

Readiness Proposal

**with Caribbean Community Climate Change Centre (CCCCC)
for Belize**

05 November 2021



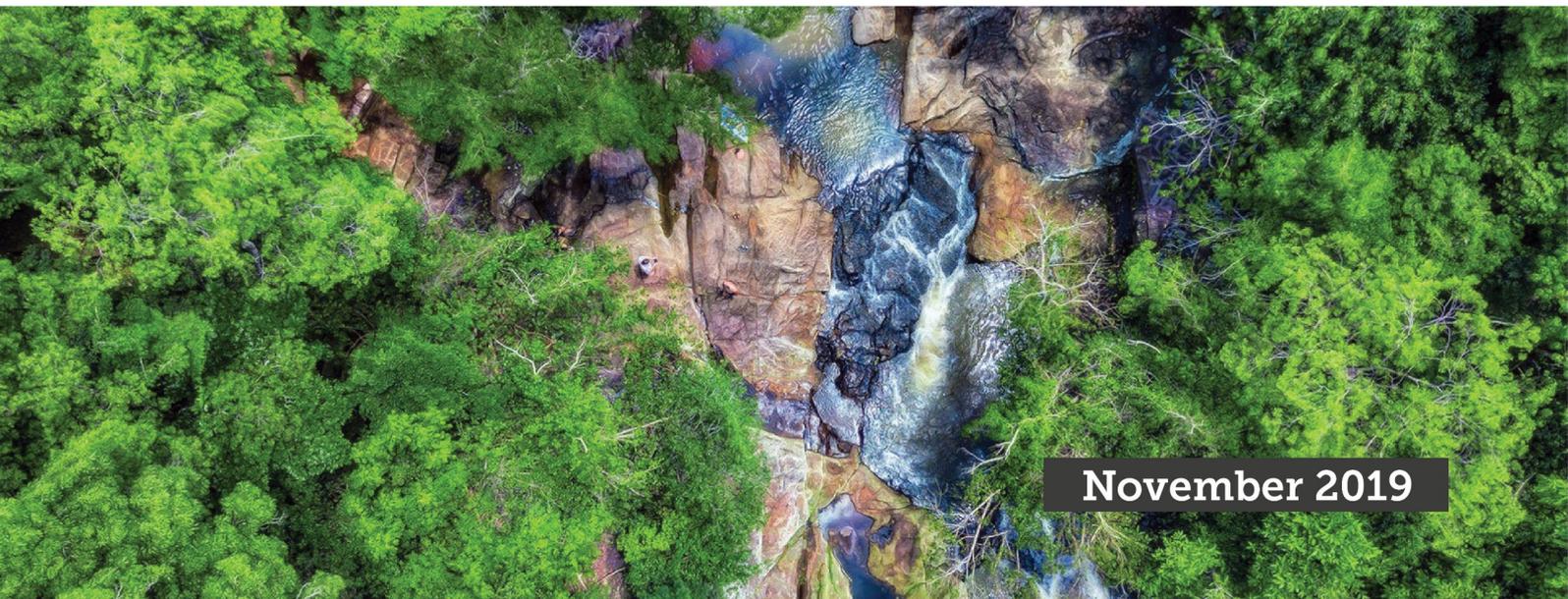
**GREEN
CLIMATE
FUND**

READINESS & PREPARATORY SUPPORT

PROPOSAL TEMPLATE



Proposal title:	National Adaptation Planning for Integrated Water Resources Management in Belize
Country:	Belize
National designated authority:	Ministry of Economic Development, Petroleum, Investment, Trade and Commerce
Implementing Institution:	Caribbean Community Climate Change Centre
Date of first submission:	14 September 2020
Date of current submission / version number	October 22, 2021 V.4



November 2019

Before completing this proposal template, **please read the guidebook** and learn how to access funding under the GCF Readiness & Preparatory Support Programme.

Download the guidebook:
<https://g.cf/xxxxx>



How to complete this document?

This document should be completed by National Designated Authorities (NDA) or focal points with support from their Delivery Partners where relevant. Once completed, this document should be submitted to the GCF by the NDA or focal point via the **online submission system**, accessible through the Country Portal of the GCF website.

Please be concise. If you need to include any additional information, please attach it to the proposal.

If the Delivery Partner implementing the Readiness support is not a GCF Accredited Entity for project Funding Proposals, please complete the Financial Management Capacity Assessment (FMCA) questionnaire and submit it prior to or with this Readiness proposal. The FMCA is available for download at the [Library](#) page of the GCF website.

Where to get support?

If you are not sure how to complete this document, or require support, please send an e-mail to countries@gcfund.org.

You can also complete as much of this document as you can and then send it to countries@gcfund.org, copying both the Readiness Delivery Partner and the relevant GCF Regional Desks. Please refer to the [Country Profiles](#) page of the GCF website to identify the relevant GCF Country Dialogue Specialist and Regional Advisor.

We will get back to you within five (5) working days to acknowledge receipt of your submission and discuss the way forward.

Note: Environmental and Social Safeguards and Gender

Throughout this document, when answering questions and providing details, please make sure to pay special attention to environmental, social and gender issues, particularly to the situation of vulnerable populations, including women and men. Please be specific about proposed actions to address these issues. Consult Annex IV of the Readiness Guidebook for more information.

Please visit the Country Portal on the GCF website to submit this proposal via the **online system**.

When submitting the proposal, please name the file:
GCF Readiness -[Country]-[yyymmdd]

1. SUMMARY

1.1 Country submitting the proposal	Country name: Belize Name of institution representing NDA or Focal Point: Ministry of Finance, Economic Development & Investment Name of contact person: Dr Osmond Martinez Contact person's position: Chief Executive Officer [CEO] Telephone number: 501-822-2526 Email: ceo@med.gov.bz Full office address: Economic Development & Petroleum, Sir Edney Cain Building, Ground Floor, Right Wing, City of Belmopan Additional email addresses that need to be copied on correspondence: Leroy Martinez Economist/GCF Focal Point leroy.martinez@med.gov.bz	
1.2 Date of initial submission	14 September 2020	
1.3 Last date of resubmission	October 22 st , 2021	Version number V. 4
1.4 Which institution will implement the Readiness and Preparatory Support project?	<input type="checkbox"/> National designated authority <input checked="" type="checkbox"/> Accredited entity <input type="checkbox"/> Delivery partner Please provide contact information if the implementing partner is not the NDA/focal point Name of institution: Caribbean Community Climate Change Centre Name of official: Dr. Colin Young Position: Executive Director Telephone number: (501)-822-1094 / (501)-822-1104 Email: cyoung@caribbeanclimate.bz Full office address: 2nd Floor, Lawrence Nicholas Building, Ring Road, P.O. Box 563, Belmopan, Belize, Central America. Additional email addresses that need to be copied on correspondences: knichols@caribbeanclimate.bz , dcain@caribbeanclimate.bz , rzuniga@caribbeanclimate.bz	
1.5 Title of the Readiness support proposal	National Adaptation Planning for Integrated water resources management in Belize	
1.6 Type of Readiness support sought	Please select the relevant GCF Readiness objective(s) below (click on the box – please refer to Annex I and II in the Guidebook): <input type="checkbox"/> I. Capacity building	

- II. Strategic frameworks
- III. Adaptation planning
- IV. Pipeline development
- V. Knowledge sharing and learning

1.7 Brief summary of the request

The National Hydrological Service (NHS) of Belize is charged with the responsibility of managing all of Belize's freshwater resources. However, the office faces several constraints including limited technical capacities, human resources, and knowledge to design, implement and maintain innovative adaptation technologies restricting their capacity to implement their IWRM framework. These challenges are exacerbated by significant data and information gaps. Limited exploration of 1 of 7 Groundwater reserves have been explored, resulting in a dearth of groundwater data to inform adaptation planning and management practices. Important data sets such as aquifer characteristics have not been determined impacting management practices not only for the water sector but also for associated sectors such as agriculture and the potable water supplier, Belize Water Services Limited.

Additionally, the demands for water and its varied impact on men and women or their differing adaptation capacities are largely unknown. There is a paucity of information regarding (a) the availability of groundwater resources (b) the level of demand/usage and (c) the quality of the groundwater. Furthermore, water resources management in Belize is plagued by limited access to financial resources. This impedes investments in water-related adaptation measures and is accompanied by limited outreach and awareness building activities focused on highlighting the impacts of climate change and water resources management. The combine effect of this, results in the existing policy, legal and institutional environments governing water resources management not sufficiently accounting for climate change risk. Therefore, this Readiness request will support the capacitation and empowerment of the Government of Belize, specifically the National Hydrological Service, to manage Belize's water resources in a changing climate. Indirect beneficiaries of the project are vulnerable groups, women, children, rural, population affected by floods; research and educational institutions; students and researchers; non-governmental organizations; civil society organizations; and the private sector. Activities under this readiness are designed to support:

- Outcome 3.1: Adaptation planning governance and institutional coordination strengthened.
- Outcome 3.2: Evidence basis produced to design adaptation solutions for maximum impact.
- Outcome 3.4: Adaptation finance increased.

