

## Article

# Does Climate Finance Support Institutional Adaptive Capacity in Caribbean Small Island and Developing States? An Analysis of the Green Climate Fund Readiness Grants

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**Abstract:** Adaptation is crucial for addressing current and future climate change challenges in Small Island Developing States (SIDS), and climate finance instruments, such as the Green Climate Fund (GCF) can play a key role in increasing their adaptive capacity and supporting the integration of adaptation into policy and programmes. Few studies have analysed the linkages between climate finance, adaptation mainstreaming, and institutional adaptive capacity; however, assessments of the impacts of climate finance on adaptation and adaptive capacity, particularly at the institutional level, are still limited. This research assesses how climate finance may promote institutional change through the mainstreaming of adaptation policies at the national level, and may contribute to more institutional adaptive capacity. Through reviewing the documentation of approved Green Climate Fund Readiness Preparatory Support Grants, and through semi-structured interviews focusing on three Caribbean SIDS (Antigua and Barbuda, Belize, and Haiti), this paper shows that the grants had a positive impact on several processes, though sometimes limited by the strength and role of the institutions in place. These results demonstrate that access to climate finance can create a window of opportunity for countries to accelerate institutional change and adaptation integration. However, further studies are needed to examine the complementary influence of the different climate finance flows (multilateral or bilateral), and their interplay with national institutional mechanisms.

**Keywords:** Green Climate Funds; Readiness Grants; adaptation; SIDS; mainstreaming; adaptive capacity



**Citation:** Ricci, L.; Mangenot, M. Does Climate Finance Support Institutional Adaptive Capacity in Caribbean Small Island and Developing States? An Analysis of the Green Climate Fund Readiness Grants. *Climate* **2023**, *11*, 144. <https://doi.org/10.3390/cli11070144>

Academic Editor: Nir Y. Krakauer

Received: 5 May 2023

Revised: 14 June 2023

Accepted: 19 June 2023

Published: 10 July 2023



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## 1. Introduction

Small Island Developing States (SIDS) are heavily affected by the consequences of climate change, including “increases in temperature, the growing impacts of tropical cyclones (TCs), storm surges, droughts, changing precipitation patterns, sea-level rise (SLR), coral bleaching, and invasive species, all of which are already detectable across both natural and human systems” [1] (p. 2045). To address these challenges, several financial mechanisms were established under the United Nations Framework Convention on Climate Change (UNFCCC) to provide financial resources to developing countries. This financial mechanism serves the Kyoto Protocol and the Paris Agreement. The Global Environment Facility (GEF) has been operating since 1994, while the Green Climate Fund (GCF) was adopted as a financial mechanism in 2011, with the aim of channelling a substantial proportion of international funds through bilateral, multilateral, and private sources to support the achievement of the mitigation and adaptation goals of climate action in developing countries and vulnerable states.

The Paris Agreement called for financial support for a “pathway towards low greenhouse gas emissions and climate-resilient development”, and for implementation that reflects the “equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.” Responding to this

call, developed countries committed to jointly mobilize USD100 billion per year by 2020, from a variety of sources, to address both mitigation and adaptation challenges in developing countries. Most of this multilateral funding should be channelled through the GFF, as a key financial mechanism to support the design and implementation of ambitious Nationally Determined Contributions (NDCs), which serve to balance contributions between mitigation and adaptation measures and engaging with the private sector in low-carbon, resilient investments.

The GCF was designed with the core mandate to drive a “paradigm shift” towards low-emission and climate-resilient country-driven development pathways [2]. The GCF also targets a 50/50 allocation of funds between adaptation and mitigation, and is expected to provide dedicated support to the Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African countries. So far, the GCF has supported 196 projects worldwide, contributing a total amount of USD10.4 billion [3].

Despite the amounts invested, assessing the impacts of climate finance on adaptation and adaptive capacity, particularly at the institutional level, remains a challenge. A large body of research has questioned the impact of adaptation finance programmes, and has analysed adaptation policies at various levels. A review of the development of policies, institutions, and the financing of adaptation in international agreements between 1992 and 2013 found that following mitigation approaches (that came first in climate policy) and technical solutions are prioritised in adaptation projects, while social, political, and cultural problems (in which the roots of vulnerability reside) are neglected [4].

In addition, two key components for more efficient national policies have been identified: the degree of environmental and climate policy integration, meaning cross-sectoral ministries’ understanding of the importance of climate change adaptation and their subsequent consideration of the impacts of climate change on their national policies [5–8], and the adaptive capacity of institutions, meaning their ability to enable the adaptive capacity of the country, and the external actors that promote change [9–13]. These two elements are not necessarily present in the institutional make-up of countries, with ministries often working in silos and with potential conflictual objectives (Runhaar, Driessen, and Uittenbroek) [7]. As a cross-cutting issue, climate change adaptation requires interventions from a wide diversity of sectors [14] and some level of institutional adjustment, including more mechanisms for collaboration and coordination at the national level, and lasting changes in practices to make the institutions themselves more able to adapt to the consequences of climate change [5]. Institutional capacity at the national level is thus needed to implement relevant and efficient climate change adaptation strategies, and is supported by several capacity-building programmes, including the Green Climate Fund Readiness Preparatory Support Programme (RPSPs, or Readiness Grants). However, to date, few studies have analysed the linkages between climate finance, adaptation mainstreaming, and adaptive institutional capacity.

Most research on projects supported by the GCF has focused on analysing the decision-making process in order to understand which countries would benefit the most from climate finance allocations, analysing the decision-making process and assessing whether climate finance targets the most vulnerable countries. Dorman and Cipler [15] highlighted discrepancies in fund allocation in the energy sector, showing that high- or middle-income countries benefited the most, while Garschagen and Doshi [16] demonstrated that some criteria for allocation, such as political stability or institutional capacity, were applied to the most vulnerable countries, thus making the poorest countries with low institutional capacity less likely to receive funds. Other scholars have investigated the issue of country ownership [17], the role of intermediaries [18,19], and the existing potential for a paradigm shift from the current development model to low-carbon and resilient societies [20,21]. The Readiness Grants are described as aiming “to strengthen [countries’] institutional capacities, governance mechanisms, and planning and programming frameworks towards a transformational long-term climate action agenda.” [22]. Their ‘transformational’ role and the potential for ‘paradigm shift’ has been emphasised by several GCF Board members [20];

however, a 2018 review of the Readiness Programme, using GCF criteria and conducted by the Independent Evaluation Unit of the GCF, did not specifically address the issue of a “paradigm shift” or the “transformational” potential in terms of institutional change [23].

Thus, assuming that effective integration of climate change adaptation concerns, objectives, and concepts is essential for transformation, this research aimed to shed light on these aspects by assessing how climate finance promotes the mainstreaming of adaptation policies at the national level, and how it may lead to more institutional adaptive capacity, through the analysis of the GCF Readiness Grants proposals and implementation.

In order to gain insights from different socio-economic, institutional, and environmental contexts, this study focused on three Caribbean SIDS, which are recipients of six or more Readiness Grants and are representative of the diversity of the region. Antigua and Barbuda is a high-income small island state that is directly in the path of hurricanes, and in 2012 was ranked by the World Bank amongst the top five countries most at risk of multiple hazards, “with 100% of their population and land area exposed to two or more environmental hazards” [24] (p. 6) [25,26]. The country has strategic plans to address climate change, although its high level of debt limits its fiscal space [26] (For more information, see Appendix A Table A1). Belize is a middle-income continental SIDS, overburdened by debt and suffering from SLR due to its low-lying situation [27,28]. The country has well-developed climate adaptation and sectoral resilience plans [25] (For more information, see Appendix A Table A1). Finally, Haiti is the only LDC in the region. The country suffers from climate change manifestations along with natural hazards, such as earthquakes, and an unstable social and political landscape [29–31]. The country has several national and sectoral plans to address climate change issues [32] (For more information, see Appendix A Table A1).

The study further attempted to answer whether the award of Readiness Grants promoted and catalysed a certain degree or form of institutional change, looking particularly at

- Whether the grants have led to more collaboration between ministries and the increased involvement of stakeholders (e.g., business sector and civil society organisation (CSO), and whether they have contributed to improving the integration of adaptation issues across ministries;
- Whether the Readiness Grants have promoted more (contribute to enhance) institutional adaptive capacity.

To answer these questions, a preliminary review of the literature on environmental and climate mainstreaming and on institutional adaptive capacity was conducted to define the conceptual framework that informed the analysis of the Readiness Grants. The results of the review are illustrated in Section 2 below, while Section 2.2 provides details on the rationale for the research, and Section 3 the methodology applied to assess the Readiness Grants’ proposals and implementation, in order to answer the research questions. Section 4 presents the results, and Sections 5 and 6 discuss the findings and suggest policy recommendations.

## **2. Conceptual Framework: Institutional Change in the Context of Climate Change Adaptation as Barrier and Enabler**

Understanding what constitutes efficient climate adaptation policies is a challenging task given the complexity of the concept of “adaptation policies”, which makes it difficult to narrow down the components of climate adaptation policies [33], their intentionality, [34] and their scope. However, several scholars agree that the challenges presented by climate change call for major systemic change, including “institutional innovations, changes in power structures and social and economic behaviours” [35] (p. 2).

### *2.1. Climate Change Adaptation and Institutional Changes*

Institutions can be conceived as a ‘fixed structures’, referring to a set of bodies or a set of rules and norms [35], or as a dynamic process of ‘shared practices’ and interactions [36,37]. Within this research, institutions are understood as governing bodies and entities at the national level, the procedures and processes that guide their interactions, and the laws and

regulations they create [38]. Institutions play an important role in climate change adaptation (CCA), with institutional weakness having been identified as a barrier to adaptation [39]. Cuevas [40] additionally argues that due to the complex and overreaching ('wicked') nature of climate change adaptation, an institutional approach is needed; both institutional change and building increased institutional capacity are required to address the issue, and adaptation mainstreaming cannot happen without institutional change. Patterson [40] summarised three reasons for institutions to change: (i) **increasing changes in society**, and the widespread recognition of climate change as a major societal issue; (ii) the necessity of **strong climate change leadership** to face the challenges to come; and (iii) developing a **cross-sectoral long-term focus** instead of a siloed short-term vision.

