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Grenada

Country case study report





Independent Evaluation of the GCF's Result Area "Health and Wellbeing, and Food and Water Security" (HWFW)

GREEN CLIMATE FUND INDEPENDENT EVALUATION UNIT

Independent Evaluation of the GCF's Result Area "Health and Wellbeing, and Food and Water Security" (HWFW)

COUNTRY CASE STUDY REPORT: GRENADA

01/2025

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ABBREVIATIONS

AE	Accredited entity
B.39	Thirty-ninth meeting of the Board
CARICOM	Caribbean Community
CCCCC	Caribbean Community Climate Change Centre
CDB	Caribbean Development Bank
CDEMA	Caribbean Disaster Emergency Management Agency
DAE	Direct access entity
EE	Executing entity
ESMP	Environmental and Social Management Plan
GCF	Green Climate Fund
GDB	Grenada Development Bank
GDP	Gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HWFW	Health and Wellbeing, and Food and Water Security
IAE	International accredited entity
IDB	Inter-American Development Bank
IEU	Independent Evaluation Unit
MoF	Ministry of Finance
NAP	National Climate Change Adaptation Plan
NAWASA	National Water and Sewerage Authority
NDA	National designated authority
NSDP	National Sustainable Development Plan
РоА	Programmes of action
RA	Result area
RCWARC	Community of Practice on Climate Resilient Water Management in the Caribbean
SIDS	Small island developing State
WRM	Water resources management
WRMU	Water Resources Management Unit

A. INTRODUCTION

This case study was undertaken as part of the independent evaluation of the Green Climate Fund's (GCF) Result Area (RA) "Health and Wellbeing, and Food and Water Security" (HWFW). The evaluation was launched in April 2024 by the GCF Independent Evaluation Unit, with the objectives of reporting on the GCF's HWFW results and progress towards targets, while also shedding light on why results have been achieved or not, and how the GCF's interventions can be improved. These objectives fulfil the accountability and learning functions of this evaluation. The evaluation also explores the value addition of adopting an RA approach. To do so, the evaluation has adopted a mixed-methods approach, which includes six country case studies.

The present case study report provides insights from Grenada. This case study was informed by a virtual field visit, undertaken from 22 July to 30 August 2024. The field mission entailed a series of interviews with the national designated authority (NDA) and government representatives from other line ministries, executing entities (EEs), accredited entities (AEs) and delivery partners, as well as the government, private sector and beneficiaries. In total, 10 stakeholders were consulted as part of this case study. Stakeholder engagement was complemented by an in-depth document review of project and programme documents and country-level strategic/policy documents. This country case study builds onto the Grenada case study report published in 2023 as part of the second performance review of the GCF (Independent Evaluation Unit, 2023).

B. BACKGROUND AND CONTEXT

1. OVERVIEW OF GRENADA

Grenada is a small island nation located in the southeastern Caribbean, comprising the main island of Grenada and its smaller sister islands, Carriacou and Petite Martinique. Geologically, the country has a volcanic origin, and it is characterized by a landscape with hilly terrain and forested hillsides, where approximately 77 per cent of the land features slopes that exceed a 30 per cent gradient. Grenada's climate is primarily humid and tropical, with a dry season from January to May and a rainy season from June to December. This climate supports significant biodiversity and various ecosystems. The economy is heavily reliant on climate-sensitive sectors such as agriculture, tourism and fisheries, making it particularly vulnerable to the adverse effects of climate change. Additionally, Grenada's coastal geography, with its beaches and coral reefs, plays a crucial role in supporting its tourism industry and natural heritage (United Nations Development Programme, 2024; World Bank Group, 2021).

Grenada has a population of approximately 117,257 individuals, with a median age of 34.4 years, making for a relatively young population (Worldometer, 2025). The current demographic composition is predominantly of African descent (approximately 82.4 per cent), with smaller percentages of mixed ancestry (around 13.3 per cent), East Indian (2.2 per cent) and other ethnic groups. There are no significant indigenous populations remaining in Grenada today. The original inhabitants consisted of the Kalinago (Carib) and Taino (Arawak) peoples, but colonial activities led to the significant decline of these groups. Most of the indigenous Caribs were killed or displaced by French colonists during the early European settlement of the island (Minority Rights Group, 2023; U.S. Department of State, 2012). English serves as the official language of the country, but Grenadian Creole, a French-based patois, is commonly spoken among the population. Christianity is the predominant religion, with Roman Catholicism accounting for about 53 per cent of the population and various Protestant denominations making up the difference (Central Intelligence Agency, 2024).

Grenada is classified by the World Bank as a middle-income country, with its economy predominantly based on tourism, agriculture and services (Canavire Bacarreza and others, 2021). The tourism sector is vital, accounting for approximately 30 per cent of the country's gross domestic product (GDP) and a substantial share of employment. Agriculture, which historically centred on crops such as nutmeg and cocoa, represents about 7 per cent of GDP and employs around 10 per cent of the workforce, contributing significantly to domestic production and local initiatives. The workforce participation rate stands at approximately 62 per cent, with notable disparities in gender representation, where women's participation remains lower than that of men (Canavire Bacarreza and others, 2021). Grenada ranks 74th out of 189 countries on the Human Development Index, indicating a level of development that reflects improvements in health and education (Canavire Bacarreza and others, 2021). In recent years, the economy has faced challenges, including the impact of the COVID-19 pandemic, which led to an economic contraction of approximately 14 per cent in 2020 (World Bank Group, 2024a).