The outputs which will support these outcomes are as follows;

- 3.1.1: Climate responsive National Adaptation Plan and Monitoring Evaluation and Learning Framework for the water resources management developed.
- 3.2.1: Climate impacts and coastal influences analyses on ground water resources produced via a gender inclusive and participatory process, to inform adaptation solutions for improved decision making.
- 3.2.2: Observation, monitoring and forecasting systems for integrated water resources management strengthened through improved adaptation knowledge management, information sharing, and communication systems.
- 3.4.1: Concept notes and financial sustainability action plan developed for adaptation priorities.

This readiness request will support Belize in addressing key challenges which are necessary for comprehensive adaptation planning in the water sector.

<p>1.8 Total requested amount and currency</p>	<p>\$USD 902,937.00</p>	<p>1.9 Implementation period</p>	<p>30 months</p>
<p>1.10 Is this request a multiple-year strategic Readiness implementation request?</p>	<p> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </p> <p>For more information on how a country may be eligible to access Readiness support through this modality, please refer to Annex III of the Readiness Guidebook.</p>		
<p>1.11 Complementarity and coherence of existing readiness support</p>	<p> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No </p> <p>Belize is party to multiple support projects/programmes related to this Readiness request where various aspects of climate resilience, engagement with the GCF, improving access to climate financing; mainstreaming biodiversity and sustainable land and water management and adaptation plans have been and /or are being developed. All are complementing the activities being proposed. Please refer to Section 2 for detailed table.</p>		

2. SITUATION ANALYSIS

Belize is recognized as having an adequate supply of freshwater and the availability of this resource is often taken for granted. However, model projections¹ show a progressive decrease in rainfall, across all regions of Belize. This is the case from the 2030s to the 2090s, across all seasons and emissions scenarios. These scenarios show that the country's water resources are poised to be negatively impacted by climate change which will be exacerbated by non-climatic factors such as: increases in population and change in demographics. In addition, pollution, agricultural demand, and the growing tourism sector will continue to lead to reductions in water quantity and quality.

Impacts of Climate Change on Groundwater

The impact of climate change on groundwater often manifests itself in terms of changes in recharge, baseflow, sea water intrusion of coastal aquifers or increased evapo-transpiration under dry conditions and high temperatures². Nevertheless, the direct impacts of climate change related to observed changes in ground water level, storage, and quality is difficult to determine in Belize due to a lack of information and or data availability. As such the extent to which groundwater resources have already been affected by climate change is not known. Notwithstanding, Belize's groundwater resource is one of the country's largest sources of fresh water and plays a central part in sustaining ecosystems and enabling human adaptation to climate variability and change. The strategic importance of ground water for water and food security has intensified under climate change as more frequent and intense climate extremes (droughts and floods) has increased variability in precipitation, soil

¹ Regional downscaling performed by the PRECIS model at 25 km resolution, with boundary conditions from the ECHAM5 global climate model (GCM) to generate the higher-scaled resolution and forced by the SRES A1B scenario

² IPCC, Fourth Assessment Report 2017.

moisture and surface water³. This is evidenced by the increased use of unregulated wells for food production across Belize.

The change in frequency, intensity, and patterns in rainfall, as well as change in temperature has implication for replenishment of groundwater storage. Aquifer recharge occurs through the infiltration of precipitation into the subsurface, through the soils, past baseflow and into the aquifer as well as via interaction with surface water bodies. Changes in global climate are expected to affect the hydrological cycle, altering surface-water levels and groundwater recharge to aquifers with various other associated impacts (e.g., sea level rise which leads to saline intrusion of coastal aquifer(s) on natural ecosystems and human activities. Although the most noticeable impacts of climate change are changes in surface-water levels and quality there are also potential effects on the quantity and quality of groundwater⁴.

As mentioned above, the effects of climate change on groundwater and groundwater sustainability in Belize are poorly understood. However, this situation is not unique to Belize and is common across the world and other CARICOM member states. The relation between climate variables and groundwater is considered more complicated than with surface water⁵. This understanding is confounded by the fact that groundwater-residence time can range from days to tens of thousands of years, which delays and disperses the effects of climate change, and challenges efforts to craft adaptation responses. While groundwater response times vary by continent, countries, and regions, a 2019 study⁶ indicates that in Belize, like other tropical and subtropical countries, groundwater resources are likely to respond to stresses in less than ten (10) years. As a result, increasing Belize's understanding of its' ground water resources is vital to the country's adaptation efforts. As such, research is needed to improve the country's understanding on multiple levels such as: (1) increase knowledge on the state of its groundwater and (2) to determine the relationship between climate and ground water sustainability are pivotal in an effort to increase the use of climate information in decision making.

Non-climatic challenges to groundwater management in Belize

Demand for water use often increases under climate change. However, the increased use is driven by various stress factors including both climatic and non-climatic stress factors. Over the past three decades, increasing areas of land have been cleared in rural areas for cultivation with a resulting increase in deforestation and growth in the number of rural settlements (Cherrington et al 2010). The increase in rural migration and unplanned village expansion has given rise to an increase in demand for water often met by hand-dug wells that service individual households. Often, these unplanned rural settlements are home to a great share of the country's vulnerable population, including migrants, the financially excluded and families with large household sizes (either female or male headed). The unregulated increase in water wells also meant that the level of water usage for domestic and agricultural purposes among rural communities is unknown. Additionally, the unique varied demands and burden for the provision of water placed on men and women are unknown. It has also led to increased demand for water resources. These factors make it difficult to manage Belize's freshwater resources efficiently and effectively under a changing climate.

The country has seven groundwater provinces: The Coastal Plain and Shelf Province; the Coastal Plain and Cayes Province; the Vaca Plateau Province; the Campur Province; the Maya Mountains Province; the Toledo Province; and the Savannah Province. Nevertheless, groundwater management is non-existent even though the resources are being used. Assessing ground water resources is extremely costly and requires a substantially large human resource investment. The country's first attempt at exploring groundwater resources for data gathering was in the south of the country on the Savannah Groundwater Province. This province covers an area from the Maya Mountains eastward to the Caribbean Sea which is the largest groundwater province in the country. This study was executed in 2014 under the European Union Global Climate Change Alliance Project (EU-GCCA) and attempted to determine the aquifer characteristics. Except for the Savannah Province, groundwater reserves have not been extensively studied to evaluate the characteristics of the resource. Interest in the Savannah Province stems from it being, the largest aquifer and sits below the largest watershed which provides water supply for two thirds' (2/3) of the population and specifically, is a major source of potable water for approximately 25 communities comprising about 22,000 persons. The investment value of tourism developments in this province exceeds USD 500 million, which has motivated research into this groundwater reserve⁷. There were research attempts for the Coastal Plains and Shelf groundwater reserves via the University of Belize and from the University of the West Indies, Cave Hill in Barbados. Results of those efforts indicated the need for more comprehensive investigation to determine the aquifer characteristics. Thus, there is a lack of data to support the integrated management of water resources to promote the sustainable use or allocation of freshwater resources. This is compounded by the lack of adequate human resources and the absence of an

³ Taylor, R., Scanlon, B., Döll, P. et al. Ground water and climate change. *Nature Clim Change* 3, 322–329 (2013).

⁴ Bear and Cheng 1999; Zektser and Loaiciga 1993

⁵ Holman 2006; IPCC 2007b

⁶ Cuthbert, M. O. et al. (2019) Global patterns and dynamic of climate-groundwater interactions, *Nature Climate Change*,

⁷ Belize Country Strategic Framework including a Country Programme for engagement with the Green Climate Fund 2019.

integrated approach to management. Also, there are no water user associations other than the Village Water Boards who manage the rural/rudimentary water systems in each of the 120 locations throughout the country. Their involvement is critical in groundwater management and are stakeholders in managing water resources.

Furthermore, some of the locations on the surface water hydrological observation network (HON)⁸ has been upgraded to automation of water level readings by installing data loggers and few radar stations. This network is monitored by community residents who live near to the station. In cases where no community is nearby the station location, reliance on the automated water level reading is critical; however, in areas where persons live nearby to the stations, the water levels at these stations are read twice daily, at 6am and 6pm. It is read more frequently during times of heavier rainfalls and flooding occurrences. Nevertheless, there is a need to enhance the automated monitoring capacity in high risk/ highly vulnerable locations. These are remote locations that are difficult to access and far from communities but are crucial points to monitor as part of the National Hydrology early detection and warning capacity.

Contrastingly, there is no groundwater monitoring hydrological observation network despite in rural areas there are well over 120 wells being utilized to supply potable water to the residents. Groundwater management was not a priority for the country in the 1970's; however, in the past 15 years, its prominence was seen in the expansion of wells being dug and utilized for various purposes as well as in records collected by the Hydrological Service that substantiates the existence of wells in almost every yard in some communities. To date, the usage of surface water and groundwater is almost the same volume.