Institutions are often characterised by continuity, i.e., by the tendency of agents to maintain the system already in place [41]. This means that institutions will remain stable unless 'exogenous shocks' provoke radical transformation. Patterson, de Voogt, and Sapiains [42], studying Santiago de Chile's municipal adaptation planning, show that national recognition of climate change and the creation of the Division of Climate Change took more than ten years to occur. Conversely, they also show empirically how stakeholders can work within the system to achieve change. Mahoney and Thelen [43] investigated gradual institutional change, defining institutions as a dynamic compromise between conflicting entities allocating resources. They also highlighted the subjectivity of the rules within institutions, which can be interpreted differently depending on the actors and the context, and the variability of compliance to these rules, due to their level of acceptance of the rule or the availability of resources for enforcement. According to Mahoney and Thelen [43], this would open to create potential for transformational change without external shocks. In line with this analysis, Beunen and Patterson [36] use the concept of 'institutional work' (or the intentional changes resulting from the actions of individuals) to describe gradual changes in the institutional mechanisms of environmental governance, and the multiple agencies and actors involved. They argue that the variety of actors involved is key, as small single actions may not be noticed, but the cumulative effect of individual actions may be significant.

Another prominent feature of institutions is linked to the cultural, historical, and social context in which they operate. The sustainability of institutions depends on their legitimacy, efficiency, and external support [44]. This requires institutions to have the ability to change and adapt to stay relevant to their constituents, alongside creating opportunities and space for institutional adaptive capacity. Adaptation to climate change encompasses all these elements, and the transformation of institutions that is happening to some degree is both exogenous and endogenous.

## *2.2. Efficiency and Coherence in Climate Change Adaptation Policies: The Concept of Policy Integration or Mainstreaming*

There is extensive debate on the efficiency and coherence in climate change adaptation policies, and on the key role of adaptation mainstreaming in achieving transformational change. Eisenack et al. [45] argue that "mainstreaming" is an "enabling condition" used to overcome barriers to adaptation, particularly the 'fragmentation' of institutions, which undermine the ability to link the multiplicity of sectors encompassing adaptation policies. Adaptation integration or mainstreaming is part of the broader Environmental Policy Integration (EPI) debate, which also includes Climate Policy Integration (CPI), [7], in some cases considered a narrower and weaker interpretation of EPI [46]. CPI comprises both adaptation and mitigation policies, and has been defined as "the integration of environmental aspects and policy objectives into sector policies, such as energy and agricultural policy" [5] (p. 1). However, this definition does not convey the conceptual complexity of the meaning of "integration". CPI also contains a normative prescription (or dimension), referring to the motivation to "change the dominant paradigm at multiple levels of governance", which "changes the rules of the game and challenges ideas, attitudes, or activities that are considered mainstream or normal" [47] (p. 2). A more comprehensive characterisation

defines CPI from a practical and normative point of view as “the incorporation of the aims of climate change mitigation and adaptation into all stages of policy-making in other policy sectors (non-environmental as well as environmental)”, including “a commitment to minimise contradictions between climate policies and other policies.” [48] (p. 19)

Integration is therefore opposed to dedicated environmental or climate policy, or “concrete” policy, as coined by [34]. Many authors concur that due to the multi-sectoral nature of adaptation policies, integration brings a range of benefits, including (i) improving policy coherence, (ii) more efficient management of human and financial capital, and (iii) improving access to financial resources [49]. However, policy integration is still a broad concept, and how it happens, how it is measured, and the outcomes of integration have been extensively debated [5,7,8,49,50]. In particular, analyses of adaptation mainstreaming focus mainly on the following elements.

- Enabling factors and barriers: the normative framework, political will, cognitive and analytical capacities, and institutional (organizational and procedural) arrangements [51].
- Integration levels: horizontal policy integration; vertical policy integration; stakeholder integration; knowledge integration; temporal integration [50].
- Integration as a process, an output or an outcome [5].

Mickwitz et al. [48] additionally suggest five criteria to evaluate CPI, looking at *consistency* between policy goals, the *weighting* given to climate change impacts compared to other policy goals, *reporting* and climate change indicators, the *resources* or knowledge about climate change’s impacts, and the *inclusion* of climate change mitigation and adaptation impacts in policies. Wamsler and Pauleit [47] developed a framework based on a multi-level analysis to study the mainstreaming of ecosystem-based adaptation policies. According to Wamsler and Pauleit [47], “climate policy integration/mainstreaming refers to the inclusion of climate considerations in sector policy and practice [ . . . ] motivated by the need to change the dominant paradigm at multiple levels of governance”, and “changes the rules of the game and challenges ideas, attitudes, or activities that are considered mainstream or normal”. Their study found that systemic adaptation mainstreaming could lead to sustainable transformations.

Existing structures and collaborative processes are important for the implementation of adaptation mainstreaming strategies, while a lack of sustained political will and of cooperation between stakeholders are significant barriers to adaptation integration [8], more so than a lack of financial resources.

SIDS face specific barriers to adaptation, which reinforces the idea that adaptation mainstreaming is particularly relevant to context of SIDS and has led to the identification of three guiding principles to evaluate adaptation mainstreaming in SIDS: (i) increased collaboration between the sub-national, national and regional levels; (ii) reduced reliance on project-based funds and the availability of resources for institutional changes; and (iii) innovation (or the freedom to innovate) and learning by doing [52].

CCA mainstreaming is crucial to more efficient interventions, and institutions play a key role in the adaptation-mainstreaming process. Thus, institutions themselves need to build adaptive capacity in order to be more responsive and able to address potential unforeseen challenges ahead.

### 2.3. Institutional Adaptive Capacity

Government (national and local) institutions play a major role in drafting and implementing climate change adaptation policies. The assessment of institutional adaptive capacity is particularly relevant, as the aim of the Readiness Programme is to achieve a “paradigm shift” to low-carbon and more resilient societies. Nevertheless, the definition of “paradigm shift” or “transformational” change according to the GCF remains unclear [20,21]; it can be understood to involve an institutional make-up that is conducive to increasing adaptive capacity in a society.

The IPCC Assessment reports [53] (p. 2216) describe adaptive capacity as a component of vulnerability that includes “The ability of systems, institutions, humans and other

organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences." For Fidelman et al. [12] (p. 2), adaptive capacity is "a critical property for fostering adaptation" and responding to environmental changes. Adaptive capacity is also defined as "the property of a system to adjust its characteristics or behaviour, in order to expand its coping range under existing climate variability, or future climate conditions" [54] (p. 168). They imply an ability to design and implement effective adaptation strategies, and to react to climate-related hazards and stresses to reduce the likelihood of their occurrence and their negative impacts (ibid). However, individuals or organisations are limited in their adaptation possibilities by social rules and procedures at local, national, and international levels [55]. An enabling environment is therefore required to allow society to adapt to climate change. Referring to institutions and the role they play in shaping societal shifts, Gupta et al. [11] defined the adaptive capacity of institutions as their ability to enable adaptive capacity in a society. Considering the scale and rapidity of the manifestations of climate change, it is therefore important to determine whether institutions will themselves adapt, and whether they will promote or hinder adaptation [56].

To assess institutional adaptive capacity, Gupta et al. [11] developed the Adaptive Capacity Wheel, a framework presenting six objective dimensions of adaptive capacity and 22 criteria for analysis. The dimensions are variety, learning capacity, room for autonomous change, leadership, resources, and fair governance. The framework has since been used and tested in several studies (including, but not limited to [12,13,56,57]). In their paper, Grothmann et al. [13] observe that institutions and the policies they make are aligned with the society's perception of a specific issue; therefore, for adaptation measures to be adopted, they would need to be perceived as necessary. They suggest integrating psychological dimensions into the adaptive capacity wheel, adding the dimensions of belief (in adaptation policies) and motivation (for adaptation policies). A review of the literature therefore establishes that (i) adaptation mainstreaming requires institutional changes; (ii) institutional adaptive capacity and adaptation mainstreaming overlap; and (iii) institutional change, adaptation mainstreaming, and institutional adaptive capacity cannot happen without broad societal support.

### 3. Materials and Methods

#### 3.1. Rational and Research Focus

Readiness Grants (supporting projects and programmes, and providing technical assistance to enhance access to climate finance) aim to ensure that eligible countries and their national accredited entities meet the requirements in terms of financial management capacity, environmental and social safeguards, and gender integration. The grants are limited to USD 1 million per country per year for institutional capacity building, and to USD 3 million per country per year for the formulation of National Adaptation Plans (NAP) [22]. The objectives of Readiness Grants are ambitious, and support programmes aiming to achieve at least one of the objectives are indicated Table 1 [58] (p. 2).

Out of the 97 Readiness Grant Proposals (RGPs) approved in the 16 Caribbean SIDS, and 10 more in the pipeline as of 24 June 2021 [59], 6 countries have received most of the funds, either directly or through multi-country grants. These countries had more than 6 approved RGPs, representing 54% of the approved proposals, globally, in all the eligible countries. For the purpose of this paper, among these six countries, three were selected, with at least one completed readiness programme or project in addition to the six or more RGPs approved: Antigua and Barbuda (two completed), Belize (one completed), and Haiti (two completed). The countries were also selected on the basis of their institutional and socio-economic diversity, in order to provide a comprehensive overview of the region. The selected and analysed cases are listed as relative number (e.g., AB-1; AB-2; AB-3) in Appendix B Table A2.