Grenada is characterized by a stable political environment within the Caribbean context, having transitioned to independence from the United Kingdom in 1974. The country operates as a parliamentary democracy, with a history of peaceful elections and transitions of power. The most recent general elections were held in June 2022, where the ruling New National Party, led by Prime Minister Dickon Mitchell, came into power. Grenada's governance is also influenced by regional organizations such as the Caribbean Community (CARICOM) and the Organisation of Eastern Caribbean States, which facilitate collaboration on various socioeconomic issues. CARICOM, comprising 15 member states including Grenada, focuses on strengthening economic integration and political cooperation among member nations. CARICOM Secretariat plays a crucial role in promoting policies and initiatives that address regional challenges, including those related to climate change. Additionally, Grenada collaborates with the Caribbean Disaster Emergency Management Agency (CDEMA), which provides support for disaster preparedness and response coordination. CDEMA enhances regional resilience by addressing disaster risk reduction through a collective framework, unifying efforts across member states to manage emergencies and build capacity (Caribbean Community, 2024a).

2. HWFW SECTORS' CLIMATE CHANGE CONTEXT

Grenada faces significant climate change-related challenges that impact its water, agriculture and health sectors. Water scarcity has become a pressing issue, exacerbated by recurrent droughts that strain fresh water resources and complicate water distribution. The variability in precipitation patterns contributes to both a shortage of available water and challenges related to water quality, further intensified by pollution and overuse (World Bank Group, 2021). Sea level rise and increased salinization threaten agricultural productivity and particularly affect the rain-fed crops that dominate the sector. These issues lead to reduced crop yields and food security concerns, heightening vulnerability in a population that heavily relies on agriculture for livelihood (World Bank Group, 2023).

The health sector is also at risk, as climate change can exacerbate the incidence of waterborne diseases due to flooding and contamination of water supplies. The increased prevalence of extreme heat events raises the likelihood of heat-related illnesses, and changing climate conditions facilitate the proliferation of mosquito-borne diseases, such as dengue fever and Zika virus, raising public

health concerns. Additionally, hurricanes and other extreme weather events pose direct threats to health infrastructure, limiting access to medical services during natural disasters (Caribbean Community, 2024b).

In 2024, Grenada experienced its most severe drought in 14 years, significantly impacting water availability across the island. Drought conditions were exacerbated by persistent heatwaves and insufficient rainfall, leading to a critical water crisis that affected households, agriculture and public health. World Bank Group (2024) indicated that February and March 2024 recorded some of the driest conditions in the country's history, further intensifying the challenges faced by a largely rainfed agricultural sector (World Bank Group, 2024b). The drought resulted in a decrease in food production, with crop yields dropping substantially, particularly for staple foods, thereby contributing to increased food insecurity. Further exacerbating the situation, the hurricane Beryl made landfall in July 2024, causing extensive damage to infrastructure and homes. As a category 4 hurricane, Beryl brought intense wind and rain, leading to flooding and widespread destruction, particularly in coastal areas, while also triggering power outages and further complicating recovery efforts following the drought (ACAPS, 2024). Preliminary assessments estimate hurricane-related damages to be in the millions of dollars, affecting thousands of residents.

3. CLIMATE CHANGE POLICY IN GRENADA

In recent years, the Government of Grenada has adopted a range of climate change policies and other relevant plans.

The National Climate Change Policy for Grenada, Carriacou and Petite Martinique (2017–2021) focuses on enhancing climate resilience across all levels of society, from individuals to the nation. It strengthens institutions to coordinate and implement climate change adaptation and mitigation, and integrates climate-responsive water management into national development plans. The policy promotes low-carbon development by empowering communities to manage climate risks and improves data management through enhanced institutional frameworks for climate data-collection, analysis and sharing. It also fosters national engagement by involving citizens, NGOs, civil society, research institutions, the private sector and government in climate actions. Key areas of focus include water supply, sewage management, agriculture, food security, biodiversity, ecosystems, human health and coastal zone management, alongside efforts to raise public awareness about climate change (Grenada, 2017).

The National Climate Change Adaptation Plan (NAP) for Grenada, Carriacou and Petite Martinique was adopted in November 2017 and covers the 2017–2021 period. Its key objectives include providing a strategic framework for building climate resilience, systematically integrating climate change adaptation into national and sectoral planning, and guiding stakeholders in addressing vulnerabilities to climate risks. The NAP focuses on several key sectors that are highly vulnerable to climate change impacts and that also hold significant economic importance for the country. These prioritized sectors include agriculture, fisheries, tourism, water, infrastructure and health, along with the ecosystems supporting them. The NAP has 12 programmes of action (PoAs), 14 goals and 20 indicators, with an estimated budget of USD 260 million (Grenada, Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management and Information, 2017). An updated NAP is in the process of being drafted but has not yet been adopted.

