that additional costs may represent a growing barrier for CDPs (García, 2015; García, 2019). In the Dominican Republic, the Ministry of Education provides financial support to families in need; however, this aid is not universal and does not cover all additional costs. Moreover, the extreme vulnerability of many CDPs was identified as a barrier to completing all the formal application processes for accessing this aid.

Lack of teachers' capacity on the psychological and educational needs of CDPs. In Guatemala, the lack of capacity among teachers to deal with CDPs' psychological and educational needs was identified as an important barrier affecting other countries in the region. In the Dominican Republic, the main barrier identified in teaching and learning practices is the lack of learning methods and techniques that focus on the specific needs of the migrant population in general, especially CDPs. Furthermore, there is a lack of teachers' preparedness to teach about climate change and climate action. CDPs must learn about the climate crisis that directly impacts them and how they could actively contribute to elaborate sustainable solutions. Along similar lines, teachers must also be trained to adopt holistic pedagogical methods beyond cognitive knowledge, including transversal competencies, such as critical thinking, creativity, empathy, collaborative problem-solving and systems thinking, to empower learners, including CDPs, to empower learners, to inform sustainability responses.

Lack of official and continuous measures to address climate-displaced students' health and psychosocial needs. Extreme weather events and climate displacement have many non-monetary effects, including the impacts on mental health, which can reduce the educational performance of affected students. A common problem faced by the countries studied is the lack of official and continuous measures to address climate-displaced students' health and psychosocial needs. In Abaco in the Bahamas, for example, the absence of school counsellors and psychologists to attend to students affected by disasters limited the resilience capacity of schools to mitigate the impact of hurricane Dorian on students. In Guatemala, public and private initiatives that provide psychological support to CDPs take place as a temporary response to the crisis rather than as a permanent component of the country's educational policy.

In many cases, however, schools can provide a safe space for children to reconnect with peers and benefit from supportive teachers, school counsellors, and principals, especially in contexts where there is a lack of mental health and psychological support services for displaced families in shelters.

Increased risks of discrimination and violence against CDPs from Haiti, part of indigenous communities from Central America, women, and economic migrants. Practices of discrimination in the region can especially affect CDPs from Haiti. Examples of discrimination in the educational system against the Haitian population were found in the Bahamas and the Dominican Republic. In the case of Guatemala, indigenous students affected by climate displacement are more highly exposed to discrimination and exclusion in the educational system. Stigmatization against migrants, who are discriminated against for being poor and stereotyped and associated with crime, also creates risks for CDPs in Guatemala and the Dominican Republic. In Guatemala, this is especially risky for people displaced from neighbouring countries and among irregular Guatemalan migrants that returned to the country.

Other forms of discrimination affecting CDPs were predominantly found in rural areas in Central America and the Caribbean. An important problem for boys and adolescents in Guatemala is that they are more likely to be removed from school than girls to work in agriculture. To some extent, this is also a problem in Jamaica (CSGM, 2020),

In the Dominican Republic, women are the majority at almost all educational levels (including university education but not professional technical education) (CEG-INTEC, 2018). However, increasing levels of physical, emotional, and sexual violence against women have been reported in the country, which is related to the "great sociocultural imbalance of power that exists between men and women, and the prevailing machismo as a social logic" (CEG-INTEC, 2018: p.74). Thus, there are high risks that cultural norms may affect the ability to educate climate-displaced girls and women. A similar problem is seen in Guatemala, one of the countries in Central America and the Caribbean with higher levels of physical violence against women (UN Women, SF) and where, in contrast to the Dominican Republic, women tend to be more excluded than men from the educational system (Naciones Unidas Guatemala, 2014).

Beyond a higher exposure to the risk of physical violence after extreme weather events, especially in shelters, women and girls in the region often find themselves without adequate medical equipment in emergencies, posing additional difficulty. This makes the need to strengthen educational content with a gender perspective and a focus on the vulnerabilities of the displaced population especially

important in the region. When schools re-open, the lack of appropriate water and sanitation facilities, including menstrual hygiene management and disposal, may also reduce school attendance (UNICEF-CDEMA, 2019).

Another group at high risk of discrimination and violence in the region are LGBTQI+ populations, especially trans and gender-nonconforming people. In the Bahamas, LGBTQI+ communities were discriminated against in their quest for housing in the aftermath of Hurricane Dorian (Roth et al., 2021). LGBTQI+ organizations have reportedly pursued solutions to minimise the risk of violence in shelters. Assault against sexual and gender minorities in the Bahamas has pushed some outed members to seek asylum in Canada (IDMC, 2020).

Lack of enough public funding in the educational sector, especially after disasters, and lack of prioritization for developing tailored policies for CDPs. Lack of enough public funding in the educational sector is one of the key challenges to protecting the CDPs' right to education in Central America and the Caribbean. Extreme weather events, such as hurricanes and tropical storms, can be very costly, especially for the reconstruction of infrastructure, stressing even more already constrained educational budgets in the region.

In the Bahamas and Jamaica, for example, education has often been one of the last services to restart during emergencies, and the lack of critical resources hampers the integration of displaced students into formal education systems. In Guatemala, the budget for the education sector tends to be limited to operational expenses, and there is little funding available to incorporate additional innovations and improvements, such as the ones needed to support CDPs. These measures, considered by the Ministry of Education as additional efforts, are carried out mainly by external actors, especially from international cooperation.

In the Dominican Republic, where a significant increase in the educational budget was defined by law in 2013, it is not a lack of funding but rather political prioritization, especially to support specific groups within the population, such as CDPs, which seems to be a more relevant challenge.

Lack of institutional coordination and capacities to attend the educational needs of CDPs. Problems associated with a lack of institutional coordination and capacities are affecting the ability of the countries studied to attend to the educational needs of CDPs. The lack of government staff with specific knowledge of these educational needs is a particularly important issue, highlighted in Guatemala's case but can be seen in other countries of the region as well. In the Bahamas, problems associated with a lack of institutional coordination have affected the opportune reopening of all schools after extreme weather events.

In the Dominican Republic, several multi-institutional spaces for coordination have been created since the 2010s, especially to incorporate the Ministry of Education in national initiatives around climate change and disaster management. However, specific forms of coordination to address the educational needs of CDPs have not been created. Neither were these identified in the other case studies.

Lack of enough mechanisms to allow CDPs to participate in the design and implementation of educational policies. It was not possible to find across the case studies many examples of formal tools that enable the participation of CDPs in the design and implementation of measures to support

their education. High vulnerability and, in many cases, irregular migration limit CDPs' participation possibilities, especially when this is seen as a risk of deportation.

In Cuba, existing formal participative structures in education and risk prevention policies can facilitate the participation of CDPs, although specific instances of this happening were not found. To a lower degree, in the Dominican Republic, several civil society organizations and public institutions, such as the Ombudsman office, offer an opportunity to function as mediators in the participation of CDPs in the design and public assessment of educational policies.

Accountability issues associated with a lack of transparent information about displacement and climate impacts in the educational sector. In the Bahamas, a lack of transparent information about the process of school reopening after hurricane Dorian and communication problems with the government were identified as important accountability challenges. Monitoring the right to education of CDPs is not easy, especially given the inherent difficulties associated with recognizing climate versus economic migrants. Moreover, in many cases, displaced people correspond to irregular migrants who are not registered in the migration system of each country. Even in extreme weather events, such as hurricanes, national systems can be limited in their capacities to account for the real number of CDPs. This was the case, for example, in the Bahamas, where a report by the Bahamas Climate Change Adaptation and Resilience Research (CCARR) Centre (Thomas & Benjamin, 2019) stated that it is highly likely that the widely cited figure of 9,480 displaced people as a result of Hurricane Dorian – not to mention the figure of 4,861 persons registered by the Department of Social Services during the evacuation process (IDB-ECLAC, 2020) – underestimates the total number of displaced persons. The report also identifies multiple causes for underestimation, such as ad hoc data collection by a range of public and private agencies, a lack of coordination between agencies, limited baseline data, language barriers, government-led data collection limited to New Providence, and underestimation of the number of displaced persons who did not seek public or private assistance. Although there are mechanisms to evaluate the education policy of each country, these normally lack the inclusion of specific measures to assess the situation of CDPs.

Language barriers affect indigenous communities' right to education and internationally displaced populations. Language barriers, including internationally and internally displaced groups, are a common problem for CDPs in the region. In New Providence, in the Bahamas, for example, languages and communication barriers created difficulties to provide education to Haitian migrants from Abaco following hurricane Dorian. Likewise, children of Haitian migrants born in the Bahamas and deported to Haiti may have struggled to adapt to a new culture and environment, as many of them do not speak Kreyol fluently (Baussan et al., 2021). In the Dominican Republic, although some schools in regions close to Haiti's border have started to provide classes in Kreyol, this is a discretionary practice, and no official policy is available to address this language challenge.

Language barriers are particularly challenging in Guatemala, where there are 25 spoken languages, 22 of which correspond to forms of Maya. However, the official language of Guatemala is Spanish, which is used in most educational instruction. This is an important barrier for CDPs, who come from rural areas, where most of the country's indigenous population is located (Minority Rights Group International, 2013). Given that there is a shortage of teachers prepared to teach indigenous languages in rural and indigenous areas, it is difficult for the educational system to respond to the bilingual educational needs of the CDPs.

5.1.2 Policy recommendations

Institutional recommendations

- Improve the access and readiness of educational infrastructure and services, targeting rural areas that can be important receptors of CDPs through increased funding and increased physical school capacity
- Facilitate the enrolment of CDP students through targeted measures (including financial support, increasing capacity to absorb additional children, flexible curriculum, relaxed administrative procedures, and flexible and non-formal learning opportunities)
- Support teachers and educational staff in addressing the educational and psychosocial needs of CDPs through targeted teacher training on hybrid learning pedagogies, teaching at the right levels, assessment of learning losses, and more

Inclusion recommendations

- Prioritize appropriate responses to already vulnerable groups of learners such as women and girls, youth (secondary), and ethnic, religious, and linguistic groups and minorities
- Create mechanisms to ensure the active participation of (potential) CDPs pre-, during and post-crisis in the design and assessment of policies to support their education, making special efforts to support the participation of vulnerable groups and irregular migrants to ensure accountability to the affected populations.
- Mainstream Education for Sustainable Development, including climate change education, in order to raise knowledge, awareness and action on the scientific and structural causes of these climate-induced disasters to turn CDPs into active agents of change rather than passive victims of disasters
- Improve preparedness to attend to the linguistic needs of climate displaced population by, for example, preparing educational material in the languages of expected CDPs or by training/ supporting teachers in attending to their needs such as Haitian Kreyol or in English, French or Spanish, depending on the country

Policy and coordination recommendations

- Cooperate with national, regional and international organizations providing support to CDPs to make these efforts permanent aspects of the educational policy, and build national and local capacities
- Explicitly integrate and address the relation between climate displacement and the right to education in national and regional educational, climate change, disaster management, and migration policies

- Strengthen the capacities of all relevant Ministries, including Ministries of Education in their lead/coordination role to enhance inter-sectoral collaboration in support of CDPs, by, for example, ensuring a representative from the Ministry of Education is present within the Disaster Risk Reduction departments or ministries in a given country and vice-versa.
- Strengthen horizontal (intersectoral) and vertical (national to local) governance mechanisms to ensure timely responses at all levels (local, national, regional)
- Develop a comprehensive, joint financing strategy to create a fund for climate displaced persons and their right to education- financed by both the Ministry of Education and the departments concerning disaster risk reduction and management while also leveraging private partnerships

5.1.3 Examples of promising practices

Child-Friendly Spaces in the Bahamas. From the perspective of mental health, the creation of Child-Friendly Spaces in the Bahamas has demonstrated its potential to be an adaptive and cost-effective solution to improve displaced students' ability to adapt and integrate in the context of adversity and trauma, avoiding protracted disruptions in education services. Child-Friendly Spaces operated in a participatory manner where integrated play, recreation, education, health, and psychosocial support can be delivered, helping students overcome their emotional stress and protecting them against physical harm, abuse, violence, and exploitation. Programmes by the Goodness Tour, who taught art, songwriting and film-making classes in shelters in Nassau following Hurricane Dorian, were an excellent way to engage children (The Goodness Tour, 2020).

Cuba's prioritization to protect the psychological needs of CDPs. In Cuba, the government has widely recognized the need to protect CDPs' psychological needs, with different institutions studying and addressing these needs. Existing Cuban disaster response policies have addressed psychosocial support to these groups, with programmes dedicated to providing such services and experts developing research (Ministerio de Educación et al., 2020).

Education on climate displacement and its framing as an adaptation mechanism in Cuba. An important advantage of the Cuban model for preventing and reducing the risk of xenophobia and violence against CDPs is the population's broad environmental education and awareness of the risks of environmental displacement, which leads to greater acceptance and empathy. The case of Cuba also offers a valuable approach to understanding climate displacement as a negative effect of climate change and as a mechanism of adaptation that can improve the lives of at-risk populations. This view has been included in Cuba's climate policy Tarea Vida, particularly in its programme for the early relocation of coastal communities. Although this form of relocation is not explicitly described as climate displacement in Tarea Vida, this policy is relevant given the integration of climate mitigation and disaster management in the educational curricula in ways that have allowed a high level of understanding and engagement of local communities.

School feeding programmes as a way of supporting families during crises in Guatemala. The pandemic has increased the overall precariousness of many families in Guatemala, increasing their vulnerability to climate displacement. However, the pandemic has also shown the fundamental

role that public schools can play in supporting families during crises, for example, through school feeding programmes. Some of these programmes have benefited not only students but the whole family through the provision of food, which acts as an incentive to send children to school. However, family food delivery practices are often applied on a discretionary basis by each institution and do not respond to an official public policy to promote school attendance after disasters occur.

5.2 Displacement caused by sudden-onset events

5.2.1 Main barriers to education

Interruption of education during disasters and destruction of educational infrastructure, or important damages if used as shelters for long periods. One of the main impacts of climate change on the right to education of CDPs in Central America and the Caribbean is the destruction of educational infrastructure caused by extreme weather events such as storms and hurricanes. Moreover, schools are commonly used as shelters, interrupting the provision of education. Using schools as shelters creates additional infrastructural damages and costs, which can further delay the restart of classes. These problems are particularly important for the population trapped in or displaced to places where classes are suspended due to infrastructural damage or the use of schools as shelters.

In the Dominican Republic, for example, after Hurricane Irma in 2017, schools that were not destroyed or flooded were used as emergency shelters for weeks, prolonging the period of educational interruption. Another nine schools that were not used as shelters remained flooded, preventing children from restarting their studies (Briggs, 2017). Hurricane Maria damaged more than a third of the country's primary and secondary schools the following year. Once they reopened, many schools still lacked water and electricity supplies (ReliefWeb, 2018). Similar examples can be found in the other case studies. In the Bahamas, hurricane Dorian interrupted the school year for weeks to months in Abaco and Grand Bahama, not only because many scholars were destroyed or damaged but also because many were being used as shelters. The provision of associated services, particularly school feeding, was also interrupted after the hurricane.

Although many schools in the region have always dealt with hurricane seasons, their higher unpredictability in the context of climate change has challenged the region's capacity to prepare. In Cuba, for example, the increase in hurricanes outside of what was traditionally the official hurricane season (from June to November) has made it more difficult for communities to prepare to protect educational infrastructure, especially during vacation periods.

Availability problems have been more limited in Cuba, where the government policy has prioritized the rapid restart of educational activities and the use of alternative learning spaces after climate-related disasters occur. Moreover, providing universal access to education in remote areas has been a priority of the educational policy. However, in all the countries studied, abrupt changes in the number of students in specific regions, especially remote ones, bring new challenges to ensure their access to education rapidly.

Loss of teaching time affecting the quality of education. Extreme weather events have impacted the quality of education in the region, especially the education provided to CDPs. A

decrease in quality has been caused by, among other reasons, the loss in teaching time during disasters and the lack of adequate and enough infrastructure, materials, and teachers to support abrupt increases in the number of students in regions receiving climate-displaced groups.

For example, the temporary interruption of primary and secondary education in the Bahamas after Hurricane Dorian created a significant loss in teaching time. In some cases, the government focused on providing displaced students with access to education through partnerships with non-governmental and private institutions, with no guarantee in terms of quality. In Abaco, schools receiving high numbers of displaced students often did not have the necessary physical space or were not provided with the physical and professional resources needed to teach specific groups of students.

Suspension of special educational services after disasters. Many countries have suspended special education services after hurricanes and other extreme events. In the Bahamas, for example, Every Child Counts, the only special needs school in Abaco, got severely damaged after hurricane Dorian and its restoration was delayed due to the COVID-19 pandemic. However, the pandemic also opened opportunities in terms of the long-term availability of alternative forms of education that can be of special importance to attend to the needs of CDPs. In the five countries, the pandemic accelerated the development of remote and hybrid education modalities and the digital divide's closure through public efforts. These can be useful strategies to consider when planning policies to support CDPs that can access education given the lack of availability in their new places of residence but also trapped population and people in transit.

Teacher shortages, especially in remote areas. A limitation in the number of teachers available to cover the needs of the displaced population is a common problem in most countries studied. In the Bahamas, specifically in Abaco and Grand Bahama, even when schools remained operational or reopened after hurricane Dorian, teacher shortages limited educational services. In Guatemala, although new teaching rooms were built in Nuevo Quejá, a village constructed after Eta and Iota, some have not been used given the lack of teachers to provide education for its 258 students. In Cuba, in contrast to the rest of the region, teacher deficits are more common in urban and tourism regions than in remote areas. This is important to consider, especially if rapid processes of climate displacement increase the demand for education in these regions.

Destruction of teaching materials, supplies, and equipment reducing capacity to teach required learning contents. Extreme weather events have destroyed the region's teaching materials, supplies, and equipment, impacting teaching practices and the capacity to teach required learning content, at least temporarily.

Lack of coordination capacities to reassign students and teachers after extreme weather events. A central challenge across the region is the need for enough coordination capacities to reassign students and teachers after extreme weather events. In general, it is possible to observe a lack of preparedness and coordination to receive large and unexpected groups of students at any moment of the school year, especially in rural and remote regions. The lack of digital documents to facilitate this process was identified as an important challenge in Guatemala and the Bahamas, although efforts are being made in both countries to address this problem.

5.2.2 Policy recommendations

- Prioritize the use of alternatives to educational infrastructure as shelter and the establishment of temporary facilities to ensure the continuity of education services during disasters
- Plan and implement timely remote learning tools and practices to mitigate school closures and destruction of teaching material, considering the learning experience gained during the COVID-19 pandemic.
- Create contingency plans for education services to reduce their suspension during disasters, including provisions for special education
- Improve national systems to respond to sudden increases in demand for additional teaching materials, supplies, and equipment, as well as teachers in localities receiving CDPs. This can be done by, for example, planning the availability of additional educational materials and creating protocols for their rapid delivery. Mechanisms can also be implemented to economically support teachers in regions with CDPs and support volunteer or contract teachers as temporary measures to attend CDPs.
- Improve the capacity of national education systems to respond and prepare schools for accommodating the influx of CDPs in the aftermath of disasters, including through non-formal education measures and by, for example, developing school-based contingency plans to respond to such influxes and creating financial support measures, such as grants for receptor schools.

5.2.3 Examples of promising practices

The Bahamian Virtual School. During Hurricane Dorian, this programme allowed secondary school students with access to computers and the internet to attend virtual classes with students from other parts of the country. This programme not only shows the potentialities of virtual learning to attend to the needs of CDPs but also that preparing distance learning materials in advance of displacement and migration can build the resilience of education systems ahead of disasters. Access to new learning content and teaching methods through full-time virtual education in Bahama concerned approximately 171 high school students (IDB-ECLAC, 2020). However, although the efforts of the government in terms of investing in mobile devices and infrastructural upgrades, upon returning to affected schools, some teachers reported that shortage of computers, lack of reliable electricity and internet, and printing materials challenge the continuous use of virtual education systems. This shows the relevance of ensuring the digital conditions needed to participate in virtual learning to make this programme relevant to CDPs' needs.

Cuba's TV education. Cuba has made significant efforts to ensure educational continuity during the COVID-19 pandemic, especially through distance education, particularly using Cuban Television (UNICEF, 2021). Favouring television education over internet education has to do with the recognition that there is a low level of coverage of internet use in the country. While no remote education strategies have been developed that directly address the needs of CDPs, Cuba's TV education system offers valuable learnings for countries where ensuring access to the internet can be a barrier.

Public-private partnerships in the Bahamas. Private businesses are playing an increasing role as an alternative source of support for the government and the educational sector, which can prove flexible and innovative after the occurrence of sudden-onset weather events. For example, approximately 1,000 displaced students benefited from the partnership between Bahamas Telecommunications Company (BTC) Communications, Cable and Wireless Foundation, One-on-One, the Ministry of Education Bahamas, the Bahamas Union of Teachers, and Sandals Foundation, which focused on providing free access to the One-on-One learning platform available to teachers and students for three months from November 2019, on supporting recovery in the education sector after Hurricane Dorian (Jamaica Observer, 2019).

Cuba's policy efforts for a rapid restart of classes. Cuba has stood out in the region for its success in the rapid resumption of school activity after disasters. For example, following Hurricane Matthew, the vast majority of schools still intact were being used as evacuation centres and shelters. Other infrastructures, such as family shelters and institutional buildings, were used as alternative learning spaces to ensure learning continuity. One week after the hurricane, classes resumed in 6 of the ten affected districts. Schools coordinated to find open spaces for students who were still out of school, and curricula and schedules were adjusted to ensure as little learning loss as possible (López, 2017). This success also relates to community practices. After Hurricane Gustav, for example, families offered rooms as temporary classrooms (UNICEF, 2008). Following Hurricane Irma, classes resumed within two weeks thanks in part to the division of groups into sessions or the relocation of students, including the use of neighbour's houses offered in solidarity by members of the communities (El Diario Vasco, 2017). The rapid return to classes was also made possible by the community participation in the clean-up, repair, and reconstruction of schools (López, 2007).

5.3 Cross-border displacement

5.3.1 Main barriers to education

Lack of legal documentation affecting internationally displaced students. Restrictive immigration policies and legislative obstacles can challenge the right to education for displaced people. Moreover, strict documentation requirements such as official school records can prove especially problematic, as they often prevent children on the move from enrolling in school. For CDPs, accessing these types of documentation can be especially hard, as they may be destroyed or lost.

The case studies show some relevant examples of how legal documentation can become a barrier to international education of displaced people. In the Bahamas, for example, children of Haitian migrants can face some barriers to access to education in cases of not possessing passports or other documents, despite the important progress that has been done in recent years to facilitate their enrolment. This is a particularly important problem in the case of the Dominican Republic, where there are many legal barriers related to the legal documentation required to access the educational system that affects people displaced from Haiti. In the Dominican Republic, legal documentation has been an important barrier to the right to education of not only first-generation Haitian but also their descendants, based on the application of retrospective discriminatory policies. Although important measures have been put in place to avoid these practices, the discretionary application of policies

that request specific legal documentation can be a challenge to protect the right to education of the Haitian population and their descendants, which are among the groups more vulnerable to climate displacement in the country.