Country Ownership

The Government of Belize (GOB) has made significant efforts to safeguard freshwater resources in a changing climate. In 1992, the GOB embarked on initiatives to promote integrated water resources management. Initiatives such as the formation of an informal Pro Tempore Water Commission (NPTWC) marked the commencement of GOB's efforts towards sustainable water management. As a demonstration of Government's commitment to this initiative, the principal mandate of the NPTWC was to formulate a National Integrated Water Resources Policy, Strategy and Plan and develop recommendations regarding the drafting of a comprehensive Water Resources Management Legislation. As part of Belize's response to climate related challenges in the water sector the country has committed itself to defining its institutional and legal landscape for climate change adaptation and mitigation, focusing on the roles of various actors, existing institutional capacities and governance issues relating to water resources management. This is evidenced by the development of the National Integrated Water Resources Act of 2010, which assigned the legislative responsibility to the Minister of Natural Resources to protect, control, allocate, and manage the sustainable use of the water resources in Belize. It also provides for the establishment of the National Integrated Water Resource Authority (NIWRA) charged with the responsibility of administering the specific functions enshrined under this Act. The NIWRA Act commenced on September 1, 2015 with limited implementation occurring. To date, only 1 of the 5 prioritized actions identified in the Integrated Water Resources Management Policy and Plan have been adopted and this is largely due to financial challenges.

The IWRM policy (2008) has not been updated to consider and incorporate climate considerations such as flood management or hydrological drought and its impact on ground water. Additionally, while the considerations in the NIWRA (Act), which should have been implemented since 2015, speak to the management mechanisms to afford activities related to the aforementioned, its implementation is only in principle as is evidenced by the GSDS Gap Assessment⁹ done in 2019. Further to the commencement of the NIWRA (Act), the Government has embarked on other projects to complement the commencement of the Act, such as but not limited to: four (4) deliverables outlining the Institutional and Operational Recommendations; Groundwater investigation for the Savannah Groundwater Province and Financial Sustainability Plan documents to assist with implementing the National Integrated Water Resources Management Act, 2011. The Consultancy documents serves as a proactive approach in establishing the framework to address the emerging scope of the hydrological service responsibilities that now encompasses issues relating to environmental aspects and contribution to the integrated management of water resources as a necessary step towards building the resilience of the water sector to climate change.

Climate projections show that Belize is highly vulnerable to the effects of climate change including sea level rise resulting in saline intrusion resulting in the reduction of freshwater reserves in coastal aquifers. Erratic weather patterns resulting in: prolonged dry days with shorter but more intense rainfall activity, and an overall decrease in rainfall have other impacts. Water scarcity is not a common term in Belize because the country has always

⁸ Belize has a surface water hydrological observation network (HON) across the country which is dedicated to surface water (major rivers and some minor) monitoring and forms our flood monitoring network. These systems existed since the 1970's when the Hydrological Service was created.

⁹ Growth and Sustainable Development Strategy (GSDS) Gap Assessment 2019, CSF3 Pages 19-20

been listed as having an abundance of freshwater resources¹⁰; however, the current state of water resources reveals the following:

1. **Belize is a water rich nation, giving the impression that water availability is of no concern.** On the contrary, Belize's water resources are significantly impacted by climate variability and change resulting in decreasing water accessibility and availability.
2. **Belize's water resources are transboundary in nature: surface and groundwater resources.**¹¹The country has a 13% dependency ratio in Guatemala and Mexico for our water resources – essentially Belize receives the water that is not used by neighboring countries.
3. **Water sources and demand locations are displaced.** Larger populations are located far away from river sources that can suffice the demand. Using these river sources as supply would require extensive investment in infrastructure to route water from source to areas of high demand.
4. **Water Resources Management (WRM) is limited in function with partial implementation.** This results in limited knowledge on the quantity, quality and variability of Belize' ground and surface water resources. This is especially so for groundwater.
5. **Over-abstraction of water resources has led to degraded ground and surface water sources resulting in sections of the river system being dried up.** Some rivers in the south have experienced changes to their profile, where in some areas the riverbed became visible when under high water withdrawals. This is an abnormal occurrence. Both cases are because of over-abstraction which in the case of groundwater has more serious impacts on the resource than surface water.
6. **Saltwater intrusion threatens Belize' freshwater supply and the ability to ensure fresh, potable water supply for the populace.**¹² Recent observations by Bowen & Bowen Ltd and Belize Water Services reflected that the quality of water is inadequate for use. They also noted the increased costs to provide freshwater supplies respectively.
7. **Droughts, specifically hydrological droughts¹³ are not being monitored.** Hydrological drought is the most serious issue concerning water availability. This affects the water sector not only for productive and economic sectors but also for domestic uses (water availability/supply). In 2019, parts of the country were declared as being in a State of Emergency due to the meteorological drought. Of note, these areas were also presumed to be experiencing a hydrological drought resulting in lowered water tables and the partial disappearance of the Honey Camp Lagoon. Hydrological drought was determined based on environmental conditions conducive/reflective of hydrological drought: abnormal precipitation and lowered water tables. Belize has been placed on a meteorological drought warning every quarter for the past 4 years. The country often experiences all 3 types of drought (meteorological, agricultural and hydrological) and it affects all sectors as well as food and water security. It also results in an economic and social response where the Government had declared that the Orange Walk, Corozal and portion of the Cayo Districts are in a State of Emergency.
8. **Absence of Water Planning¹⁴ where water allocation/distribution is being done in the absence of data and can lead to deleterious effects on the nation's water resources.** The majority of the water users that are not regularized by the Ministry of Natural Resources continue to utilize and degrade the resources at will. This is so due to limited implementation of IWRM.

The Government has been executing IWRM through the National Hydrological Service which is the hydrology arm for the government tasked to execute data collection for hydrology such as but not limited to: collect data on the quantity, quality, hydrological forecasting variability of water resources and more recently, implementation of IWRM. Nevertheless, in addition to issues related to climate and inadequate planning and management, human resources and data collection/regularization constraints have delayed progress and increased the vulnerability of the resource. Challenges related to these include:

¹⁰ Harlan Koff, Carmen Maganda, Edith Kauffer. (2020) Transboundary water diplomacy among small states: a giant dilemma for Central American regionalism. *Water International* 45:4, pages 275-291; National Integrated Water Resources Management Policy including Climate Change for Belize, 2008. Belize Enterprise for Sustainable Technology, September 2008.

¹¹ Harlan Koff, Carmen Maganda, Edith Kauffer. (2020) Transboundary water diplomacy among small states: a giant dilemma for Central American regionalism. *Water International* 45:4, pages 275-291.

National Integrated Water Resources Management Policy including Climate Change for Belize, 2008. Belize Enterprise for Sustainable Technology, September 2008.

¹² BELIZE TECHNOLOGY NEEDS ASSESSMENT: ADAPTATION - FINAL REPORT: Identification and Prioritization of Adaptation Technologies for Belize June 23, 2017; NATIONAL ADAPTATION STRATEGY TO ADDRESS CLIMATE CHANGE IN THE WATER SECTOR IN BELIZE STRATEGY AND ACTION PLAN, 2009. Belize Enterprise for Sustainable Technology, November 2009.

National Adaptation Strategy to Address Climate Change in the Agriculture Sector in Belize 2014, Caribbean Community Climate Change Centre Belize: Effects of Climate Change on Agriculture, ECLAC 2013; Belize and Climate Change: The Costs of Inaction 2009, United National Development Programme.

¹³ <https://www.ncdc.noaa.gov/monitoring-references/dyk/drought-definition#:~:text=Hydrological%20drought%20occurs%20when%20low,happens%20when%20crops%20become%20affected.https://drought.unl.edu/Education/DroughtIn-depth/TypesofDrought.aspx#:~:text=Hydrological%20Drought,-Hydrological%20drought%20is&text=Hydrological%20droughts%20are%20usually%20out,and%20groundwater%20and%20reservoir%20levels.>

¹⁴ Organizational Review and Institutional Development for the National Integrated Water Resources Authority of Belize – Capacity, Training Needs and Strategy and Plan, R. Williams Jr. 2013.

1. Current IWRM implementation status revealed that the current staff complement of six (6) is inadequate for the National Hydrological Service to enable efficient and effective delivery of service to stakeholders. Also, there is severely limited data decision support system to enable holistic water resources management.
2. There are wide gaps between technical competencies within the Unit.
3. The absence of observation, monitoring and forecasting system for IWRM and the accompanying decision support software to enable holistic water resources management inclusive of groundwater, has been rendered the NHS inefficient and ineffective. Constant data recovery has been executed with an already limited human resource and additional data being collected for water allocation being stored in physical files rather than arranged electronically for ease of digestion or integration to an electronic platform are some limitations.
4. Groundwater management was not prioritized and hence does not occur in a holistic manner as there is no established groundwater monitoring network. The majority of the groundwater resources are managed on an ad-hoc basis and for a singular purpose despite attempts to regularize water users and usage. Additionally, in the past 6 years, water allocation has been executed in the absence of scientific and validated data to inform resource management. Coupled with the aforementioned, there is no mid-level management support beyond the Officer in Charge as well as limited competencies in hydrogeology and water rights planning.