In line with the Paris Agreement, Grenada submitted its second **nationally determined contribution** to the United Nations Framework Convention on Climate Change in 2020. The plan includes priority actions in the energy, transport, forestry and waste sectors. It also includes adaptation objectives for coastal resilience, water resource management and community resilience, among others. Grenada's nationally determined contribution is linked to its national policy framework, which includes the NAP and the Climate Change Policy, both of which provide detailed plans for adaptation and resilience building (Grenada, 2020b).

Grenada's National Water Policy (2020) promotes sustainable and equitable management of the country's water resources. The policy envisions providing safe, affordable and adequate water and sanitation for both current and future generations. The policy is structured around four outcomes: (i) enhanced enabling environment and improved "climate smart and water-related behaviour"; (ii) increased water access, availability and quality; (iii) increased water use efficiency and conservation; and (iv) strengthened preparedness for climate variability and extremes (Grenada, 2020a).

Grenada's National Sustainable Development Plan (NSDP) for 2020–2035 proposes 217 strategic actions that are articulated around three main goals: (i) high human and social development, which focuses on putting people at the centre of sustainable development; (ii) a vibrant, dynamic and competitive economy with climate- and disaster-resilient infrastructure; and (iii) environmental sustainability and security. The NSDP includes a number of climate change adaptation measures, such as the integration of climate-smart practices into the food, agriculture and fisheries sectors to support food security. In addition, the NSDP focuses on water and energy efficiency and emphasizes the importance of developing climate- and disaster-resilient infrastructures (Grenada, Ministry of Finance, Planning, Economic, and Physical Development, 2019).

4. INSTITUTIONAL ARRANGEMENTS AND THE GCF PORTFOLIO

Grenada's NDA to the GCF is housed in the Ministry of Climate Resilience, The Environment & Renewable Energy. As of August 2024, the NDA representative is Ms. Peron Johnson, Permanent Secretary. Key institutional entities guiding and coordinating climate policy and finance in Grenada include the National Climate Change Committee, the Sustainable Development Council, the Ministry of Finance, the Ministry of Climate Resilience, The Environment & Renewable Energy, the Ministry of Economic Development, Planning, Tourism, Creative Economy, Culture, Agriculture and Lands, Forestry, Marine Resources and Cooperatives, the Ministry of National Security, Home Affairs, Public Administration, Information and Disaster Management. A network of 20 climate change focal points across relevant ministries and bodies is responsible for integrating climate resilience into government policies, monitoring sectoral adaptation and mitigation efforts, and supporting the mobilization of funds for these initiatives (Green Climate Fund, 2019).

The country currently has three national/regional direct access entities (DAEs) – namely, the Caribbean Community Climate Change Centre (CCCCC), Caribbean Development Bank (CDB) and Department of Energy of Antigua and Barbuda. In addition, the Grenada Development Bank (GDB) has been nominated as a potential DAE and the Ministry of Finance and/or Ministry of Climate Resilience, The Environment & Renewable Energy is being considered for nomination. Several international accredited entities (IAEs) are identified in Grenada's country programme. These include the Conservation International, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the European Investment Bank, the Food and Agriculture Organization of the United Nations, the Inter-American Development Bank (IDB), the International Finance Corporation, the International Fund for Agricultural Development, the International Union for Conservation of Nature, KfW Development Bank, the United Nations Development Programme, the United Nations Environment Programme, the World Bank, the World Food Programme, the World Meteorological Organization and the World Wide Fund for Nature. The GCF country programme for Grenada was developed in 2019. The GCF project pipeline for Grenada includes 20 projects, 12 of which are part of Grenada's National Integrated Resilience Programme and eight of which are part of Grenada's Climate Resilient Cities Programme. Of the 20 projects, four – three of which are multi-country – have been approved, while the remaining 16 are at the stage of concept note development. In addition, Grenada has 11 Readiness and Preparatory Support Programme grants approved.

One project was identified as relevant for this case study in the relation to the HWFW RA – namely, the FP059 "Climate Resilient Water Sector in Grenada (G-CREWS)". Total project value amounts to USD 46.1 million, of which USD 38.7 million comes from GCF financing. Regarding governance arrangements, the project is implemented by three EEs and overseen by an IAE. GIZ plays a dual role of AE and EE, with GIZ headquarters, as the AE, assuming project oversight and reporting functions, while the national branch of GIZ acts as the EE responsible for project implementation. There are two additional EEs – namely, the Ministry of Finance (MoF) and GDB. Further details on this project are presented in Table 1 (Green Climate Fund, 2018).