Problems in the recognition of degrees, certificates, and knowledge. Although the recognition of degrees, certificates, and knowledge was not identified as a particularly relevant challenge to protect the right to education of CDPs in the region, this problem was not inexistent. Some examples of barriers to access education given the lack of recognition of degrees and certificates were identified in the case of the Bahamas, particularly of Haitian children deported back to Haiti after Hurricane Dorian, and who faced the risk of being denied access to education due to a lack of recognition of the education received in the Bahamas. In Guatemala, the long, complicated, and costly processes to get recognition of international degrees from professional colleges and foreign universities were identified as a problem affecting the displaced population.

5.3.2 Policy recommendations

- Simplify administrative and legal requirements for cross-border CDPs in accessing education.
- Establish the concept of climate refugee (or an equivalent one) in the main regulatory bodies related to international migration of each country, as well as legally binding frameworks to ensure the access to education of CDPs that cross borders.
- Review procedures to facilitate the recognition of degrees and certificates of potential cross-border CDPs.

5.3.3 Examples of promising practices

The inclusion of natural disasters in Cuba's migration policy. Cuba is an exception among the countries of the Americas as it is the only State that considers natural disasters as a reason for recognising refugee status in its national legislation. This is defined by Art. 80, D-5 (b) of the 1978 Migration Law Regulations, according to which Cuba understands "refugees" as part of the category "temporary resident". Therefore, a temporary conditionality is explicitly established. This migration sub-classification was used to help Haitian refugees who sought asylum in Cuba between 1991 and 1994 (UNHCR, n.d.). However, it is less clear how this categorization can be used for CDPs affected by slow-onset climate disasters and to protect CDPs for a long time.

"Quédate" (Stay) programme in Guatemala. To improve access to education for the population vulnerable to irregular migration to the United States, in 2016, the Social Welfare Secretariat (Secretaría de Bienestar Social or SBS), with the support of the Ministry of Education, implemented the "Quédate" Training Centre. The goal is to prevent irregular migration and support returnee adolescents through technical training. This initiative operates training centres that provide free formal and technical education to improve the employability of beneficiaries in their home regions (SBS, 2017).

Programme to promote access to health for irregular migrants in Guatemala. Given that one of the barriers for irregular migrants in Guatemala to access the health system is their fear of being denounced and deported, the Guatemalan Ministry of Public Health and Social Assistance has

carried out important promotional work in regions where the migrant population transits to inform them of their right to health. Similar measures can be implemented in the educational sector to share information among cross-border CDPs about their right to education and existing programmes to facilitate their access.

5.4 Internal displacement

5.4.1 Main barriers to education

Low digitalization of academic records affecting internally displaced students. For the internally displaced population in Guatemala, an important barrier to education is due to the low level of digitization of educational records necessary when students transfer between schools. Accessing these files can be difficult and may require travelling to the original places of residence (if physical copies of official documents were not destroyed) or to the central offices of the Ministry of Education in the main cities. Similarly, in the case of the Bahamas, some parents displaced from Abaco to New Providence reported that they could not get their children enrolled in school because they did not have the right documentation, as their documents were either lost or had been left behind.

Safety risks associated with inadequate school buildings and disaster management.

Concerns around safety are especially important for trapped populations that attend schools at risk of collapse or suffering damages that can disrupt the provision of water or electricity. In the countries studied, these are also important risks for communities displaced in regions where educational infrastructure has not been properly built, repaired, or maintained. The lack of updated and periodic applications of existing tools to assess disaster risks in schools is an important problem in Guatemala, in addition to the low public resources assigned to disaster reduction practices in schools. Moreover, in Nuevo Quejá, a village built to host some of the families displaced by hurricanes Eta and Iota, a provisional school was built in an unsuitable area, increasing safety risks. In the case of the Bahamas, many schools are located in low-lying coastal areas, such as on Eleuthera Island and are, therefore, very vulnerable to sea-level rise.

5.4.2 Policy recommendations

- Improve educational infrastructure resilience, especially in at-risk areas of sudden and slow-onset disasters as well as in regions potentially receptors of CDPs by, for example, updating and implementing infrastructure assessments and monitoring mechanisms as well as updating building and zoning codes through retro-fitting and aligning policy with the Comprehensive School Safety Framework.
- Improve the digitalization of academic records with the explicit aim of facilitating CDP reintegration after disasters.

5.4.3 Examples of promising practices

Intersectoral roundtables for disaster risk management in the Dominican Republic. Disaster risk prevention policy in the Dominican Republic has increasingly incorporated education as a key focus, particularly in expanding the population's education on climate change and its impacts, as well as on disaster prevention and response measures as mitigation strategies. The Ministry of Education is part of the National Council for Disaster Prevention, Mitigation and Response and the National Technical Committee for Risk Prevention and Mitigation. These are promising inter-sectorial instances to promote the right to education of CDPs. However, up to now, the participation of the Ministry of Education is limited to the incorporation of educational content and there is no mention of education for CDPs.

The Bahamas' Educational Management Information System (EMIS). This system, which is expected to be a ground-breaking planning instrument for the Ministry of Education, has been progressively rolled out since 2020. It will support the issuance of an individual identification number for each student, facilitating their school enrolment in times of displacement and/or when they lack access to legal documentation. The EMIS will also provide data on school location, infrastructure, and assets, easing disaster preparedness and response and the long-term planning of infrastructure resilience in the education sector. w



Chapter 6

Regional challenges and efforts

Climate change and displacement involve multiple challenges for the educational systems of countries in Central America and the Caribbean and their response capacity to attend to the needs of students on the move. As for any other kind of human mobility, national initiatives are not enough to face the challenges of climate displacement. Regional collaboration, the definition of a common political agenda, and coordination for formulating and implementing policies are key and urgently needed to reduce the impacts of climate displacement on the right to education. Regional cooperation matters not only due to the expected increase in cross-border climate displacement within the region but also as a way of taking advantage of existing platforms to exchange experiences, policy ideas, and data.

Central America and the Caribbean governments are already participating in several regional initiatives to address challenges related to climate displacement and the right to education in the context of climate change. As the following sections show, existing regional initiatives and agreements have not addressed the relationship between climate displacement and education. There are no explicit regional obligations related to protecting people on the move under any climate and environmental agreement, including those developed within the region. Few of these agreements and coalitions refer to the education sector, and the link between climate displacement and the right to education is not explicitly expressed.

Some of the main regional agreements and platforms for collaboration are described below according to their main thematic focus.

6.1 International displacement

Regional Declarations on Refugees. The Cartagena Declaration on Refugees adopted in 1984 in Latin America, Mexico and Panama seek to protect people whose “lives, safety or freedom have been threatened by generalized violence, foreign aggression, internal conflicts, massive violation of human rights or other circumstances which have seriously disturbed public order.” This definition has been used in cases of natural disasters. For instance, Ecuador used this Declaration to admit Haitians fleeing the 2010 earthquake. Nevertheless, these cases remain the exception. The Cartagena Declaration was followed by the San José Declaration on Refugees and Displaced Persons of 1994, the Mexico Declaration and Plan of Action to Strengthen the International Protection of Refugees in Latin America of 2004, and the Brasilia Declaration on the Protection of Refugees and Stateless Persons in the Americas of 2010.

The San Jose Action Statement was signed in 2016 by the governments of Belize, Canada, Costa Rica, El Salvador, the United States of America, Guatemala, Honduras, Mexico, and Panama, with the participation of Argentina, Brazil, Chile, and Uruguay, committed to joining efforts to address the structural causes of forced displacement and international protection of asylum seekers and refugees, based on a perspective of solidarity and shared responsibility at the regional level. The Declaration of San Pedro Sula of 2017, between Belize, Costa Rica, Guatemala, Honduras, Mexico, and Panama, agreed on a joint effort to implement the Comprehensive Regional Framework for the Protection of Solutions (MIRPS) to contribute concretely to the Pact Refugee World Cup. In 2019, the Government of El Salvador joined the process (UNHCR, 2021).

Countries in the region also agreed on guidance for responses to cross-border displacement in climate change and disasters through the 2014 Brazil Declaration and Plan of Action, adopted by 28 countries and three territories in Latin America and the Caribbean. This plan establishes a broad set of operational priorities for protecting refugees, asylum seekers, internally displaced persons, and stateless persons in the Americas. In this declaration, countries recognize the challenges posed by climate change and climate displacement in the region and recognize the need to conduct studies and give more attention to this matter, including by UNHCR.

The Brazil Declaration and Plan of Action focuses on “regional cooperation and solidarity” concerning human displacement due to multiple causes, through free movement mechanisms and humanitarian visas in particular. It also requested that UNHCR undertake “a study on cross-border disaster displacement, with the aim of supporting the adoption of appropriate national and regional measures, tools and guidelines, including response strategies for countries in the region, contingency plans, integrated responses for disaster risk management and humanitarian visa programmes, within the framework of its mandate”. The study was released in 2018 (James, 2018). It states that climate displacement “is not some remote futuristic scenario but rather a process that is already established for some of their citizens, even as the impact of climate change will likely exacerbate such challenges, in the coming years, will reach more sectors of the population” (p.69). The report also expresses that the region’s response to displacement due to disasters is among the most developed and proposes that States develop “national and regional measures, tools and guidelines” (p.70). Among the main recommendations at the regional and bilateral level, highlight the following: “to respond jointly, through regional bodies such as the Regional Conference on Migration, the South American Conference on Migration and the Caribbean Migration Consultations, and their respective technical work groups; to promote international cooperation in order to develop collective understanding of movements, regional or bilateral visa waiver arrangements and adopt a regional strategy on the temporary stay of non-nationals; to consider how this issue can be integrated into the future development of free movement and/or residency arrangements; to integrate specific disaster risk management and climate change challenges at the national level, including cross-border movement and risk management agreements or protocols” (p.70).

Bilateral and multilateral FMAs. Several regional bilateral and multilateral agreements are relevant from the perspective of international climate displacement. For example, FMAs were signed by the CARICOM and the OECS as provisions that liberalize migration restrictions between participating member states. The benefits provided by these FMAs supported migrants in gaining stability. After Hurricane Maria, Trinidad and Tobago used the CARICOM FMA’s 6-month visa-free stay provision to shelter displaced Dominicans. The Antigua & Barbuda, Saint Vincent & the Grenadines, Grenada, and Saint Lucia governments also welcomed Dominicans using the OECS FMA. Immigration officials admitted Dominicans sometimes without the national identification documents, including passports, that is typically required. Government officials used other forms of identification, including appearance, accent, and family networks, while prioritizing 100% admission of arriving Dominican nationals and speed of registration and entry. Such FMAs will be formalized going forward under the coordination of the Immigration and Customs Working Group on Disaster - a coalition between CDEMA, CARICOM, and national immigration officials.

Another example is the agreement to eliminate the migratory visa between El Salvador, Guatemala, Honduras, and the Dominican Republic made in 2017, which allows people to be free from mobility between these countries (IOM 2019:133). The Dominican Republic, Haiti, Cuba, and Spain, among several other countries, also maintain an agreement on migration management. The Guatemala Protocol, signed by Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama in 1993, indicates that “the States Parties agree to seek free labour mobility” (Section four, art. 18). However, according to a recent IOM report (2019), a concrete action plan has not yet been developed to implement the agreement. The Regional Agreement on Migratory Procedures CA-4 was signed in 2005 and created the Single Central American Visa for the free movement of foreigners between the Republics of El Salvador, Guatemala, Honduras, and Nicaragua. The objective is to facilitate temporary entry to these countries for tourists, investors, businesses, health, in transit, official reasons, or to participate in scientific, humanitarian, religious, artistic, sports, or public entertainment activities (IOM, 2019).

Guatemala and Belize established the Agreement on the Passage of Schoolchildren in Migratory Land Posts to facilitate students’ agile and safe passage to move daily from one country to another (OAS, 2014). In the case of Mexico, a special visa policy was established for the Guatemalan population that allows temporary work permits to be granted to residents who travel daily to the farms and urban towns on the north side of the Chiapas border (CEPAL, 2019).

Regional Conference on Migration (RCM). The RCM, or Puebla Process, was established in 1996 to promote regional cooperation on migration within the region’s economic and social development framework. The RCM comprises 11 Member States (Belize, Canada, Costa Rica, El Salvador, Guatemala, Dominican Republic, Honduras, Mexico, Nicaragua, Panama, United States of America) and five Observer States (Argentina, Colombia, Ecuador, Jamaica, and Peru).

Caribbean Migration Consultations (CMC). At the regional level, the CMC was established in 2016 and launched in 2019. These consultations were created to promote regional dialogue for establishing a Regional Consultative Mechanism for effectively managing mixed migration. One key action is strengthening cooperation for this management through rights-based approaches. The objectives are to⁵

- Create a non-binding forum that allows member countries to openly discuss migration topics to develop consistent and coordinated regional efforts to manage migration effectively.
- Coordinate and promote information exchange between member states, emphasising sharing good practices related to migration governance.
- Develop policies with a rights-based approach aimed at effective, comprehensive regional migration governance.

This new platform could play a decisive role in developing a regional and harmonised approach to the challenge of cross-border disaster displacement.

⁵ See: <https://www.iom.int/caribbean-migration-consultations-cmc>

The migration policy of SICA⁶. SICA has implemented several initiatives, projects, and agreements on regional migration. Especially important to protect the right to education of CDPs is the “Alternatives” project implemented by the Secretariat for Central American Social Integration (SISCA), SICA’s technical body. This project seeks to incorporate good practices by institutions responsible for migration issues so that “children and youth can have access to quality education, and in the same way, promote professional training, and insert youth in the labour environment” (SG-SICA, 2019: para. 3).

6.2 Disaster management and risk reduction

The Regional Platform for Disaster Risk Reduction in the Americas and the Caribbean was one of the outcomes of the Sendai Framework. It is organized by the UNDRR, with several sessions hosted since 2009. This regional platform is a space for multiple stakeholders to come together “to share experiences and knowledge and to agree on the main regional priorities for concerted action for disaster risk reduction in the Americas and the Caribbean” (UNDRR/CDEMA, s/f:p.2)

The agenda of the VII Regional Platform organized from 1-4 November 2021 by the Government of Jamaica, under the theme “building resilient economies in the Americas and the Caribbean”, did not explicitly refer to the education sector. The only session on displacement, organized by the Platform on Disaster Displacement, did not refer to impacts on the right to education; however, the discussions held on “integrating disaster displacement considerations into DRR law, policies, strategies, and plans, including communities at risk of displacement”, indicate possible avenues for inter-sectoral collaboration on the matter.⁷

Another regional platform focusing on disaster risk reduction and resiliency, specifically within the education sector, is the Regional Education Group for Latin America and the Caribbean (REG LAC)- an initiative under the overall umbrella of the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector (GADRRRES). REG LAC was established in 2011 under the framework of REDLAC (Risk Emergency Disaster Working Group for Latin America and the Caribbean) to support Ministries of Education in their education in emergency response, which includes a focus on risk management, disasters, and migration.

Their purpose is to “promote the development and strengthening of capacities and skills in **DRR** preparation and response to emergencies in the educational sector of **LAC** countries – including decision-makers – fostering a culture of reduction/risk and resilience in this sector,” among other things. For this study, REG LAC’s Key Priority number 4 is particularly relevant: “Mobilization of technical and financial resources for **DRR**, refugee and migration initiatives and education in emergencies.”

One of their recent accomplishments was the High-level REGLAC meeting 2021: “Securing the Right to Education for Venezuelan Refugees and Migrants,” as well as the development of the “Guide for the Adaptation of Curriculum in Emergency Situations” (GADRRRES 2022).

⁶ The member countries of SICA are Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and the Dominican Republic.
⁷ <https://rp-americas.undrr.org/integrating-disaster-displacement-drr-strategies-policies-plans-and-legal-frameworks>

Launched in 2017, the Caribbean Safe School Initiative (CSSI) is being implemented in collaboration with partners such as UNICEF and the CDEMA to ensure that school safety and resilience in the education sector become the norm, including the adoption and implementation of retrofitting and construction standards that support schools to withstand natural disasters. However, no explicit linkage is made with climate displacement.

In 2019, a Regional Protocol for the Integrated Protection of Children and Adolescents During Emergency and Disaster Situations was developed by UNICEF with the CDEMA. The protocol's section on education states that children should have access to services before, during, and after emergencies, including safe, high-quality, child-friendly, flexible, relevant, and protective learning opportunities in a protective environment, requiring close collaboration between education and child protection actors on a range of issues. The protocol is meant to serve as a guide for government agencies, members of civil society, the private sector, and international cooperation agencies in the stages of prevention, preparation, response, and recovery in disaster situations in CDEMA participating countries.

Regional Plan for Disaster Reduction (PRRD): Established in 1999 by the governments of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and the Dominican Republic, it establishes the joint action mechanisms for risk prevention and disaster mitigation and mutual assistance and humanitarian aid (CEPREDENAC, 2014). Among its objectives is “Promoting mechanisms that guarantee the international protection of migrants in cases of disaster, as well as meeting their needs” (CEPREDENAC, 2014:23).

6.3 Multisectoral collaboration platforms

CARICOM. CARICOM is a particularly relevant platform for multisectoral collaboration among its country members at the Caribbean level. Importantly for the right to education, the CARICOM has drafted a Protocol on Contingent Rights (not yet into force), which will extend rights to dependents, including access to primary education (CARICOM, 2018). Skilled CARICOM nationals - including graduates of all recognized universities, teachers, artisans with Caribbean vocational qualifications and holders of associate degrees or comparable qualifications, etc. - may already apply (where national migration frameworks were amended) for a Certificate of Recognition of Skills Qualification to work in other member states. The Skills Certificate does not guarantee permanent residence, but skilled nationals may apply after admission and move with their dependents. Cuba also cooperates with members of CARICOM on climate change initiatives, including a 2008 declaration calling for increased funding to address climate change adaptation.

Association of Caribbean States (ACS). The ACS seeks the strengthening and integration of the Caribbean countries to create a common economic space, preserve the sea, and promote sustainable development. In 2019, these countries committed to “address the effects of climate change, strengthen the region as a zone of peace, ensure safe migration, focus on sustainable development, and support CARICOM’s efforts to compensate for transatlantic trafficking of slaves and slavery” (ACS/AEC, 2019: para.1).

6.4 Policy recommendations

The right to education of CDPs in Central America and the Caribbean can be better protected by international, regional, and bilateral agreements that respond to their needs and circumstances. In this line, some policy recommendations are the following:

- Countries in the Caribbean should support the enforcement of the CARICOM Protocol on Contingent Rights and join regional and bilateral FMAs with other Caribbean countries.
- Each Member State should participate in any upcoming CMC consultations and use this space to promote regional dialogue on the right to education for CDPs.
- Regional cooperation can promote collaborative and comparative research efforts to better understand challenges and opportunities to protect the right to education among CDPs to guide policy decisions.
- Regional cooperation should also be used to facilitate sharing good practices about the right to education for CDPs in collaboration with UNESCO, UNICEF, and other institutions.
- Bilateral and multilateral agreements on migration in the region should promote incorporating the notion of climate refugees in their protocols and legal frameworks.
- The RCM, CMC, and SICA can be platforms to promote common efforts to visualize cross-border climate displacement associated with low-onset climate events, creating shared mechanisms to identify this type of displacement in the region.
- Regional initiatives to promote safe schools and better disaster management practices, such as the Caribbean Safe School Initiative, should more explicitly discuss the challenges of climate displacement and policy ideas that can be promoted.
- A regional protocol on educational access in the context of climate change should be developed. This is important given that although there are many platforms for climate change, migration, and disaster risk reduction in the region, there is a lack of regional efforts to address the relationship between education and climate change.
- Develop a cross-country information system to monitor displacement to inform educational planning and management.



Chapter 7

Conclusions

The impacts of climate displacement on the right to education in Central America and the Caribbean is not a problem for the future. Children are losing significant time in school; learning loss is already being seen and learning poverty exacerbated; livelihoods are impacted or lost long-term, leading to increased financial barriers to education; and climate-driven poverty is increasing the rate of early dropout. Ultimately, climate change impacts the likelihood of achieving SDG4 as climate change creates a new group of vulnerable learners. The five exploratory case studies developed in the region demonstrate that climate displacement is already happening and rising, creating important challenges in the educational systems and affecting the right to education of many people.

It is paramount that the countries in the region ensure that the right to education is protected in law and policy for all, without discrimination, regardless of citizenship, residency, or any other legal status. Any existing legal or administrative barriers should be adequately reconsidered. In addition to the county-based policy recommendations included in each case study and the recommendations based on the different climate displacement types described in section 6, the following principles should guide the policy development of the countries in the region to better protect the right to education of CDPs.

Increasing public awareness of climate displacement and its different forms. One of the main challenges for creating public policies to protect CDPs' right to education is that many forms of climate displacement tend to be invisible. This is especially the case of cross-border displacement associated with slow-onset climate events, which tend to be interpreted as economic migration, and many internally displaced people are not accounted for as CDPs as well. As a region particularly affected by the impacts of climate change but one that has had a relatively small historical role in the origin of the climate crisis, and by making the climate reasons behind displacement visible, Central America and the Caribbean would be better prepared to attribute responsibilities, take advantage of climate finance tools to address associated problems, and better apply existing climate frameworks to attend to displaced populations and protect their right to education.

Different approaches can be used to make climate displacement visible, such as creating methodologies to assess the role of slow-onset climate events in triggering human mobility, for which different studies conducted in Guatemala to understand the role of the drought affecting the "Dry Corridor" in prompting displacement offer useful examples (WPF, 2017; CEPAL, 2021).

These efforts should not only focus on cross-border displacement but also on the role of climate change in internal forms of displacement. Given that most cross-border forms of displacement in the countries studied are intraregional or at least involve the process of transiting (sometimes from months) within the region, bringing different forms of understanding and assessing climate displacement into alignment can help the region better track possible forms and routes of climate displacement, improving the preparedness and coordination of the educational systems.

Aligning legal and policy frameworks on education, climate change, disaster management, and migration is key to ensuring the right to education is protected for all. Increasing policy coherence and coordination at national levels between the key areas related to protecting the right to education among CDPs (education, climate change, disaster management, and migration policies and regulations) should be a priority for all the countries in the region. In addition, specific challenges related to the key policy sectors associated with CDPs need to be remediated, such as the protection,

by law and policy of the right to education to all, without discrimination and regardless of citizenship, residency, or any other legal status.

Making the right to education a priority in climate change and displacement policies. In many Central America and the Caribbean countries, there are high levels of poverty, and large parts of the population live in conditions of extreme vulnerability. In these contexts, the situation of CDPs, especially those affected by slow-onset climate events, can easily be undiscerned. When governments in the region create targeted responses to attend to CDPs, which normally occur after weather-related disasters, education is not normally a priority in attending to other needs of the affected groups, such as housing and their basic livelihoods. However, for several reasons, protecting the right to education should be a priority. The education system in the region has provided a space of protection for many students by offering psychological attention, peer relationships, and basic food services that their families may be unable to provide in a crisis context. However, schools can also be a space of risk for CDPs if the correct measures to protect these groups from different forms of discrimination or health risks are not in place.

Moreover, stronger regional cooperation and coordination efforts can help governments in Central America and the Caribbean to improve their preparedness to address climate displacement and the right to education by taking advantage of regional technical assistance to design and implement relevant measures. Existing bilateral and multilateral agreements and platforms around migration, economic development, and disaster management are good starting points for developing these regional efforts.