**Table 1.** Objectives of Readiness Grants \*.

Objective	Description
<b>Capacity building for climate finance coordination</b>	Countries established human, technical, and institutional capacity to drive low-emission and climate-resilient development, including through direct access to the GCF
<b>Strategies for climate finance implementation</b>	Ambitious strategies implemented to guide GCF investment based on analyses of emissions reduction potential and climate vulnerability and risk, in complementarity with other sources of climate finance
<b>National adaptation plans and/or adaptation planning processes</b>	National adaptation plan (NAP) and/or other adaptation planning processes formulated to catalyse public and private adaptation finance at scale
<b>Paradigm-shifting pipeline development</b>	Priority-aligned and paradigm-shifting concept notes and funding proposals submitted by countries with least capacity, including LDCs, and direct access-accredited entities
<b>Knowledge sharing and learning (cross-cutting)</b>	Increased levels of awareness, knowledge sharing, and learning that contribute to countries developing and implementing transformational projects in low-carbon and climate-resilient development pathways

\* source: Green Climate Fund, 2019, [58] (p. 2).

Since 2015, 30 RGPs have been approved for Antigua and Barbuda, Belize, and Haiti, either as a direct grant or a multi-country grant. This research focuses on the national level, discarding proposals for strengthening the capacity of the implementing entities or local authorities (13) [22]. Out of the remaining 17 RGPs, the analysis involved 12 of them, which were those focusing on non-sectoral institutional capacity-building: 5 targeting Antigua and Barbuda, 3 targeting Belize, and 4 targeting Haiti.

The proposals' analysis was complemented with background information and data from a review of GCF countries' programmes, the countries' Nationally Determined Contribution, Adaptation Communication, National Adaptation Plans, and GCF reviews from the Independent Evaluation Unit (when available).

### 3.2. Assessing Adaptation Mainstreaming

Acknowledging that the Readiness Grants promote "long-term strategies across key policy areas", and provide "a framework for increased collaboration between different government institutions" [60] (p. 6), the 12 selected RGPs were analysed to determine whether the grants promoted more collaboration between ministries, increased involvement of stakeholders, and contributed to improve the integration of adaptation issues across ministries. First, the assessment of climate adaptation integration was carried out through coding the RGPs documents, by noting the occurrences of four key words and expressions: "adaptation mainstreaming", and "mainstreaming adaptation" in relation the research question 1, and "adaptive capacity" in relation to the research question 2, each included in the Introduction section. The coding used both exact match and stemmed words to determine whether the proposals expressly referred to these words/expressions.

Second, a review of barriers and adaptation needs, as described in the RGPs, was performed via coding relevant references in the documents. Then, Wamsler and Pauleit's [47] conceptual framework was applied to selected grant proposals. The RGPs documents were coded by noting occurrences of phrases that related closely to the following categories.

- *Programmatic mainstreaming*: the modification of the implementing body's sector work through the integration of aspects related to adaptation into on-the-ground operations, projects or programmes;
- *Managerial mainstreaming*: the modification of managerial and working structures, including internal formal and informal norms and job descriptions, the configuration

of sections or departments, as well as personnel and financial assets, to better address and institutionalise aspects related to adaptation;

- *Intra- and inter-organisational mainstreaming*: the promotion of collaboration and networking with other departments, individual sections or stakeholders (i.e., other governmental and non-governmental organisations, educational and research bodies, and the general public) to generate shared understanding and knowledge, develop competence, and steer collective issues of adaptation;
- *Regulatory mainstreaming*: the modification of formal and informal planning procedures, including planning strategies and frameworks, regulations, policies, and legislation, and related instruments that lead to the integration of adaptation;
- *Directed mainstreaming*: higher-level support to redirect the focus to aspects related to mainstreaming adaptation by, e.g., providing topic-specific funding, promoting new projects, supporting staff education, and directing responsibilities.

The results of coding through key words and of the application Wamsler and Pauleit's conceptual framework were integrated into a single quantitative analysis.

### 3.3. Assessing Adaptive Capacity

In order to qualitatively assess whether and how the Readiness Grants contribute to enhancing institutional adaptive capacity in the three selected countries, this study applied a simplified Adaptive Capacity Wheel Framework developed by Gupta et al. [11], integrating the beliefs and motivational elements suggested by Grothmann et al. [13]. This framework is comprehensive, has been well-tested, and is suitable for application in a variety of institutional contexts [57]. It allowed us to assess whether institutions facilitate or hinder institutional change in pursuit of climate change adaptation integration.

The criteria of the Adaptive Capacity Wheel were tested through interviews with relevant stakeholders. The outcomes of the interviews were used to refine and complement the findings of the document analysis. They provided explanatory elements to determine whether the government representatives from the targeted countries, a delivery partner and a representative from the GCF, considered that they were equipped and well prepared to implement relevant adaptation policies.

Seven semi-structured qualitative interviews were conducted, following a single question set (the detailed question set is available in Appendix C and a grid analysis for the interview in Table A3) slightly adapted for regional interviewees. Respondents were selected among officials from relevant government agencies or ministry departments with in-depth hands-on experience and knowledge of the GCF Readiness Programme, i.e., National Designated Authorities (NDAs). A representative from a regional delivery partner who handled a significant number of Readiness Grants, and one GCF representative for a regional overview were also interviewed. The paper prioritised in-depth qualitative interviews with a small sample of respondents to engage with more experienced officials within a defined time frame of three months. For anonymity, interviewees are referred to by codes as follows: representative from the GCF (GCF1), representatives from the governments of Antigua and Barbuda (A&B1), Belize (Bz1 and Bz2) and Haiti (Hi1), and representatives from one delivery partner with a regional focus (DP1 and DP2). The authors manually clustered and classified/evaluated the qualitative data from the interviews using 7 institutional adaptive capacity dimensions and 24 related criteria, as defined by Gupta and colleagues in the Adaptive Capacity Wheel framework and illustrate in Table 2 below.

The evaluation assessed the impacts of the Readiness Grants on institutional adaptive capacity, categorising them using three levels of impacts: no noticeable change (=), small positive impact (+), and significant positive impact (++)

The results of the RGP's document analysis and of the interviews are presented in Section 4.

**Table 2.** Clustering dimensions and criteria for the assessment of institutional adaptive capacity. The table applies the dimensions and criteria defined by Gupta et al., 2010 [11] and Grothmann et al. 2013 [13] to the analysis of the impact of Readiness Grants in the three case studies.

Dimensions	Definition and Aim	Corresponding Criteria
Variety/diversity	Assess whether a variety of sectors and a diversity of stakeholders were engaged and consulted in the making of the various Readiness outputs, and whether the Readiness Grants promoted a diversity of approaches in defining core adaptation policies.	<ul style="list-style-type: none"> <li>- Problem frames and solutions</li> <li>- Multi-actor, level and sector</li> <li>- Diversity</li> <li>- Redundancy</li> </ul>
Learning capacity	Assess if the Readiness Grants favoured the development of a culture of learning and sharing in targeted ministries and across ministries, including increased monitoring and evaluation of activities.	<ul style="list-style-type: none"> <li>- Trust</li> <li>- Single-loop learning</li> <li>- Double-loop learning</li> <li>- Discuss doubts</li> <li>- Institutional memory</li> </ul>
Room for autonomous change or agile planning	Assess the contribution of the Readiness Grants to the production of more agile adaptation plans, looking at the capacity of actors to access information, act according to a plan, or improvise.	<ul style="list-style-type: none"> <li>- Continuous access to information</li> <li>- Act according to plan</li> <li>- Ability to improvise</li> </ul>
Leadership	Analyse the role of leadership to understand to what extent the Readiness Grants promoted a visionary, entrepreneurial, or collaborative leadership, and more processes of exchanges between Ministries.	<ul style="list-style-type: none"> <li>- Visionary</li> <li>- Entrepreneurial</li> <li>- Collaborative</li> </ul>
Resources	Assess the potential of the Readiness Grants to develop the capacity of core staff and their ability to access to more financial or technical support.	<ul style="list-style-type: none"> <li>- Authority</li> <li>- Human</li> <li>- Financial</li> </ul>
Fair governance	Assess whether the Readiness Grants encouraged a higher degree of transparency, equity, accountability, and whether they strengthened the legitimacy of the institutions.	<ul style="list-style-type: none"> <li>- Legitimacy</li> <li>- Equity</li> <li>- Responsiveness/transparency</li> <li>- Accountability</li> </ul>
Belief and motivation	Assess how the Readiness Grants contributed to an increase in belief in the efficacy of adaptation interventions and the overall motivation to implement adaptation policies at the national level.	<ul style="list-style-type: none"> <li>- Belief</li> <li>- Motivation</li> </ul>

#### 4. Results: Assessing the Effects of Readiness Grants in SIDS

##### 4.1. Contribution of Readiness Grants to Adaptation Integration

###### 4.1.1. Brief Analysis of Common Needs and Barriers

The analysis of the RGPs for the three countries found common needs and barriers to adaptation integration, including

- Limited staff capacity, pointing to the need to create new positions and implement ongoing training;
- A lack of baseline data, scattered or missing data, or data inaccuracies, and the need for higher-quality data collection and data analysis;
- A lack of monitoring and evaluation systems;
- A lack of required policies, processes or procedures, and a critical lack of financial resources and technical financial capacity;
- Limited knowledge and awareness of climate change issues at the national level, including key actors such as parliamentarians;

- The limited role, engagement, and awareness of the private sector;
- A need to strengthen coordination mechanisms.

All these elements sometimes refer to a specific department (for example, the staff capacity of National Designated Authorities (NDA)) or to procedures (such as the GCF no objection procedure), or relate to a broader national context (the issue of data, for example, or financial resources). To address these challenges, the countries implemented strategies with various degrees of potential and scopes for adaptation mainstreaming.

#### 4.1.2. Programmatic Mainstreaming

This section discusses the measures included in guidelines or general policy frameworks, while the regulatory mainstreaming section below refers to measures directly integrated into laws and regulations. The two sections overlap only for A&B, wherein the NAP became a regulatory document and not only an example of policy guidance. The indications of programmatic adaptation mainstreaming found in RGP relate to the development of NAP, or reviews of existing plans to integrate CCA priorities (Antigua and Barbuda and Haiti). Other references to climate change programmatic mainstreaming are linked to climate finance planning and provisions for the development of funding proposals. The study of proposals from Belize reveals a more programmatic strategy, wherein the opportunities offered by the GCF Readiness Grants aim to strengthen and accredit entities, and are focused on developing sectoral plans. Out of the nine Readiness Grants Belize has received thus far, four of them aim to strengthen entities for accreditation, three are sectoral (fisheries, water, disaster risk reduction), and one is aimed at the private sector. Only one readiness proposal (the earliest one in 2016, B-6) targets institutional capacity building.