PROJECT NAME	AE	EE	GEOGRAPHIC SCOPE	Status	GCF FINANCING
FP059. Climate Resilient Water Sector in Grenada (G-CREWS)	GIZ	GIZ MoF GDB	Grenada	Under implementation Approval: March 2018 Completion: November 2025	GCF financing: USD 38.7 million (grant) Co-financing: USD 7.2 million (grant)

Table 1. Case study portfolio overview

C. KEY FINDINGS

1. Relevance and responsiveness

The G-CREWS project is well aligned with the country's needs, priorities and commitments to addressing climate change adaptation. The G-CREWS project, as part of the broader GCF HWFW RA, enhances Grenada's resilience goals under the Climate Change Policy and NSDP. The project is critically aligned with Grenada's climate change adaptation needs, particularly in the agriculture, water and health sectors. In this regard, the project is directly linked to NAP priorities, addressing three of the 12 PoAs: resilient infrastructure and sustainable land management (PoA 7), water availability (PoA 3), and food security (PoA 4). PoA 7, which commands 43 per cent of the NAP budget, underscores the importance of sustainable land management, which is crucial for agricultural resilience. PoA 3, accounting for 20 per cent of the NAP budget, focuses on water availability, which is paramount to addressing water scarcity given Grenada's recent severe droughts. The droughts have emphasized the need for improved water efficiency and capacity-building within the National Water and Sewerage Authority (NAWASA), the Island's water service provider. The project's alignment with PoA 4 on food security (19 per cent of the NAP budget) highlights its support for sustainable agriculture practices, aimed at ensuring food security amid climate challenges.

The G-CREWS project is holistic, integrating sectors such as agriculture, water and health, and fostering linkages between them. For example, the project's support for water governance, including regulatory reform on integrated water resources management and its focus on rainwater harvesting, directly benefits farmers by securing water resources critical for agriculture, thereby enhancing food security. The project displays strong linkages not only between water and agriculture sectors but also with the energy sector through the promotion of solar photovoltaic cells systems. On the one hand, these systems support mitigation objectives through emissions reduction, and, on the other hand, they support adaptation objectives by maintaining water grid operations in case of natural disasters. Although the project's focus on health is less explicit than for the other sectors, the project seeks to make health centres climate and disaster resilient by equipping them with water storage systems that will enable them to store six days of water supply, in alignment with World Health Organization guidelines, to enable them to operate in the event of a natural disaster.

Improving water supply, not only in health centres but also in hotel facilities, is also expected to yield health co-benefits in two ways: (i) It would allow beneficiaries to practice better hygiene; and (ii) The population will have increased access to drinking water, benefiting their overall health. In addition, the project has a focus on improving water quality by addressing issues of water turbidity linked to watershed deterioration, which has rendered the chlorination process suboptimal and could potentially result in increased waterborne illnesses. The G-CREWS project, by connecting various sectors and addressing multiple vulnerabilities – including vulnerability to climate change through a disaster risk management approach – represents a comprehensive approach to climate adaptation in Grenada.

The strong consultative approach to project origination has contributed to the high relevance of the G-CREWS project to beneficiary needs. All stakeholders consulted confirmed that the G-CREWS project was developed following a highly consultative approach, involving the NDAs, NAWASA, farmers and tourism associations as well as civil society. Stakeholders provided input regarding their needs, making the project design highly relevant to country needs and priorities. This process took place shortly after the consultations for the NAP, which was adopted in 2017. National stakeholders had already identified several priorities through the NAP and engaged in project origination with a clear understanding of what the country needed. The design of the G-CREWS project also coincided with the consultation process for the development of the GCF country programme for Grenada, which gathered more than 70 stakeholders.

Concerns exist regarding the capacity of the G-CREWS project to remain relevant by adapting to evolving contexts. In Grenada, there are worries that the GCF is not sufficiently responsive to emerging needs. Several interviewees raised concerns that there will be a need to revisit project objectives in the aftermath of the hurricane Beryl, as the agricultural assets of many farmers have been destroyed, which hinders their capacity to absorb project support. It is too early to assess whether adjustments will be made to respond to these contextual changes. Interviewees welcomed the openness of the GCF to address these issues in early discussions, although it is unclear to them whether GCF processes for project amendment will allow for this.

2. COHERENCE AND COMPLEMENTARITY

The G-CREWS project complements several other similar projects in Grenada, and GIZ, the IAE, was key to this complementarity. The G-CREWS project built on the project Integrated Climate Change Adaptation Strategies (Deutsche Gesellschaft für Internationale Zusammenarbeit, n.d.). This project was funded by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety and implemented by GIZ between 2013 and 2019, within the scope of the International Climate Initiative. The project sought to enhance the resilience to climate-related risks of both the population and ecosystems by integrating climate adaptation into national planning, supporting community-based adaptation initiatives, and promoting water resource and coastal management through a multisectoral approach. It is very difficult for small island developing States

(SIDS) to develop GCF projects due to lack of capacity, so they often approach organizations with GCF experience, such as GIZ, which facilitates complementarity between GCF projects and initiatives of other development partners. The G-CREWS project is also complemented by the United Kingdom Caribbean Infrastructure Partnership Fund's Southern St. George Water Supply Expansion Project, which is funded by the United Kingdom's Foreign, Commonwealth and Development Office and administered by the CDB, and which provides support to NAWASA in terms of water supply expansion and sewerage system improvement. Also complementary to the G-CREWS project is the CReW+ regional project, funded by the Global Environment Facility and implemented by the United Nations Environment Programme and the IDB in 18 Caribbean countries. Executed by GIZ and the Organization of American States, the project seeks to implement innovative solutions using integrated water and wastewater management approaches. The focus of these projects on wastewater management complements the G-CREWS project, which does not address this issue.