Conducting research in collaboration with academic and non-governmental partners and collecting disaggregated data on the right to education and climate displacement is paramount to closing the knowledge gap and developing evidence-based laws and policies, including in the education sector. Collaborative information and data collection can also help recognize the impact of climate change displacement on the right to education on time for prevention and a better and more grounded response.

Incorporating climate displacement in educational curricula. In recent years, there have been important advances in countries of Central America and the Caribbean in terms of incorporating climate change into the educational curriculum. This is also the case with the topic of disaster management in the context of climate change. However, climate displacement has not been central in these efforts. Incorporating climate displacement in the educational curricula of the region is important to make this phenomenon visible among the population. The lack of policy consideration of climate displacement in its different forms is related to how public policies define and distinguish the problem and how CDPs interpret their reasons to move. For communities affected by severe drought, such as Haitian groups crossing the border of the Dominican Republic or families from Honduras transiting to Guatemala to reach North America, climate displacement can be a concept too distant to describe their situation of economic vulnerability. Better incorporation of climate displacement in educational curricula can help make the problem more visible among the population. This incorporation can also contribute towards dignifying the process of climate displacement, which is particularly relevant today, given that there is rising stigmatization against economic migrants in the region.

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Annexes

Annex A

Bahamas Case Study

The impact of climate displacement on the right to education in Bahamas

EXECUTIVE SUMMARY

UNESCO launched in early 2020 a global initiative to investigate the barriers to the right to education in the context of climate displacement to improve Member States' preparedness to ensure the inclusion of all displaced persons in quality education. The project includes country case studies in priority regions, including Latin America and the Caribbean. **For The Bahamas case study, an overarching question was: to what extent does climate change, particularly climate displacement, threaten the right to education, and how to overcome existing barriers?**

Through the 5A's analysis, focusing on core dimensions of the right to education - availability, accessibility, acceptability, adaptability and accountability - and key response areas, the analysis revealed that barriers to the right to education in the context of climate displacement are multifaceted, and intrinsically linked to poverty-related issues, especially with people on the move, as well as heightened exposure based on the geographical specificities of an archipelagic Small Island Developing State (SIDS).

Specifically, the case study focuses on the impact of hurricanes, particularly Hurricane Dorian (2019) and its aftermath, highlighting the consequences of the COVID-19 pandemic on the recovery process. However, it also includes essential aspects of slow-onset (typically gradual, longer-term) climate change impacts, such as sea-level rise. After presenting the context of climate displacement in the Bahamas and the profile of vulnerable populations, the report details barriers to the right to education, followed by an analysis of policy and sectoral responses.

Climate change and displacement in the bahamas

Overview of climate change impacts

The Bahamas, which are situated right inside the Caribbean hurricane belt, have a long-recorded history of being hit by tropical storms and hurricanes, at least 14 since 2000, with the latest major occurrences being Hurricanes Joaquin, which hit the Family Islands (October 2015), and Matthew, which hit Nassau and Grand Bahama (October 2016), soon followed by Category 5 Hurricanes Irma, which primarily affected Ragged Island, Grand Bahama and Bimini (September 2017) and Dorian, which devastated Abaco and Grand Bahama (1-3 September 2019).

The coastal concentration of communities in the Bahamas also makes them vulnerable in the face of sea-level rise. The Bahamas as one of the top four most-at-risk countries in the world (University of the Bahamas, 2021): 32% of its land, corresponding to 25% of the population, is below 0.5 m (IDB, 2018). Besides, The Bahamas, like other Caribbean SIDS, is already dealing with more frequent drought episodes. This trend is expected to worsen with climate change and more intense precipitation.

Characteristics of climate displacement

Climate impacts have already caused recurring population displacement in the Bahamas:

- **Internal displacement as a result of extreme weather events:** Hurricane Dorian is not the first extreme weather event to have directly caused internal displacement in the Bahamas. However, it was the most recent and significant in scale with at least 9,840 internally displaced people (IDMC, 2020). By the end of 2019, at least 3,360 people were still accounted as relocated to New Providence from Grand Bahama (565) and Abaco (2,795) (Bleeker, A. et al, 2021). It is unclear how many people opted for or were forced to choose permanent relocation, though in most cases, displacement was temporary.
- **Internal displacement as a result of slow-onset events:** Displacement due to slow-onset events such as sea-level rise is often less discernible than displacement resulting from extreme weather events. In the Bahamas, sea-level rise is expected to lead to the displacement of tens of thousands of people (The Gleaner, 2020).
- **Cross-border displacement as a result of extreme weather events:** In the aftermath of Hurricane Dorian, 600 and 700 Bahamians are thought to have evacuated to the United States of America, predominantly to Florida. This is not counting more than 3,000 US citizens living in the Bahamas who were evacuated (IDMC, 2020). The Trump administration eventually did not grant Bahamians Temporary Protected Status (TPS).
- **Cross-border displacement as a result of slow-onset events:** Like internal climate displacement, it is difficult to quantify the scale of international movement due to slow-onset events. However, international migration is highly likely to become an adaptation strategy used in the Bahamas.
- **Planned relocation:** In response to climate threats across the Caribbean, planned relocation may be imperative in most at-risk areas, in some extreme cases. For the Bahamas, the question is whether the country will have the resources to keep rebuilding communities devastated by hurricanes and protect those threatened by sea-level rise and other climate risks. In 2017, Hurricane Irma displaced the entire population of Ragged Island, which became a case of planned relocation as the government declared it 'uninhabitable'. Eventually, the local population returned.
- **Trapped populations:** Many people could not leave Abaco when Hurricane Dorian hit. It is impossible to say how many would have reached safer grounds – or would have liked to - would they have had the opportunity. In any event, many remained trapped, especially members of the Haitian-Bahamian community (Shah, S., 2020).

Vulnerable groups

Globally, climate displacement is not affecting populations evenly. Multiple factors render some groups more vulnerable than others, which is the case in the Bahamas. People living in poverty are generally more vulnerable to climate impacts, including displacement. In the Bahamas, the poor – such as people of Haitian descent - are disproportionately represented within informal settlements, which increases their vulnerability to climate-related hazards due to inadequate infrastructure and

housing quality. Age is another key driver of vulnerability. Children are particularly vulnerable due to their specific developmental needs and physiology, which is exacerbated in the Caribbean by the fact that they are disproportionately represented among the poor (Pegram, J. and Knaute, D., 2019). From a gender perspective, challenges for women and girls can be exacerbated by intersecting vulnerabilities and potentially worsening conditions. Finally, there is anecdotal evidence that displaced lesbian, gay, bisexual, transgender, queer, and intersex (LGBTQI) and gender nonconforming persons were discriminated against in their quest for housing in the aftermath of Hurricane Dorian (Roth, D. et al, 2021). Not much data was found on persons with disabilities, although many must have been directly and significantly affected by recent extreme weather events in the Bahamas.

Barriers to education in the context of climate change

Vulnerability of the education sector to climate and other shocks

Across Abaco and Grand Bahama, 45 educational facilities experienced varying levels of damage due to Hurricane Dorian. Seven schools were altogether destroyed. Despite efforts to prepare for the storm, its intensity or duration was not expected to be that extensive. As of September 2021 (two years after the hurricane), approximately 965 students had not returned to the island. One public school and two private schools were still closed (Government of the Bahamas, 2020b). Aside from hurricanes, many schools across The Bahamas are located in low-lying coastal areas, such as on Eleuthera Island and are therefore very vulnerable to sea-level rise and other climate impacts.

The implication of the COVID-19 pandemic

COVID-19 emerged in The Bahamas just six months after Hurricane Dorian. As in other countries, it impacted the education sector immensely, beginning with the closure of schools in March 2020. COVID-19-related disruptions to education are not over, with online, hybrid and face-to-face strategies expected to be continued for some time. The pandemic also slowed down the recovery process. However, it can be perceived as a long-term opportunity, as reforms that had seemed arduous to implement, for instance, introducing new pedagogical approaches, became an obligation in the context of the pandemic. In particular, what would have appeared to be a long-term investment in community infrastructure before the pandemic, i.e. internet connectivity, became the norm.

Climate displacement: 5A's analysis on the right to education

→ *Availability:*

Education must be available. Governments must ensure that educational institutions, physical resources, personnel and programmes are available in sufficient quantity and quality and with the necessary facilities to function properly for both people on the move and host communities.

Educational facilities and basic services: By damaging or destroying schools or using schools as shelters, Hurricane Dorian interrupted education and associated services (such as school feeding) in

Abaco and Grand Bahama for several weeks to several months. With the onset of the pandemic and the transition to virtual learning, other challenges have emerged. In particular, formally displaced students have been unable to obtain a mobile learning device, notably due to the difficulty for the Ministry of Education to ensure the handout of free devices to students moving to new schools and islands in the context of school closure.

Provision of quality education: The temporary interruption of primary and secondary education after Hurricane Dorian significantly reduced teaching time. The change in school populations led to the need for alternative classroom locations and changes to teacher assignments.

Availability of both regular and alternative forms of education: Hurricane Dorian affected all levels of education. However, the suspension of tertiary education may have been more prolonged than primary and secondary education. Special education services were also interrupted. For example, Every Child Counts, the only special needs school in Abaco, got severely damaged. Its restoration was furthermore delayed due to the COVID-19 pandemic.

Teachers and other educational personnel: In Abaco and Grand Bahama, even when schools remained operational or reopened, educational services were limited by teacher shortages, a common feature of displacement situations due partly to teachers having evacuated.

→ *Accessibility*

Education should be accessible to all, physically and economically, without legal discrimination, including migrants, refugees, returnees, asylum seekers and host communities.

Economic costs: Auxiliary costs to education, such as school supplies and transportation, may discourage displaced families from sending their children to school. In the aftermath of Hurricane Dorian, some low-income families in the town of Marsh Harbour in Abaco could not send their children to school as the only ones still operating were privately run.

Legal documentation: Restrictive immigration policies and legislative obstacles hinder the fulfilment of the right to education for migrant and refugee children globally. In The Bahamas, authorities generally grant Haitian children access to education, whatever their status. After Hurricane Dorian, the government offered to replace lost documentation, including work permits, free of charge. However, some parents displaced from Abaco to New Providence reported that they could not get their children enrolled in school because they did not have the right documentation, as their documents were either lost or had been left behind (Government of the Bahamas, 2020b).

Safety and protection: In the immediate aftermath of Hurricane Dorian, many buildings (including schools or other places used as temporary schools) could collapse. Inter-island displacement following Hurricane Dorian also created protection risks. Some children got separated from their parents or lived and socialised in a new environment (shelter, school) where they were or felt less protected than back home.

Recognition of degrees, certificates and knowledge: Migrant children deported back to Haiti after Hurricane Dorian faced the risk of being denied access to education due to a lack of recognition of their degrees, certificates and knowledge from the Bahamas, where they were born and has studied their entire life.

→ *Acceptability*

The form and content of education should be appropriate and coherent with the needs of people on the move and host communities, with relevant curriculum and other educational materials and approaches that value difference, ethnic plurality and intercultural dialogue.

Language and other communication barriers: Bahamian teachers may lack training in teaching children on the move and have limited experience in dealing with issues about displacement and diversity.

Teaching and learning content and practices: In addition to the damage to infrastructure, Hurricane Dorian caused the loss of teaching materials and furniture. The loss of teaching materials directly impacted the reopening of schools and the resumption of classroom instruction. As there was often no reliable internet or power, new/replacement materials could not be downloaded or printed, and local teacher supply stores were either closed or not accessible (Government of the Bahamas, 2020b).

Mental health and psychosocial needs: Given the traumatic experience of Hurricane Dorian for many students and teachers, a key gap in response efforts was identified as the provision of mental health and psychosocial support services.

Socio-cultural discrimination and exclusion: Community activists have alleged that some schools continued to discriminate by falsely claiming to be with no vacant to avoid admitting children of Haitian descent despite their right to enrol (EWNNews, 2021b). Such discrimination and the lack of educational material that acknowledges the culture of origin of children on the move may have further impacted children with a migration background and their educational outcomes.

→ *Adaptability*

There is an enabling environment and institutional capacities in the education sector to respond to the diverse needs of people on the move and host communities.

Funding and investment: The widespread damage to educational facilities due to Hurricane Dorian amounted to \$72 million, not counting other costs such as the estimated value of lost instruction time along with the value of tuition refunds for students no longer returning for post-secondary level education, and other costs incurred during the recovery efforts (IDB-ECLAC, 2020). However, the long

process of rebuilding schools was an opportunity to retrofit all those impacted and consider whether to rebuild them on-site. Besides, the private sector is well developed in The Bahamas, with entities such as the Sandals Foundation implementing initiatives in the education sector. Private businesses are potentially an alternative source of funding and in-kind support for the government, which can prove flexible and innovative, as experienced in the aftermath of Hurricane Dorian.

Coordination and institutional capacities: At the national level, the Ministry was constrained in its response efforts due to a lack of a comprehensive, fully communicated emergency preparedness and response plan and the lack of a timely and comprehensive impact assessment. The hurricanes also revealed critical vulnerabilities that severely impacted the education sector, namely maintenance of school premises, securing special equipment to minimize destruction and lack of access to potable drinking water. Since 2020, a major breakthrough has been the progressive roll-out of an Education Management Information System (EMIS), which is expected to be a ground-breaking planning instrument for the Ministry of Education.

→ *Accountability*

Education must be accountable for transparency, social management, affected populations' participation, and responsibility for the actions and public policies undertaken in the response.

Participation: In the immediate aftermath of Hurricane Dorian, parents, teachers and principals called for a quick re-opening of schools after Hurricane Dorian - ideally within two to three weeks. However, information about whether this would be possible was not accessible. On the Abaco Cays, communities took the initiative to set up announcement boards for people to post and find information about response efforts (Government of the Bahamas, 2020b). Communication during the response was therefore identified as a major challenge.

Monitoring and evaluation: Likely, the widely cited figure of 9,480 displaced people due to Hurricane Dorian underestimates the total number of IDPs (Thomas, A, 2021). The true number could be as high as 15,000. There are multiple causes for under-estimation, such as ad hoc data collection by a range of public and private agencies, a lack of coordination between agencies, limited baseline data, language barriers, government-led data collection limited to New Providence and underestimation of the number of displaced persons who did not seek public or private assistance (Thomas, A, 2021). Overall, the absence of a viable database of displaced persons – and later of persons in need of assistance in the face of the COVID-19 pandemic – limited the institutional capacity to address the needs of some of the most vulnerable members of society.

Policy responses and sectoral interventions

Legal frameworks

To date, there are no explicit international obligations related to the protection of people on the move under any climate change agreement. Few refer to the education sector and the link between climate displacement and the right to education is not explicitly expressed.

Climate impacts in Latin America and the Caribbean have a strong regional character. Countries in the region have agreed on guidance for responses to cross-border displacement in the context of climate change and disasters through the 2014 Brazil Declaration and Plan of Action. The complexity of migration trends and country characteristics at the Caribbean level require specific responses. Importantly for the right to education, the CARICOM has drafted a CARICOM Protocol on Contingent Rights (not yet into force), which will extend rights to dependents, including access to primary education (CARICOM, 2018). The Caribbean Safe School Initiative, launched in 2017, is being implemented in collaboration with partners such as UNICEF and the Caribbean Disaster Emergency Management Agency (CDEMA) to ensure that school safety and resilience in the education sector become the norm, including through the adoption and implementation of retrofitting and construction standards that support schools to withstand natural disasters. However, no explicit linkage is made with climate displacement.

At the national scale, there is a global lack of policy coherence and coordination with connections between human mobility and climate change. The education sector is usually absent from existing frameworks (James Cantor, D., 2018). In The Bahamas, the National Policy for the Adaptation to Climate Change of 2005 outlines risks, mitigation strategies, and adaptation strategies for various sectors, but not education.

The Disaster Preparedness and Response Act of 2006 provides a centralized disaster preparedness and response structure, establishing the National Emergency Management Agency (NEMA). Nevertheless, education is not mentioned.

Intervention gaps and best practices at the sectoral level

- **Education sector:** The extent to which climate change and displacement disrupt access to equitable and quality education is highly dependent on system-wide policy action and planning, primarily in the education sector, although inter-sectoral action is critical, as illustrated temporarily but effectively post-Dorian. Besides, the recovery process has served as an ideal opportunity to accelerate climate action. In the short-term, the focus has been on building back better. From a protection and mental health perspective, temporary or mobile education facilities, together with Child Friendly Spaces, can be an adaptive and cost-effective solution to improve displaced students' ability to adapt and integrate in the face of adversity and trauma while avoiding protracted disruptions in education services, as illustrated by programmes by the Goodness Tour, who taught art, songwriting and film making classes in a shelter in Nassau following Hurricane Dorian, as an excellent way to engage children. (The Goodness Tour, 2020).
- **Disaster risk management:** A dedicated entity, the Disaster Reconstruction Authority, was established under the Disaster Reconstruction Act (2019) to coordinate rebuilding a "resilient Bahamas". In September 2021, two years after the passage of the hurricane, the DRA chairman recognized that work was moving slowly, even though progress was being made (The Tribune, 2021). Regarding infrastructure, the magnitude of Hurricane Dorian and subsequent damage exposed gaps in the enforcement of existing regulations and the potential need to undertake an extensive building code review applicable to the education sector. Hurricane Dorian also highlighted that gender was not given sufficient consideration in disaster risk reduction policies, despite the disproportionate impact women and girls faced and the barriers experienced during emergency and recovery.

- **Climate change:** Education needs are largely invisible in most key discussions on climate change, with advocacy for linking the two issues beyond climate change education remaining relatively silent. Even less is known about the nexus between climate change, displacement, and education (IDMC, 2021). In the Bahamas, the National Climate Change Committee, whose mandate is cross-sectoral, may contribute to filling this gap. Relevant to the education sector, the government of The Bahamas has committed to prioritizing the water sector as part of its response to climate change. A project funded by the Green Climate Fund is expected to scale up investment on highly vulnerable islands to address declining freshwater availability, increasing risks of freshwater contamination and negative impacts on critical water infrastructure towards ‘transforming’ the way water resources are managed on these islands (Government of The Bahamas, 2020a).

Conclusion and recommendations

The exponential increase of climate impacts, as overwhelmingly demonstrated by Category 5 Hurricane Dorian in 2019, calls for urgent and effective action, in line with UNESCO’s new landmark report “Reimagining our futures together: A new social contract for education” (November 2021). It is therefore hoped that policy-makers in the education and other relevant sectors, particularly in the Bahamas, will find the case study eye-opening and the final recommendations useful to uphold the right to education for all under all circumstances, including climate displacement while keeping as primary goals building the resilience of the education sector and the prevention of climate displacement to begin.

RECOMMENDATION 1: ALIGNING LEGAL AND POLICY FRAMEWORKS TO ENSURE THE RIGHT TO EDUCATION IS PROTECTED FOR ALL UNDER ALL CIRCUMSTANCES

As mentioned in the case study, there is a global lack of policy coherence and coordination at the national scale regarding connections between human mobility and climate change. Moreover, the education sector is usually absent from existing frameworks. This applies to the Bahamas. Therefore:

- **Climate Change and Disaster Risk Management Policy Framework:** The Government of The Bahamas, through the National Climate Change Committee, should update the National Policy for the Adaptation to Climate Change (2005) and Disaster Preparedness and Response Act (2006) to incorporate education into these and vice versa, ensure that the impacts of climate change are addressed into education sectoral policies. It should also ensure that its revised Nationally Determined Contributions (NDCs), which the Government is planning to submit before COP27 in 2022, as well as its Third National Communication to the UNFCCC (TNC), which is also being drafted, include strong language on climate displacement and the education sector.
- **Ecosystem restoration:** In the face of increased climate risks in coastal areas, from extreme weather events and slow-onset changes, and an acceleration of ecosystem degradation, the government should promote nature-based solutions and full-scale ecosystem restoration, which will benefit highly exposed schools and educational institutions.

Member States must ensure that the right to education is protected in law and policy for all, without discrimination, regardless of citizenship, residency or any other legal status. Any existing legal or administrative barriers should be adequately reconsidered. This is a priority in The Bahamas, given the complexities surrounding access to citizenship among members of the Haitian-Bahamian community, which complicates access to education for many children and young people, even more so in situations of climate displacement. Therefore:

- **Principle of non-discrimination:** The Government of the Bahamas should strongly adhere to the principle of non-discrimination, which entails keeping assistance for climate displaced persons separate from barriers related to their legal status that may discourage them from seeking assistance. In particular, access to education should be facilitated and proactively encouraged (e.g. through public information campaigns) for all in times of emergencies.
- **Informal settlements:** The Bahamas' current response to the informal settlement, predominantly through eradication, particularly in Abaco and New Providence (Nassau), should be based on right-based approaches not to increase vulnerabilities, i.e., the government must refrain from, and protect against, forced evictions; and ensure the meaningful and informed participation of all affected persons, including people on the move and receiving communities. Besides, as relocations are planned, the government should focus on access to key services, including education, decent housing solutions, and hazard risk reduction measures.

RECOMMENDATION 2: STRATEGIZING FOR RESILIENCE IN THE EDUCATION SYSTEM

Building on available assets and resources (e.g. school leadership and community support), the education sector should prioritize preparedness, including policy measures and interventions, which can anticipate risk and respond to the educational needs of children in crisis situations. In particular, the Ministry of Education should implement priority actions as per the Caribbean Safe School Initiative (CSSI):

- **Infrastructure resilience:** Educational infrastructure should be made resilient, in line with building codes and through careful land-use planning. New schools and those being retrofitted should be able to withstand Category 5 Hurricanes. An additional focus should be placed on protecting and upgrading water systems, which have been particularly damaged by Hurricane Dorian, preventing the reopening of schools promptly.
- **Emergency preparedness:** The Ministry of Education should elaborate guidelines for mandatory and periodic infrastructure inspections before the hurricane season and budget pre-hurricane season infrastructure repairs and retrofitting to the extent possible. In addition, all schools should develop emergency preparedness and response plans and conduct regular multi-hazard risk assessments to identify localized risk reduction strategies. For future emergencies, lessons should be learnt from the Hurricane Dorian response, for instance, in student enrolment or staggering school openings, as detailed in a Post-Disaster Education Sector Assessment conducted with USAID. If not already in place, the Ministry could also allocate post-disaster recovery funding to the yearly budget for each school for immediate access.

- **Resilience education:** Integrating Climate Change and Environmental Education into curricula, including Disaster Risk Reduction (DRR) elements, should be accelerated and become the norm at all levels from early childhood to tertiary and adult education.

A more comprehensive approach to strengthening the resilience of the education system – so-called crisis-sensitive educational planning, fostering political leadership for effective crisis response, should be promoted. In particular:

- **Sectoral Planning:** The Ministry of Education should advocate for the revised Education Act to refer to climate resilience and displacement and formulate a new Education Plan in which strong elements on climate change and disaster risk management are included.
- **Inter-sectoral coordination and leadership:** The Ministry of Education should coordinate inter-sectoral cooperation to build resilience in the education sector. Climate displacement requires a system-wide approach, fostering cooperation between departments, divisions and ministries addressing interrelated issues. Whether internal or cross-border, climate displacement has important ramifications with other sectors (e.g. climate, DRR, social protection, environment), often in ways that interact with the education sector.