#### 4.1.3. Managerial Mainstreaming

The RGPs contain substantial references to climate change and climate finance managerial mainstreaming, which emanate from the previously identified needs and barriers. Most managerial mainstreaming interventions entail capacity building, with a few references to creating new positions (consultants) or bodies within the NDA. Occurrences of adaptation specifically are rarer, except in Haiti, with activities aiming to revive and strengthen coordination bodies pursuing climate change (with a focus on adaptation), and capacity building for the Direction of Climate Change (DCC) and the Ministry of Environment (MoE) alongside other closely related ministries such as the Ministry of Planning. A key measure in one of the proposals, (H-6) for example, is the performance of a gap assessment and the development of a comprehensive training curriculum for cross-ministries personnel. The production of data and knowledge for decision making is also important within the various proposals, with measures aiming to develop and strengthen officers' training, consolidated data tools, and shared knowledge platforms within CCA.

#### 4.1.4. Inter–Intra Organisational Mainstreaming

Inter–intra organisation mainstreaming is an important element for all three countries, with a strong emphasis on stakeholder engagement. “Stakeholders” is a term often loosely defined; it sometimes refers to non-governmental actors such as the private sector, civil society organisations (CSOs), or research institutions, and sometimes refers to other departments or ministries, or other departments within the same ministry. In most interventions, stakeholders' engagement takes the form of consultations and capacity building through trainings and workshops. In Antigua and Barbuda and Haiti, there are also provisions for the set up and strengthening of a permanent consultative body for the NDA on matters related to climate change including adaptation. For Belize, intra–inter organisation mainstreaming activities are mostly related to the strengthening and implementation of GCF procedures.

#### 4.1.5. Regulatory Mainstreaming

Regulatory mainstreaming is mostly absent from the analysed RGP, with the exception of Antigua and Barbuda, wherein one of the proposals (AB-1) mentions the National Adaptation Plan as a new sectoral legislative output to be approved by the Cabinet, gazetted, and made law, along with proposed amendments to current regulations. There is no explicit reference to such regulatory changes in the other proposals. This illustrates the different choices made by countries regarding the plans developed within the RGP, and whether they will be strategic guidance, general policy documents, or made legally enforceable.

#### 4.1.6. Directed Mainstreaming

There is little reference to directed mainstreaming in the reviewed documents. Analysis of the documents for Antigua and Barbuda suggests that the country adopted an overall directed strategic mainstreaming for climate change policies. There are few interventions in the documents which could be coded as “Directed”; however, all the proposals taken together show a strategic intent to mainstream climate finance and adaptation at all levels, with a focus on one direct access entity, the Department of Environment (DoE). Even though coordination mechanisms exist and large consultations have taken place, the DoE is at the centre of all suggested interventions. There is no evidence of proposals to submit another implementing entity for accreditation, according to the Antigua and Barbuda Country Programme [24].

Overall, the analysis shows the RGP contains elements for broader adaptation mainstreaming and institutional capacity building. However, most of the provisions are at the level of procedural interventions, and there is an overall lack of regulatory outputs. Table 3 summarises the main findings related to the potential of the proposals for adaptation integration.

**Table 3.** Strengths and weaknesses analysis of the selected Readiness Grant proposals in terms of adaptation mainstreaming.

Criteria for Climate Adaptation Integration according to Wamsler and Pauleit [51]	Strengths	Weaknesses
<b>Programmatic Mainstreaming</b>	Climate finance planning Development of NAP (e.g., Haiti as a strategy non-binding) Participatory development of framework, multi-year documents (country programmes, NAP) Focus on baseline assessments and data collection to inform policies and plans	<ul style="list-style-type: none"> <li>- Very few measures to indicate consultation mechanisms are permanent</li> <li>- Very few mentions of budgetary interventions</li> <li>- Activities sometimes vaguely defined (“strengthening” without more details on how this will be achieved)</li> </ul>
<b>Managerial Mainstreaming</b>	Capacity-building interventions Creating new positions (consultants) Knowledge sharing mechanisms (workshops, platforms)	<ul style="list-style-type: none"> <li>- Staff training sometimes limited to the NDA or the hosting ministry</li> </ul>
<b>Inter–Intra Organisation Mainstreaming:</b>	Multiple provisions for stakeholder consultations Capacity-building interventions Focus on the engagement of the private sector References to regional/international cooperation on adaptation tools and planning	<ul style="list-style-type: none"> <li>- Stakeholders vaguely defined</li> </ul>
<b>Regulatory Mainstreaming</b>	New sectoral legislative output (NAP, Antigua and Barbuda) Amendments of current regulations (Antigua and Barbuda only)	<ul style="list-style-type: none"> <li>- Very few references to regulatory enforcement (most interventions remain at the programmatic level)</li> </ul>
<b>Directed Mainstreaming</b>	Mainstream climate finance and adaptation at all levels (Antigua and Barbuda only)	<ul style="list-style-type: none"> <li>- Centralisation and limited accreditation of new implementing entities</li> </ul>

There are significant differences between countries; if Haiti’s focus on adaptation is clearly marked, it is less evident in Belize’s proposals. Finally, the most promising

provisions in the RPGs may be through the set-up of consultative processes, whether directly related to adaptation or linked to GCF procedures. Although there is little evidence that the creation of working groups for the achievement of the project's objectives would lead to a long-term and regular practice of cooperation, these groups have the potential to create collaborative practices and to drive engagement with new relevant stakeholders. These key points were further explored during the interviews with NDAs and delivery partners, when assessing the potential impacts of the Readiness Grants on institutional adaptive capacity.

#### 4.2. Impacts of the Readiness Grants on Institutional Adaptive Capacity

This section illustrates the results of the application of the seven dimensions and twenty-four criteria of the Adaptive Capacity Wheel [11], aiming to explore whether the Readiness Grants positively influenced institutional adaptive capacity through discussing the criteria with target interviewees. Overall, the respondents were positive in assessing the effects of the grants; however, they highlighted significant limitations.

##### 4.2.1. Variety of Perspectives, Actors, and Solutions

According to the respondents, variety/diversity was promoted through the involvement of a variety of actors and sectors, which brought new approaches. Stakeholders' engagement is required by the GCF to ensure country ownership (Bz1). The grants promote the engagement and capacity building of a wide range of actors, which otherwise would not have been possible (A&B1). The collaboration of national implementing entities, CSOs representatives, and the private sector was cited as a positive advance by all respondents. In Antigua and Barbuda, local actors have been engaged through consultation and incentives to participate in adaptation actions (A&B1). In Haiti, an entire Readiness Grant was dedicated to engaging municipalities in climate adaptation activities, with targeted climate finance funds. In Belize, the grants created opportunities for regional collaboration and exchanges between NDAs from different countries, thus contributing to the development of higher-quality grant proposals (Bz2).

The development of NAPs and country programmes has also contributed to increasing the variety of actors and climate adaptation challenges addressed. Participation and collaboration with ministries not directly involved in the implementation and management of the grants has increased due to the creation (Bz2, A&B1) and reactivation (H1) of dedicated committees. These committees are often composed of representatives from key sectoral ministries, CSOs representatives, and the private sector, and can act as advisories on the no objection procedure or the development of projects.

##### 4.2.2. Learning Capacity and Continuous Learning

The interviewees overall recognised that Readiness Grants improved the capacity for learning within institutions. However, learning interventions are still 'siloes', and target NDAs or small teams responsible for GCF grants (DP1), thus limiting awareness of climate change and adaptation within the responsible ministry (H1). Nevertheless, an interviewee from Antigua and Barbuda (A&B1) observed that specific sections of their readiness grants were designed to improve knowledge and shared learning, including engagement with key ministries and stakeholders, especially local communities and environmental groups. The implementation of the grants also strengthened the role of NDAs in knowledge production, notably related to gender policies and environmental and social protection (Bz2, H1). The obligation to report to GCF improved the need and capacity for monitoring and evaluation, and a regional readiness grant was designed to strengthen the measurement, reporting and verification (MRV) capacity in several countries, including Belize and Haiti (Bz2).

The activities developed within the Readiness Grants have also promoted learning from parties outside the national implementing agency/NDA (MoE, H1), and the need for increased shared learning led to the development of knowledge management platforms (Haiti, Antigua and Barbuda) and new knowledge-related website sections and updates

(Belize). Finally, continuous learning is fostered by the need to keep up-to-date with GCF policies and procedural changes (Bz2, A&B1).

#### 4.2.3. Agile Planning and Autonomous Change

Readiness Grants allowed for agile planning and autonomous change in several ways, including

- The participative design of guiding documents, strategic plans, and the development of national plans, such as country programmes or NAP;
- National entities, local authorities, and stakeholders' capacity building, either to promote their accreditation as an implementing entity, or the development of concept notes for funding;
- Alignment with national plans, ensured by a no objection procedure in Haiti. In addition, Belize centralised all climate finance into one department (Bz1, Bz2), and Antigua and Barbuda only has one accredited national implementing entity with the DoE.

However, the interviewees also mentioned several issues linked with overlapping competencies, bureaucracy (DP2, Bz2), multi-level decision chains, and plans being stalled due to changes in governance (DP2).