This grant request is also rooted in Belize's climate response actions and is consistent with the goals and objectives of several national policies and strategies including:

- *The National Adaptation Strategy to address climate change in the Water Sector 2009: The National Adaptation Strategy to address climate change in the Water Sector proposes five key adaptation actions, namely: establishment of an IWRM agency; strengthening existing institutional and human capacities in the water sector; formalize the legal mandate and operation of the National Climate Change Committee; strengthen trans-boundary watershed management.*
- *The National Climate Change Policy, Strategy and Action Plan 2015: The Government of Belize (GOB) is cognizant that climate change is already having a negative effect on the social, economic, and productive sectors; the physical environment including land and water, and infrastructure; as well as the sustainability of natural resources. The Climate Change Policy, Strategy and Action Plan highlights the need for adaptation planning and supports Belize's efforts to strengthening its resilience to the effects of Climate Change. In addition, due to the cross-sectoral nature of Climate Change impacts, the document guides the efforts of the Government of Belize to augment the governance and coordination mechanisms required for the management of Climate Change in Belize.*
- *National Determined Contributions (NDC .):* Water Resources management is identified as a priority sector of Belize's NDC. Main actions to be implemented to build resilience in the sector include the design and implementation of an IWRM programme in watersheds; enhance protection of water catchment (including groundwater resources); develop water conservancy management systems; conduct water resource assessment (especially groundwater); develop flood controls and drought monitoring; improve trans-boundary cooperation regarding water resources; strengthen the human resource capacity in the water sector strengthen the compliance monitoring capacity of staff; undertake water policy reform.

Belize's Climate Change Adaptation framework seeks to encourage all agencies in Belize to explore actions and opportunities to build resilience to climate change. It also encourages government agencies to engage in adaptation planning and identify adaptation options for their sectors. The following points summarize the Belize's national adaptation planning objective.

- Explore and access the opportunities being developed through the climate change negotiation process to meet the development objectives of the nation.
- Prepare all sectors of Belize to meet the challenges of global climate change.
- Promote the development of economic incentives, which encourage investment in public and private sector adaptation measures.
- Develop Belize's negotiating position on climate change at the regional and international levels to promote its economic and environmental interests.
- Foster the development of appropriate institutional systems for planning and responding to global climate change.

The management of water resources is not being done holistically but in a somewhat ad-hoc manner. Given the above constraints, effective planning and management is limited and thus places the resources at risk. In the absence of adequate management and planning within the Government architecture, building climate resilience in the water sector through IWRM is still a major challenge. Technical capacity does reside within the NHS and current staff capacity will be improved with training which is supported under this grant request. While most sectors have been significantly impacted by COVID-19, the water sector has been successful in managing the additional challenges brought on by the pandemic.

As a result, this Readiness request is intended to support the capacitation and empowerment of the Ministry of Natural Resources, specifically the National Hydrological Service, to manage Belize's water resources in a changing climate. The project is nested within national efforts to build resilience to climate change in Belize.

Activities under this readiness are designed to support.

- Outcome 3.1: Adaptation planning governance and institutional coordination strengthened.
- Outcome 3.2: Evidence basis produced to design adaptation solutions for maximum impact.
- Outcome 3.4: Adaptation finance increased.

These outcomes will be realised from a set of outputs and deliverables geared towards developing a climate responsive National Adaptation Plan and Monitoring Evaluation and Learning Framework for water resources management; identifying climate impacts and coastal influences on ground water resources to inform adaptation solutions for improved decision making; strengthened observation, monitoring and forecasting systems for integrated water resources management through improved adaptation knowledge management, information sharing, and communication systems; and the development of concept notes and a financial sustainability plan for adaptation priorities. In addition, support under this grant will improve water-related policies and financial sustainability strategies for effective long-term management of water resources. Throughout the implementation of this readiness, consultations will include vulnerable groups including women, and children. The status of integrating gender concerns in climate change activities in Belize is on-going and is reflected in various projects under implementation and in the development pipeline. These efforts are being spearheaded by the National Climate Change Office under the Ministry of Sustainable Development, Climate Change and Disaster Risk Management

Project Complementarity Table

Project/ Programme	Date Approved and Status	Linkage to Current Readiness Request
Strategic frameworks support for Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Haiti, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname through CDEMA	24 December 2019- pending grant agreement	This project provides support for improving regional and national level mechanisms and capacity for achieving climate resilience through advancing Multi-Hazard Early Warning Systems. These systems will support building resilience by helping national authorities and communities to prepare for the impact, and if needed, to evacuate vulnerable areas to prevent loss of property and life. This proposed readiness project seeks to further enhance Belize's capacity, via the National Hydrological Service, to manage water-related hazards through the strengthening of Belize's observation, monitoring and forecasting systems for improved planning, organizing, coordination and communication of ground and surface water resources management.
Strategic frameworks support for Belize through CDB	06 December 2019- under implementation	This readiness seeks to build awareness and to strengthen the capacity of the private sector to engage with the GCF. The proposed readiness project seeks further engage the private sector, specifically in resilience building, adaptation planning and water resources management. This will be seen in meaningful and strategic consultation with private sector partners to guide the development of key outputs such as the development of a Resource Mobilization and Financial Sustainability plan for water resources management.
Strategic frameworks support for Antigua and Barbuda, Belize, Grenada, Jamaica, Saint Lucia, Saint Kitts and Nevis, Suriname through CANARI	08 November 2019- under implementation	Under this Readiness, support will be provided to enhance civil society's capacity to improve access to climate financing and delivery of climate change adaptation and mitigation in the Caribbean. This is consistent with the objective of the proposed readiness project which seeks to increase

		adaptation financing in Belize specific to water resources management. Also, civil society will be a key stakeholder in the consultation process and in the implementation of the proposed activities.
Strategic frameworks support for Belize and Saint Lucia through CARICOM Development Fund	04 October 2019- under implementation	This Readiness seeks to further aid countries of the Caribbean region to achieve their Climate Change priorities through the strengthening of SMEs capacity to access climate finance and to increase of private sector participation financing options for climate action. These objectives are consistent with the proposed readiness project which seeks to increase adaptation financing in Belize specific to water resources management. Activities will support the continued participation of relevant SMEs and other private sector actors in climate action and water resources management.
Entity supports for Belize, Dominica, Haiti, Jamaica, Saint Lucia, Saint Vincent and the Grenadines through CCCCC	10 January 2019- under implementation	This project aims to enhance the capacity of countries to engage with the GCF through improved stakeholder consultations and strategic programming. Also, the project will support development of a pipeline of projects consistent with the GCF investment framework. The current readiness proposal complements this project by Belize's effort to take a participatory approach to adaptation planning and programming and the development of project concept consistent with the GCF investment framework because of the planning process.
Capacity Building for the Protected Areas Conservation Trust, Support for the accreditation of the Development Finance Cooperation, NDA Strengthening and Country Programming support for Belize through CCCCC and additional support For Accreditation to the Development Finance Cooperation and the Social Investment Fund	2019-2016 – under implementation	Activities under this readiness will empower the Government and its stakeholders to take meaningful climate action via improved coordination mechanisms, robust country programming efforts and capacitation of several national entities for engagement with the GCF. The proposed readiness will build on and utilize the national coordinating mechanisms and capacities developed to inform and guide Belize's national adaptation planning process in the water sector.
Fisheries and Coastal Zone National Adaptation Plan	Under Development	The project seeks to improve management and build climate resilience in Belize's fisheries and coastal environment. This will occur by increasing the resilience of the coastal zone and fisheries sector through improved climate data and information gathering, monitoring and dissemination, assessments of impacts of climate change on select communities, mainstreaming of climate change considerations into the relevant plans and policies and strengthening of coastal and fisheries communities and organizations communication network for appropriate climate response. The outputs of the water nap will build on the outputs of the Fisheries and Coastal Zone nap by providing additional data and information on the coastal groundwater aquifers to the fisheries department and CZMAI for improved decision-making.