RECOMMENDATION 3: ENSURING ACCESS TO EDUCATION FOR ALL CLIMATE DISPLACED PERSONS

A challenge Member States face is providing quality, inclusive education in the context of climate displacement. It is difficult to predict human mobility trends, and natural disasters can displace numerous persons almost instantaneously, all of which require specific measures and investments:

- **Financial barriers:** The Ministry of Education could explore ways to remove financial barriers for both direct and indirect climate displaced students. Conditional cash transfers, scholarship programmes, or grants could relieve some of the hidden costs of education (e.g., school uniforms, transportation), especially for students from low-income families.
- **Innovation and flexibility:** The Ministry of Education should explore alternative learning and teaching approaches adapted to climate displacement. In particular, it could build on, and further invest in online systems developed to respond to the COVID-19 pandemic to fully bridge the remaining connectivity gaps.
- **Mental health and psychosocial needs:** The Ministry of Education, in collaboration with other government entities, should build internal capacity to address the mental health and psychosocial impacts of recurring extreme weather events on the school community, including students and teachers, and ensure the integrated protection of students in situations of climate displacement. The Ministry could also explore the possibility of including elements on non-economic losses to allow displaced students to express themselves on issues linked to culture, language and identity as part of this recovery process.

RECOMMENDATION 4: ADDRESSING INEQUALITIES AND INTERSECTIONAL VULNERABILITIES

The complexity of climate displacement must not overshadow the research into the ways that existing inequalities interact with human mobility to create different education experiences:

- **Most at-risk groups and communities:** The Ministry of Education, in collaboration with other government entities, should systematically identify groups, schools and communities most at risk of climate displacement to be able to prioritise interventions and address vulnerabilities. In addition to geographic disparities, it should investigate the specific needs of the most vulnerable students, including children facing multidimensional poverty or living with disabilities, children on the move, etc.
- **Fighting xenophobia and discrimination:** The Ministry of Education, in collaboration with other government entities and in liaison with local leaders, religious groups, non-governmental organizations, the media and the private sector, pro-actively combat xenophobia and discrimination against displaced populations and specific groups such as migrants or LGBTI persons towards enhanced social cohesion.
- **Gender inequities:** The government should take necessary measures to identify and respond to protection risks (including gender-based violence) faced by female students at home, at school and in their community, including in the context of climate displacement.

RECOMMENDATION 5: PUBLIC AWARENESS AND CAPACITY-BUILDING

Public awareness and education, combined with formal education, are requirements to accelerate climate action at a societal level:

- **Action for Climate Empowerment:** The government of The Bahamas should develop an ambitious Action for Climate Empowerment (ACE) Strategy and Action Plan embedded within a results-based framework to foster a better understanding of an ability to address climate change and its effects; promote community engagement, creativity and knowledge in finding climate change solutions; and engage all stakeholders in debate and partnership to respond collectively to climate change (i.e. the three core objectives of the UNFCCC's ACE Framework), with a specific focus on engaging stakeholders in the education sector and reaching out to climate displaced persons.
- **Institutional capacity-building:** Relevant stakeholders, including staff from the NEMA and education sector stakeholders, should be equipped with the knowledge, skills and systems needed to address issues related to the right to education in the context of climate displacement. For instance, special training programmes could be organized for teachers and principals.

RECOMMENDATION 6: REGIONAL AND INTERNATIONAL COOPERATION AND FUNDING

The right to education of climate displaced persons can be better protected by international, regional and bilateral agreements that respond to their particular needs and circumstances:

- **Regional cooperation:** The Bahamas government should actively support the enforcement of the CARICOM Protocol on Contingent Rights and join regional and bilateral Free Movement Agreements (FMAs) with other Caribbean countries, both as a host or country of origin of potential climate displaced persons. Such cooperation could also facilitate sharing good practices concerning the right to education in collaboration with UNESCO, UNICEF and regional institutions such as CDEMA.
- **Sharing of good practices:** As a low-lying Small Island Developing States (SIDS), the Bahamas could take the opportunity of available platforms to share good practices concerning the right to education with other Caribbean countries and SIDS in the Pacific and Indian Ocean, particularly those that are well advanced in addressing an issue related to climate displacement and have already adopted innovative solutions to avoid disruptions in the education system.
- **Climate finance:** The Bahamas government should continue to expand its collaboration with the Green Climate Fund (GCF), the Adaptation Fund and various other multi-lateral and bilateral partners, ensuring that the education sector and educational infrastructure resilience, in particular, become priority areas of interventions in such partnerships. At the national level, innovative partnerships with the private sector should be pursued to strengthen the resilience of the education sector, for instance, in terms of access to technologies or resilience of water systems in schools.

RECOMMENDATION 7: FILLING KNOWLEDGE AND DATA GAPS, PROMOTING COMMUNITY AND STUDENT PARTICIPATION

Collecting disaggregated data on climate displaced populations is paramount to close the knowledge gap in this area and developing evidence-based laws and policies, including in the education sector. More must be done to understand and monitor the extent to which displaced children, youth and adults have access to education and how to lift the barriers confronting them:

- **Research on the right to education and climate displacement:** The Government of the Bahamas, through the Research & Planning Section of the Ministry of Education and in collaboration with academic and non-governmental partners, could develop a research agenda on the right to education and climate displacement to guide policy decisions.
 - There is, for instance, a need to do more research on the specific barriers faced by most vulnerable groups, such as children with disabilities; climate displacement and migration in slow-onset scenarios, and the implications in terms of planned relocation, specifically for the education sector; or whether families weigh education as a push/pull factor, i.e. whether the search for educational opportunities is tied to specific migration patterns.

- **Education Management Information System:** The Ministry of Education, in collaboration with other government entities (such as the NEMA, the Department of Social Services and the National Insurance Board), should incorporate climate displacement and, more broadly, climate impacts into the newly created - and ground-breaking - Education Management Information System (EMIS). It could do so under the guidance of resources and approaches discussed at UNESCO's 2021 Regional Forum on information systems in educational policy planning and management. In particular, reliable, timely and comparable data is needed to address barriers and monitor learning outcomes in situations of climate displacement.
- **Participation of climate displaced persons:** Climate displaced persons, including children and youth, should be actively involved as agents of change in research and data collection exercises, hazard-risk mapping and community-based disaster management planning among other activities related to the education sector.

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Annex B

Cuba Case Study

The impact of climate displacement on the right to education in Cuba

Executive Summary

UNESCO launched a global initiative in early 2020 to investigate existing barriers to the right to education in the context of climate displacement to improve member states' preparation to ensure the inclusion of all displaced persons in quality education. The project includes country case studies in priority regions, including Latin America and the Caribbean. The fundamental question for the Cuba case study was: to what extent does climate change, in particular climate displacement, threaten the right to education, and how to overcome existing barriers?

Through the 5A analysis, which focuses on the core dimensions of the right to education (availability, accessibility, acceptability, adaptability, and accountability) and key areas of response, the analysis revealed that barriers to the right to education in the context of climate displacement are multifaceted, and intrinsically linked to issues related to poverty, conditions of people on the move, as well as increased exposure based on the geographic specificities of the country.

The case study focuses on the impact of recent major hurricanes. However, it also includes essential aspects of slow onset (generally gradual and longer-term) climate change impacts, such as drought and sea level rise. After presenting the context of climate displacement in Cuba and the profile of vulnerable populations, the report details the barriers to the right to education, followed by an analysis of policy and sectoral responses.

Climate change and displacement in Cuba

Climate change impacts summary

With more than 3.735 km of coastline and its terrain surrounded by the Atlantic Ocean, one of the main climate threats for Cuba is hurricanes and thunderstorms. Although the Cuban population has always had to deal with hurricane seasons, the intensity of hurricanes has increased the damage they caused in recent years. For example, while between 1952 and 2000, Cuba was hit by only one important hurricane, between 2000 and 2008, the country had to deal with six thunderstorms of bigger intensity (El Mundo, 2008). Later, important examples include the damage caused by Hurricane Sandy in 2012 (USD 278 million in damages), Matthew in 2016 (USD 97 million), and Irma in 2017 (USD 13 billion) (EFE, 2019).

On the other hand, the tropical weather of Cuba has become more extreme due to climate change, resulting in rainier summers and drier winters. Currently, 90% of the population experiences rainfall deficits (WeatherNation, 2020). The European Commission has described this drought as the worst that Cuba has experienced in a century, with dams with less than 50% capacity and 75% of the soil significantly dry (Avril, 2017). In addition, the majority of Cuba's beaches are being affected by the rising sea level, which is receding by an average of 1.2 meters per year and is causing the disappearance of several villages (Coastal Care, 2011).

Characteristics of climate displacement

Climate impacts have already caused recurrent population displacements in Cuba:

- **Internal displacement as a result of extreme climate events:** The number of internal displacements due to environmental disasters has severely increased in recent decades. Between 2008 and 2020, approximately 6,601,900 displacements occurred due to environmental disasters in the country iDMC (2021a). There is a lack of information to characterize the displaced population for these kinds of events, although it is known that most of the affected population belongs to coastal communities.
- **Internal displacement as a result of slow onset events:** The sea-level rise represents one of the main direct threats to human safety and settlements in Cuba. The sea-level rise in Cuba could cause the disappearance of more than 14,100 homes in coastal communities, implying the displacement of 41,300 people over the next 30 years (Towel, 2020). On the other hand, by the end of the 90s, an important part of the Cuban population (over a million inhabitants) was already experiencing the effects of drought, especially in urban settlements (Planos et al., 2013). However, there are no studies quantifying the drought's impacts on human mobility in Cuba.
- **Cross-border displacement as a result of extreme climate events:** It wasn't possible to identify Cuban population groups that have been massively displaced internationally after an extreme weather event. It wasn't either possible to identify any case of the international population that has arrived in Cuba for these reasons.
- **Cross-border displacement as a result of slow-onset events:** The main causes for emigration from Cuba are related to political and economic reasons but not directly to environmental reasons (ONEI, 2018). Climate change, however, produces important economic impacts in Cuba, especially in agricultural and tourism activities. Therefore, it is difficult to distinguish between economic and environmental reasons to migrate. It is also important to consider the increasing population that arrives by boat from Haiti to reach Central and North America (MINREX, 2021). While it is impossible to identify the role of climate change in increasing this population flow, attention should be paid to the interaction between political, economic, and environmental conditions in Haiti and their role in human displacement from this country.
- **Planned relocation:** Several relocation programmes for people affected by sea level rise and hurricanes have been organized preventively and reactively. Most of these programmes are temporary, especially during hurricanes and thunderstorms periods, and then inhabitants return to their usual places of residence to rebuild their homes, as was the case of the inhabitants of Rosario Beach. Different programmes of planned relocation have been attempted in Cuba, in some cases with low success due to the resistance of local inhabitants.
- **Trapped populations:** In the framework of this study, it was not possible to identify examples of the trapped population by the effects of climate change in Cuba.

Vulnerable groups

Globally, climate displacement is not affecting populations uniformly. Multiple factors make some groups more vulnerable than others, as is also the case in Cuba.

People who live in poverty are generally more vulnerable to displacement due to a lack of access to resources. Given that several cities receiving internal migrants in Cuba, such as Havana, are also highly vulnerable to the impacts of climate change, the increase in population and urban concentration increases the level of vulnerability (ONEI, 2018). In Cuba, it is important to consider internal migratory phenomena that are not directly related to climate change to better recognize population groups exposed to double mobility risk associated with economic reasons and climate displacement. In addition, given that women affected by climate displacement tend to be a group especially vulnerable to different forms of violence and discrimination, it is particularly important to consider their conditions and rights protection. Other especially vulnerable groups in Cuba are afro-descendant people, whose discrimination and marginalization have until recently been deeply invisible in Cuba, as well as children, adolescents, people with disabilities, and LGBTI persons (HRW, 2020).

Barriers to education in the context of climate change

Sectoral vulnerabilities to climate change and other impacts

One of the biggest impacts of climate change on the education sector in Cuba is the damage to infrastructure after extreme weather conditions. On the other hand, using schools as shelters often leads to the deterioration of classrooms, furniture, equipment, and sanitary facilities. For example, after Hurricane Matthew in 2016, several schools in Guantanamo province, where more than 42,000 homes were destroyed, were used as evacuation centres (López, 2017). A year after, Huracan Irma continued the devastation. About 1.7 million people were evacuated in preparation for the arrival of Hurricane Irma. It also caused the forced interruption of the education of a plethora of Cuban students (IDMC, 2018). Impacts on drinking water services in schools created by these disasters have also created an obstacle to ensuring the availability of educational services. It was not possible to collect systematic information quantifying the effects of these disasters in terms of lost classes and school dropouts. In addition to the destruction of infrastructure, the use of schools as shelters has been a major problem for school disruption in the country.

Climate displacement: 5A analysis on the right to education

→ *Availability:*

Education must be available. Governments must ensure that educational institutions, physical resources, personnel, and programmes are available in sufficient quantity and quality and with the necessary infrastructure and services to function properly for both persons in mobility and host communities.

Access to regular system levels. The main problems of access to the regular education system for the displaced population in Cuba have to do with the destruction of educational infrastructure when disasters occur, as well as the use of this infrastructure as shelters for long periods. This is a major problem for the trapped population or those moving to places where classes are suspended due to the use of schools as shelters. However, Cuba's disaster policy has prioritized the prompt reactivation of educational activities and alternative learning spaces.

Access to alternative modalities. In Cuba, several alternative education programmes could be useful for the displaced population, especially those who, for reasons of displacement, had to suspend their studies, were behind the regular cycle or were over-aged students. For example, the Educa a Tu Hijo programme focuses on the population between 0 and 6 years of age in rural areas (EcuRed, s/f). In addition, Cuba has made important efforts to ensure educational continuity during the COVID-19 pandemic, especially through distance education, particularly using Cuban Television (UNICEF, 2021), given the low level of internet coverage. These may be an important alternative to consider, especially for trapped populations.

Adequacy of facilities, educational materials, and services. As previously mentioned, damage to facilities, educational materials, and water and electricity services is one of the main barriers to education for the population displaced by the climate in Cuba, especially those trapped in regions where schools are used as shelters. In the case of educational materials, Cuba has a policy to protect these materials as part of the disaster risk protection protocols.

Teachers and other educational personnel. The Cuban education system has been affected by a shortage of teachers, with the provinces of Havana, Mayabeque, and Matanzas being the most affected. This crisis is related to the low salaries of teachers, who have searched for jobs in other sectors. The shortage of educational personnel is particularly common in urban and tourist areas, where there are more labour alternatives (EFE, 2018). This problem may increase if the impacts of climate change increase migration to regions with a shortage of teachers. This could occur especially in those regions that are poles of attraction for internal migrants because they offer better job opportunities.

→ *Accessibility*

Education should be freely accessible to all, physically and economically, without any legal discrimination, including migrants, refugees, returnees, asylum seekers, and host communities.

Economic costs. Since education in Cuba is free, economic costs are not a major problem for access to education for the displaced population. However, many additional costs condition the possibility for climate displaced persons to access to it. This includes transportation costs, educational materials, school supplies, and uniforms. Although the Cuban state subsidized these costs and school meals for many years, this contribution has decreased in recent years, so there is a greater likelihood that these costs may represent a barrier for many displaced families (García, 2015; García, 2019).

Legal documentation. In this study's framework, it was impossible to identify barriers related to legal documentation to ensure access to education for the displaced population. However, it is necessary to investigate in more depth the barriers in legal documentation that those groups from Haiti may face who have arrived in Cuba on boats, either temporarily or permanently. In addition, it is important to consider the legal and documentation limitations that a large number of Cuban emigrants in other countries face in accessing education, especially in a context in which it is expected that climatic reasons will increase their role in this migratory phenomenon.

Protection and livelihoods. Lack of financial resources and livelihood deprivation are among the main barriers faced by families affected by climate displacement in Cuba, which can affect their ability to access the formal education system. These conditions of poverty have been aggravated by the economic blockade experienced in recent years and by the COVID-19 pandemic (Ministerio de Educación, 2020). In addition, the suspension of educational services when extreme weather events occur affects many Cuban families since educational institutions are a place of access to services such as food and health care (El Diario Vasco, 2017).

Disaster risk reduction. Cuba has important policies and initiatives to reduce disaster risk in schools, which have stood out internationally for the quality of their implementation and effectiveness (UNICEF, s/f). In the poorest regions, however, there are not always sufficient resources to build school infrastructure resistant to extreme weather events or to immediately repair damaged schools. In addition, given that the educational infrastructure was already damaged and not repaired before extreme weather events in many poor locations, the impacts generated have entailed even greater damage. On the other hand, the increase of these phenomena outside of what was traditionally the official hurricane season in Cuba (from June to November) has made it more difficult for communities to prepare protection for educational infrastructure.

Violence-free spaces. In the case of the displaced population, the level of violence to which they are exposed will depend on where they arrive, and there may even be cases where there is a decrease in violence compared to their communities of origin. In the framework of this study, it was not possible to identify specific risks for the displaced population within educational spaces in Cuba.

Recognition of degrees, titles, and knowledge. It was not possible to identify through the information gathered by this study the existence of specific barriers to the education of the climate-displaced population in Cuba that have to do with the recognition of degrees, titles, and knowledge.

→ *Acceptability*

The form and content of education must be appropriate and coherent to the needs of persons in mobility and host communities, with a relevant curriculum, educational materials, and perspectives that value difference, ethical plurality, and intercultural dialogue.

Language and communication. Given that the increase in transit migrants from Haiti can be expected to be related to the interaction of economic, political, and environmental reasons, it is important to consider the extent to which Cuba is protecting the rights of these non-Spanish-speaking groups.

Curricular frameworks. However, a major barrier in educational content is the low capacity to make curricular adaptations to allow students who have missed classes, as is expected to be the case for a significant portion of those displaced for environmental and climatic reasons, to take advantage of the content taught. On the other hand, Cuba has stood out internationally for its early incorporation of topics related to sustainable development and climate change in its curricula. Environmental displacement, however, is not an issue that has been given priority but is taught as one of several effects of climate change without going into it in depth.

Teaching and learning practices. In this study, it was impossible to identify the existence of teaching and learning practices in Cuba that focus on the specific needs of the migrant population in general but especially of climate-displaced persons.

Care, education, and socio-emotional and psychosocial support. An important barrier to protecting the right to education of the population displaced for environmental reasons is the strong psychosocial damage that these phenomena entail, especially among children and adolescents. In addition, on many opportunities, parents of children affected by the impacts of climate change in Cuba must migrate to the cities or even internationally in search of better opportunities, increasing their psychosocial damage. Psychosocial support to these groups has been widely addressed by existing disaster response policies in Cuba, and there are several institutions dedicated to providing this type of service, as well as experts dedicated to the subject (Ministerio de Educación et al. 2020).

Prevention and risk reduction of xenophobia and violence. An important advantage of the Cuban model for the prevention and reduction of the risk of xenophobia and violence against the population displaced for climatic and environmental reasons has to do with the broad environmental education of the population and awareness of the risks of environmental displacement, especially planned relocation, which leads to greater acceptance and empathy with the affected population. Although it was not possible to identify examples of xenophobia and violence against the climate displaced population in the framework of this study, it is important to consider possible risks for those groups that often suffer discrimination, such as the afro-descendant population, LGBTI groups, and women.

Social, cultural, and gender norms. In recent decades, gender gaps in average years of schooling have decreased in Cuba. In rural areas, however, men tend to have completed the different levels of education to a greater extent than women (Vázquez et al., 2017). Therefore, it is important to consider how existing disparities may disproportionately affect the education of women affected by climate displacement who become trapped or displaced, particularly in rural areas of Cuba.

→ *Adaptability*

There is a suitable environment and institutional capacity in the education sector to respond to the diverse needs of people in mobility and host communities.

Funding. Although Cuba has placed great importance on public education in disaster situations, the country's resources are still limited to meet all the needs of schools to return to operating quickly and safely. Some stakeholders have criticized the fact that during some hurricanes, the government has prioritised protecting and repairing the tourism sector more than education. On the other hand, the economic blockade has profoundly affected Cuba's educational sector through, for example, the decrease in imports of products and raw materials necessary for the school year, such as supplies to produce textbooks and school materials, as well as technology and computers used in schools (Ministerio de Educación, 2020). This situation creates additional financial pressures that may affect the country's ability to respond to the educational needs of those displaced by the climate.

Coordination and operation. In Cuba, different multi-ministerial and multi-institutional coordination spaces address issues related to climate change, migration, and disaster risk reduction. In this study's framework, it is impossible to identify coordination and operational problems that could generate barriers to the education of the climate displaced population in Cuba.

Institutional capabilities. It is impossible to identify in Cuba the existence of significant institutional barriers to responding to the educational needs of the climate displaced population. For example, there is sufficient trained personnel in issues related to this problem in the country. To date, however, there are no officials specifically focused on the right to education of environmentally displaced persons, which could be a barrier to making the specific needs of this population visible and relevant.

Legal and national policy frameworks. It is impossible to identify barriers in the legal and policy frameworks to protect the right to education of the population displaced by climate change. On the contrary, these frameworks justify the importance of protecting the rights of these groups, including their right to education. However, the lack of measures to ensure these rights are protected through concrete actions represents a barrier that could affect the education of displaced groups. Another barrier is the invisibility of many climate displaced people, particularly those who have not been prioritized by planned relocation policies in legal and policy frameworks.

→ *Accountability*

Education must be responsible for transparency, social management, and participation of affected populations. The education system must also be responsible for the actions and public policies taken in response.

Participation. One of the principles of the Cuban educational system is the use of participatory structures through various political and popular organizations in the educational field (Jiménez & Verdecia, 2020), and it is hoped that the population displaced by the climate can maintain the right to participate in educational policy like the rest of the population. On the other hand, risk prevention policies in Cuba include an important participatory component, which promotes community education and training, the relationship between a sense of belonging and community commitment, and the division of responsibilities among all (Castro & Bosque, 2019).

Monitoring and evaluation. There are no mechanisms in the Cuban migration system to systematically quantify the different forms of climate displacement, especially internal displacement caused by slow-onset events. It was possible to identify the belief that internal climate displacement does not exist in Cuba, except in cases of a planned relocation. This belief risks making invisible the role that climate change plays in the economic decisions that lead to migration. On the other hand, the relevance that the Cuban state has given to public and universal education has led to the belief that it is unnecessary to monitor and count students displaced by the climate since there is a tendency to assume that their right to education is assured. Characterizing these students, however, is important to move toward designing policies that address their educational needs more specifically.

Policy response and sectoral interventions

Legal frameworks

There are no explicit international obligations related to the protection of people on the move under any climate change agreement today. There are few references to the education sector and the link between climate displacement and the right to education is not explicitly stated.

Climate impacts in Latin America and the Caribbean have a markedly regional character. Countries in the region agreed on a roadmap for responses to cross-border displacement in the context of climate change and disasters through the 2014 Brazil Declaration and Plan of Action. On the other hand, the Caribbean Migration Consultations were created in 2016 to promote regional dialogue for establishing a Regional Consultative Mechanism to manage mixed migration effectively. One key action is strengthening cooperation for this management through rights-based approaches. Cuba also cooperates with members of the Caribbean Community (CARICOM) on climate change initiatives, including a 2008 declaration calling for an increase in funding to address climate change adaptation. Finally, Cuba is part of the Association of the Caribbean States, which seeks to strengthen and integrate the countries of the Caribbean to create a common economic space, preserve the sea and promote sustainable development.