#### 4.2.4. Leadership

The respondents agreed that a long-term vision and a clear agenda was essential to address climate change policy issues, particularly for adaptation. There is strong centralisation of decision making and resources within high-level institutions and government representatives that are particularly active in the international area (this is evidenced by the recent appointment of Grenadian Prime Minister as the Head of the Conference of the Parties in 2022 [61]). While the commitment of high-level representatives, such as Heads of State, is considered positive, it can lead to the prioritisation of short-term interventions and the neglect of long-term adaptation policies that exceed the electoral mandate (DP1). Despite adaptation being a very high priority in Antigua and Barbuda, respondent (A&B1) observed that short-term decisions sometimes contradicted long-term resilient actions, and that governments had difficult choices to make. In addition, the respondents noted that short-term projects and grants may be inadequate to achieve long-term goals, particularly those concerning changes in the institutional structure, awareness, or culture (DP1, DP2, A&B1).

At the national level, Antigua and Barbuda demonstrated a clear direction and vision which helped to coordinate and enhance the coherence of the various readiness grants to ensure the achievement of their longer-term adaptation objectives. The DoE, being both an NDA and accredited national implementing entity, has strategic control over funds (A&B1) and ownership of the projects and programmes.

Belize improved its institutional structure by creating a Climate Finance Unit, which centralises all climate finance proposals in one place to ensure coordination and avoid the duplication of efforts. However, the parallel strategy of having multiple implementing entity accreditations and sectoral proposals might in the end "dilute the efforts" (DP2).

Haiti, which is dealing with socio-economic vulnerability and policy instability, is struggling in integrating CCA as a country priority, even though most sectors are already being negatively impacted. The role of the DCC is to design strategic documents and guidelines to be implemented by other national institutions and actors with the support of Readiness Grants. However, a lack of clear leadership and coordination (e.g., with other ministries, or bilateral or multilateral funding bodies) may lead to the duplication of efforts. Enhanced national ownership of climate change adaptation policies and actions was indicated to be essential (H1).

Despite the complexity of the implementation process, the Readiness Grants increased collaborative leadership through the improved participation of stakeholders, the imple-

mentation of cross-ministerial advisory and technical committees, and the importance of the no objection procedure.

#### 4.2.5. Access to Resources

Access to resources is the core objective of several Readiness Grants, which aim to strengthen the entities to be accredited, and to submit strong funding proposals. It is also imperative for countries that have “reached the limits” of what they can do to adapt, and that are overburdened by debt and adaptation costs (A&B1). The Readiness Grants comprise several provisions to strengthen NDAs’ and national implementing entities’ capacity for GCF procedures and accreditation processes. In the case of Belize, the Readiness Grants were instrumental in structuring the Climate Finance Unit. The enhanced capacity of the MFED enabled the country to secure additional funding and a higher number of Readiness Grants than other countries (Bz2).

In Antigua and Barbuda, the accreditation of the DoE facilitated access to additional funds and facilitated the development of a GCF country programme. The programme provides a clear climate finance strategy, which is required to apply for multi-year grants. This led to the country’s successful application for project proposals and multi-year Readiness Grants, which resulted in the receipt of project funding of over USD 50 million from the GCF, and an additional 10 million from the Adaptation Fund (A&B1).

Readiness Grants had a very positive impact on individual skills, and improved human capital within institutions (DP1). In Antigua and Barbuda, the grants were instrumental both in building internal capacity and in hiring new staff “to become ready to access climate finance and implement climate action” (A&B1).

However, due to an overall lack of skilled and trained human resources across these countries and the region, in some countries, the human resources turnover has increased; this is the case particularly in Haiti, where skilled government staff moved to other agencies or the private sector to benefit from higher salaries (DP2, H1).

#### 4.2.6. Promotion of Fair Governance

According to the respondents, the implementation processes required by the GCF helped strengthen the internal procedures, equity, transparency, and legitimacy of the departments in charge of climate change and climate change finance.

In all countries, capacity building on gender issues and environmental and social protections helped to achieve higher equity standards, and positioned the NDA as a legitimate ‘champion’ in these matters. NDAs are better positioned to take the lead in replicating these policies in other ministries, particularly in Belize, where the MFED showed significant influence on integrating gender and environmental and social guidelines (Bz2).

In Antigua and Barbuda, earlier grants, aiming to achieve accreditation for the GCF and the Adaptation Fund, enhanced the internal systems, standards, and requirements regarding procurement, conflicts of interest, and financial management. They increased transparency, legitimacy, and efficiency “to make sure the climate action was done in a correct manner” (A&B1; Bz2).

In the case of Haiti, centralisation helped to build the capacity of the NDA; however, a weak institutional framework and the lack of national accredited entities limited the autonomy and operation of the NDA (H1).

#### 4.2.7. Psychological Dimensions

The Readiness Grants, through the enhanced participation of a variety of actors, helped to enhance the understanding of climate change as a societal issue, rather than an exclusively environmental issue. In Belize, climate change is considered an “economic and development issue”, and in Antigua and Barbuda, adaptation has become a “way of life”. In Haiti, the level of awareness is still low because the MoE is still struggling to prioritise climate change and broader understanding of the interdependences between climate change and socio-economic challenges.

Knowledge sharing on GCF processes and the possibility of accessing climate finance have helped to enhance the motivation and interest of ministries other than the implementing authority or NDA (Bz2).

Excluding Antigua and Barbuda, where residents' awareness is already high (A&B1), there is still a need to raise awareness and thus broaden understanding of climate challenges and adaptation; there is also a need for advocacy to support adaptation policies and controversial political choices (DP1, Bz2). Some RGP did contain provisions for awareness campaigns; however, assessment of their results would be premature, as their implementation is ongoing. As became clear from the interviews, "climate change is a global issue, but ownership at the national level is still lacking" (H1), particularly in Haiti, where awareness about adaptation is low.

#### 4.2.8. A Positive Impact on a Limited Number of Institutions

According to the analysis of the interviewees' responses, the Readiness Grants have already contributed, to some extent, to more adaptive institutions. Drawing from Munaretto and Klostermann [56], Readiness Grants contribute to strengthening elements on both sides of the adaptation wheel—the more dynamic right side (variety, learning capacity and room for autonomous change), and the structuring left side (leadership, resources and fair governance)—while having an inconclusive impact on the psychological element, as the influence of Readiness Grants on beliefs/motivations is still partial/uncertain. Their contribution to the variety and resources elements of the wheel is the most evident in all the countries. This is linked with the purpose of the Readiness Grants to strengthen institutional capacity, access to resources, and 'country ownership' and stakeholders' consultations. Readiness Grants also improve collaborative leadership, stakeholders' empowerment, and transparency. However, it was not possible to fully test the resulting learning capacity, especially concerning the single-/double-loop learning sub-criterion, which is not applicable in the context of the grants. That said, it is worth noting efforts to improve monitoring, evaluation, and shared learning. The findings illustrated above are summarised in Table 4 below.

**Table 4.** Evaluation of each criterion.

Element	Criterion	Evaluation <sup>1</sup>
Variety	Problem frames and solutions	+
	Multi-actor, level and sector	++
	Diversity	+
	Redundancy	N/A
Learning capacity	Trust	+
	Single-loop learning	N/A
	Double-loop learning	N/A
	Discussion of doubts	+
	Institutional memory	+
Agile planning and room for autonomous change	Continuous access to information	+
	Acting according to a plan	+
	Ability to improvise	=
Leadership	Visionary	=
	Entrepreneurial	N/A
	Collaborative	++
Resources	Authority	+
	Human	++
	Financial	++
Fair governance	Legitimacy	+
	Equity	+
	Responsiveness/Transparency	+
	Accountability	++
Psychological	Belief	=
	Motivation	=

<sup>1</sup> no noticeable change (=); small positive impact (+); and significant positive impact (++)

An important caveat to highlight is that most of the positive contribution to institutional adaptive capacity emerged in departments directly working on climate change or climate finance, while the spillover effect in other ministries and institutions was difficult to assess through the interviewees' responses.

During the interviews, three key themes emerged: the issue of the retention of skilled workers in government bodies, the possibility of increased regional collaboration through Readiness Grants, and the question of opportunity, for example, the attraction of available climate finance for debt-burdened governments (Belize, Antigua and Barbuda) and governments with scarce resources (Haiti). The possibility of obtaining additional funds pushes governments in a direction they might not otherwise have taken.

## 5. Discussion

This research explored how climate finance may promote adaptation mainstreaming and institutional adaptive capacity, through the development and implementation of GCF Readiness Grants and related projects and programmes in three Caribbean SIDS. It first analysed the influence of the grants on adaptation mainstreaming by looking at the interventions and provisions included in the selected grant proposals. The study then examined the potential contribution of the Readiness Grants to longer-term potential institutional changes and increased institutional adaptive capacity, analysing the results of semi-structured interviews with NDAs, implementing authorities, and delivery partners.

### 5.1. An Opportunistic Short-Term Move for Potential Long-Term Adaptation Integration

Relating to climate change adaptation integration, the analysis focused on evaluating whether the Readiness Grants had an influence on the way ministries worked together, and whether they contributed to more collaboration between ministries, the increased involvement of stakeholders, and the integration of adaptation issues across ministries. Adaptation integration was not a specific intent of the Readiness Grants (except for AB-2, H-2, and H-3), but the results show their positive influence in promoting more climate finance and adaptation mainstreaming into institutions and their programming, especially with the development of inter-ministry coordination mechanisms, and improved stakeholders' participation. These results are in accordance with the findings of Zamarioli, Pauw, and Grüning [19], who highlighted that Readiness Grants have enhanced stakeholders' engagement.