Enhancing the Resilience of Belize's Coastal Communities to Climate Change Impact through the Adaptation Fund Board	Funding Consideration by AF Board	The project aims to increase the climate resilience of 27 coastal communities in Belize by improving coastal land use, habitation, and the long-term monitoring of climate related coastal impacts through the increase of adaptive capacity and knowledge transfer. Key components Coastal Vulnerability Mapping including determining Saline intrusion zone for the coast of Belize which has a direct impact for water resources. Activities under the proposed readiness will seek to determine the impacts of saline intrusion on aquifers in northern Belize. Data collected across both projects will be used to inform adaptation planning and responses in the water sector.
Integrated Management of production landscapes to deliver multiple global environmental benefits through GEF-6	Implementation started January 2021	The objective of the project is to mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize. This will be achieved through a multifocal strategy that includes three interrelated outcomes that will enable an environment that comprises policies, financial mechanisms, and institutional capacities to deliver multiple global environmental benefits (GEBs) through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed (BRW), as well as knowledge management of the scaling-up of project results. Project seeks to engage in some work for groundwater resources management in the Belize River Basin. Activities under this NAP proposal will complement works on ground water by supporting comprehensive aquifer assessments and the development of catchment plans for target areas.
Regional Project - Integrated Ridge to Reef Management of the Mesoamerican Reef Ecoregion (MAR2R) through WWF and GEF	Implementation	The project objective is to support regional collaboration for the integrated ridge to reef management of the transboundary MAR ecoregion by demonstrating its advantages and improving regional, national, and local capacities for the integrated management and governance of its freshwater, coastal, and marine resources. National Hydrological Service has a component aimed at establishing an optimized hydrological monitoring network for water quality and quantity and the Department of the Environment (DOE) to classify waters into Class I and Class II waters related to water quality. The National Water Resources Policy will be updated to consider the changing climate change impacts to the resource. Draft Public Private Partnership agreement to be developed, submitted for acceptance for future use in engaging non-government agencies to participate in integrated water resources management. Outputs from this project will be used to inform the implementation of activities under the proposed readiness. Specifically, both projects will support the enactment of Belize's the hydrological monitoring network.

Additional project support for Belize includes the Enhancing coastal communities resilience to climate change impacts through Adaptation Fund; GCF approved IFAD project for agriculture; GEF-6 Integrated Productive Landscapes through UNDP which seeks to engage in some work related to groundwater management in the Belize River basin; The Taiwan ICDF Flood Early Warning System for SI/SE; the MAR2R project where hydrology has component on optimizing the hydrological monitoring network for water quality and quantity for Belize River from headwater to outlet;___ this allows the Department of Environment (DOE) to classify waters into Class 1 and

Class 2 waters for water quality and; The PACT related project through DOE which seeks to address water quality issues with the New River and its integrated watershed management plan.

3. LOGICAL FRAMEWORK

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
<p><u>Outcome 3.1:</u> Adaptation planning governance and institutional coordination strengthened</p>	<p>Belize has no National adaptation planning mechanism in place to inform sustainable use of water resources in a changing climate</p>	<p>Climate change adaptation integrated into planning for water resources use and management. Including an analyses of climate risks, vulnerabilities and adaptation options and low-carbon development objectives in the water sector</p>	<p><u>Output 3.1.1.</u> Climate responsive National Adaptation Plan and Monitoring Evaluation and Learning Framework for the water resources management developed.</p>	<p><u>Activity 3.1.1.1</u> Based on activities Output 3.2.1, develop a climate responsive National Adaptation Plan for the water sector. The development of NAP- water will follow the following steps:</p> <ol style="list-style-type: none"> a. Stocktaking and gap analysis (inclusive of a gender analysis). b. Gender analysis and action plan c. Identification of NAP mandate. d. Formulation of NAP strategy and roadmap. e. Appraise, prioritize and rank identified adaptation options based on sex-disaggregated data. f. Integrated National Adaptation Plan for the water sector. 	<p><u>Deliverable 3.1.1.1</u> National Adaptation Plan (inclusive of a stocktaking and gap analysis report and action plan, a NAP strategy and road map, adaptation priority report) for the water resources management developed. (M26)</p>

¹⁵ Please briefly elaborate on current baselines on which the proposed activities can be built on, processes that are in place that the current Readiness proposal can strengthen, or any gaps that the proposed activities would fill in. If more space is needed, please elaborate this in Section 4.

¹⁶ Please include tangible and specific deliverables for each activity proposed, please note that during implementation all deliverables should be included within the implementation reports for GCF consideration.

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
				<p><u>Activity 3.1.1.2</u> Based on Activity 3.1.1.1: Develop a Monitoring Evaluation and Learning Framework (MELF) for NAP- water. The MELF will allow for the monitoring of the effectiveness of the water NAP, lessons learnt and knowledge transfer. It will include a process for review and updating the NAP.</p>	<p><u>Deliverable 3.1.1.2</u> Monitoring, Evaluation and Learning Framework (MELF) for water NAP developed (M 29)</p>
				<p><u>Activity 3.1.1.3</u> Conduct three (3)1.5-day gender and socially inclusive national stakeholder consultations (i.e., Two consultation and one validation workshop) to ensure the NAP and the Monitoring Evaluation and Learning Framework are developed in an inclusive and participatory manner. This allows for the Involvement of key stakeholders in the initial design of the NAP, adaptation outcomes.</p>	<p><u>Deliverable 3.1.1.3</u> Three (3) 1.5-day Consultation/validation workshop held with representatives for 30 person each.¹⁷ Inclusive of session reports and gender disaggregated participation list, workshop materials developed in conducting activities 3.1.1.1, 3.1.1.2 & 3.1.1.3 & (M20 &25, 23 &28)</p>
				<p><u>Activity 3.1.1.4</u></p>	<p><u>Deliverable 3.1.1.4</u> Project steering committee operationalized (M3)</p>

¹⁷ Participants will be from the Ministries of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development and Immigration Services and Refugees, Natural Resources, Human Development, Social Transformation and Poverty Alleviation, Housing and Urban Development and Finance, Labour, Local Government, Rural Development Public Service, Energy, Economic Development, Petroleum, Investment, Trade and Commerce and Public Utilities and Elections and Boundaries etc. and Universities of Belize, Galen, private sector such as Belize Water Services ,community based organisations, and ingenious people organizations (e.g., National Garifuna council and Sarstoon Temash Institute for Indigenous Management) and Village Water Boards.

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
				<p>Support the operationalisation of a project steering committee¹⁸ to guide the implementation of project activities.</p> <p>This will include the development of a project-level grievance mechanism. This will act as a formal mechanism for stakeholders communicate grievances to the steering committee which includes the office of the NDA.</p>	<p><u>Deliverable 3.1.1.4b</u> Project-level grievance mechanism developed and implemented (M4)</p> <p><u>Deliverable 3.1.1.4c</u> Eight (8) 1-day quarterly project review meeting with members of the project steering committee. Meeting reports and minutes (M4, 8, 12, 16, 20, 24, 28, 30)</p>
<p><u>Outcome 3.2:</u> Evidence basis produced to design adaptation solutions for maximum impact</p>	<p>The National Hydrology Service is managing ground water resources in the absence of scientific and validated data to inform resource management and evidence-based decision making.</p>	<p>Scientific evidence used to inform adaptation solutions, planning and decision making for effective water resources management</p>	<p><u>Output 3.2.1.</u> Climate impacts and coastal influences analyses on ground water resources produced via a gender inclusive and participatory process, to inform adaptation solutions for improved decision making.</p>	<p><u>Activity 3.2.1.1</u> Assess the groundwater flow regime through the aquifer in Northern Belize¹⁹ (Orange Walk and Corozal) to inform adaptation measures for water resources management</p>	<p><u>Deliverable 3.2.1.1</u> Groundwater flow regime assessment conducted, and assessment report produced. (M15).²⁰</p>
				<p><u>Activity 3.2.1.2</u> Based on Activity 3.2.1 a: Conduct an analysis to determine the hydraulic properties of the aquifer. This will include:</p> <ol style="list-style-type: none"> a. Transmissivity b. storage value c. porosity of an aquifer 	<p><u>Deliverable 3.2.1.2</u> Hydraulic properties identified and report produced. (M17) identified and produced.</p>

¹⁸ The project steering committee will be co-chaired by the CCCCC and Ministry of Natural Resources and include representatives from the office of the NDA, National Climate Change Office, Meteorology Department, Academia, Civil Society, Village Water Board, and the Private Sector.

¹⁹ North is a productive region for sugar cane farmers; experienced all 3 types of drought in 2019, economy was affected, state of emergency, linked to New River Situation, Agriculture Dept trying to develop irrigation scheme, drainage plan and watershed management plan all constrained because they need this hydrological data to adequately plan and execute.

²⁰ General flow directions are determined from contour maps of the water table and potentiometric surface, if available, or from information on water levels, boundaries, and locations of recharge and discharge areas. If there is more than one aquifer present, flow directions are shown for each aquifer. Groundwater data arising out of the geophysical surveys in this concept along with well survey (depth to water level) would afford the determination of a groundwater flow regime.