There is also complementarity regionally within the Caribbean. The G-CREWS project has leveraged CARICOM and CDEMA frameworks, which enhances regional complementarity and contributes to the project's resilience-building efforts. In addition, the project is embedded in the Regional Strategic Action Plan for the Water Sector in the Caribbean to Develop Resilience to the Impacts of Climate Change. GIZ has also been instrumental in promoting coherence and linkages within Grenada, as well as in supporting replication among other Caribbean islands. GIZ is part of the Monitoring Committee of the Caribbean Wastewater Association. Also, the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety funds the Community of Practice on Climate Resilient Water Management in the Caribbean (RCWARC), which has been supporting coherence, complementarity and replication in the Caribbean water sector (see section C.5). The NDA in Grenada hosts this platform and invites likeminded small islands to attend, intent on supporting peer-to-peer exchanges regarding strategies and actions that can be developed to support implementation of the Regional Strategic Action Plan for the Water Sector in the Caribbean to Develop Resilience to the Impacts of Climate Change. This includes discussions for how countries can seek GCF funding, for which there is strong demand among neighbouring islands.

Drawing on GIZ as an AE has been a key factor supporting complementarity. When implementing GCF projects, GIZ always provides co-financing that manifests in the form of a project component, complementing GCF resources. There are also requirements for GCF projects to be anchored in GIZ project portfolios in pursuit of bilateral development cooperation objectives.

3. EFFECTIVENESS AND IMPACT

While it is too early in the project's implementation to observe impact, there are early indications that climate-resilient infrastructures have helped communities to better withstand shocks. It should be noted that the project is still in the process of developing infrastructure and in building the capacity of key beneficiaries, including at the institutional and community levels. Therefore, while stakeholders noted that it is still too early to see impact, many stakeholders also referred to the G-CREWS project as "ground-breaking and the first of its kind". The project is expected to have major impacts in the way that water resources are managed in the country.

There are early indications of the impact of the climate-resilient infrastructure adopted by the five hotels that participated in the project. Compared to those that did not participate in the project, participating hotels were better able to withstand the 2024 droughts thanks to increased water storage, which enabled them to continue their economic activity despite the major water restrictions

imposed as a result of water scarcity on the Island (Deutsche Gesellschaft für Internationale Zusammenarbeit, 2023).

Two key factors enabling and hindering progress towards results were identified, with shocks observed as both a negative and a positive factor. The start of the G-CREWS project coincided with the onset of the COVID-19 pandemic, which has been a major barrier that stalled progress, especially towards targets to reach beneficiaries of the tourism industry. In the end, only five of 23 targeted hotels participated in the project, investing in the retrofitting of water-related infrastructure that would allow for the implementation of more efficient water use management. Even though the targeted hotels had accessed the Challenge Fund (furthered discussed in section C.4), which would have matched the resources that they invested, most hotels were unwilling to participate because their revenue had significantly decreased due to movement restriction measures resulting from the COVID-19 pandemic. Conversely, the 2024 drought has led to a revival of interest within Grenada's tourism industry to adopt disaster- and climate-resilient infrastructure, as hotel owners have seen that the hotels that adopted these measures were better able to withstand shocks.

Paradigm shift was seen at multiple levels within the G-CREWS project. Firstly, the project is shifting water resources management (WRM) practices and systems in the country. It is contributing to an enabling environment for stronger efficiency, oversight and accountability of the entire sector. In 2020, Grenada approved its first Water Resources Policy, which set the stage for the development of a regulatory framework and institutional mechanisms to manage water resources in the country. In 2024, the project contributed to the approval by Cabinet of a WRM bill, which sets provisions for the creation of the Water Resources Management Unit (WRMU), to be housed under the Public Utilities Regulatory Commission. Previously, the Commission was only mandated to oversee the energy sector, and the bill and related regulations now give it the mandate to oversee WRM, from water utility and tariffs to measuring water quality. However, there have been delays in approving the bill into a law.

The expected WRMU is seen as paradigm shifting because there previously was no accountability for WRM in the country, and NAWASA, the public water service provider, was the sole entity for WRM. Previously, there were no mechanisms to ensure equity in the way that water was utilized, and this new entity will now ensure that water resources are used efficiently and that water users have equitable access. Similarly, stakeholders raised concerns with water quality, with water often "coming out of the tap brown", an issue that is expected to be addressed through the implementation of new regulations on water quality.