However, mostly involving a limited number of sectors, the influence of Readiness Grants is often limited to the achievement of specific objectives (e.g., coordination to write funding proposals, consultations to develop a plan), in line with Adelle and Russel's [46] view of CPI. Additionally, it remains unclear whether the provisions for collaborative processes are contingent and short-term or long-lasting, given the short timeframe of the study (i.e., 4 months between April and August 2022). Institutional change is usually slow and incremental [43]. However, in the investigated countries, some provisions were implemented over only a few years. The processes of change observed in the analysis add another element to those described in the literature, defined as "climate finance opportunism". Countries that are highly indebted or have fewer fiscal resources rely on external grants to promote adaptation policies and reforms, and the GCF provides a window for middle and high-income SIDS to access concessional grants. In the three countries studied, the "financial opportunism" of obtaining Readiness Grants led to a quicker rate of institutional change, which, if not readily visible across the board and all ministries, is significant for the units administering the grants, and their parent ministries. "Climate finance opportunism" adds a layer to Runhaar et al.'s analysis [8], which points out the role that financial resources can play in promoting adaptation mainstreaming. However, these results can be fragile, and for them to really 'take root' and be sustained when funding is no longer available, broader top-level and societal support is required [44]. Changes implemented only to access funds might be at risk of reversal if the requirements to access them are modified. In addition, there are few provisions in the grants that deal with regulatory interventions, which limits the enforceability of the measures and their

sustainability over time. The stability of the changes can be assessed with Patterson's [41] three reasons for institutional change related to climate change. In Antigua and Barbuda, the conditions of (i) societal support and (ii) strong leadership are robust drivers for implementing the institutional changes needed both to access climate finance and to deliver stronger adaptation policies. The third condition, that of long-term focus, is recognized and accepted, but its implementation faces short-term challenges. In Belize, condition (ii) is met with the MFED, which is leading climate resource mobilisation to deliver the funds that the country needs; however, conditions (i) and (iii) were not thoroughly evidenced during the research.

The case of Haiti shows that changes are happening (despite the apparent lack of all three conditions), and seem more driven by the motivation of a core, trained team within the MoE, and the possibility of accessing the funds needed to support the country's development. Certainly, the lack of a national accredited implementing entity limits awareness of available adaptation funds, and also limits the ability to prioritise adaptation policies and projects. Therefore, measures for adaptation mainstreaming are more evident in Antigua and Barbuda and Belize, while greater ownership and understanding still need to be developed in Haiti. This analysis is aligned with the findings of Robinson [52], that adaptation mainstreaming strategies need an identified national 'champion' institution in order to be effective and successful.

### *5.2. Divergent Strategies for Institutional Adaptive Capacity*

Applying the Adaptive Capacity Wheel [11,13] to assess the expected impact of Readiness Grants on institutions allowed us to provide a broad overview of the elements most included in the grants, and to identify those relevant for the improvement of future reading proposals and the GCF.

Unsurprisingly, Readiness Grants have been particularly successful in strengthening the 'Resources' part of the wheel. Building the country's adaptive capacity requires funds, and responsible institutions have aimed to enable this development by bringing in additional resources. The analysis highlighted three different pathways that the countries utilise to distribute the grants according to their adaptation needs.

In Antigua and Barbuda, the strengthening of the DoE alone allowed the country to take full ownership of the grant's design and implementation. This emboldened the country to implement a strategic design, with further Readiness Grants on NAP, multi-year programmes, and regional projects supporting other regional entities and countries, before finally submitting fully developed sectoral adaptation programmes.

In Belize, the strategy aimed to maximise climate finance with a multi-pronged approach to supporting adaptation priorities; this approach comprised the centralisation and strengthened capacity of one unit to design the projects, and the submission of multiple entity accreditations and sectoral adaptation proposals. The strategy has been successful, as Belize has benefitted from the highest number of Readiness Grants in the region, and has increased regional cooperation.

With regard to Haiti, it is still too early to assess the approach followed, as the need of this country for technical capacity and basic knowledge was greater, and most of the grants rewarded focused on this issue. Moreover, because the country does not yet have an accredited entity, it relies on external agencies to access funds, and this can limit the full deployment of a national climate adaptation funding strategy. However, Haiti proved able and committed enough to incrementally build its institutional adaptive capacity, including at the local level, despite the existing challenges and the lack of an accredited entity.

## **6. Conclusions**

This study investigated and illustrated the links between climate finance and institutional change; in particular, it highlighted the influence of GCF Readiness Grants on adaptation mainstreaming and institutional adaptive capacity.

The research demonstrated that the selected GCF Readiness Grants have had a positive but limited impact on adaptation mainstreaming and institutional adaptive capacity in the three countries studied. The analysis shows that the proposals contain elements for adaptation mainstreaming, specifically related to inter–intra organisations, and programmatic and managerial mainstreaming. There is, however, a lack of provisions regarding regulatory outputs and directed mainstreaming. Moreover, Readiness Grants promote institutional adaptive capacity, particularly through a variety of perspectives, actors, solutions, resources, and collaborative leadership elements; however, they are often limited to a single unit (NDA, Climate Finance Unit, DCC or DoE) for capacity building.

The results show the “climate finance opportunism” by which countries accelerate institutional change, thereby increasing adaptation mainstreaming and adaptive capacity, in order to be eligible for additional GCF funds. This in turn provides more resources to support countries’ adaptation needs. The potential effects depend on the strategies each country has developed to benefit from the Readiness Grants, and on the strength and pre-existing capacity of the institutions in place.

We faced several challenges in conducting this research, and the limitations of the scope and methodology call for further studies, which are suggested below.

The disclosure policy of the GCF and long delays in obtaining public (but not yet published) information prevented the researcher from consulting relevant documents such as completed RGPs reports.

Qualitative inputs and semi-structured interviews were chosen to assess institutional adaptive capacity; therefore, the analysis is based on the respondents’ views, and potential biases due to their direct involvement with the Readiness Grants. Consulting with more respondents may have yielded more nuanced conclusions.

Similarly, the choice of the three countries aimed to give overview of the diverse use of the grants; therefore, the research did not attempt to compare countries, rather to note and aggregate interventions in favour of adaptation mainstreaming and institutional adaptive capacity to draw general conclusions. A comparative study or an in-depth analysis of one country may be of interest to further understand the mechanisms and motivations behind the observed changes.

This project focused on selected national GCF Readiness Grants, without including regional readiness grants or proposals targeting specific sectors. Carrying out a comprehensive analysis of adaptation mainstreaming and institutional change in the region would help to extend this research to sectoral readiness grants; comparing the results obtained at a national level with those from the different sectors would help to assess if and how elements of adaptation mainstreaming are present, and how they might complement each other. Other areas for future research may also include institutional capacity building and adaptation mainstreaming at the sub-national level, to examine how climate finance can contribute to change through a bottom-up or multi-level approach. GCF project proposals and financing from other multilateral or bilateral funds were also excluded from the study. Additional research may include interventions from other financing sources, and may also disaggregate contributions from several programmes running in parallel.

**Author Contributions:** Conceptualization, M.M. and L.R.; methodology, M.M. and L.R.; formal analysis, M.M.; investigation, M.M.; data curation, M.M. and L.R.; writing—original draft preparation, M.M.; writing—review and editing, L.R.; supervision, L.R.; All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Data Availability Statement:** Data from the review of the Readiness Programme documents and from the interviews are accessible from the authors.

**Conflicts of Interest:** The authors declare no conflict of interest.

## Abbreviations

CARICOM	Caribbean Community
CCA	Climate Change Adaptation
CPI	Climate Policy Integration
CSOs	Civil Society Organisations
DCC	Direction of Climate Change
DoE	Department of Environment (Antigua and Barbuda)
EPI	Environmental Policy Integration
GDP	Gross Domestic Product
MFED	Ministry of Finance and Economic Development
MoE	Ministry of Environment
MRV	Measurement, Reporting and Verification
NAP	National Adaptation Plan
NCCPSAP	National Climate Change Policy, Strategy and Action Plan
OECS	Organisation of Eastern Caribbean States
PNCC	Politique Nationale sur les Changements Climatiques
PSRC	Programme Stratégique pour la Résilience Climatique
Readiness grants	Green Climate Fund Readiness Preparatory Support Programme
SNAT	Schéma National d'Aménagement du Territoire
SNGRD	Système National de Gestion des Risques et des Désastres

## Appendix A

**Table A1.** Climate change and adaptation policies in Antigua and Barbuda, Belize, and Haiti.

Description
<p><b>Caribbean SIDS are facing common climate change threats, but diversified impacts</b></p> <p>According to the 6th IPCC report on adaptation (Working Group II), SIDS are already facing many climate change impacts: temperature increases, stronger tropical cyclones, changes in rainfall patterns, more intense and repeated droughts, storm surges, sea-level rises (SLR), and threats to biodiversity such as coral bleaching or the growth of the number of invasive species [1]. People in coastal cities and rural communities have already been affected, along with almost all economic and social sectors: health, water, agriculture, infrastructure, and food security [1]. SLR is a particular threat, as it is estimated that in 2017, 22 million people in the Caribbean lived less than six metres above sea level [1]. Additionally, extreme weather events such as tropical cyclones are increasing in intensity and frequency; in 2017 alone, 22 out of the 29 Caribbean islands were affected by a Category 4 or 5 hurricane [1]. Although this overall picture applies to all Caribbean SIDS, the potential impacts of climate change are nuanced by countries' particular vulnerabilities.</p> <p><b>Antigua and Barbuda</b></p> <p>Antigua and Barbuda is a Caribbean Small Island Developing State (SIDS) of around 456 km<sup>2</sup> of land, divided into two inhabited islands and other small islands [24]. The country was ranked in 2012 by the World Bank amongst the top five countries most at risk of multiple hazards, "with 100% of their population and land area exposed to two or more environmental hazards" [24] (p. 6). Climate change impacts Antigua and Barbuda in two main ways: (i) physical impacts, and (ii) economic and social impacts.</p> <p>Sea-level rise (SLR), droughts, and hurricanes are of particular concern, as Antigua and Barbuda is composed of low-lying islands; 70 percent of Antigua is less than 30 m above sea level, and most of Barbuda less than 3 m above sea level [24]. Estimations indicate that given the current and projected levels of SLR, Antigua and Barbuda might lose 50.8 to 64.9 km<sup>2</sup> of coastal land by 2080 (in other words, up to 14 percent of the country's inhabited land) [28]. With climate change, droughts are also expected to become more intense and frequent (up to 81.8 percent of probability of severe droughts over a five-year period), with an average rainfall decline of around 26 percent under a business-as-usual scenario [24]. Droughts cause a particular strain on the water supply, with heavy reliance on water desalination plants running on fossil fuel energy (<i>ibid</i>). Finally, the country is particularly exposed to extreme weather events, with projection of direct hit by a tropical storm every six to seven years (<i>ibid</i>, p. 6).</p> <p>Extreme weather and other expected climate change impacts have a disproportionate bearing on Antigua and Barbuda's already strained economy. Despite being ranked among higher-income countries, the country is socially fragile, with 14 percent of people unemployed and 18 percent below the poverty line [24]. External shocks can have a devastating impact on populations (it is estimated that an additional 10 percent of the population will be at risk of poverty in this case), infrastructures, and the country's development as a whole (the economy depends on tourism, comprising 80 percent of the economy). For instance, in 2017, Hurricane Irma caused "damage and loss of USD155.1 million (10 percent of the Gross Domestic Product -GDP), impacting houses, public buildings, hotels, firms engaged in the tourism sector, and the safety nets of vulnerable households" [28], (p. 27). Such losses impacted the small-sized economy, which was already plagued with a heavy debt burden averaging 104.36 percent of the GDP in 2015 [62]. This debt limits the country's fiscal ability to cope with climate change impacts with adequate adaptation or mitigation interventions (24). In addition, Antigua and Barbuda's ability to attract international climate funds is limited by its high-income status [63], preventing the country from accessing concessional loans [28].</p>