At the national level, in contrast to the global trend, in Cuba, there is a high level of policy coherence and coordination regarding the connections between human mobility and climate change, especially concerning planned population relocation. Climate change policies include human mobility. However, there is a lower level of integration between the different policy fields relevant to protecting the right to education for climate-displaced persons.

Intervention gaps and best practices at the sectoral level

- **Education sector.** Cuban education policy has no specific measures to address the challenges of displacement caused by climate change and the environmental crisis. However, Cuba has been one of the few Caribbean countries that have taken concrete steps to include people displaced by environmental events in education despite the emergency circumstances. After Hurricane Matthew, for example, the government expressly prioritized getting children, including those displaced, back to school as soon as possible (López, 2017). In addition, Cuba has stood out from other island nations, such as Jamaica and the Dominican Republic, for its success in terms of the quick restart of school activity. For example, after Hurricane Matthew hit, the vast majority of schools still intact were being used as evacuation centres and shelters. However, other infrastructures, such as family shelters and institutional buildings, were used as alternative learning spaces to ensure continuity of learning (López, 2017).
- **Disaster risk management.** Cuba has stood out internationally for offering since the 70s various education programmes to prevent and reduce the effects of natural disasters among the population, improving resilience. For example, the government provides funds through the Ministry of Education for environmental education programmes of Disaster Risk Reduction (DRR) in all primary and secondary schools (Valdés & Miscolta, 2017). The Ministry of Education has also created informal education projects, including the entire community, such as the project Education, Leadership, and Gender for Strengthening Resilience in Children and Adolescents in the Face of Risk, Danger, and Vulnerability in Cuba, created in 2013. This emphasis that Cuba has given to educational programmes in DRR has meant that, despite frequent hurricanes and floods, the number of deaths has been minimal and the number of people affected tends to be much lower compared to other countries in the region. However, this policy makes little reference to how to protect the right to education of those who are displaced in these contexts.
- **Climate change.** Tarea Vida, the main policy to address the impacts of climate change in the country, does not explicitly mention the right to education for the population displaced by climate change. On the other hand, Cuba is among the 25 countries that have included human mobility in some form in their NDC (Nationally Determined Contribution) (SLYCAN Trust, 2021). In particular, Cuba refers to the State Plan to Address Climate Change 2017, which includes relocating human settlements in low coastal areas as one of its tasks. However, in its NDC, Cuba does not mention other forms of climate displacement.
- **Migration policy.** Cuba's migration policy does not mention climate change, and it is impossible to identify measures that would help directly to protect the right to education of the displaced population for reasons related to climate change. However, Cuba is an exception among the countries of the Americas as it is the only State that considers natural disasters as a reason for recognizing refugee status in its national legislation.

Conclusions and recommendations

Cuba has been a country highly affected by the impacts of climate change, including an increase in human displacement, especially internal displacement. The country, however, has also stood out internationally for implementing risk reduction policies that have reduced the population's vulnerability to displacement. The priority given by Cuban policy to resume and protect educational services in the event of disasters has served to protect the right to education of the displaced population. In addition, between the search for alternative learning spaces, the replacement of lost materials, and community participation, Cuba offers important examples of how national and local governments can work together to ensure that displaced persons keep their right to education. However, there is no explicit policy to protect the internally displaced population's right to education in the medium term. On the other hand, the Cuban case set an example of the importance of considering human displacement as a part of climate change adaptation strategies and not only as a response and a problem.

Based on the results of this study, the following recommendations are made to protect the right to education of the climate-displaced population in Cuba:

Recommendation 1. To make climate displacement visible as a relevant policy issue.

While planned relocation of the population affected by sea level rise is a priority policy in Cuba, climate displacement in general, including its complex relationships with the economic reasons for migrating to, from, and within Cuba, has not been sufficiently visible or prioritized in the country's political agenda. While Cuba's general education policy, based on the provision of free education for all, protects the displaced population in general, it is essential to have measures that focus on these groups to better understand their specific conditions and needs. A fundamental step in advancing towards the development of policies that protect the right to education of this population is to make the problem more visible. To this end, the high level of displacement that occurs every year due to sudden disasters and the negative impact of climate change on the livelihoods of Cuba's population should be highlighted. Climatic and environmental reasons generate significant pressure on human displacement, often understood as being driven by purely economic reasons, hiding the role played by environmental and climatic factors. Having professionals in charge of relating climate displacement to the right to education may be a relevant measure to advance this visibility in Cuba.

Recommendation 2. Improve the knowledge about internal migration.

An important gap in the information available to understand the social and educational impacts of climate displacement in Cuba is the lack of data on internal migration, especially at the interprovincial and inter-municipal levels. Linking data about internal migration with regional educational statistics, such as enrollment and dropout levels, can help better understand how internal migration patterns

affect the educational system. Having updated data that make climate-displaced people visible can help to better plan for the educational needs of this population, which is expected to increase in the coming years. In addition, it would make it possible to monitor the population's educational trajectories and possible interruptions due to displacement.

Recommendation 3. Understand and address the educational needs of the permanent shelter population.

Given that, in some cases, temporary shelters that host the internally displaced population in Cuba after extreme weather events become permanent, as demonstrated by the temporary relocation of the inhabitants of Playa Rosario (Batista, 2017), it is important to better understand the special educational needs of this population. In addition, given the high risk that fast-onset events will increase internal displacement in Cuba in the next years, it is important to have measures to improve the education system's capacity to adapt to rapid changes in the geographic distribution of students. The government should move forward, for example, in generating measures to make curricular frameworks more flexible to be able to respond quickly to the demands of students in mobility situations so that students who may miss classes after a disaster can take advantage of the contents taught in the educational institutions where they arrive.

Recommendation 4. Decrease barriers to education for the relocated population.

In the case of the population that is part of the relocation programmes, it is important for the Cuban government to continue to ensure appropriate access to education in the new places of residence and to implement preventive measures to eliminate economic barriers that may occur, especially given a possible decrease in economic opportunities for families in the new places of residence.

Recommendation 5. Emphasize the right to education of the Haitian population displaced by the climate and environmental crisis.

Given the increasing number of precarious boats arriving in Cuba from Haiti with migrants in transit seeking to reach North America, it is important to generate specific measures to protect the right to education of these groups, which could increase in the coming years. Language barriers can be a major impediment to Cuba's climate-displaced Haitian population's access to education. Therefore, it is important to generate measures to ensure a bilingual educational offer is adapted to the needs of these groups.

Recommendation 6. Improve statistics on international migration to find out if environmental reasons play a role in the Cuban exodus.

Although various academic and government publications and studies analyze the international migration phenomenon, they do not refer to environmental and climatic reasons as important factors for migrating from Cuba. Given the multi-causality that characterizes the migration phenomenon, it is important to move forward with more detailed analyses of the role of environmental reasons in this emigration and also to understand how the right to education of those who leave Cuba has been affected in the new countries of residence.

Recommendation 7. Generate specific measures to discourage migration to vulnerable areas.

In Cuba, groups of the population are vulnerable to a double displacement process associated with economic and climatic reasons respectively. Therefore, it is important to identify the population flows that move to risky areas because they offer better economic opportunities, for example, by facilitating fishing activities, to generate specific measures to discourage these movements and generate alternative sources of labour in safe regions. Given the relevance of women in this type of displacement, the government must generate training and education measures adapted to women's needs and job possibilities.

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Annex C

Dominican Republic Case Study

The impact of climate displacement on the right to education in the Dominican Republic

Executive Summary

UNESCO launched a global initiative in early 2020 to investigate existing barriers to the right to education in the context of climate displacement and to improve member states' preparation to ensure the inclusion of all displaced persons in quality education. The project includes country case studies in priority regions, including Latin America and the Caribbean. **For the Dominican Republic case study, the fundamental study question was: to what extent does climate change, in particular climate displacement, threaten the right to education, and how to overcome existing barriers?**

Through the 5A analysis, which focuses on the core dimensions of the right to education (availability, accessibility, acceptability, adaptability, and accountability) and key areas of response, the analysis revealed that barriers to the right to education in the context of climate displacement are multifaceted, and intrinsically linked to issues related to poverty, conditions of people on the move, as well as increased exposure based on the geographic specificities of the country.

The case study focuses on the impact of recent major hurricanes, such as Irma (2017), and their aftermath. However, it also includes essential aspects of slow onset (generally gradual and longer-term) climate change impacts, such as drought and sea level rise. After presenting the context of climate displacement in the Dominican Republic and the profile of vulnerable populations, the report details the barriers to the right to education, followed by an analysis of policy and sectoral responses.

Climate change and displacement in the Dominican Republic

Climate change impacts summary

With over 1200 km of coastline, the Dominican Republic, like many other Caribbean nations, is highly exposed to the risk of hurricanes and storms. In addition, the Dominican Republic is located in the North Atlantic hurricane corridor, so these events are frequent. The intensity of hurricanes and storms that have affected the country has been increasing as part of the impacts of climate change. The 2017 Hurricane Irma and the 2016 floods are among the strongest storms.

On the other hand, the driest regions of the Dominican Republic, concentrated in the northwest of the country, are increasingly prone to drought, which has increased due to the intensification of the El Niño phenomenon. In addition, the Dominican Republic faces multiple impacts associated with sea level rises, such as coastal erosion, flooding, salinization, and consequent water scarcity.

Characteristics of climate displacement

Climate impacts have already caused recurrent population displacements in the Dominican Republic:

- **Internal displacement as a result of extreme weather events:** Among the major climatic disasters that have generated internal displacement since the 1990s is Hurricane Georges (865,000 Dominicans displaced and 400,000 homeless) (ReliefWeb, 1998). Mass displacements occurred in 2017 (67,879) following the passage of hurricanes Maria and Irma in 2016 (21,000) (Davies, 2016).
- **Internal displacement as a result of slow onset events:** Rising sea levels represent one of the main threats of internal displacement in the Dominican Republic. Approximately 100,000 inhabitants live less than 0.5 meters above sea level and face a high risk of displacement (Strauss & Kulp, 2018). Drought is another important source of displacement. Between 1966 and 2000, drought most frequently affected the country's northwestern part (OIM, 2016b).
- **Cross-border displacement as a result of extreme weather events:** There have been no large migratory movements out of the Dominican Republic due to climatic disasters. However, there is a significant risk of international displacement from Haiti to the Dominican Republic as a result of climate change and the environmental crisis.
- **Cross-border displacement as a result of slow onset events:** The impact of these events on the livelihoods of an important part of the Dominican population could play a key role in the reasons, perceived as purely economic, that lead to this migration. In addition, it is highly likely that the environmental crisis in Haiti, where problems such as lack of drinking water, deforestation, land degradation, and disasters caused by extreme weather events, are interrelated with the current economic and political crisis, playing an important role in the increasing number of emigrants from this country (OBMICA, 2020).
- **Planned relocation:** Other examples of internal displacement in the Dominican Republic have occurred through the planned relocation of communities. This was the case of Boca de Cachón, a town affected by the expansion of Lake Enriquillo and La Barquita, an irregular settlement located on the slopes of the Ozama River in the city of Santo Domingo. These examples have been made after disasters have occurred. However, preventive relocation measures have been scarce (OIM, 2016b).
- **Trapped populations:** Trapped populations in the Dominican Republic are among the poorest groups in the country. Given this situation of poverty, these population groups do not have the necessary resources to leave their places of residence despite the occurrence of disasters (IOM, 2016). Although there are no studies to quantify and characterize the trapped populations in the country, it is expected, given the vulnerability of a significant part of the Dominican population, that the situation of trapped populations is common not only in the event of disasters but also in areas affected by slow onset climatic events.

Vulnerable groups

Globally, climate displacement is not affecting populations uniformly. People living in poverty are generally more vulnerable to the impacts of climate change, including displacement. Several of the Dominican Republic's major cities are located in coastal areas exposed to hurricanes and floods. The growing concentration of the Dominican population in urban areas may increase the risks of further displacement (Ministerio de Medio Ambiente y Recursos Naturales et al., 2013). Urban marginality has increased vulnerability to extreme weather events in Dominican cities, especially in informal settlements.

On the other hand, given the poverty faced by many Haitian migrants in the Dominican Republic, they represent one of the main vulnerable groups. This vulnerability is also related to existing forms of discrimination in the Dominican Republic against Haitian migrants and Dominicans of Haitian descent, which is also associated with existing forms of racism (CIDH, 2015). Children represent another particularly vulnerable group given their specific developmental needs. Given that women affected by climate displacement tend to be vulnerable to different forms of violence and discrimination, considering their conditions and protection of rights is especially important, as well as the population with disabilities and LGBTI groups (CNDH, 2018).

Barriers to education in the context of climate change

Sectoral vulnerabilities to climate change and other impacts

One of the biggest impacts of climate change on the education sector in the Dominican Republic is the damage to the infrastructure following extreme weather conditions. On the other hand, using schools as shelters often leads to the deterioration of classrooms, furniture, equipment, and sanitary facilities. For example, after Hurricane Matthew (2016), 45 schools were affected (Ministerio de Educación, 2015); after Noel (2007), about 50 thousand students were affected, 12 schools were destroyed, and 174 were partially destroyed (PNUD, 2009). In addition, the use of schools as shelters has been widely documented as a major problem for school disruption in the Dominican Republic.

Climate displacement: 5A analysis on the right to education

→ *Availability:*

Education must be available. Governments must ensure that educational institutions, physical resources, personnel, and programmes are available in sufficient quantity and quality and with the necessary infrastructure and services to function properly for both persons in mobility and host communities.

Access to regular system levels. The main problems of access to the regular education system for the displaced population in the Dominican Republic have to do with the destruction of educational infrastructure when disasters occur, as well as the use of this infrastructure as shelters for long periods. In the longer term, access limits can be a barrier to education for displaced populations in specific regions within the country with limited educational offerings, especially in rural areas (UNICEF, 2017).

Access to alternative modalities. In the Dominican Republic, several alternative education programmes could be useful for the displaced population, especially those who, for reasons of displacement, had to suspend their studies, were behind the regular cycle or were over-aged students. Among the most important programmes are the Accelerated High School, Educación para el Trabajo and PREPARA. Distance learning modalities can be an opportunity for certain groups without access to the regular modality because the infrastructure is damaged or used as a shelter. Given that many rural areas are among the most vulnerable to the impacts of climate change, including environmental displacement, there are high risks that trapped populations will have greater difficulty accessing distance education through digital means.

Adequacy of facilities, educational materials, and services. As previously mentioned, damage to facilities, educational materials, and water and electricity services is one of the main barriers to education for the population displaced by the climate in the Dominican Republic, especially those trapped in regions where schools are used as shelters. In the case of educational material, this problem is exacerbated by the lack of specific policies to protect this type of material during disasters.

Teachers and other educational personnel. The shortage of teachers is a problem that significantly affects certain rural areas of the Dominican Republic and has been exacerbated by the COVID-19 pandemic (de Jesús, 2020). In some regions of the country, teachers must teach several levels simultaneously, a situation that may worsen with the unexpected arrival of displaced populations. In many cases, teachers teaching in rural schools must travel for hours from their homes to the schools. This problem may increase after disasters related to extreme weather events, such as disabling roads and access routes. On the other hand, several interviewees mentioned the problem of the low quality of educational personnel, especially in rural areas, as a barrier to providing quality education to the displaced population.

→ *Accessibility*

Education should be freely accessible to all, physically and economically, without any legal discrimination, including migrants, refugees, returnees, asylum seekers, and host communities.

Economic costs. In the Dominican Republic, the State offers pre-university education free of charge. However, many additional costs condition the possibility for the most vulnerable population, such as climate displaced persons, to have access to it. This includes transportation costs, educational materials, school supplies, and uniforms. While the Ministry of Education tries to offset some of these costs through a School Bonus, it tends to be unable to cover all students in need.

Legal documentation. In the Dominican Republic, legal documentation barriers often affect the Haitian population's ability to access the educational system. This problem could be replicated or even exacerbated among Haitians displaced by the climate, especially those who enter the country irregularly. Lack of access to legal documentation has also impacted Dominicans of Haitian descent, who have seen their access and progress in the educational system affected by discriminatory policies and the arbitrary application of laws (Georgetown Law, 2014).

Protection and livelihoods. The Dominican Republic has a high dropout rate, especially due to the lack of economic resources for purchasing school supplies, workbooks, uniforms, transportation, etc. (Manning, 2014). Students from economically disadvantaged families are often tempted to drop out of school to enter the labour market (UNICEF, 2017). This situation becomes even more complex among the displaced population, given that displacement is often accompanied by worsening economic conditions. Extreme poverty affects the climate-displaced population; Dominican families prioritize access to food and health, not education. On the other hand, planned relocation programmes that have been carried out in the Dominican Republic have not always represented a successful adaptation strategy, but in some cases have also exposed the population to other vulnerabilities, affecting their livelihoods and, therefore, their ability to access education (OIM, 2016b).

Disaster risk reduction. There are still many schools built with materials incapable of withstanding extreme weather events, located on inadequate land, with structural failures that have not been resolved, or that have already been affected by the effects of storms, hurricanes, and earthquakes. Serious deficiencies in the sanitary conditions of many schools and access to drinking water pose health risks to students. This is a particularly serious problem for the trapped population wishing to resume classes and the displaced population attending new schools in at-risk areas. On the other hand, although education on disaster risks, including education on adaptation and mitigation measures for climate change impacts has improved, it is still deficient, with few trained teachers and many students who need to improve their training on the subject.

Violence-free spaces. It was not possible in this study to identify specific risks of violence for the displaced population within educational spaces. However, it was possible to identify that one type of displacement that can increase the risk of violence in the community is the one from rural areas to marginal areas within the cities, which is common in the Dominican Republic.

Recognition of degrees, titles, and knowledge: It was not possible to identify through the information gathered by this study the existence of specific barriers to the education of the climate-displaced population in the Dominican Republic that have to do with the recognition of degrees, titles, and knowledge.

→ *Acceptability*

The form and content of education must be appropriate and coherent to the needs of persons in mobility and host communities, with a relevant curriculum, educational materials, and perspectives that value difference, ethical plurality, and intercultural dialogue.

Language and communication. Since there is no government policy to provide classes in Creole or French, there is, therefore, the possibility that many Haitian children who do not speak Spanish will face barriers to integration into the educational system.

Curricular frameworks. A major barrier in terms of educational content is the low capacity to make curricular adaptations for students who have missed classes. On the other hand, progress has been made in incorporating topics related to sustainable development and climate change in the curricula, especially since 2012 with the implementation of the National Strategy to Strengthen Human Resources and Skills to Promote Green, Low Emission, and Climate Resilient Development. However, environmental displacement is not an issue that has been given priority but is taught as one of several effects of climate change.

Teaching and learning practices. The main barrier identified in terms of teaching and learning practices is that there are no learning methods and techniques in the Dominican Republic that focus on the specific needs of the migrant population in general, especially those displaced by the impacts of climate change. This is an issue for which teachers have not been trained, and the strategies that should be employed to serve this population have not been analyzed.

Caregiving, socioemotional education, and psychosocial support. Another important barrier to acceptability is the impact that environmental displacement causes on students' mental health. On the other hand, there are a significant number of people in the Dominican Republic who have had to experience the difficult conditions of the migration project to the United States (OIM & INM, 2017). The experience of those who are victims of trafficking, which in the Dominican Republic has particularly affected women and children, must be added to this (OIM & INM, 2017). Psychosocial support for these groups has been one of the most addressed issues by initiatives carried out by civil society organizations to support this population. However, this type of initiative arises as a response to crises, and psychosocial support to the population displaced by events related to climate change does not exist as a permanent component in educational policy or the educational curriculum.

Prevention and risk reduction of xenophobia and violence. One of the main risks of violence in the Dominican Republic against the displaced population in the new communities of arrival and the new educational spaces is the historical racism that affects the Haitian black population, Dominicans of Haitian descent, and Afro-Dominicans (Martínez & Wooding, 2017). These groups are particularly vulnerable to displacement, so special attention should be paid to the risk of violence and discrimination in educational spaces. This risk may also imply a lack of motivation for these displaced population groups to send their children to school. On the other hand, international migrants and their families often suffer stigmatization, including the collective of Dominicans reported. Therefore, there is a risk of discrimination and violence that climate displaced people may suffer, especially if these groups are not recognized as victims of climate change but as economic migrants.

Social, cultural, and gender norms. In the Dominican Republic, increasing levels of physical, emotional, and sexual violence against women have been reported in the country (CEG-INTEC, 2018). Therefore, there are high risks that these cultural norms may affect the ability of climate-displaced girls and women to be educated. In addition to the risk of physical violence, women and girls often find themselves without adequate health equipment in emergencies, which poses an additional difficulty. This makes the need to strengthen the educational content with a gender perspective and a focus on the vulnerabilities of the displaced population especially important for the Dominican Republic.

→ *Adaptability*

There is a suitable environment and institutional capacity in the education sector to respond to the diverse needs of people in mobility and host communities.

Funding. According to all interviews conducted in this study, lack of funding should not be an issue in protecting the education of the climate-displaced population in the Dominican Republic, especially with the increase in public spending on pre-university education established in 2013 (Educa, 2016). However, according to some interviewees, the emphasis given to investment in educational infrastructure and human resources could indicate that there is not enough political will to prioritize a greater proportion of spending on programmes to support specific groups within the vulnerable population, such as the climate-displaced population. However, the increase in the budget for the education sector, in the context of the continued growth of the Dominican economy, represents an opportunity for developing policies that protect the education of the population displaced by climate change.

Coordination and operation. Since 2010, different multi-ministerial and multi-institutional coordination spaces have been created in the Dominican Republic to address issues related to climate change, migration, and disaster risk reduction. However, environmental displacement has not been addressed by these bodies.

Institutional capabilities. A barrier identified in terms of institutional capacities to respond to the educational needs of the population displaced by climate change is the lack of personnel trained in this subject within the Ministry of Education who can understand the specific needs of this population, as well as the lack of officials with sufficient time available to dedicate to a subject that has not been prioritized by the ministerial policy.

Legal and national policy frameworks. It is impossible to identify barriers in the legal and policy frameworks to protect the right to education of the population displaced by climate change. On the contrary, existing legal frameworks justify the importance of protecting the fundamental rights of these groups, including their right to education. However, the lack of enforcement of these frameworks and measures to ensure that these rights are protected through concrete actions have been identified as barriers that could affect the education of climate displaced people.

→ *Accountability*

Education must be responsible for transparency, social management, and participation of affected populations. The education system must also be held accountable for the actions and public policies taken in response.

Participation. There are no formal mechanisms in the Dominican Republic to generate the participation of the displaced and their families in designing and evaluating educational policies.

In addition, given their vulnerable condition and, in many cases, their irregular migration status, it is difficult for these groups to access existing participation spaces, such as consultation roundtables.

Monitoring and evaluation. There are no mechanisms in the migration system to systematically quantify climate displacement, especially internal displacement. In addition, there are no mechanisms to systematically know how environmental and climate displacement has affected education, including, for example, how much learning time these groups have lost. There are also no characterizations of this population to better understand their educational needs.

Policy response and sectoral interventions

Legal frameworks

There are no explicit international obligations related to the protection of people on the move under any climate change agreement as of today. There are few references to the education sector and the link between climate displacement and the right to education is not explicitly stated.