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
				<p><u>Activity 3.2.1.3</u> Based on Activity 3.2.1.1 & 3.2.1.2: Conduct analyses to determine the effect of climate impacts and coastal influences (e.g., saline intrusion) and other anthropogenic activities on water resources (e.g., quality and quantity).</p>	<p><u>Deliverable 3.2.1.3</u> Water analyses conducted and report produced. (M19)</p>
				<p><u>Activity 3.2.1.4</u> Conduct gender and socially inclusive stakeholder consultations sessions (in-person or virtually as appropriate) in conducting Activity 3.2.1.1, 3.2.1.2 & 3.2.1.3. The gender and socially inclusive national stakeholder consultations (i.e., one consultation and validation workshop) will be to ensure the NAP and the Monitoring Evaluation and Learning Framework are developed in an inclusive and participatory manner.</p>	<p><u>Deliverable 3.2.1.4</u> Three (3) stakeholder consultations sessions which actively seek gender balance and for 15 persons from Ministries including the views of women and indigenous representatives held with representatives for the Ministries of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development and Immigration Services and Refugees, Natural Resources, Human Development, Social Transformation and Poverty Alleviation, Housing and Urban Development and Finance, Labour, Local Government, Rural Development Public Service, Energy, Economic Development, Petroleum, Investment, Trade and Commerce and Public Utilities and Elections and Boundaries etc. and the Universities of Belize, Galen, Village Water</p>

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
					Boards private sector such as Belize Water Services ,community based and organizations and ingenious people organizations (e.g., National Garifuna council and Sarstoon Temash Institute for Indigenous Management). Inclusive of session reports and gender disaggregated participation list and materials developed (M 11, 14, 16)
	The National Hydrological Service is established but lacks the necessary governance and institutional coordination to effectively manage water resources in a changing climate	The capacities of the National Hydrological Service are strengthened through the development and implementation of: <ul style="list-style-type: none"> • Integrated climate monitoring, communication, and data collection systems for improved governance • Institutional coordination improved. 	<u>Output 3.2.2</u> Observation, monitoring and forecasting systems for integrated water resources management strengthened through improved adaptation knowledge management, information sharing, and communication systems	<u>Activity 3.2.2.1</u> Strengthen the observation, monitoring and forecasting systems of the National Hydrology Service for improved planning, organizing, coordination and communication of ground and surface water resources management. This will include. <ol style="list-style-type: none"> 1. Establish hydrological observation systems in high-risk/highly vulnerable locations, 2. Develop multi-hazard impact-based forecasting models²¹. 3. Upgrade forecasting procedures to ensure effective use of global and regional products, as well that as systematization of forecast 	<u>Deliverable 3.2.2.1a</u> At least four (4) ²² observation stations operationalized. The location of these stations will be identified and implemented in collaboration with Belize's Meteorological Services (M13) <u>Deliverable 3.2.2.1b</u> Multi-hazard impact-based forecasting models and forecasting procedure manual and tools developed (M5) <u>Deliverable 3.2.2.1c</u> Forecasting procedures upgraded (M8)

²¹ The readiness grant on EWS delivered by CEDEMA seeks to identify practices of, and opportunities for EWS in the region. While the output of this project will help to strengthen the capacities and improve communication regionally support for intragovernmental coordination and collaboration at the national level is still very much needed to maximize benefits from the outputs of the regional project. As such this grant request will strengthen Belize's data gathering and communication capacities of the NHS and improved coordination and collaboration across relevant government department.

²² Choice of 4 stations were based on the cost of the groundwater stations

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
		Integrated water resources management.		verification, recording, and publication.	
				<p><u>Activity 3.2.2.2</u> Establish a water-related hazard risk forum to increase gender inclusive stakeholder involvement in hazard risk management and synergized standard operating procedures between National Hydrology Service and relevant agencies in climate-sensitive sectors (e.g., meteorology, agriculture, disaster management, rural development. This will include the design of a database platform for data sharing of real/near-real time multi-hazard risk to inform real time impact-based forecasts and response advisories for integration of climate risk information in planning and decision-making²³.</p>	<p><u>Deliverable 3.2.2.2a</u> Multi-hazard forum conducted and Standard operating procedures between National Hydrological Service, The National Meteorological Service and relevant agencies in climate-sensitive sectors developed. Inclusive of session reports and gender disaggregated participation list (M11).</p> <p><u>Deliverable 3.2.2.2b</u> Hydrological Database platform for data sharing of real/near-real time multi-hazard risk assessments, inclusive of a Water Resources Management Information System (WRMIS) and Decision Support System (DSS) designed (M8)</p>

²³ This includes the development of a data sharing agreement to ensure agencies with responsibility for hydrological, meteorological and disaster management have access to and share databases/information to facilitate coordinated risk management.

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
				<p><u>Activity 3.2.2.3</u> Conduct gender inclusive training and sensitization sessions (in-person or virtually as appropriate) on translating forecasts into potential impacts and impact management advisories, including demonstrations of climate applications at national and local levels and data assimilation, model development, GIS-based data visualization system (model and tool) and operation & maintenance will be conducted on the manuals and procedures as contained in activity 3.1.1a. This included multi-stakeholders' consultation at an early stage in to allow stakeholders to make their priorities, needs, and constraints known.</p>	<p><u>Deliverable 3.2.2.3</u> Training/sensitization programme inclusive of reports, pre- and post-participant evaluation assessments, Inclusive of session reports and gender disaggregated participation list and training manuals/materials for 30 persons (technical staff and managerial staff) from the Hydrometeorological department, National Hydrological Service and other relevant government departments and stakeholders</p> <ul style="list-style-type: none"> • One Training workshop, manuals and tools conducted (M9) • One (1) Multi-Hazard forum, reports and materials (M13) • One (1) Inception workshop, reports and materials(M3)
<p><u>Outcome 3.4:</u> Adaptation finance increased</p>	<p>There is a lack of finance to adequately invest in adaptation measures geared towards water resources management</p>	<p>Adaptation finance mobilise to invest in adaptation measures geared towards water resources management</p>	<p><u>Output 3.4.1</u> Concept note, pre-feasibility study and financial sustainability action plan developed for adaptation priorities</p>	<p><u>Activity 3.4.1.1</u> Based on Output 3.1.1 & 3.2.2, develop a resource mobilization and Financial Sustainability plan for the for-water resources management. This will guide the continued implementation of the water sector NAP beyond the project implementation period and identify entry points for increased private sector participation in water resources management including opportunities to catalyse Public Private Partnerships (PPPs) and Opportunities to leverage banks and credit unions to update/develop new financial products and blended finance approaches for</p>	<p><u>Deliverable 3.4.1.1</u> Resource Mobilization and Financial Sustainability Plan developed (M29)</p>

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
				<p>private sector actors to further accelerate the IWRM. The plan will also include:</p> <ol style="list-style-type: none"> a. Strategy that defines high potential funding sources for specified areas of adaptation action, including private and public, domestic, and international sources b. Evidence base that supports the business case for private investment in climate resilience. c. Definition of sustainable finance sector investment strategy, including exploring government incentives for private sectors to adopt climate adaptation solutions. d. Tailored climate information to attract private sector investment for adaptation. e. Policy and legal framework recommendations that ensures that right enabling conditions are in place for private sectors and investors 	
				<p><u>Activity 3.4.1.2</u> Based on Output 3.1.1. & 3.2.2, develop a concept note inclusive of a pre-feasibility study reflecting adaptation priority actions identified via the adaptation planning process. Also,</p>	<p><u>Deliverable 3.4.1.2a</u> Pre- feasibility study (M 30)</p> <p><u>Deliverable 3.4.1.2b</u> One concept-note developed. (M 30)</p>

Outcomes	Baseline ¹⁵	Targets	Outputs	Activities (brief description)	Deliverables ¹⁶
				where necessary environmental, social and gender considerations in adaptation will be included.	<p><u>Deliverable 3.4.1.2c</u></p> <p>One (1) 3-day project development workshop for 20 participants each. Participants will be from the Ministries of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development and Immigration Services and Refugees, Natural Resources, Human Development, Social Transformation and Poverty Alleviation, Housing and Urban Development and Finance, Labour, Local Government, Rural Development Public Service, Energy, Economic Development, Petroleum, Investment, Trade and Commerce and Public Utilities and Elections and Boundaries etc. and the Universities of Belize, Galen, Village Water Boards private sector such as Belize Water Services ,community based and organizations and ingenious people organizations (e.g., National Garifuna council and Sarstoon Temash Institute for Indigenous Management). Inclusive of session reports and gender disaggregated participation list and materials developed (M22)</p>

- All deliverables achieved under this readiness proposal will be implemented and monitored by the National Hydrological Service in the Ministry of Natural Resources, Petroleum and Mining.
- M= Month of the deliverable