**Table A1.** *Cont.***Belize**

Belize is classified as a SIDS and is ranked amongst the upper middle-income countries. It is rather large compared to other Caribbean SIDS, covering an area of around 22,967 km<sup>2</sup>, including 280 km of coastland. Around 42 percent of Belize's population live in poverty [27].

Climate change is considered one of the biggest threats to the country's development. It is estimated, depending on the projections, that Belize will witness a temperature increase of between 2 and 4 degrees Celsius by 2100, and a 20 percent increase in the intensity of rainfalls, while the rainy season will decrease by 7 and 8 percent [27]. The country is ranked third among small states for susceptibility to natural disasters, and fifth for climate change risks among SIDS [27,28]. The low-lying topography of the country makes Belize's major infrastructures particularly at risk from flooding, storm surges, and SLR [28]. The capital city, Belize City, which is on the coast, is particularly exposed [27]. Extreme weather events are projected to have severe impacts on the country, with an average 7 percent GDP loss every year [28].

The country's economy is reliant on agriculture, fisheries and tourism, sectors which will all be severely affected by climate change. Losses of 10 to 20 percent of agricultural production and annual losses of USD 12.5 million for fisheries are expected by 2100. SLR, extreme weather events, flooding, and vector-borne diseases are considered threats to the tourism industry, along with impacts on biodiversity (coral reefs) and the landscape (beaches). Total tourism income could decrease by up to USD 24 million a year [27]. Climate change could threaten the energy sector; changes in rainfall patterns and the anticipated decrease in precipitation coupled with increased evaporation could impact hydropower electricity generation, which represents around 50 percent of the country's electricity [28].

Finally, Belize's economy is vulnerable to the devastating consequences of extreme weather events, and the country is burdened by a high level of debt (around 100 percent of GDP), which limits its ability to make climate change adaptation investments [28].

**Haiti**

Haiti is the only Caribbean SIDS amongst the world's Least Developed Countries. The country is located at the heart of the Caribbean, and shares the island of Hispaniola with the Dominican Republic. It is one of the largest Caribbean SIDS, with a total land area of around 27,750 km<sup>2</sup> and a territorial sea of 30,000 km<sup>2</sup>. Most of the Haitian territory is occupied by a mountainous landscape and steep slopes [32]. Haiti is the poorest country in the Latin American and Caribbean region, and is ranked 170 out of 189 countries in terms of human development [31].

Haiti is particularly vulnerable to extreme weather events; it is located in the path of hurricanes, and the country is regularly hit by tropical storms. It is estimated that over the last 20 years, the country lost an average of USD 400 million a year to climatic events [32].

Haiti is most affected by flooding, drought, intense rainfall, landslides, soil erosion, saltwater intrusion, and hurricanes. Haiti's institutional, social, and economic fragility additionally aggravate the situation; deforestation and the lack of a proper water drainage system increase the impacts of hurricanes, storm surges, and flooding [30].

The current and expected impacts of climate change are likely to worsen; the average yearly temperature is projected to increase by 0.8 to 1 degree Celsius in 2030, annual rainfall is projected to decrease by 6 to 20 percent, and some studies predict an increase of up to 80 percent in category 4 and 5 hurricanes [32]. Other projections estimate an SLR increase of around 0.13 to 0.56 m by 2090, and that 50 percent of Haiti will be at risk of desertification by 2050 [30].

Flooding is of special concern for Haiti. The country's urban centres, located in the alluvial plains of large river systems, are especially vulnerable to inundation risks. Hurricanes Hanna (2008), Sandy (2012), and Matthew (2016) caused intense floods, destroying many lives and buildings and causing an increase in water-borne diseases [30]. Extreme weather events linked to climate change often exacerbate other natural disasters; in 2021, tropical storm Grace hit the country shortly after a 7.2 magnitude earthquake struck the southern peninsula.

Climate change's strongest impacts are already being felt in the agriculture and fishing sectors, alongside affecting the availability of freshwater resources. The expected coupling of a decrease in annual rainfall with more intense downpours will negatively impact food productivity and worsen food security issues. Freshwater supplies will additionally be more vulnerable to the changes in precipitation and saltwater intrusions caused by storm surges [30].

Finally, Haiti's overall lack of institutional capacity, adequate funding, and infrastructures are serious challenges to the country's development and ability to address the current and expected impacts of climate change [32].

**An uneven policy landscape to tackle climate change adaptation issues**

At the regional level, the Caribbean Community (CARICOM) unites fifteen Caribbean member states and five associate territories in a single market and foreign policy initiative. Its decisions are non-binding until ratified by Member States [64]. The CARICOM developed the 2009–2015 Regional Framework for Achieving Development Resilient to Climate Change, which was approved by the CARICOM Heads of Government in July 2009 [65,66]. The framework is designed as a piece of guidance for member States to follow climate-resilient development pathways, and comprises five strategic objectives; these include Strategic Element 1, which is to "Mainstream climate change adaptation strategies into the sustainable development agendas of the CARICOM Member States" [65].

**Antigua and Barbuda**

Antigua and Barbuda has developed several policies to address climate change mitigation and adaptation; among them are the Policy Framework for Integrated Adaptation Planning and Management in Antigua and Barbuda (2002), the National Physical Development Plan (2012), the Medium-Term Development Strategy (2015), the National Comprehensive Disaster Management Policy and Strategy for Antigua and Barbuda (2015–2017), the Environmental Protection and Management Act (2015), the draft Building Code for the Organisation of Eastern Caribbean States (OECS), and the Coastal Zone Management Plan (2016) [25].

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**Table A1.** *Cont.*

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**Belize**

The Ministry of Environment defines the climate policies and plans, and the Ministry of Finance and Economic Development (MFED) is responsible for resource mobilisation and climate finance. In terms of policy, the country is quite advanced, with what [28] refer to as “a well-articulated policy framework and sectoral strategies for resilience building” (p. 29), and “good example of effective mainstreaming of climate-related projects” (p. 47). Among those policies, Belize’s Nationally Determined Contribution [27] refers particularly to Horizon 2030 (national development framework); the National Climate Resilience Investment Plan 2013; the National Climate Change Policy, Strategy and Action Plan (NCCPSAP) (administrative and legislative framework, 2014); the National Energy Policy Framework (2014); and the Growth and Sustainable Development Strategy (2014).

**Haiti**

According to the Adaptation Communication prepared for CoP26, the Republic of Haiti lacks specific environmental and climate change policies, and its international treaties and legal framework are weak [32]. The current strategic documents referring to climate change and adaptation more specifically are the *Programme Stratégique pour la Résilience Climatique* (Strategic Programme for Climate Resilience (PSRC)) (PSRC), Haiti’s Nationally Determined contribution (2015), Haiti’s Revised National Adaptation Plan of Action (2017), the *Politique Nationale sur les Changements Climatiques* (National Policy on Climatic Changes (PNCC)) (PNCC), and contributions from the *Schéma National d’Aménagement du Territoire* (National Land Use Plan (SNAT)) (SNAT) and the *Système National de Gestion des Risques et des Désastres* (National Framework for Disasters and Risk Management (SNGRD)) (SNGRD) [32]. To address those challenges, Caribbean SIDS rely on climate finance, and particularly concessional grants. Readiness Grants therefore have a key role to play to strengthen institutional capacity, and Section 2 details the methodology used to answer the research questions.

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## Appendix B

**Table A2.** Readiness proposals selection table.

Number	Doc Name	Country	Sector	Type of Project	Proposing Entity	Adaptation Focus	Date Submitted	Date Approved	Budget (USD)	Budget for Adaptation/Integration/Research area	Institutional Focus (Y/N/S)
AB-1	multi-year-readiness-proposal-ab-doe	Antigua and Barbuda	Energy	Multi-Year Strategic Readiness for Antigua and Barbuda: Supporting Antigua and Barbuda's NDCs implementation towards a transformation to Climate Resilient and Low-Emission Development Pathway by 2030	Department of Environment, Ministry of Health and Environment (DoE)	Capacity building to support the project pipeline and the achievement of the country's NDC's targets	30 August 2020	25 October 2021	2,836,551	1,034,220	Y
AB-2	readiness-proposals-antigua-and-barbuda-ministry-health-and-environment-adaptation-planning	Antigua and Barbuda	Governance	National Adaptation Planning in Antigua and Barbuda (NAP)	Ministry of Health and Environment	Data collection, assessment, preparation of the NAP, development of a sustainable financing strategy	26 January 2017	01 November 2017	3,000,000	2,621,500	Y
AB-3	readiness-proposals-antigua-and-barbuda-department-environment-entity-support-strategic-framework	Antigua and Barbuda	Governance	Realizing direct access climate financing in Antigua and Barbuda and the Eastern Caribbean	Department of Environment, Ministry of Health and Environment	Supporting the accreditation of a national direct access entity through the accreditation of the Department of Environment. Readiness funding will also support the further development and submission of an Enhanced Direct Access (EDA) funding proposal, to include project activities in Dominica and Grenada and in partnership with the Organization of Eastern Caribbean States (OECS) Commission	26 October 2016	01 March 2017 completed	620,250	438,000	Y

Table A2. Cont.