Another element linked to paradigm shift is the multi-stakeholder and whole-of-society approach put forward. The G-CREWS project worked with multiple stakeholder groups, including the water service provider, NAWASA, as well as the water users – namely, smallholder farmers and hotels. To ensure broad outreach to these stakeholders, it also worked with national associations (namely, farmers associations and the tourism association). It engaged with government ministries from multiple sectors, in particular the Ministry of Economic Development, Planning, Tourism, Creative Economy, Culture, Agriculture and Lands, Forestry, Marine Resources and Cooperatives and the Ministry of Health, Wellness & Religious Affairs. To promote incentives for private sector users to engage in the project, the GDB was engaged as one of the project's EEs (see section C.4 for more information on the GDB Challenge Fund).

Paradigm shift was also seen in regard to social behaviour change. On the one hand, the project has been working with farmers to support their adoption of innovative technologies and promote new ways of working. Interviews with beneficiaries indicate that farmers now better understand WRM practices, with drip irrigation now being adopted despite initial reticence. The project also

supports behaviour change through a partnership with the Ministry of Education, Youth & Sports, which uses science fairs and social media to engage youth, raising awareness about the importance of water efficiency and the adoption of climate-smart agricultural practices.

Given that the project is still in the early stages of implementation, the case study did not identify any unintended results as yet.

4. INNOVATIVENESS IN RESULT AREAS

The concept of innovation in the HWFW RA is unclear and not shared among different stakeholders, with innovations taking many shapes and forms. Overall, there is a lack of clarity among stakeholders around what innovation means for the HWFW RA, with consulted stakeholders identifying several different types of what they perceive to be innovations.

The first type of innovation relates to the type of technologies promoted through the G-CREWS project. Although the technologies are not new in themselves, they contribute to the modernization of systems and practices within Grenada and are therefore seen as innovative. One such technology is the use of drip irrigation to promote more efficient WRM. Although drip irrigation has existed for many years globally, it has not been used in the agricultural sector in Grenada. The fact that farmers now understand the benefits of drip irrigation and turn to it as a technology of choice reflects a shift in mindset, which is perceived as highly innovative. Similarly, though not innovative as such, the project has supported the digitalization of water utility management in the country, which has until now been paper-based, thereby contributing to the modernization of the water utility sector.

Other national stakeholders have identified new strategic approaches and partnerships as an innovation. In that sense, the partnership between farmers associations and schools, with an intent to promote behaviour change through the integration of climate-smart agriculture and efficient WRM, is perceived as highly innovative. Finally, another innovative approach identified by stakeholders is the creation of the Challenge Fund, which entails a new financing instrument offered by Grenada's GDB to support the adoption of efficient water technologies by private sector users, including smallholder farmers and hotels. It does so by matching the funds that hotels and smallholders are willing to invest in water efficient and climate-resilient infrastructures.

Notwithstanding the examples provided above, some stakeholders expressed that developing new solutions through GCF projects is challenging given the GCF's low tolerance for risk. Somewhat contradictory is the fact that the GCF requires funding proposals to demonstrate innovation, and yet the proposals are also required to provide detailed evidence of the effectiveness of a project's proof of concept, which is logically non-existent for innovations.

5. SUSTAINABILITY, REPLICABILITY AND SCALABILITY

The G-CREWS project was designed with an exit strategy. Although it is still too early to assess sustainability, there are some indications that results will be sustained. The project has contributed to the development of a WRM bill, which has been approved by the Cabinet. However, delays in obtaining approval for this bill to be turned into a law are a concern. In addition, there are indications of the institutionalization of the Challenge Fund, which was created by the GCF project. For example, the Fund has developed an inter-institutional governance mechanism comprising the EE (namely, the GDB), which manages the Fund, and the Ministry of Economic Development, Planning, Tourism, Creative Economy, Culture, Agriculture and Lands, Forestry, Marine Resources and Cooperatives. The Government of Grenada also finances the Fund through national budgets; consulted stakeholders confirmed that the Government has expressed interest in continuing to

finance the Challenge Fund through the GDB upon project completion, although specific measures to do so are still unclear.

The case study identified key factors that hinder sustainable capacity strengthening. Some stakeholders identified key factors inherent in SIDS that are likely to adversely affect sustainability. A major challenge is the shortage of water engineers and the "brain drain" phenomenon, whereby experts who have received capacity-building often emigrate from the island because of their ability to secure higher-paying jobs in other countries. In addition, while the dual role of GIZ as both AE and EE has facilitated project oversight and implementation, a strong reliance on international entities combined with the limited involvement of national institutions in project execution hinders sustainable knowledge transfer and the capacity strengthening of local stakeholders. In this regard, national stakeholders identified opportunities to further strengthen the role of national entities such as the GDB in project execution. However, complex procedures in the accreditation process ofs constitute a hindering factor.