GCF READINESS & PREPARATORY SUPPORT

4. THEORY OF CHANGE

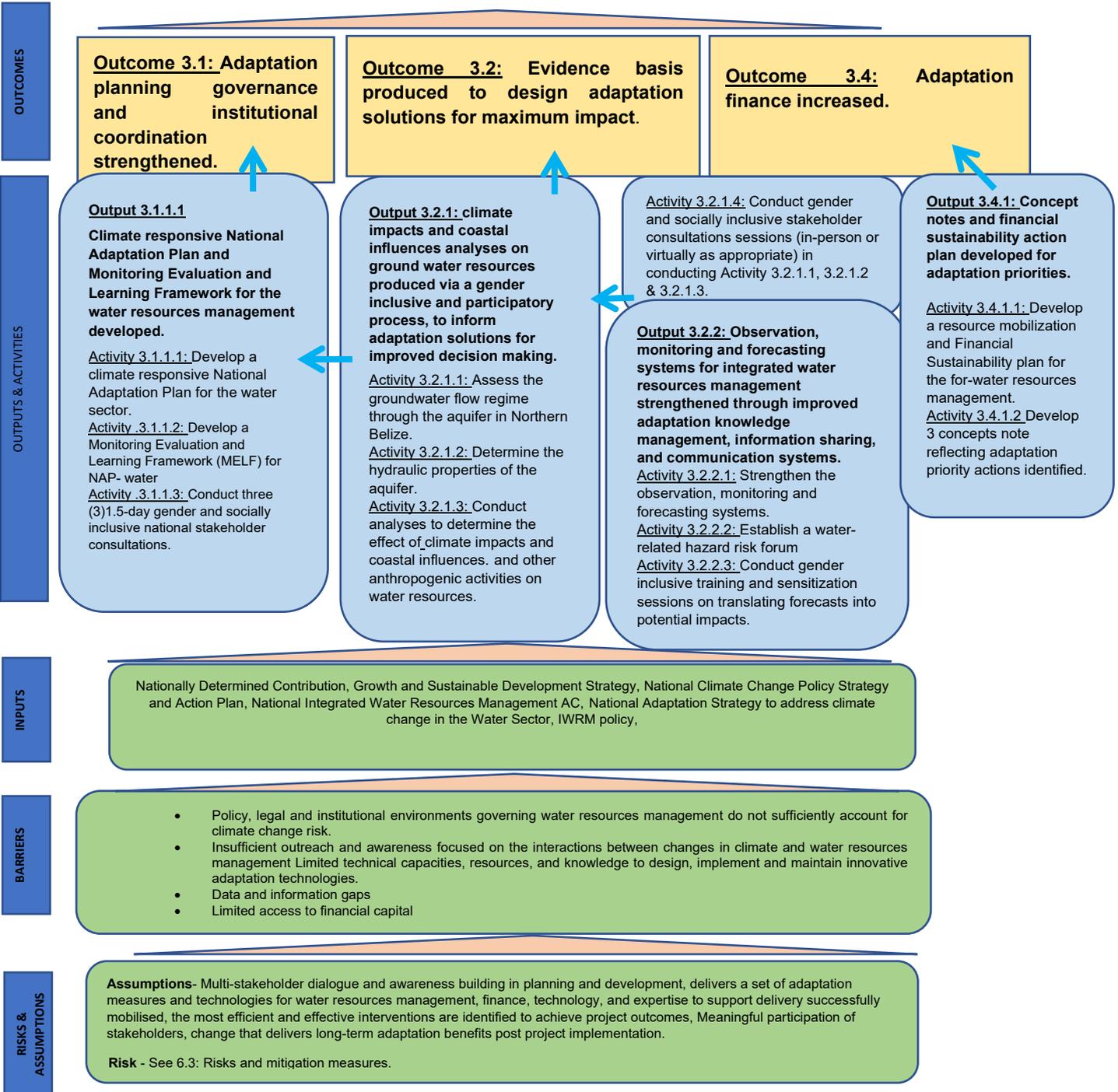
The Outcomes and Outputs of this grant request will provide an enabling environment for increased efficiency and effectiveness in planning and management of water resources in a changing climate. As such, Outcome 3.1: (*Adaptation planning governance and institutional coordination strengthened*), will result in the development of a (*Climate responsive National Adaptation Plan and Monitoring Evaluation and Learning Framework for the water resources management: Output 3.1.1.1*). This will increase resilience of all water stakeholders to adapt to the impacts of climate change in a participatory and inclusive manner. Output 3.2.1: (*climate impacts and coastal influences analyses on ground water resources produced via a gender inclusive and participatory process, to inform adaptation solutions for improved decision making*) and Output 3.2.2. (*Observation, monitoring and forecasting systems for integrated water resources management strengthened through improved adaptation knowledge management, information sharing, and communication systems*) produced under Outcome 3.2: (*Evidence basis produced to design adaptation solutions for maximum impact*) will be used to guide Outcome 3.1. Furthermore, the strengthening of observation networks to develop effective early warning systems and response plans for the benefit of all users will create a shift from crisis management to proactive climate response and water management. Water dependent sectors such as health, agriculture and tourism can benefit from impact-based forecasting to improve their responses to drought, flooding or vector related risks/vulnerabilities. Additionally, impact-based forecasting shall allow for information to be readily available and in a format easily understandable and usable by decision makers and community at large. Utilizing a country ownership approach, will afford for the improvement of delivery of services and response mechanisms to inform nationally as well as at the community level for planning, adaptation, and mitigation actions. As a result, resilience, and adaptive capacities of communities, institutions and the private sector will increase. The project promotes evidence-based approach to planning and decision making. These practices will promote a shift from reactive to anticipatory management of hazards and promote a culture which undertakes measures in integrated water resources management by generating and applying climate/weather information to inform planning and management processes. Lastly, Outcome 3.4: (*Adaptation finance increased*) will seek to mobilise financing for the implementation of adaptation measures identified beyond the project implementation period. This will be accomplished through the development of a concept note, pre-feasibility study and financial sustainability action plan developed for adaptation priorities (Output 3.4.1).

These outputs and outcomes are strategically designed to overcome key barriers that derails the efforts of Belize and the National Hydrology Service to take meaningful adaptation actions in the water sector. Barriers related to the limited mainstreaming of climate risk in policy, legal and institutional environments governing water resources management will be addressed through the increase understanding of climate impacts on ground water resources. The benefits of this are twofold: (1) to guide the adaptation planning process and the identification of comprehensive adaptation actions in the water sector and (2) inform the revision of, and where necessary, development of climate responsive policies and institutional arrangements to govern water resources management. Furthermore, the realization of the project outcomes and outputs will also help to address barriers related to insufficient outreach and awareness focused on the interactions between changes in climate and water resources management among key stakeholders. Targeted strategic and gender inclusive consultation will be used to gather the input of stakeholders but also to increase stakeholders' understanding of, and participation in resilience building and adaptation planning. This will also occur through several capacity building trainings and workshop geared to support the capacitation of the National Hydrology Services and other relevant government departments, academia, civil society, and the private sector to meaningfully engage in integrated water resources management. As a result, alleviating barriers related to limited technical capacities, resources, and knowledge to design, implement and maintain innovative adaptation technologies. Lastly the project will response to barriers related to limited access to financial capital to invest in adaptation action through the development of financial sustainability plan and the development of a project concept for submission to the GCF.

Theory of Change Diagram

GOAL: Strengthen adaptation planning, governance, and institutional coordination to enable climate resilient water resources use and management practices.

GOAL STATEMENT
 If Belize builds enabling institutional, planning and program environments for integrated water resources management in a changing climate, then the country will be able to identify, design and implement adaptation measures for the water sector, in line with national priorities, because increased knowledge and understanding of key vulnerabilities will inform the development of effective coordination mechanisms and investment plans for building resilience.



Project activities are aligned with several of Belize's national policies and strategies for climate change and water resources management. For example, Belize's Growth and Sustainable Development Strategy (GSDS) guides national development for the period 2016-2019 and adopts an integrated and systemic approach to sustainable development. The GSDS is developed on three drivers: a proactive role for the state, tapping into global markets, and innovative social policy. This GSDS is the nation's primary planning document, providing detailed guidance on priorities and on specific actions to be taken during the planning period, including actions that contribute to longer term development objectives beyond 2019. The project will directly benefit approximately 70,000 persons (inclusive of 7,944 farmers) and over 350,000 persons indirectly.

The GSDS highlights that climate change adaptation and resilience building are to be mainstreamed into all relevant development decision-making; but some urgent issues in basic water resource management are to be specially and specifically addressed. This is specifically reflected in the hierarchical framework of inter-related goals and objectives called the "Belize Framework for Sustainable Development" (BFSD). The BFSD provides the structure for the "Program of Action" (Section IV), which in turn describes the actions to be taken in realization of the goals and objectives, which are referred to as "Critical Success Factors" (CSF) and "Necessary Conditions" (NC) for the attainment of the Overall Goal. Under Critical Success Factor 3: "Sustained or Improved Health of Natural, Environmental, Historical and Cultural Assets", Water Resources Management is highlighted as a NC. The document mentions three key areas for action: (1) complete the establishment of the National Integrated Water Resources Authority and strengthen its capacity to implement its mission, (2) complete a Water Master Plan, a National Groundwater and Surface Water Assessment, and a Water Vulnerability Profile and (3) complete an assessment of water supply and related needs. All three actions are supported by the outputs of this grant request.