Number	Doc Name	Country	Sector	Type of Project	Proposing Entity	Adaptation Focus	Date Submitted	Date Approved	Budget (USD)	Budget for Adaptation/ Integration/ Research area	Institutional Focus (Y/N/S)
AB-4	readiness-proposals-antigua-and-barbuda-department-environment-entities-support	Antigua and Barbuda	Governance	Accelerating a transformational pipeline of Direct Access climate adaptation and mitigation projects in Antigua and Barbuda	Ministry of Health and Environment	National direct access entity meets all accreditation conditions and EDA funding proposal conditions; Accreditation Master Agreements (AMA) requirements are met annually and independent functions are strengthened using international best practice <ul style="list-style-type: none"> <li>• Baseline gender assessment to guide transformational gender interventions in Antigua and Barbuda's country programme</li> <li>• Strengthened climate rationale and evidence base for adaptation and mitigation interventions</li> <li>• Technology needs assessments for five sectors, including feasibility analyses and risk assessment annexes, to significantly advance the Country Programme pipeline</li> </ul>	30 April 2018	23 December 2018	931,000	791,200	Y
AB-5	readiness-proposals-antigua-and-barbuda-department-environment-nda-strengthening-and-country	Antigua and Barbuda	Governance	NDA Strengthening and Country Programming	Environment Division, Ministry of Health and the Environment	Strengthening the NDA The NDA will hire consultants and procure services to build the capacity of the Environment Division and the Debt Management Unit that will be responsible for coordinating with other ministries on the Green Climate Fund (the Fund). Strategic frameworks for engagement with the Fund, including the preparation of country programmes.	08 July 2015	completed	300,000	N/A,	Y

Table A2. Cont.

Number	Doc Name	Country	Sector	Type of Project	Proposing Entity	Adaptation Focus	Date Submitted	Date Approved	Budget (USD)	Budget for Adaptation/Integration/Research area	Institutional Focus (Y/N/S)
B-3	20211231-belize-pact-proposal	Belize	Governance	Enhancing Access for Climate Finance Opportunities, through pre accreditation support to Belize Social Investment Fund (BSIF) and Ministry of Economic Development-Belize and technical support for Belize National Protected Areas System (BNPAS) Entities, Belize	Protected Areas Conservation Trust (PACT)	To address the identified institutional gaps that inhibit Belize's ability to successfully access climate finance through entities such as the GCF.	16 June 2021	31 December 2021	600,000	505,060	Y
B-6	readiness-proposals-belize-5cs-nda-strengthening-and-country-programming	Belize	Governance	NDA Strengthening and Country Programming	Caribbean Community Climate Change Centre	NDA capacity to undertake Fund-related responsibilities and engage national stakeholders strengthened Strategic framework for engagement with the Fund development	14 December 2016	completed	300,000	300,000	Y
B-7	readiness-proposals-belize-ccccc-entity-support	Belize	Governance and entity strengthening	Building Capacity for direct access to Climate Finance and Support for the accreditation of the Development Finance Cooperation and Social Investment Fund of Belize	Caribbean Community Climate Change Centre	to facilitate the preparation of nominated entities to meet GCF accreditation standards in areas such as environmental and social safeguards (ESS), the GCF gender policy, and project development, monitoring and evaluation. This will allow for national institutions to effectively administer resources from the GCF and other resources partners, ensuring high country ownership.	15 September 2018	22 December 2018	355,365	214,000	Y

Table A2. Cont.

Number	Doc Name	Country	Sector	Type of Project	Proposing Entity	Adaptation Focus	Date Submitted	Date Approved	Budget (USD)	Budget for Adaptation/ Integration/ Research area	Institutional Focus (Y/N/S)
H-2	readiness-proposals-haiti-undp-adaptation-planning	Haiti	Governance	Integrating climate change risks into national development planning processes in Haiti	United Nations Development Programme (UNDP)	Strengthen institutional and technical capacities for iterative development of NAP for an effective integration of CCA into national and sub-national coordination, planning and budgeting process.	23 April 2018	15 May 2019	2,856,957	2,450,040	Y
H-3	20211231-haiti-ifdd-proposal	Haiti	Governance	Strengthening NDA Capacity for greater leadership on Climate Change Adaptation	Institut de la Francophonie pour le Développement Durable (IFDD)	(a) Strengthen the technical and operational capacities of the NDA and; (b) enhance stakeholder engagement mechanisms and processes	26 June 2021	31 December 2021	300,000	255,354	Y
H-5	readiness-proposals-haiti-undp-nda-strengthening-and-country-programming	Haiti	Governance	Green Climate Fund (GCF) Readiness Programme in Haiti	United Nations Development Programme (UNDP)	To support the Government of Haiti through its GCF Focal Point in strengthening their national capacities to effectively and efficiently plan for, access, manage, deploy and monitor climate financing in particular through the GCF.	16 December 2016	05 June 2017 completed	430,000	341,268	Y
H-6	readiness-proposals-haiti-ccccc-nda-strengthening-and-country-programming	Haiti	Governance	Institutional Strengthening and Preparatory Support for the Republic of Haiti	Caribbean Community Climate Change Centre	To continue the strengthening of Haiti's ministerial institutions and associated services in order to enhance the country's ability to effectively manage climate risk, promote greater public/private partnerships, and mobilize climate resources.	23 September 2018	22 December 2018	403,390	332,750	Y

## Appendix C. Interview Questions

### • Target interviewees

In order to assess the impact of GCF readiness projects on institutional adaptive capacity, it is necessary to interview people who are knowledgeable about

- The actual projects and their implementation status;
- The policy framework and institutional arrangements regarding climate change adaptation in a given country.

For each country benefitting from GCF funds, a Nationally Designed Authority (NDA) or focal point must be appointed. The role of the NDA is, inter alia, to submit non-objection letters for each new readiness proposal, project funding proposal, or entity accreditation submitted to the GCF. These key responsibilities imply the NDA must be familiar with the country's climate change policy documents, to ensure the readiness/project proposals are aligned with the country's primary objectives relating to climate change policy.

In addition, representatives from the most active delivery partners in the region, along with the GCF regional focal point are key resources for the research. They would be able to bring insight on common successes and challenges in the region, and give some highlights or recommendations from countries outside the scope of this study.

### • Interview guide

The research interviews are semi-structured, using the following questions to drive the conversation. The question set was shared with participants approximately 72 h in advance of each interview. The interview is divided in five sets of questions: (i) general contextual questions about the interviewee, his/her current role, experience in the position, and general knowledge of the matter discussed; (ii) general policy questions about the current policy landscape in terms of adaptation; (iii) past and ongoing readiness projects; (iv) perceptions of the impact of climate finance in increasing the institutional adaptive capacity; and (v) the conclusion and recommendations/suggestions.

#### • Questions set

##### (i) General contextual questions

**Objective:** Gaining a sense of who the interviewee is and his/her ability to give insightful/informed answers to the following questions.

1. What is your function within the <Relevant department> ?
2. You are currently acting a Nationally Designed Authority for the Green Climate Fund. What does this entail for you? How long have you been in this position?
3. How is the department organised? How many people work in the department, and what is the turnover?

##### (ii) Current climate change adaptation policy landscape

**Objective:** Setting a baseline for the analysis and confirming information from the document review.

4. What are your country's climate change adaptation institutional priorities?
5. What are your country's climate change adaptation policy needs?

##### (iii) Past and ongoing readiness projects

**Objective:** Understanding the context of the grants and quickly assessing the respondents' expectations of those grants.

6. There are currently XX GCF readiness projects underway in the country. Already, XX have been completed.
7. What are the main objectives of these projects? Do they target your institutional priority areas and needs?

8. What was your role in designing these projects? Did you take an active part in their development?

(iv) *Perception on the impact of the readiness projects: Would you say the Readiness Grants (respondents were asked to rank from 0 to 10 and to justify) ... ?*

**Objective:** Assessing the institutional adaptive capacity potential of the grants within the framework of the adaptive capacity wheel. Gaining a sense of change (before/after) and sustainability (temporary improvement or lasting change) through investigating the grants' types of impact (normative, organisational/procedural, political, resources/capacities, etc.).

9. Promoted a diversity of approaches and favoured the intervention of a variety of actors in defining core adaptation policies?

10. Helped develop a culture of learning and knowledge sharing in the targeted institutions?

11. Led to the development of agile adaptation plans?

12. Adequately and sustainably developed the capacities of teams and their ability to reach for more resources?

13. Improved the accountability, transparency, and legitimacy of relevant institutions on climate change issues?

14. Favoured a collaborative leadership and more processes of exchanges between ministries?

15. Increased belief in the efficacy of adaptation actions and the overall motivation to implement adaptation policies?

(v) *Conclusion and close*

**Objective:** Drawing on the previous section, gaining a sense of what really works well and what needs to improve.

16. Overall, how do you think the grants helped your country to better adapt, at least in your institutional priority areas?

17. What would you suggest is needed for climate finance to be more impactful in your country at policy level?

**Table A3.** Grid analysis for the interview.

Dimensions	Criterion
Variety/Diversity	Variety of problem frames
	Multi-actor, multi-level, multi-sector
	Redundancy
Learning capacity	Trust
	Single-/double-loop learning
	Discuss doubts
	Institutional memory
Agile planning	Continuous access to information
	Act according to plan
	Capacity to improvise
Leadership	Visionary
	Entrepreneurial
	Collaborative
Resources	Authority
	Human resources
	Financial resources

Table A3. Cont.

Dimensions	Criterion
Fair governance	Legitimacy
	Equity
	Responsiveness
	Accountability
Psychological	Belief
	Motivation

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