There is early evidence of the potential of replicability of the G-CREWS project. Caribbean islands face similar challenges when it comes to climate change, including recurrent droughts and water scarcity, sea level rise and increases in climate-related events – in particular, hurricanes. There are a number of regional organizations that seek to address climate changes issues through common strategies and approaches, including the Organisation of Eastern Caribbean States, CCCCC, the Caribbean Water and Sewerage Association, CARICOM and the Global Water Partnership -Caribbean. The RCWARC which was established in January 2023 and is hosted by the NDA in Grenada, seeks to strengthen the Caribbean water sector through knowledge-sharing, cooperation and networking (United Nations, Department of Economic and Social Affairs, n.d.). NDAs from the region gather through the RCWARC to exchange ideas for the development and submission of concept notes to the GCF. NDAs have been looking at the G-CREWS project as a good-practice example of a large GCF project that addresses water scarcity through a holistic and intersectoral approach and that could be worth replicating in other Caribbean islands. To that end, government representatives from Saint Kitts and Nevis are expected to travel to Grenada in the last quarter of 2024 to learn from the G-CREWS experience and explore possibilities to seek GCF funding for a similar project.

6. GENDER AND SOCIAL EQUITY

The G-CREWS project considered environmental and social safeguard-related issues at the project origination stage, which has resulted in the development and monitoring of an Environmental and Social Management Plan (ESMP). In compliance with the GCF's environmental and social safeguard policies, the G-CREWS project has developed an ESMP. The project has a strong focus on infrastructure development, although it does not entail the building or rehabilitation of dams and therefore did not represent major risks in terms of potential damage to vegetation or the displacement of local populations. A key result that has emerged from the implementation of the ESMP is that NAWASA is now in the process of hiring an ESMP expert, who will subsequently be transferred to the WRMU once it becomes functional. In addition, an occupational health and safety system has been created within NAWASA (Deutsche Gesellschaft für Internationale Zusammenarbeit, 2018a).

The project has a gender action monitoring plan and a gender focal point. This is not a genderfocused project, and stakeholders noted that it is sometimes difficult to identify entry points to gender equality mainstreaming, considering the project's strong focus on infrastructure. That said, some gender equality results are observed. Namely, NAWASA is a male-dominated institution that has hired two female site supervisors. The project does not have a dedicated budget to address gender, which is perceived as a limiting factor, although the expertise of the GIZ team in gender equality and the presence of a gender focal point has facilitated some progress in this area (Deutsche Gesellschaft für Internationale Zusammenarbeit, 2018b).

There are no significant indigenous communities in Grenada. However, there is a strong focus on local communities/populations through support provided to local farmers, as noted throughout this report.

7. EFFICIENCY

There are concerns regarding inconsistent policy direction and guidance provided by the GCF, related to the GCF HWFW RA and more broadly. It should be noted that the sectoral guidance documents on agriculture, water and health were developed after origination of the G-CREWS project, which was approved in 2018. However, when asked about GCF guidance for the HWFW RA, AEs explained that the design of the project makes strong linkage between water, agriculture and to a lesser extent health, and that guidance to support this aspect of project origination was not lacking. This said, a general concern raised by AEs, which is not necessarily specific to the HWFW RA but that has affected project origination, is the inconsistency in policy direction and guidance provided by the GCF Secretariat, which seems to differ depending on the individual providing it. In addition, though not especially related to the HWFW RA, government stakeholders expressed concerns that GCF requirements during funding proposal development are difficult to meet for SIDS, which have less capacity than larger countries.

The project faced considerable delays, due to factors both internal and external to the GCF. AEs have reported significant delays caused by lengthy decision-making processes at the GCF Secretariat at various stages of the project cycle. Project origination took longer than expected, largely due to multiple rounds of feedback and lengthy approval process. Similarly, the project proposal underwent a restructure to revise some of the expected outputs, which were unlikely to be met within the available budget. This process took approximately 18 months, and concerns were raised that procedures for project restructuring were unclear, with the absence of established guidelines and thresholds for making changes within specific project components.

External factors have also impacted the project timeline. This includes the COVID-19 pandemic as well as general elections that resulted in the reconfiguration of ministries. The latter case notably led to the Government abolishing the project management unit originally responsible for overseeing project implementation. These external factors have led to important efficiency issues that have resulted in delays in project implementation. More specifically, efficiency issues regarding procurement (a critical element of this infrastructure project) were made yet more complex by bureaucratic governmental procedures and a shortage of national procurement personnel, causing important bottlenecks in contract management.

There are mixed views regarding the adequacy of monitoring and reporting mechanisms to assess progress in the HWFW RA. With respect to the monitoring and evaluation framework, certain gaps were noted regarding the ability to measure outcomes and impact, with indicators overly focusing on project activities. Likewise, the annual performance report gathers qualitative data on co-benefits, although there is no clear methodology or indicators to measure these benefits. Concerns were expressed regarding an eventual requirement to measure co-benefits, which would likely go beyond the capacity of the monitoring and evaluation team, which already faces difficulties in obtaining reliable data. However, stakeholders noted that GCF monitoring and reporting requirements are demanding for national counterparts, with room to further streamline these requirements with that of other donors to avoid duplication and overlap. Requirements also provide little flexibility in terms of meeting timelines, which has proved challenging, especially in situations where national counterparts have to unexpectedly respond to disaster-related events. In addition, insufficient integration of real-time climate and sectoral data restricts adaptive management.