Climate impacts in Latin America and the Caribbean have a markedly regional character. Countries in the region agreed on a roadmap for responses to cross-border displacement in the context of climate change and disasters through the 2014 Brazil Declaration and Plan of Action. SICA countries have implemented several initiatives, projects, and agreements on regional migration issues. The “Alternativas» project is particularly important to prevent irregular migration between member countries. The Regional Conference on Migration, or Puebla Process, was established in 1996 to promote regional cooperation on migration within the region’s economic and social development framework. The Regional Disaster Reduction Plan (PRRD), created in 1999, establishes the mechanisms for joint action for risk prevention, disaster mitigation, mutual assistance, and humanitarian aid. On the other hand, several agreements with other countries in the region are important in migratory matters, such as eliminating the migratory visa between El Salvador, Guatemala, Honduras, and the Dominican Republic in 2017. The Dominican Republic also has an agreement with Haiti, Cuba, and Spain on migration management, among several other countries.

At the national level, there is a lack of policy coherence and coordination in the Dominican Republic regarding the linkages between human mobility and climate change. Some climate change policies include human mobility, while the corresponding human mobility policies do not include climate change.

Intervention gaps and best practices at the sectoral level

- **Education sector.** In the Dominican Republic’s education policy, it is impossible to find any explicit mention of climate displacement or initiatives that seek to protect the right to education of the population displaced by climate change. Climate displacement has also not been an important topic included in the curricular content of the National Strategy to Strengthen Human Resources and Skills for Moving Towards Green, Low Emission, and Climate Resilient Development (Presidencia de la República Dominicana, 2012). However, climate displacement is likely to be mentioned to students in the regular system as one of the effects of climate change.

- **Disaster risk management.** Disaster risk prevention policy in the Dominican Republic has expanded education on climate change and its impacts, as well as on disaster prevention and response measures as mitigation strategies (Ministerio de Educación, 2015). The Ministry of Education is part of the National Council for Disaster Prevention, Mitigation and Response and the National Technical Committee for Risk Prevention and Mitigation. However, their participation is limited to the incorporation of educational content. In addition, the Ministry of Education has incorporated new protocols and tools for risk management in educational institutions. This policy explicitly mentions education as one of the fundamental rights that must be protected in the face of disaster risk by reestablishing the teaching process as soon as possible. However, there is no mention of education for displaced populations.
- **Climate change.** The Dominican Republic's national policy on climate change refers to the importance of improving public education on environmental issues, including climate change, as a strategy for disaster risk reduction and adaptation (Ministerio de Medio Ambiente, 2015). However, this policy does not refer to the problems related to displacement generated by climate change. In addition, there are no concrete initiatives that seek to protect the right to education of the displaced population as part of the policy to address the impacts of climate change in the country.
- **Migration policy.** The Dominican Republic's migration policy does not mention climate change; therefore, it is impossible to identify measures that would help to explicitly protect the education of the population displaced by climate change.

Conclusions and recommendations

In the case of the Dominican Republic, a country highly affected by climate displacement, a significant proportion of the population has been internally displaced due to fast onset weather events, such as hurricanes and floods, as well as the drought that has mainly affected the country's rural and indigenous inhabitants. Hurricanes and floods have tended to generate higher levels of internal displacement as a short-term response to the destruction generated. On the other hand, it is important to consider the impact of climate change in Haiti, often combined with economic and political phenomena, has played in increasing emigration to the Dominican Republic. The Dominican Republic case study revealed that the barriers to the right to education in the context of climate displacement are multifaceted and place children and adolescents, Afro-descendant populations, the poor, and women in conditions of special vulnerability.

The increase in climate displacement, related to both fast-onset extreme weather phenomena and slow-onset weather changes, requires urgent and effective action to protect the right to education. The following recommendations are addressed to national policy-makers:

Recommendation 1. To make climate displacement visible as a relevant policy issue.

A fundamental step in moving towards the development of policies that protect the right to education of the climate-displaced population is to make the problem more visible. To this end, the high level of displacement that occurs every year due to sudden disasters, as well as the negative impact of climate change on the livelihoods of the population of the Dominican Republic, should be highlighted. Weather and environmental reasons generate significant pressure on human displacement that is often understood as being driven by purely economic reasons, thereby hiding the role played by environmental and climatic factors.

Recommendation 2. Emphasize the right to education as an explicit objective within the policy to mitigate the effects of climate change.

Emphasizing education as a central objective of climate and migration policies, and designing concrete measures, is an important step to protect the education of displaced people. Using existing organizational structures that link education to climate change can serve as an entry point to generate more concrete measures to protect this right. For example, the role that the Ministry of Education plays in the National Council for Disaster Prevention, Mitigation, and Response and the National Technical Committee for Risk Prevention and Mitigation can be strengthened by including the role of protecting the right to education of the displaced population in the event of disasters.

Recommendation 3. Adapt existing alternative education programmes to the needs of climate displaced persons.

Taking advantage of existing alternative education programmes, such as the Accelerated High School, Educación para el Trabajo, and PREPARA, as well as forms of remote and hybrid education that have been developed, especially since the experience of the COVID-19 pandemic, and adapting them to the needs of the displaced population, internally and internationally, can be a useful strategy to promote their rapid re-entry or inclusion into the educational system.

Recommendation 4. Emphasize the right to education of the Haitian population displaced by the climate and environmental crisis.

It is important to generate measures to ensure a bilingual educational offer is adapted to the needs of these groups. Special attention should be paid to the Haitian population or those of Haitian descent living in the Dominican Republic, as this group is particularly vulnerable to losing access to the educational system in the event of internal displacement. It is important to move towards exceptional measures that will allow all students of Haitian descent to access the levels of the educational system and take the mandatory national exams without the need to have identity cards or to be registered in the national electronic database.

Recommendation 5. Prioritize the use of alternative infrastructure when disasters occur.

While the use of schools as disaster shelters has been important to help affected families, it has also limited access to educational services for students, not only because the infrastructure is not available but also because they are often damaged and require significant investments to be restored after being used as shelters. Therefore, planning disaster response measures by seeking alternative infrastructures is essential to prioritize the right to education of the affected population.

Recommendation 6. Moving from transitory and discretionary measures to permanent policies.

Several measures to protect the education of climate-displaced populations take place temporarily after crises occur. Examples include psychosocial support from international organizations and policies to support Haitian students after the 2010 earthquake. Given the importance of these practices in promoting the education of the affected population, it is important to move towards permanent policies that include this type of measure, for example, hiring experts on the subject in all regions marked by high risks of climate displacement.

Recommendation 7. Filling key information gaps.

It is necessary to generate data to quantify the role of climatic and environmental reasons in internal and international migration to better understand the specific needs of climate displaced persons and to quantify the total loss of classes caused by the use of schools as shelters. Generating case studies to learn more about how climate displacement has affected access to education among the relocated population, such as Boca de Cachón, could be an important measure to generate more knowledge for policy design.

Recommendation 8. Improve education on environmental and climate displacement.

Although there has been significant progress in the Dominican Republic to improve education about climate change and its effects, the causes and implications of climate displacement are not explored in depth. Generating more education on climate displacement is an important step to dignify displaced persons. To this end, it is important to emphasise this issue in the National Strategy to Strengthen Human Resources and Skills to Promote Green, Low Emission, and Climate Resilient Development.

Recommendation 9. Improve institutional and coordination capacities and participatory mechanisms.

The Dominican Republic has taken important steps to improve the capacities of public institutions on issues related to climate change, disaster management, and migration. However, there are no instances that relate these issues to protecting the right to education of the displaced population. It is important to advance in building the capacity so that institutions better understand the educational needs of this population. Existing inter-institutional coordination spaces can be used as a starting point. In addition, it is essential to move towards designing policies incorporating participatory mechanisms so that these populations can be more directly involved in defining priorities and initiatives.

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Annex D

Guatemala Case Study

The impact of climate displacement on the right to education in Guatemala

Executive Summary

UNESCO launched a global initiative in early 2020 to investigate existing barriers to the right to education in the context of climate displacement to improve member states' preparation to ensure the inclusion of all displaced persons in quality education. The project includes country case studies in priority regions, including Latin America and the Caribbean. **For the Guatemala case study, the fundamental study question was: to what extent does climate change, in particular climate displacement, threaten the right to education, and how to overcome existing barriers?**

Through the 5A analysis, which focuses on the core dimensions of the right to education (availability, accessibility, acceptability, adaptability, and accountability) and key areas of response, the analysis revealed that barriers to the right to education in the context of climate displacement are multifaceted, and intrinsically linked to issues related to poverty, conditions of people on the move, as well as increased exposure based on the geographic specificities of the country.

The case study focuses on the impact of recent major hurricanes such as Eta and Iota (2020) and their aftermath. However, it also includes essential aspects of slow-onset (generally gradual and longer-term) climate change impacts, such as drought and sea level rise. After presenting the context of climate displacement in Guatemala and the profile of vulnerable populations, the report details the barriers to the right to education, followed by an analysis of policy and sectoral responses.

Climate change and displacement in Guatemala

Climate change impacts summary

Guatemala faces great threats of disasters caused by the increase in the intensity of storms and hurricanes. In 1999, Hurricane Mitch killed more than 9,000 people in Guatemala, leaving millions homeless and jobless (ReliefWeb, 1999). Although these types of hurricanes were rare before the turn of the century, rising sea and air temperatures in the Caribbean have increased the severity of hurricanes. In 2020 there was a record hurricane season in the Atlantic, with two consecutive ones, Eta and Iota, generating devastating effects for Guatemala. The increase in the severity of the rains is also causing more destructive landslides, which was demonstrated after the landslide caused by Hurricane Eta, in which the entire slope of a mountain collapsed, burying 150 houses in the town of Quejá (Deutsche Welle, 2020).

Guatemala is already experiencing a severe drought, particularly in the «dry corridor», which is characterized by extreme scarcity of water for drinking and agriculture. The dry corridor has experienced up to 40 percent less rain than normal, interspersed with years of heavy rains that wipe out crops (Gustin, 2019). Another effect of climate change in Guatemala is the rising sea level, which threatens coastal towns with flooding and beach erosion. In addition, the few remaining water resources in Guatemala are at risk due to saltwater intrusion. (USAID, 2017a).

Characteristics of climate displacement

Climate impacts have already caused recurrent population displacements in Guatemala:

- **Internal displacement as a result of extreme weather events:** Climate-related and fast-onset disasters, such as hurricanes and floods, have generated massive displacements in Guatemala's inland areas. The displaced population is often housed in emergency shelters nearby or in the same regions where disasters occur for months. Hurricanes Agatha (2010), Eta, and Iota are the events that have generated the largest mass displacements since 2008, with more than 110 thousand displacements generated by each of them (iDMC, 2021). During this period, floods and extreme temperatures have caused constant displacements in years without major hurricanes, totalling more than 200,000 displacements (iDMC, 2021).
- **Internal displacement as a result of slow onset events:** The main slow-onset event creating environmental displacement in Guatemala is drought. In drought-affected regions, migration represents a coping strategy for food and economic crises. The drought mainly affects populations engaged in subsistence agriculture (Sivisaca et al., 2015). In Guatemala, internal migration is oriented towards the north in search of access to land for crops and towards the department of Guatemala (the capital) in search of better employment and/or educational opportunities. (ACH, 2019).
- **Cross-border displacement as a result of extreme climate events:** The first mass exodus of migrants from Guatemala to the United States as a result of an extreme weather event occurred in October 1998 after Hurricane Mitch, which destroyed 60,000 homes and affected 49,795 people, a situation that was repeated in 2005 after Hurricane Stan destroyed 38,058 homes and affected 495,900 people (SIINSAN, 2018). More recently, several Guatemalans migrated to the United States after the passage of Eta and Iota, which left more than 200,000 families in Guatemala in a situation of food vulnerability (Morales, 2021). However, there have been no large migratory movements from other countries to Guatemala following extreme weather events. After the passage of Eta and Iota, it was possible to observe that some families from Honduras decided to settle in Guatemala because they had lost their farmland.
- **Cross-border displacement as a result of slow onset events:** Migration to the United States from Guatemala has increased in recent years for complex reasons, including poverty, unemployment, and violence. The increase in migration also matches the drought that began in 2014. Given the impacts of the drought on the agricultural sector, many families have taken the risk of migrating to avoid the worst consequences of food insecurity. Emigration from Guatemala is increasing particularly rapidly in rural areas, where a growing proportion of the population faces the combined consequences of joblessness, poverty, food insecurity, and malnutrition. (Rodríguez, 2021).
- **Planned relocation.** Although the importance of planned relocation of communities has been recognized as an adaptation measure to protect populations with high levels of exposure to disaster risks associated with climate change, it is impossible to identify the implementation of this type of relocation project to date (SGCCC, 2019). The lack of policies for resettlement communities at lower risk of climate impacts has meant that many displaced communities

return to their places of origin after disasters have occurred, reproducing the risk of new displacements and human losses.

- **Trapped populations:** Many times after disasters associated with extreme weather conditions, populations have been trapped, as in the Quejá Village, affected by a landslide generated by tropical depression Eta in 2020. The inhabitants had been trapped for ten days before the event occurred because the rains had flooded the access road, which made subsequent rescue efforts difficult. On the other hand, many food insecure families in the dry corridor usually do not have the resources to finance the migration project, so they tend to get stuck in drought-affected regions. (ACH, 2019).

Vulnerable groups

Globally, climate displacement is not affecting populations uniformly. Multiple factors make some groups more vulnerable than others, as is also the case in Guatemala.

People living in poverty, typically rural and indigenous populations in Guatemala, are generally more vulnerable to climate change impacts, including displacement, due to a lack of access to resources. While many people migrate to urban areas in search of better economic opportunities, vulnerable groups living in urban areas often find themselves in neighbourhoods with poor sanitation, in homes with poor infrastructure, and are particularly prone to flooding and landslides due to inadequate location and construction (UNICEF, 2012). On the other hand, children represent a particularly vulnerable group in cases of climate displacement, given their specific development needs. In addition, their vulnerability has increased in recent years, given the previously unheard of increase in the number of Guatemalan children, accompanied and unaccompanied, undertaking the migration project to Mexico and the United States (Cruceta, 2016). Women affected by climate displacement tend to be a group especially vulnerable to different forms of violence and discrimination. In households in the dry corridor, those that experience a stronger food deterioration have a higher migration of women. Other particularly vulnerable groups in Guatemala include groups of migrants in transit moving through Guatemala to cross the Mexican border, irregular migrants, and people who have suffered internal displacement in the past (CIDH, 2019). These are communities with low access to resources and exposed to violence, discrimination, and violation of rights. Other particularly vulnerable groups are those with disabilities and LGBTI persons. (CIDH, 2015).

Barriers to education in the context of climate change

Sectoral vulnerabilities to climate change and other impacts

One of the biggest impacts of climate change on the education sector in Guatemala is damage to infrastructure following fast-onset events, particularly hurricanes, floods, and landslides. For example, after the passage of hurricanes Eta and Iota in 2020, the public education sector reported damage to 435 educational buildings, representing 2.07% of the total buildings (CEPAL, 2021). On the other hand, using schools as shelters often leads to the deterioration of classrooms, furniture, equipment, and sanitary facilities. In addition, the common abandonment, especially temporary, of educational centres after hurricanes in Guatemala also increases the risk of severe damage to infrastructure. Floods and storms also damage textbooks and learning materials. For example, a school in Campur, Alta Verapaz, was one

of the first in Guatemala to receive textbooks from the Cooperation for Education (CoED) starting in 1999 and every year, stocking a large number of educational materials. However, all textbooks were destroyed by the extreme flooding generated in 2020 (Cooperative for Education, 2020). There are no systematic studies in Guatemala to quantify the effects of climate change and environmental disasters regarding lost classes and school dropouts. In the case of hurricanes Eta and Iota, a study conducted by the UNESCO office in Guatemala estimated an expected dropout rate of 6.731 students due to the hurricanes, including 3.607 in primary school, and 1,984 in elementary school, 964 in pre-primary, and 175 in high school. For those schools that manage to avoid severe destruction, their usage as emergency shelters results in a serious disruption of educational continuity. After the hurricanes of 2020, 84 educational buildings were used as temporary shelters for 7,031 people. (UNESCO Guatemala, 2021).

Climate displacement: 5A analysis on the right to education

→ *Availability:*

Education must be available. Governments must ensure that educational institutions, physical resources, personnel, and programmes are available in sufficient quantity and quality and with the necessary infrastructure and services to function properly for both persons in mobility and host communities.

Access to regular system levels. The main problems of access to the regular education system for the displaced population in Guatemala have to do with the destruction of educational infrastructure when disasters occur, as well as the use of this infrastructure as shelters for long periods. This is a particularly important problem for the trapped population or those who move to places where classes are suspended due to the use of schools as shelters. On the other hand, rural areas of Guatemala, the most affected by climate change, have a lower level of school coverage (Naciones Unidas Guatemala, 2016). Departments such as San Marcos, through which large flows of migrants pass, already suffer from problems of capacity to attend to the regular population in the area, so the increase in population could generate additional pressure. Therefore, the combination of high disaster risks and low coverage in rural areas creates especially high barriers to access to education for the population trapped in or moving to rural areas.

Access to alternative modalities. In Guatemala, several alternative education programmes could be useful for the displaced population, especially those who, for reasons of displacement, had to suspend their studies, were behind in the regular cycle or were over-aged students. These programmes are centralized in the General Office of Extracurricular Education (DIGEEX). The supply, however, is concentrated in urban areas that are not necessarily where displaced students move to. After the passage of storms Eta and Iota, there was a significant decrease in the enrollment of students in these programmes (58.7% less than in the previous year), which indicates that these programmes are not necessarily providing educational services for the displaced population that is left without them. In addition, an important part of the education offered in alternative modalities is private, which implies additional costs for families. The Primary Education Programme for Overage Girls and Boys (PEPS) can also be an opportunity for displaced students, especially those who have lost more time in education due to international migration or who have been out of the educational system longer

due to having to work (DIGEDUCA, 2016). The COVID pandemic has made the inequality in Guatemala more evident concerning access to the technologies and services necessary for distance education through radio, television, and the internet. This gap may increase among the displaced or in-transit population, which often do not have access to televisions or radios. In the case of the trapped population, it is expected that many times there will not be access to electricity as well. On the other hand, in many cases, the official distance education modality requires travel to find study materials, which can be a barrier for the population trapped or affected by disasters.

Adequacy of facilities, educational materials, and services. One of the barriers identified for the education of the displaced population has to do with the destruction of educational materials due to disasters. Furthermore, although educational texts are freely available in the public system, the distribution system for educational materials is based on preset statistics and is not flexible enough to ensure the timely delivery of new materials in the event of unexpected displacements during the educational cycle. Since, in general, it tends to be a significant delay in the delivery of educational materials in the country, especially in rural areas, it is difficult for the system to adapt to deliver in time the necessary materials to meet the population's needs that suddenly moves after disasters.

Teachers and other educational personnel. The number of teachers has not been identified as a relevant problem at the country level in Guatemala, where there is enough educational personnel to cover the student population. However, problems have been identified in the distribution and allocation of vacancies, especially in rural areas. Therefore, a major barrier to the education of the displaced population in rural areas is the availability of teachers, as well as the capacity of the system of distribution of places to adapt to the changing needs associated with the unanticipated mobility of the population groups for environmental reasons.

→ *Accessibility*

Education should be freely accessible to all, physically and economically, without any legal discrimination, including migrants, refugees, returnees, asylum seekers, and host communities.

Economic costs. While public education in Guatemala is free, private education, whose coverage increases at higher levels of the educational system, reaching 71 percent of students enrolled at the diversified level, can be costly for displaced families. Therefore, the cost of private education may discourage or make it impossible for displaced families with adolescent children to access formal education. On the other hand, several interviewees mentioned that although basic education is free, the cost of uniforms, books, paper, writing utensils, and transportation are often too high for many families. Transportation costs are especially evident among the relocated population, as pointed out by some inhabitants of xx, for whom mobilization to educational centres is particularly costly.

Legal documentation. For the internally displaced population in Guatemala, the main barrier to accessing the educational system regarding legal documentation is due to the low level of digitization of educational records, which are necessary to transfer between schools. Accessing these files can be a cumbersome process, involving travel to the initial place of residence or the Ministry of Education

headquarters. In addition, in the case of those who try to find the records in the schools of the initial place of residence, many times after disasters, these documents may have been destroyed or not updated in time in the Ministry of Education's databases. This difficulty creates a disincentive to resume education quickly after displacement occurs. It is important to note that one of the barriers for irregular migrants in Guatemala to access the health system is the fear of being denounced and deported. This problem could be replicated in education. The Ministry of Public Health and Social Assistance of Guatemala has carried out important promotional work in regions where the migrant population transits to inform them about their right to health and the protection that Guatemala offers them, measures that could be exemplary for the educational sector.

Protection and livelihoods. Poverty poses an obvious barrier to the right to education in Guatemala, regardless of the effects of climate change. In 2017, the Census showed that nearly 150,000 Guatemalan children do not attend school despite strong desires and a lack of financial means (AMEDICAUSA, 2020). Many children and young people must devote themselves to paid and family work, a situation that has been aggravated by the effects of climate change, especially among families that depend on agriculture. With the COVID-19 pandemic, the situation of scarcity has increased in Guatemala, increasing families' vulnerability to the impacts of climate displacement. However, COVID has also demonstrated the fundamental role that public schools can play in supporting families in crises through, for example, school feeding programmes. Some of these programmes have benefited the whole family through the delivery of food, which acts as an incentive to send children to school. However, practices such as food delivery for the family are usually applied discretionally by each institution and do not respond to an official public policy to promote school attendance after disasters occur. An additional problem in Guatemala is a school dropout, especially among students who migrate to the United States (Blitzer, 2019). Many children may spend weeks or months in the migration process on long journeys and are often returned or deported. In Guatemala, the dropout rate almost doubled in 2018, with migration being one of the reasons behind this increase (Blitzer, 2019). On the other hand, rural families' debt level has increased due to the high cost of the migration project to the United States. However, migration to the United States has also generated opportunities to improve access to education in Guatemala, especially through remittances (OIM, 2019b).

Disaster risk reduction. A challenge for the education of the displaced population in Guatemala is that the infrastructure of many educational centres is in poor condition and adequate maintenance measures have not been carried out. In addition, there has been a low utilization of the budget allocated for this purpose (UNESCO Guatemala, 2021). For example, in 2021, only 2.4% of the budget was allocated for expanding, repairing, and improving educational infrastructure. In addition, there are no systematic and updated mechanisms to evaluate the condition of schools and educational furniture to ensure that they are safe spaces for students. However, Guatemala's Educational Center Security Index has not been implemented (CEPAL, 2021). This problem is of particular concern for populations trapped or moving to areas at risk of hurricane or flood disasters.

Violence-free spaces. The violence experienced in educational institutions and communities, especially by girls and adolescent women, is a major barrier to education for the displaced population in Guatemala. Many parents do not send their daughters to school because of the risk of violence during the trip or within the institutions themselves. In the case of the displaced population, the level of violence to which they are exposed will depend on where they arrive, and there may even be cases

where there is a decrease in violence compared to their communities of origin. Although there are no data to quantify this situation, it is important to pay special attention to the risks of violence against women and the indigenous population in cities, especially in marginal areas.