While significant, the project's financial resources may fall short in addressing the broader systemic needs highlighted in Grenada's NAP. The G-CREWS project is valued at USD 45 million, which according to national stakeholders is the biggest investment in the water sector in Grenada. However, this is still a small-sized project for the GCF, and national stakeholders expressed concerns that resources are likely insufficient to fulfil the ambitions of the NAP.

D. CONCLUSIONS

The G-CREWS project has demonstrated significant alignment with Grenada's national climate change adaptation needs, particularly in the agriculture, water and health sectors. The project's integrated approach, linking water governance with agriculture and energy, enhances its relevance to the country's NAP. The project's design, developed through a consultative process involving multiple stakeholders, further reflects the alignment of its objectives with local priorities. However, concerns remain regarding the project's ability to adapt to evolving contexts, such as the aftermath of the hurricane Beryl, raising questions about the flexibility of GCF processes in responding to new challenges.

The project also shows potential for sustainability and replicability, particularly in the water sector. Although early in its implementation, the project's adoption of climate-resilient infrastructure and water management practices has already demonstrated benefits for the tourism and farming sectors. There are early indications that the G-CREWS project could serve as a model for other Caribbean nations facing similar climate-related challenges. Nonetheless, challenges to sustainability remain. Going forward, enhancing local capacity-building will be key to addressing the current shortage of local expertise through training and knowledge transfer, to equip national institutions and stakeholders with the needed expertise to manage and sustain climate adaptation efforts. Strengthening national ownership through greater involvement of local institutions and communities will also be key. Supporting the development of sustained funding mechanisms and an enabling legislative framework will also be critical to ensure that the benefits achieved are not only preserved but expanded upon to meet the country's long-term climate-resilience objectives. Moreover, robust data integration will be essential to improving decision-making processes and adaptive management, enabling the project to evolve in response to future challenges. Similarly, scaling lessons learned from the water sector to other climate-vulnerable areas, such as energy and coastal management, could amplify its overall impact. Continued attention to these issues will be critical to ensure the project's ongoing relevance and success.

Appendix 1. PORTFOLIO REVIEW

Table A - 1. Grenada HWFW portfolio

PROJECT	PROJECT NAME	DESCRIPTION	THEME	COUNTRIES	AE	PROJECT TIMELINE	FINANCIAL INSTRUMENT
FP059	Climate Resilient Water Sector in Grenada (G- CREWS)	Creating a climate-resilient water sector in Grenada through increased fresh water availability and demand reduction measures	Adaptation	Grenada	GIZ	Approved: 01Mar 2018 To be completed: 25 Nov 2025	80% disbursed GCF Finance: Grant: USD 38,652,897 Co-finance: Grant: USD 2,738,225 Grant: USD 228,651
							Grant: USD 2,023,461
							Grant: USD 2,421,432

Source: GCF Tableau Server, as of B.39 [iPMS – General].

Table A - 2. Grenada portfolio (other projects not related to HWFW RA)

Project	PROJECT NAME	DESCRIPTION	THEME	COUNTRIES	AEs	Project timeline	FINANCIAL INSTRUMENT
FP061	Integrated physical adaptation and community resilience through an enhanced direct access pilot in the public, private, and civil society sectors of three Eastern Caribbean small island developing states	Strengthening the resilience of three Caribbean islands to climate change-related threats by improving the hurricane resilience of community buildings, homes and businesses, and through flood prevention measures	Adaptation	Grenada Antigua and Barbuda Dominica	Department of Energy of Antigua and Barbuda	Approved: 01 Mar 2018 To be completed: 16 Jul 2024	99% disbursed GCF Finance: Grant: USD 20,000,000 Co-finance: Other: USD 1,459,120 Other: USD 555,120 Other: USD 555,120
FP020	Sustainable Energy Facility for the Eastern Caribbean	Financing commercial geothermal energy projects while strengthening legal and regulatory frameworks to underpin the development of	Mitigation	Grenada Dominica Saint Kitts and Nevis	IDB	Approved: 14 Oct 2016 To be completed: 28 Aug 2027	25% disbursed GCF financing: Grant: USD 20,000,000 Loan: USD 60,000,000

Project	PROJECT NAME	DESCRIPTION	THEME	COUNTRIES	AEs	Project timeline	FINANCIAL INSTRUMENT
		geothermal energy potential in the East Caribbean region	n Saint Lucia Saint Vincent and the Grenadines	Saint Lucia			Co-finance:
				Vincent and the	cent the		Loan: USD 20,000,000
							Loan: USD 16,810,000
							Grant: USD 19,050,000
				Grenaumes			Grant: USD 500,000
							Grant: USD 1,240,000
							Grant: USD 1,935,698
						Grant: USD 5,607,167	
							Grant: USD 18,300,000
							Grant: USD 14,000,000
							Grant: USD 15,000,000

Source: GCF Tableau Server, as of B.39 [iPMS – General].

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