Recognition of degrees, titles, and knowledge. The main barrier that has been identified to the recognition of the degrees of the displaced population is related to those who move internationally, given that in Guatemala the processes for the recognition of degrees from professional associations and foreign universities can be long, cumbersome, and costly. For example, obtaining an apostille for legalising international transcripts in rural areas can be a particularly slow process.

→ *Acceptability*

The form and content of education must be appropriate and coherent to the needs of persons in mobility and host communities, with a relevant curriculum, educational materials, and perspectives that value difference, ethical plurality, and intercultural dialogue.

Language and communication. Although the 2003 reform introduced intercultural bilingual education in Guatemala, the existing intercultural bilingual education offer covers only half of the country's indigenous children (CEPAL, 2021). This language barrier has been one of the key factors contributing to the majority of Mayan students dropping out of school in sixth grade (Matthews, 2011). This is also a major barrier for the population displaced by climate change, mostly from rural areas, where 75 percent of the country's indigenous population is located (Minority Rights Group International, 2013). Since there is a shortage of teachers with original language teaching skills in rural and indigenous areas, it is difficult for the education system to respond to the bilingual educational needs of the displaced population in the face of environmental displacement.

Curricular frameworks. Public schools in Guatemala must provide education to students who require it by law. However, a major barrier in educational content is the low capacity to make curricular adaptations to allow students who have missed classes, as is expected to be the case for a significant portion of those displaced for environmental and climatic reasons, to take advantage of the content taught.

Teaching and learning practices. The main barrier identified in terms of teaching and learning practices is that there are no learning methods and techniques in Guatemala that focus on the specific needs of the migrant population in general, especially those displaced by the impacts of climate change. This is an issue for which teachers have not been trained, nor have they analyzed what strategies should be used to serve this population.

Caregiving, socioemotional education, and psychosocial support. Another major barrier to acceptability is environmental displacement's impacts on students' mental health, especially when experiencing disasters such as hurricanes or massive landslides. For example, after the landslide in Queja in 2020, the principal of the city's elementary school stated that 19 of her students died (Kitroeff, 2020). For both the students trapped in these locations and those displaced, this type of experience,

as well as the loss of family members and the destruction of their homes and neighbourhoods, can lead to significant trauma, affecting their school performance. On the other hand, children and adolescents undertaking the migration project to the United States are also exposed to traumatic experiences and violence. Psychosocial support for these groups has been one of the issues most addressed by existing public and private initiatives to protect this population. However, this type of initiative arises as a response to crises, and psychosocial support to the population displaced by events related to climate change does not exist as a permanent component in educational policy or the educational curriculum.

Prevention and reduction of xenophobia and violence risks. Identifying documented or known examples of xenophobia and violence that systematically affect the migrant student population in Guatemala, either internally or across borders, was impossible. However, when considering existing forms of structural discrimination, an important barrier is the discrimination of the mestizo population against the indigenous population, which has been disproportionately impacted by climate displacement. On the other hand, it is possible to identify at the country level a recent increase in the level of xenophobia towards the Honduran and Salvadoran population, especially since the passage of the new caravans of migrants in 2021, thus increasing the risk of xenophobia against displaced students of these nationalities. In addition, there is growing stigmatization of migrants in Guatemala, both Guatemalan and international, who are often associated with crime and poverty. This situation is especially evident in the case of the returnee population.

Social, cultural, and gender norms. Guatemala experiences a great inequality in terms of the educational exclusion of women, which is an additional barrier for a population group particularly vulnerable to climate displacement. In general, women face greater risks in a post-disaster situation, as overcrowded emergency shelters often put girls and women at risk of violence and sexual abuse, as observed in Hurricanes Iota and Eta (Plan International, 2020). This situation is particularly problematic in Guatemala, given that it ranks among the countries of the Americas and the Caribbean with the highest mortality rate among women due to violence (UN Women, sf). In addition to the risk of physical violence, women and girls often find themselves without adequate health equipment in emergencies, which poses an additional difficulty. This makes the need to strengthen educational content with a gender perspective and a focus on the vulnerabilities of the displaced population especially important for Guatemala.

→ *Adaptability*

There is a suitable environment and institutional capacity in the education sector to respond to the diverse needs of people in mobility and host communities.

Funding. Given scarce resources to finance Guatemala's education sector, its adaptability to respond to the needs generated by climate displacement is limited. The budget for the education sector is limited to operational expenses and there is little funding to incorporate additional innovations and improvements, such as support for the displaced population. These measures are mainly carried out by actors external to the Ministry of Education, especially international cooperation agencies. The lack of resources becomes especially critical during extreme weather events, where a significant portion of

the education budget must be allocated to reconstruction.

Coordination and operation. In Guatemala, there has been an important inter-ministerial coordination effort since 2010 to introduce the topic of climate change in the education system. However, the existing coordination between the Ministry of Education and the Ministry of Environment has not included the migration issue as a key axis to advance the protection of the education of the displaced population.

Institutional capabilities. A barrier identified in terms of institutional capacities to respond to the educational needs of the population displaced by climate change is the lack of personnel trained in this subject within the Ministry of Education who can understand the specific needs of this population, as well as the lack of officials with sufficient time available to dedicate to a subject that has not been prioritized by the ministerial policy.

Legal and national policy frameworks. It was not possible to identify through this study the existence of barriers in the legal and policy frameworks to protect the right to education of the population displaced by climate change. On the contrary, existing legal frameworks justify the importance of protecting the fundamental rights of these groups, including their right to education. However, the low political priority given to protecting displaced persons' rights by the government in office appears as a major barrier to implementing measures to advance the protection and education of these groups in Guatemala.

→ *Accountability*

Education must be responsible for transparency, social management, and participation of affected populations. The education system must also be responsible for the actions and public policies taken in response.

Participation. Barriers to the participation of communities and families affected by climate and environmental displacement in Guatemala in the design of educational policies and initiatives are particularly high, given the vulnerability of these groups, as well as the lack of formal mechanisms to incorporate their participation.

Monitoring and evaluation. There are no mechanisms in the country's migration system to systematically quantify climate displacement, especially internal displacement. In addition, information related to the education of this population is scarce and there are no formal mechanisms to monitor the right to education of these groups. Although a technical unit within the Ministry of Education is prepared to evaluate the system, the climate displacement variable has not been considered. On the other hand, significant delays and inconsistencies in evaluating evaluation mechanisms in the education system further complicate the possibility of effectively assessing the capacity to respond to the educational needs of the population displaced by climate change.

Policy response and sectoral interventions

Legal frameworks

There are no explicit international obligations related to the protection of people on the move under any climate change agreement as of today. There are few references to the education sector and the link between climate displacement and the right to education is not explicitly stated.

Climate impacts in Latin America and the Caribbean have a markedly regional character. Countries in the region agreed on a roadmap for responses to cross-border displacement in the context of climate change and disasters through the 2014 Brazil Declaration and Plan of Action. On the other hand, SICA member countries have implemented a series of initiatives, projects, and agreements on regional migration issues. Particularly important for protecting migrants' right to education is the "Alternativas» project to prevent irregular migration between member countries, implemented by the Secretariat for Central American Social Integration (SISCA), a technical body of SICA. On the other hand, the Guatemala Protocol of 1993 seeks free labour mobility among the States Parties. However, a concrete action plan to implement what has been agreed upon has not yet been developed. Other important regional instruments for protecting environmentally displaced persons include the 2016 San José and 2017 San Pedro Sula declarations of action, the CA-4 regional agreement on migration procedures and several bilateral agreements.

At the national level, following a global trend, Guatemala lacks policy coherence and coordination regarding the connections between human mobility and climate change. There is a low level of integration between the different policy fields relevant to protecting the right to education of climate displaced persons: migration, disaster risk management, and climate change.

Intervention gaps and best practices at the sectoral level

- **Education sector.** In Guatemala's education policy, it is impossible to find any explicit mention of climate displacement or initiatives that attempt to protect the right to education of the population displaced by climate change. However, it is possible to identify some educational policy initiatives protecting this right *de facto*. This is the case of initiatives to improve access to education for the population vulnerable to irregular migration to the United States to prevent it. In 2016, the Social Welfare Secretariat (SBS), with the support of the Ministry of Education, implemented the «Quédate» Training Center to prevent irregular migration of returned adolescents and those at risk through technical training (SBS, 2017). Regarding climate change, following the creation of the Environmental Education Law in 2010, the Ministry of Education coordinated and installed a roundtable in 2011 to address environmental issues, including climate change, which continues to operate. During this period, coordination mechanisms were established between the Ministry of Education and the Ministry of the Environment and Natural Resources to address this issue (Ministerio de Educación, 2017). However, climate displacement has not been a topic included in the curricular content of Guatemala's National Environmental Education Policy, established in 2017, although this may be mentioned as one of the impacts associated with climate change.

- **Disaster risk management.** Guatemala's risk prevention policy does not explicitly mention education as one of the fundamental rights to be protected in the face of disaster risk. However, the population's education in preventive measures and disaster response is one of the important axes of this policy (CONRED, 2018). Despite this, the incorporation and relevance given to the education of the population in risk reduction has been relatively recent and, therefore, late and has not been sufficiently effective in improving the population's response capacity (CEPAL, 2021). On the other hand, the risk reduction policy refers to the displacement created by environmental disasters and the particular vulnerability of women and children (CONRED, 2018:58). However, the policy does not include guidelines or specific measures to address this problem.
- **Climate change.** Guatemala's national policy on climate change refers to the importance of improving the education of the Guatemalan population on environmental issues, including climate change, as a strategy for disaster risk reduction and adaptation (Gobierno de la República de Guatemala, 2019). However, this policy does not refer to the problems related to displacement generated by climate change. In addition, there are no concrete policies and initiatives that explicitly seek to protect the right to education of the displaced population as part of the policy to address climate change in the country.
- **Migration policy.** Guatemala's migration policy does not mention climate change, and it is impossible to identify measures that would help protect the education of the displaced population for reasons related to climate change. However, given the large number of Guatemalan children attempting to migrate to the United States, several initiatives have been created to protect their rights, including their right to education. The public policy for the protection and care of migrants introduced in 2019 in Guatemala presents strategies to protect the human rights of migrants in transit, especially children and adolescents. (Gobierno de la República de Guatemala, 2019)

Conclusions and recommendations

Guatemala has been a country highly affected by climate displacement, with a significant proportion of the population migrating internally and internationally due to fast-onset climatic events, such as hurricanes and floods, as well as the drought that has affected mainly rural and indigenous inhabitants of the country. While hurricanes and floods have led to higher levels of internal displacement as a short-term response to the destruction generated, the drought has primarily driven international migration projects, especially to the United States, in search of greater employment opportunities.

Based on the results of this study, the following recommendations are made to protect the right to education of the population displaced by the effects of climate change:

Recommendation 1. To make climate displacement visible as a relevant policy issue.

While many international organizations, media, and academic studies have greatly emphasised international climate displacement in Guatemala, internal displacement has received fewer media and policy attention. Given the high risk that fast-onset events will increase internal displacement in Guatemala in the next few years, it is important to have measures in place to increase the capacity of the education system to adapt to rapid changes in the geographic distribution of students. A fundamental step in advancing towards the development of policies that protect the right to education of this population is to make the problem more visible. To this end, it is important to highlight the high level of displacement that occurs every year due to sudden disasters, as well as the negative impact of climate change on the livelihoods of Guatemala's population, generating significant pressure on a migratory phenomenon that is usually understood as being driven by purely economic reasons, thus hiding the role played by the environmental and climatic factors.

Recommendation 2. Emphasize the right to education as an explicit objective within the policy to mitigate the effects of climate change.

Although measures have been implemented in Guatemala to protect the human rights of the migrant population, regardless of the causes, the right to education has not been made explicit as a key axis of these measures. Emphasizing education as a central objective of these policies and designing measures that explicitly and concretely protect it is an important step in protecting the education of displaced persons. Using existing organizational structures that link education and climate change (such as the existing inter-ministerial working group on the issue) can serve as an entry point to include the right to education of the displaced population as an explicit policy objective and generate more concrete measures to protect this right.

Recommendation 3. Create specific initiatives to protect the education of the population in transit and return.

A particularly vulnerable population group in Guatemala are migrants in transit and returning migrants, especially women, children, and adolescents. These groups include Guatemalans travelling to Mexico or the United States and groups from other countries in the region transiting through Guatemala. Given that the transit and return process can take months, it is essential to create specific measures for the education of these people, not only preventive or palliative measures, which take place before or after undertaking these projects. The experience of the Ministry of Public Health and Social Assistance in promoting access to the health system among the migrant population through the dissemination of information focused on the protection of rights can serve as an example of promoting access to education for the population in transit in Guatemala. In addition, creating initiatives to facilitate the reincorporation of students who may lose months in migratory projects is fundamental to prevent them from falling further behind or dropping out of the educational system.

Recommendation 4. Adapt existing alternative education programmes to the needs of climate displaced persons.

Taking advantage of existing public and private alternative education programmes such as PRONEA, PEPS, and ASEC and adapting them to the needs of the internally and internationally displaced population can be a useful strategy to promote the rapid re-entry or inclusion of this population into the educational system.

Recommendation 5. Emphasize the right to education of the indigenous population displaced by the climate.

Limitations to access to bilingual education have been one of the main barriers in Guatemala, regardless of climate displacement. However, this barrier may be exacerbated if the education system's capacity to respond quickly to the internal migration of indigenous groups and to accommodate displaced non-Spanish speaking students is not improved.

Recommendation 6. Prioritize the use of alternative infrastructure when disasters occur.

While the use of schools as disaster shelters has been important to help affected families, it has also limited access to educational services for students, not only because the infrastructure is not available but also because they are often damaged and require significant investments to be restored after being used as shelters. Therefore, planning disaster response measures by seeking alternative infrastructures is essential to prioritize the right to education of the affected population.

Recommendation 7. Moving from transitory and discretionary measures to permanent policies.

Several measures in Guatemala to protect the education of the climate-displaced population take place temporarily after crises occur. In addition, they are often implemented as part of international humanitarian aid or through discretionary practices by educational institutions or other Guatemalan institutions and organizations. Examples include psychosocial support provided by international organizations and food delivery policies for families by some schools. Moving toward permanent policies that include this type of measure is important.

Recommendation 8. Filling key information gaps.

Progress should be made towards generating data and information to inform policies that protect the education of the displaced population, especially to: (i) quantify the role of climatic and environmental reasons in internal and international migration, especially in displacement caused by slow onset events, (ii) better understand the specific needs of the environmentally displaced to adopt appropriate measures, through demographic data and qualitative studies that compile their experiences; (iii) quantify the total loss of classes caused by the use of schools as shelters.

Recommendation 9. Improve education on environmental and climate displacement.

While there has been significant progress in Guatemala to improve education on climate change and its effects, the causes and implications of climate displacement are not explored in depth. Creating more education on climate displacement is an important step to dignify the people affected. Although efforts have been made in Guatemala to raise awareness of the dangers of international migration, it is important to educate the population about the causes of the different types of migration to avoid stigmatizing human mobility.

Recommendation 10. Improve institutional and coordination capacities and participatory mechanisms.

It is important to advance in building the capacity so that institutions better understand the educational needs of this population. Existing inter-institutional coordination spaces related to these issues can be used as a starting point to address the education of the environmentally displaced. In addition, it is essential to move towards designing policies incorporating participatory mechanisms so that these populations can be more directly involved in defining priorities and initiatives. Finally, it is important to move forward in implementing existing measures for disaster risk protection in schools, such as the School Safety Index.

Recommendation 11. Improve the educational system for everyone.

Guatemala's education system suffers from important deficiencies that may not only be aggravated by the impacts that climate change may generate in the education system but may also affect the right to education of climate and environmentally displaced people in an accentuated manner. These barriers include high dropout rates, low coverage in certain rural areas, insufficient bilingual education, and restricted budgets. Improving these gaps in the education system in general, and not only for groups displaced by climate change, is fundamental to protect their right to education and improve the country's resilience to the effects of climate change, thereby reducing the risk of displacement.

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Annex E

Jamaica Case Study

The impact of climate displacement on the right to education in Jamaica

EXECUTIVE SUMMARY

UNESCO launched in early 2020 a global initiative to investigate the barriers to the right to education in the context of climate displacement to improve Member States' preparedness to ensure the inclusion of all displaced persons in quality education. The project includes country case studies in priority regions, including Latin America and the Caribbean. **For the Jamaica case study, an overarching question was: to what extent does climate change, particularly climate displacement, threaten the right to education, and how to overcome existing barriers?**

Through the 5A's analysis, focusing on core dimensions of the right to education – availability, accessibility, acceptability, adaptability and accountability – and key response areas, the analysis revealed that barriers to the right to education in the context of climate displacement are multifaceted, and intrinsically linked to poverty-related issues, including uncontrolled urbanization, gender inequalities and outmigration. The fact that the country is not necessarily “sinking” in absolute terms like other Small Island Developing States (SIDS) does not mean that it will not be seriously affected – or hasn't been.

Specifically, the case study includes elements on extreme weather events (tropical storms, hurricanes and associated floods) that have hit the country over the period 2000-2021 and also focuses on slow onset impacts of climate change, which are typically gradual with consequences in the longer run. After presenting the context of climate displacement in Jamaica and the profile of vulnerable populations, the report details barriers to the right to education, followed by an analysis of policy and sectoral responses.

Climate change and displacement in Jamaica

Overview of climate change impacts

As a Small Island Developing State (SIDS) and despite being an Upper-Middle Income country, Jamaica has been labelled as one of the most exposed countries in the world to multiple climate hazards, with over 96% of the country's GDP and the population at risk from two or more (FAO-Government of Jamaica, 2020). The tourism and agriculture sectors dominate the Jamaican economy and are very sensitive to climate impacts. Jamaica has generally experienced more Category 4-5 hurricanes in the last few decades compared to earlier periods. The number of storms passing by or within 200 kilometres of Jamaica - indirectly affecting the country - has been at its highest in the 2000s (22 versus 7 for the period 1980-1999) (CSGM, 2020). Most tropical storms and hurricanes have been accompanied by heavy winds and intense rains that have destroyed infrastructure through flooding and landslides.

Besides, Jamaica experiences seasonal and prolonged droughts. In 2004, the effects of Hurricane Charley were heightened as it followed a three-month drought preceded by damaging hailstorms that ruined crops, with major impacts on the agricultural sector. In 2014-2015, Jamaica experienced

the worst drought in over 50 years, resulting in a 30% decline in agriculture production and losses, estimated to be up to USD7.2 million.

Sea level rise threatens 95% of Jamaica's beaches (Simonelli, A, 2018). In addition, approximately 60% of Jamaica's population lives within 2km of the coast and more than 70% of all major industries are located within the coastal zone. Due to sea-level rise, the salinization of freshwater wells in coastal lowlands is another key concern.

Characteristics of climate displacement

Climate change has already caused recurring population displacement in Jamaica:

- **Internal displacement as a result of extreme weather events:** Documented internal displacement as a result of extreme weather events is limited to short-term evacuation to shelters. In at least one case (Hurricane Ivan, 2004), the number of displaced persons was comparatively higher.
- **Internal displacement as a result of slow-onset events:** Displacement as a result of slow-onset events (such as the sea-level rise and recurring droughts) is often less discernible than displacement resulting from extreme weather events. In Jamaica, slow-onset events can be expected to lead to the displacement of thousands of people. Such displacement may be triggered or amplified by extreme weather events and contribute to current urbanization trends.
- **Cross-border displacement as a result of extreme weather events:** No documented case of international migration resulting from extreme weather events was identified as part of the case study.
- **Cross-border displacement as a result of slow-onset events:** International migration has been an integral part of Jamaica's historical and contemporary experience and is a feature of the country's demographic landscape (Government of Jamaica, 2017). However, like in the case of internal displacement, it is difficult to quantify the scale of cross-border movements as a result of slow-onset events. Still, international migration is highly likely to become an adaptation strategy used in Jamaica.
- **Planned relocation:** The possible relocation of communities facing environmental hazards has been part of Jamaica's public debate for a long time. Following Hurricane Michelle (2001), a question surrounded the decision of whether the villagers of ByBrook or Swift River should be relocated or allowed to rebuild in the same flood plain (ECLAC, 2001). More recently, the Office of Disaster Preparedness and Emergency Management (ODPEM) developed a resettlement action plan for the Harbour Heights community east of Kingston, highlighting the need for community engagement to design successful planned relocation (Caribbean Migration Consultations, 2019). Residents struggle on a daily basis with the poor state of infrastructure and roads that deteriorate whenever there is heavy downpour similar to what was brought on by tropical storms Grace and Ida in August 2021 (Jamaica Observer, 2021a).

- Trapped populations:** Immobility refers to people staying in their usual residence despite extreme weather or slow-onset events affecting their community. When such people have no possibility nor right to move to another location, one refers to trapped populations. In Jamaica, documented cases of trapping occurred when populations were temporarily stranded during extreme weather events.

Vulnerable groups

Globally, climate displacement is not affecting populations evenly. Multiple factors render some groups more vulnerable than others, which is also true in Jamaica. People living in poverty are generally more vulnerable to climate impacts, including displacement (Silver JM et al, 2019). Jamaica's Third National Communication identifies the poor as most vulnerable to climate impacts as they will be the least able to adapt. This is particularly relevant for rural areas, where poverty levels are consistently higher. Poverty in rural areas has also led to uncontrolled urbanization, based on factors of degradation of livelihoods and environmental and economic reasons. This has resulted in the development of unplanned settlements in marginal and environmentally sensitive lands such as flood plains and unstable slopes (UNICEF, 2020). The act of "squatting", as it is referred to in Jamaica, has increased significantly over the last 25 years; the squatter population now stands at 20% of that of the country (Government of Jamaica, 2019).

Age is another key driver of vulnerability. Children are particularly vulnerable due to their specific developmental needs and physiology, which is exacerbated in the Caribbean by the fact that they are disproportionately represented among the poor (Pegram, J. and Knaute, D., 2019). With high unemployment levels and low skills and education levels, unattached youth (youth not in school and not at work which make up approximately 30% of Jamaica's total youth population) are also particularly vulnerable to climate change (UNICEF, 2020 and CSGM, 2020). From a gender perspective, challenges for women and girls can be exacerbated by intersecting vulnerabilities and potentially worsening conditions (HRC, 2018). Among other vulnerable groups, people with disabilities may be disproportionately affected by extreme weather events. In Jamaica, most are likely to live in ecologically fragile rural locations and hazard-prone squatter settlements in urban areas such as on the peripheries of Kingston.

Barriers to education in the context of climate change

Vulnerability of the education sector to climate and other shocks

Since 2000, various tropical storms and hurricanes have significantly impacted educational infrastructure. In 2004, Hurricane Ivan caused severe infrastructure damage to schools across the island: 33% of public schools sustained significant damage with 90% requiring repair (Spencer, N., et al, 2016). In 2007, Hurricane Dean affected 518 schools and public educational institutions. In 2008, Hurricane Tropical Storm Gustav incurred a cost of J\$200.1 million in the education sector, with the greatest cost in the period 2000-2021, J\$1,097.0 million (Government of Jamaica, 2018a), incurred by Tropical Storm Nicole in 2010, ahead of Hurricanes Ivan (J\$806.9 million) and Dean (J\$727.9 million). Schools and other educational institutions are among the most vulnerable to sea-level rise and storm surges, given their proximity to the coast. Titchfield High School (Port Antonio), Donald Quarrie 'DQ'

High School (Kingston), Ruseas High School (Lucea) and Marcus Garvey Technical High School (Ocho Rios) are examples (CSGM, 2020). Longer drought periods may lead to water scarcity threatening school terms across the island. Drought-like conditions in 2019 led the Government to distribute over 100 tanks to schools across the island (CSGM, 2020).

The implications of the COVID-19 pandemic

The educational gap exposed by the COVID-19 pandemic has revealed that many children in poorer communities were not able to benefit from online learning as a result of limited access to devices or the internet (UNICEF, 2020).

Climate displacement: 5A's analysis on the right to education

→ *Availability*

Education must be available. Governments must ensure that educational institutions, physical resources, personnel and programmes are available in sufficient quantity and quality and with the necessary facilities to function properly for both people on the move and host communities.

Educational facilities and basic services: From 2000 to 2021, climate displacement interrupted educational services in most, if not all schools at some point, at least in the form of school closure and/or the use of schools as shelters. Numerous schools have been damaged, sometimes causing students' temporary enrolment elsewhere. Outside of damage to the schools themselves, infrastructural deterioration of roads prevents safe transportation to and from schools and poses a serious threat to children's physical safety. Due to heavy rains associated with Tropical Storm Eta in 2020, the government pre-emptively kept schools closed due to the high probability of flash floods and their associated effects (UNESCO, 2020). Last but not least, a long-standing concern is that many schools are used as shelters during extreme weather events, forcing the interruption of educational services.

Provision of quality education: A 2017 study - based on hurricane destruction indexes taking into account the physical characteristics of extreme weather events relative to the location of each school, along with standardized examination test scores over the period 1944-2010 - found that the average hurricane reduces students' test scores where the impact is significantly greater for larger storms.

Availability of both regular and alternative forms of education: According to a document prepared by the ODPEM back in 2007, pre-school age children lack stimulation in shelters (ODPEM, 2007). However, no specific data was found on differentiated impacts per level or alternative forms of education.

Teachers and other educational personnel: No specific challenge was identified regarding the availability of teachers and other educational personnel.

→ *Accessibility*

Education should be accessible to all, physically and economically, without legal discrimination, including migrants, refugees, returnees, asylum seekers and host communities.

Economic costs: Auxiliary costs, such as school supplies lost during a disaster or transportation, may discourage displaced families from sending their children to school, at least temporarily. Worsening post-disaster socioeconomic circumstances may also negatively affect school attendance. Following disasters, some families may remove children from schools and put them to work to reduce economic burden and increase family income (CSGM, 2020).

Legal documentation: Restrictive immigration policies and legislative obstacles hinder the fulfilment of the right to education for migrant and refugee children globally. Strict documentation requirements such as official school records can prove especially problematic, as they often prevent children on the move from enrolling in school. In the case of Jamaica, no specific challenge about legal documentation was identified. However, it is worth noting that there is a small community of Haitian migrants in Jamaica, mostly asylum seekers. In 2013, out of an official population of 34,907 immigrants, Haitians and Cubans were the two dominant groups of foreign nationals applying for asylum and refugee status, with the cumulated number of Haitians numbering 1,155 over the period ranging from 2001 to 2010 (IOM, 2017).

Safety and protection: Vulnerable groups such as women and girls, as well as people living with disabilities, are likely to face exacerbated protection risks (including gender-based violence) as a result of natural disasters, particularly in emergency shelters (UNICEF-CDEMA, 2019). In some cases, where incomes are lost, some children may be forced into child labour (UNICEF, 2020). However, no specific issue about safety and protection was identified.

Recognition of degrees, certificates and knowledge: No specific challenge was identified regarding the recognition of degrees, certificates and knowledge.

→ *Acceptability*

The form and content of education should be appropriate and coherent with the needs of people on the move and host communities, with relevant curriculum and other educational materials and approaches that value difference, ethnic plurality and intercultural dialogue.

Language and other communication barriers: No specific challenge about language and other communication barriers was identified.

Teaching and learning content and practices: Some extreme weather events have destroyed teaching materials, supplies, and equipment, which may have impacted teaching and learning content and practices, at least temporarily. More generally, at all levels of the educational system, children from low-income households usually attend schools of inferior standard, with deteriorating infrastructure (more vulnerable to natural hazards) and more likely to be overcrowded, therefore receiving poorer quality instruction than their more advantaged peers (UNICEF, 2020).

Mental health and psychosocial needs: The frequency of extreme weather events, including flooding, is likely to have non-monetary effects, particularly mental health, during interruption of educational services due to damage to school infrastructure and/or use of schools as shelters. This is illustrated by the deployment of school counsellors following Hurricane Matthew in 2016 (JIS, 2016). The context of the COVID-19 pandemic has caused further stress and anxiety among school communities.

Socio-cultural discrimination and exclusion: In rural areas in Jamaica, there is an assumed gender bias in the education of girls and boys, as boys are more likely to be removed from school than girls to assist with recovery efforts after disasters and to work on the farm (CSGM, 2020).

→ *Adaptability*

There is an enabling environment and institutional capacities in the education sector to respond to the diverse needs of people on the move and host communities.

Funding and investment: Recovery is an opportunity to retrofit impacted schools and consider whether to rebuild them on-site, if applicable. In the same way, the COVID-19 pandemic reinforced the critical importance of securing investment to safeguard water security, including in schools. Indeed, proper sanitation and hygiene require reliable access to safe water. From 2016 to 2019, the Government of Jamaica assessed the integration of disaster risk into construction in the regulation, planning, design, construction, and management of infrastructure in 972 schools, to establish a baseline for future investments.

The private sector is well developed in Jamaica, with entities such as the Sandals Foundation (a regional entity headquartered in Jamaica), launched in 2009, implementing initiatives in the education sector across the Caribbean. Private businesses are potentially an alternative source of funding for the government, which can prove flexible and innovative.

Coordination and institutional capacities: While the damage to schools repeatedly caused by natural disasters in Jamaica indicates that governance gaps exist in the education sector, there are also documented situations at the occasion of which the Ministry of Education and other government entities have showed strong leadership. For instance, in the aftermath of Hurricane Dean in 2007, the Ministry initiated an inventory of schools in need of repairs and immediately launched a programme for the construction of new schools and expansion of others, focusing on critical facilities, calling on school authorities to contact the Ministry's regional offices, should they have immediate uncovered furniture needs (Government of Jamaica, 2007).

→ *Accountability*

Education must be accountable for transparency, social management, affected populations' participation, and responsibility for the actions and public policies undertaken in the response.

Participation: The evaluation of a post-Hurricane Dean reconstruction project indicated that the reconstruction team from the Jamaica Social Investment Fund, a limited liability company established in 1996 as a component of the government's national poverty alleviation strategy, had maintained regular communication with school staff during the project implementation and incorporated their suggestions. It was also apparent that coordination and supervision at the community level were maintained (World Bank, 2020).

Monitoring and evaluation: The same evaluation indicated that the monitoring and evaluation design of the reconstruction project included useful indicators for measuring service provision outcomes from rehabilitated educational infrastructure, i.e. attendance rates (World Bank, 2020).

Policy responses and sectoral interventions

Legal frameworks

To date, there are no explicit international obligations related to the protection of people on the move under any climate change agreement. Few refer to the education sector and the link between climate displacement and the right to education is not explicitly expressed.

Climate impacts in Latin America and the Caribbean have a strong regional character. Countries in the region have agreed on guidance for responses to cross-border displacement in the context of climate change and disasters through the 2014 Brazil Declaration and Plan of Action. The complexity of migration trends and country characteristics at the Caribbean level require specific responses. Importantly for the right to education, the CARICOM has drafted a CARICOM Protocol on Contingent Rights (not yet into force), which will extend rights to dependents, including access to primary education (CARICOM, 2018). The Caribbean Safe School Initiative, launched in 2017, is being implemented in collaboration with partners such as UNICEF and the Caribbean Disaster Emergency Management Agency (CDEMA) to ensure that school safety and resilience in the education sector become the norm, including through the adoption and implementation of retrofitting and construction standards that support schools to withstand natural disasters. However, no explicit linkage is made with climate displacement.

At the national scale, there is a global lack of policy coherence and coordination concerning connections between human mobility and climate change. Jamaica has developed various policies, plans and programmes that address climate change, including the country's Nationally Determined Contributions, updated in June 2020. Jamaica's Climate Change Policy Framework, adopted in 2015, serves primarily as a complement and support to Vision 2030 Jamaica and structures and coordinates the implementation of climate-focused policies. No reference is made to the education sector nor to climate displacement.

Institutional arrangements

The Office of Disaster Preparedness and Emergency Management (ODPEM), established in 1980 (renamed in 1993), is the Government agency responsible for disaster management. The National Environment and Planning Agency (NEPA), operational since 2001, is the lead government agency with the mandate for environmental protection, natural resource management, land use and spatial planning. Since 2012, Jamaica has also sought to enhance its institutional arrangements to address climate change. The Climate Change Division (CCD) was established in 2013 with the specific mandate of addressing climate change issues and coordinating related activities across sectors. Municipal Corporations have authority over various areas, including many directly relevant to climate change mitigation and adaptation, such as public health, water supplies, building regulations, public beaches, and sanitation.

Intervention gaps and best practices at the sectoral level

- **Education sector:** The extent to which climate change and displacement disrupt access to equitable and quality education is highly dependent on system-wide policy action and planning, primarily in the education sector, although inter-sectoral action is also critical. Intervention areas may range from climate-resilient school infrastructure to disaster risk management and awareness-raising/curriculum change. As a CDEMA member, the Government of Jamaica is integrating such objectives in alignment with the Caribbean Safe School Initiative, which Jamaica joined in April 2019. As far as resilient school infrastructure is concerned, it has conducted energy audits at schools since as far back as the early 2000s, retrofitting them with renewable energy systems using solar energy. Regarding curriculum, interest in environmental education began in the 1980s, leading to several interventions supporting the integration of environment, climate and energy issues in the curricula at the primary and secondary levels. Many schools have environmental clubs while some non-governmental organizations provide environmental education, such as the Jamaica Environment Trust (JET) through its Schools Environment Programme delivered in over 350 Jamaican schools as of 2020. From a social protection perspective, an important programme initiated in 2001 is the Programme of Advancement Through Health and Education (PATH), a cash transfer programme addressing immediate poverty alleviation and, more significantly, longer-term social gains in health and education (Social.Protection.Org website). The programme could be part of Jamaica's shock-responsive social protection strategies with natural disasters (UNICEF, 2020). Its critical importance for children from low-income families was revealed during the COVID-19 pandemic as it had to be continued despite school closure.
- **Disaster risk management:** The ODPEM, from very early on, initiated a public awareness programme focusing on Jamaica's children and schools, which remains one of its priorities. The ODPEM was the first in the Caribbean to have a disaster preparedness website targeting children. Published in 2005, the Guidelines for Child-Friendly Disaster Management and Response were developed as an aide-mémoire for planners and implementers in times of emergency. Among the six core aspects that are covered, one is education. The guidelines state that the use of schools as shelters undermines education.

- **Climate change:** To mainstream and integrate climate change across sectors, the Climate Change Policy Framework seeks to use Sector Strategies and Action Plans (SSAPs), among other instruments. Presently, the Forestry SSAP (National Forest Management and Conservation Plan, 2016-2026) has been completed. Therefore, an opportunity exists for other SSAPs to be completed, including sectors identified as particularly vulnerable such as water, agriculture, human health, tourism and coastal resources, human settlements (Government of Jamaica, 2020) and possibly education. With over 530,000 youth representing approximately 19% of the country's population, Jamaica stands to gain significantly from the creative and transformational power of its youth. A success story was the 3rd Youth Climate Change Conference "Our Climate, our Voice, Our Change" held in 2017, which involved the participation of 600 youth from Jamaica and other Caribbean countries. Still in 2017, the Jamaica Climate Change Youth Council, youth affiliate of the Jamaica Climate Change Advisory Board, was founded to raise awareness about climate change and its effects among young Jamaicans aged 15-35. It recently adopted an advocacy plan entitled Re-Imagine, using the COVID-19 pandemic as an opportunity to get more young people involved in climate advocacy and action (JIS, 2021b), which could be implemented in partnership with schools.
- **Resettlement policies and strategies:** At the crossroads between urban planning, disaster risk reduction, climate change adaptation and repatriation policies, the Government of Jamaica is currently reviewing its legal and institutional framework to reduce risk and better protect the most vulnerable groups. There is a unique window of opportunity to incorporate the education sector into such efforts.

Conclusion and recommendations

The exponential increase of climate impacts, in the form of extreme weather events and slow-onset changes, calls for urgent and effective action, in line with UNESCO's new landmark report "Reimagining our futures together: A new social contract for education" (November 2021). It is therefore hoped that policy-makers in the education and other relevant sectors, particularly in Jamaica, will find the case study eye-opening and the final recommendations useful to uphold the right to education for all under all circumstances, including climate displacement while keeping as primary goals building the resilience of the education sector and the prevention of climate displacement to begin.

RECOMMENDATION 1: ALIGNING LEGAL AND POLICY FRAMEWORKS TO ENSURE THE RIGHT TO EDUCATION IS PROTECTED FOR ALL UNDER ALL CIRCUMSTANCES

Member States must ensure that the right to education is protected in law and policy for all, without discrimination, regardless of citizenship, residency or any other legal status. Any existing legal or administrative barriers should be carefully reconsidered. In Jamaica, a priority is to incorporate education into policy frameworks related to climate change and disaster risk reduction and vice versa, ensuring that the impacts of climate change are addressed in education sectoral policies. Therefore:

- **Vision 2030 Jamaica:** On-going reviews of Vision 2030 Jamaica - National Development Plan (2009) could help identify policy changes and strategic actions required to build the resilience of the education sector in the context of climate change, with clear linkages to addressing vulnerabilities related to multi-dimensional poverty as a root cause of both exposure to hazards and school drop-out.
- **Climate Change Policy Framework and Disaster Risk Management Policy:** The Climate Change Policy Framework (2015) should be reviewed to cover the education sector and climate displacement. The upcoming new Disaster Risk Management Policy should cover the same. In particular, the elaboration of the policy is an opportunity to review shelter policies in Jamaica and accelerate efforts to step away from the use of schools as shelters.
- **Informal settlements:** Jamaica's response to the informal settlement, whether through upgrading and regularization, or eradication and relocation, should focus on access to key services, including education and decent housing and hazard risk reduction measures.
 - Approaches to relocation should be right-based so as not to increase vulnerabilities, i.e. the government must refrain from, and protect against, forced evictions; and ensure the meaningful and informed participation of all affected persons, including people on the move and receiving communities.
- **Ecosystem restoration:** In the face of increased climate risks in coastal areas, from extreme weather events and slow-onset changes, and an acceleration of ecosystem degradation, the government should promote nature-based solutions and full-scale ecosystem restoration, which will benefit highly exposed schools and educational institutions.

RECOMMENDATION 2: STRATEGIZING FOR RESILIENCE IN THE EDUCATION SYSTEM

The education sector should prioritize preparedness, including policy measures which can anticipate risk and respond to the educational needs of children in crisis situations. In particular, the Ministry of Education of Jamaica should implement priority actions as per the Caribbean Safe School Initiative:

- **Infrastructure resilience:** Educational infrastructure should be made resilient, in line with building codes and through careful land-use planning. New schools and those being retrofitted should be able to withstand Category 5 Hurricanes.
- **Emergency preparedness:** All schools should develop emergency preparedness and response plans and conduct regular multi-hazard risk assessments to identify localized risk reduction strategies.
- **Resilience education:** Integrating Climate Change and Environmental Education into curricula, including Disaster Risk Reduction (DRR) elements, should be accelerated and become the norm at all levels from early childhood to tertiary and adult education.

A more comprehensive approach to strengthening the resilience of the education system – so-called crisis-sensitive educational planning, fostering political leadership for effective crisis response, should be promoted. In particular:

- **Sectoral Planning:** The Ministry of Education should formulate a new National Education Strategic Plan (covering 2021-2030) that includes strong climate change and disaster risk management elements. The Ministry could also develop a Sector Strategy and Action Plan (SSAP) linked to the country's Climate Change Policy Framework and Nationally Determined Contributions.
- **Intersectoral coordination and leadership:** The Ministry of Education should coordinate inter-sectoral cooperation to build resilience in the education sector. Climate displacement requires a system-wide approach, fostering cooperation between departments, divisions and ministries addressing interrelated issues. Whether internal or cross-border, climate displacement has important ramifications with other sectors (e.g. DRR, social protection, environment), often in ways that interact with the education sector.

RECOMMENDATION 3: ENSURING ACCESS TO EDUCATION FOR ALL CLIMATE DISPLACED PERSONS

A challenge Member States face is providing quality, inclusive education in the context of climate displacement. It is difficult to predict human mobility trends, and natural disasters can displace numerous persons almost instantaneously, all of which require specific measures and investments:

- **Financial barriers:** The Ministry of Education could explore ways to remove financial barriers for climate displaced learners, direct and indirect, to complement existing programmes (e.g. PATH). Conditional cash transfers, scholarship programmes or grants could relieve some of the hidden costs of education (e.g. school uniforms and transportation).
- **Innovation and flexibility:** The Ministry of Education should explore alternative learning and teaching approaches adapted to climate displacement. In particular, it could build on, and further invest in online systems developed to respond to the COVID-19 pandemic to fully bridge remaining connectivity gaps.
- **Mental health and psychosocial needs:** The Ministry of Education, in collaboration with other government entities, should build internal capacity to address the mental health and psychosocial impacts of recurring extreme weather events on the school community, including students and teachers, and ensure the integrated protection of students in contexts of climate displacement.

RECOMMENDATION 4: ADDRESSING INEQUALITIES AND INTERSECTIONAL VULNERABILITIES

The complexity of climate displacement must not overshadow the investigation into the ways that existing inequalities interact with human mobility to create different education experiences:

- **Most at-risk groups and communities:** The Ministry of Education, in collaboration with other government entities, should systematically identify groups, schools and communities most at risk of climate displacement to be able to prioritise interventions and address vulnerabilities. In addition to geographic disparities, it should investigate the needs of most vulnerable students, including children facing multidimensional poverty or living with disabilities, those in State Care, possibly asylum seekers, etc.
- **Gender inequities:** The government should take necessary measures to identify and respond to protection risks (including gender-based violence) faced by female students at home, at school and in their community, including in the context of climate displacement. Vulnerable women in rural and informal urban settlements should have access to social protection and employment opportunities.

RECOMMENDATION 5: PUBLIC AWARENESS AND CAPACITY-BUILDING

Public awareness and education, combined with formal education, are requirements to accelerate climate action at a societal level:

- **Action for Climate Empowerment:** The government of Jamaica, through the Climate Change Division, should develop an ambitious Action for Climate Empowerment (ACE) Strategy and Action Plan embedded within a results-based framework to foster a better understanding of an ability to address climate change and its effects; promote community engagement, creativity and knowledge in finding climate change solutions; and engage all stakeholders in debate and partnership to respond collectively to climate change (i.e. the three core objectives of the UNFCCC's ACE Framework), with a specific focus on engaging stakeholders in the education sector and reaching out to climate displaced persons.
- **Institutional capacity-building:** Relevant stakeholders, including staff from the Climate Change Division, NEPA and ODPEM, and education sector stakeholders, should be equipped with the knowledge, skills and systems needed to address issues related to the right to education in the context of climate displacement. For instance, special training programmes could be organized for teachers and principals.

RECOMMENDATION 6: REGIONAL AND INTERNATIONAL COOPERATION AND FUNDING

The right to education of climate displaced persons can be better protected by international, regional and bilateral agreements that respond to their particular needs and circumstances:

- **Regional cooperation:** The government of Jamaica should actively support the enforcement of the CARICOM Protocol on Contingent Rights and join regional and bilateral Free Movement Agreements (FMAs) with other Caribbean countries, both as a host or country of origin of potential climate displaced persons. Such cooperation could also facilitate regional migration dialogues and, in collaboration with regional institutions such as CDEMA, facilitate the sharing of good practices regarding the right to education.
- **Climate finance:** The government of Jamaica should continue to expand its collaboration with the Green Climate Fund, the Adaptation Fund and various other multi-lateral and bilateral partners, ensuring that the education sector and educational infrastructure resilience become priority areas of intervention in such partnerships. At the national level, innovative partnerships with the private sector should be pursued to strengthen the resilience of the education sector, for instance, in terms of access to technologies or resilience of water systems in schools.

RECOMMENDATION 7: FILLING KNOWLEDGE AND DATA GAPS, PROMOTING COMMUNITY AND STUDENT PARTICIPATION

Collecting disaggregated data on climate displaced populations is paramount to close the knowledge gap in this area and to develop evidence-based laws and policies, including in the education sector. More must be done to understand and monitor the extent to which displaced children, youth and adults have access to education and how to lift the barriers confronting them:

- **Research on the right to education and climate displacement:** The Government of Jamaica, through the Climate Change Division and in collaboration with academic and non-governmental partners such as the Caribbean Child Development Centre (CCDC – UWI) and the Jamaica Environment Trust (JET), could develop a research agenda on the right to education and climate displacement, to guide policy decisions.
 - There is, for instance, a need to do more research on the specific barriers faced by most vulnerable groups, such as children living with disabilities or children among families recently deported back to Jamaica; on climate displacement and migration in slow-onset scenarios, and the implications in terms of planned relocation, specifically for the education sector; or on whether families weigh education as a push/pull factor and whether the search for educational opportunities is tied to specific migration patterns.

- **Education Management Information System:** The Ministry of Education, in collaboration with other government entities, should incorporate climate displacement and, more broadly, climate impacts into existing education management information systems under the guidance of resources and approaches discussed at UNESCO's 2021 Regional Forum on information systems in educational policy planning and management, and possibly set up a dedicated clearing house to keep track of relevant data and information. In particular, reliable, timely and comparable data is needed to address barriers and monitor learning outcomes in situations of climate displacement.
- **Participation of climate displaced persons:** Climate displaced persons, including children and youth, should be actively involved as agents of change in research and data collection exercises, hazard-risk mapping and community-based disaster management planning among other activities related to the education sector.

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UNESCO

7, place de Fontenoy - 75352 Paris 07 SP France
righttoeducation@unesco.org



<https://www.unesco.org/en/right-education>

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Central America and the Caribbean regional synthesis

Climate change, displacement and the right to education

Due to their socio-economic characteristics and geographical location, Central America and the Caribbean are among the regions most vulnerable to the effects of climate change and displacement. This led UNESCO to conduct case studies in the Bahamas, Cuba, the Dominican Republic, Guatemala and Jamaica to examine their specific vulnerabilities to climate change and related human mobility, and, in light of this, the impacts on the right to education in this region. The case studies have shown that climate change directly threatens education.

On that basis, this regional synthesis report aims at identifying common and divergent patterns of climate displacement as well as barriers to education for climate displaced persons in the studied countries. It also aims to guide policymakers by providing policy recommendations on how to ensure the protection of the right to education in the face of climate change and displacement, using a human rights-based approach. This report is part of a global initiative launched by UNESCO in 2020 to investigate the impact of climate change and displacement on the right to education. It is one of the regional reports that will lead to the development of a global report providing global operational policy guidance.