Furthermore, water resources management is a focus of Belize's Nationally Determined Contribution (NDC). The NDC references the Integrated Vulnerability and Adaptation Assessment which made several cross-linkages between the impacts of climate change on six priority development sectors: inclusive of water further highlighting Belize's extreme vulnerability. As a result, the NDC considers water resources management issues to be addressed under two of the six priority areas, namely Agriculture and Water Resources. The importance of water resources management is also highlighted in the Belize's National Climate Change Policy Strategy and Action Plan. The policy focuses on Integrated Water Resources Management advocating for; coordinated management; sustainable use; and protection of Belize's water resources consistent with the social, economic, and environmental needs of present and future generations. Also, it stresses the need to develop a National Adaptation Strategy and Action Plan to Address Climate Change in the Water Sector. The policy acknowledges the growing threats of Climate Change to the water resources sector; and advocates for the development of programmes to enhance the protection and restoration of forest ecosystems and water catchment areas. This document also highlights five key adaptation actions which includes: the establishment of an agency to execute integrated water resources management; strengthening the existing institutional and human resources capacities in the water sector for improved management practice; formalizing the legal mandate and operations of the National Climate Change Committee; strengthening the trans-boundary relationships to cover the impacts of Climate Change on the water sector; and increasing public awareness and education in water culture and Climate Change.

5. IMPLEMENTATION ARRANGEMENTS AND OTHER INFORMATION

5.1 Budget plan

Please complete the Budget Plan in Excel using the template available in the [Library](#) page of the GCF website.

5.2 Procurement plan

Please complete the Procurement Plan in Excel using the template available in the [Library](#) page of the GCF website. For goods, services, and consultancies to be procured, please list the items, descriptions in relation to the activities in section 2, estimated cost, procurement method, relevant threshold, and the estimated dates. Please include the procurement plan for at least the first tranche of disbursement requested below and provide a full procurement plan for the entire duration of the implementation period if available at this stage.

5.3 Implementation Plan

Please complete the Implementation Plan in Excel using the template available in the [Library](#) page of the GCF website.

5.4 Disbursement schedule

Please specify the proposed schedule for requesting disbursements from the GCF. For periodicity, specify whether it's quarterly, bi-annually or annually only.

Please choose one option among the two below and delete the one that does not apply to you. Please fill in information under brackets:

Readiness Proposal that falls within a Framework Agreement with the GCF

Disbursements will be made in accordance with **[Clause 4]** “Disbursement of Grants” and **[Clause 5]** “Use of Grant Proceeds by the Delivery Partner” of the Framework Readiness and Preparatory Support Grant Agreement entered between GCF and **Caribbean Community Climate Change Centre** on **5 June 2017** as amended by the Side Letter between the GCF and Caribbean Community Climate Change Centre dated 22 July 2020 (“Framework Agreement”) ²⁴

Readiness Proposal that requires a bilateral Grant Agreement

- Please include an indicative disbursement table showing the expected amounts to be requested and keep to multiples of USD 5,000.
- The first disbursement *amounting* [Choose Currency][Choose Currency] [Type the amount] will be transferred upon approval of the readiness request and effectiveness of the Grant Agreement;
- The second disbursement *amounting* [Choose Currency][Choose Currency] [Type the amount] will be transferred upon submission of an interim progress report [and audited financial report]²⁵, in form and substance acceptable to the Fund, [including an audited expenditure statement]; and
- The third disbursement *amounting* [Choose Currency][Choose Currency] [Type the amount] will be made upon submission of a completion report and financial report, in form and substance acceptable to the Fund, including an audited expenditure statement.

²⁵ For second disbursement, audited financial report and audited expenditure statement are only required for readiness and preparatory support proposals expected to last over 12 months.

6. IMPLEMENTATION ARRANGEMENTS AND OTHER INFORMATION

6.1 Implementation arrangements

Please describe how implementation arrangements will be made and how funds will be managed by the NDA and/or the Delivery Partner.

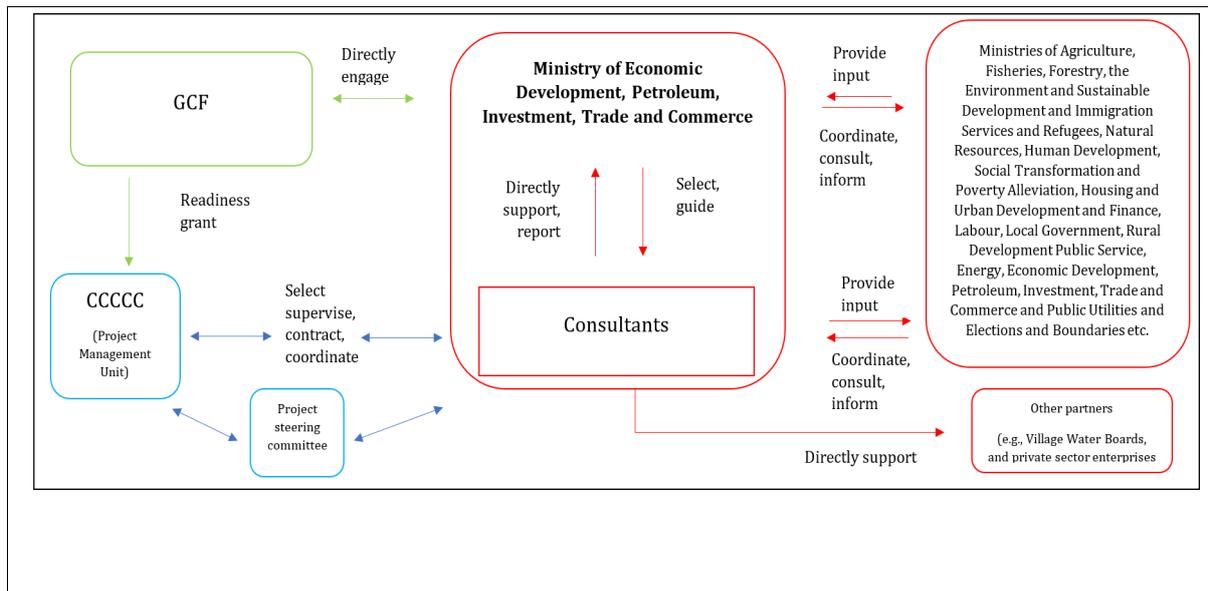
The project will be led by the Government of Belize through the GCF Focal Point/NDA in the Ministry of Economic Development, Petroleum, Investment, Trade and Commerce, with technical support from the Ministry of Natural Resources via the National Hydrological Services Department. Additionally, The Caribbean Community Climate Centre (CCCCC) will provide support as the delivery partner, in accordance with the Framework Readiness and Preparatory Support Grant Agreement entered into between GCF and Caribbean Community Climate Change Centre on 5 June 2017 as amended by the Side Letter between the GCF and Caribbean Community Climate Change Centre dated 22 July 2020 ("Framework Agreement"). The CCCCC, under the leadership and guidance of the NDA, will be responsible for overall execution of the project and for timely achievement of project results. This includes the recruitment and selection of consultants, providing financial and technical oversight services for the outcomes and outputs, and monitoring, reporting and evaluation of the project. The National Hydrological Service will provide technical guidance in the execution of project activities and will also lead the stakeholder coordination and consultation process. After approval of the Grant, a notification letter will be sent by the GCF to the NDA. The date of such notification of approval by the GCF will be treated as the start date for project implementation and from that date, the end date of implementation will be calculated considering the total duration of the project as presented in the approved proposal. To avoid any possible conflicts of interest deriving from the Delivery Partner's role as an Accredited Entity, the prioritization of investments and projects in the context of this readiness grant, will be made through a broad consultation process with relevant stakeholders, including other potential implementing entities for Belize. The final validation of these priorities will be carried out through the country's own relevant coordination mechanism and institutional arrangements. Other government agencies, as well as representatives from civil society and private sector will be consulted as the NDA deems relevant, to ensure that chosen priorities are fully aligned with national plans and strategies, and adequately includes inputs from consulted stakeholders.

The CCCCC was selected as a delivery partner due to its proven track record of managing and implementing GCF projects in the Caribbean region. In addition, the Government of Belize enjoys a good working relationship with the CCCCC for national climate change capacity building. To date, the CCCCC has implemented two Readiness projects, two grants from the Project Preparation Facility and have submitted two other concept notes that are currently under review by the GCF. Furthermore, the CCCCC support to the GOB extends beyond the country's GCF portfolio. The CCCCC has supported development of various national policies, strategies, and action plans.

Also, the CCCCC along with the Ministry of Natural Resources (National Hydrology Services) will function as co-chairs on a project steering committee. The committee will provide guidance in the general course of project operations and will include representation from the office of the NDA, National Climate Change Office, Meteorology Department, Academia, Civil Society, Village Water Board, and the Private Sector. The role of the Steering Committee is as follows:

- Ensures the implementation of the project activities is aligned with project proposal as approved by the GCF.
- Ensures project makes good use of assets.
- Assist with resolving strategic level issues and risks.
- Approve or reject changes to the project with a high impact on timelines and budget.
- Assess project progress and report on project to the CCCCC's head of the Project Management Unit.

See Below a flow chart of the implementation arrangements.



6.2 Implementation and execution roles and responsibilities

Please briefly describe how the activities will be implemented and outputs delivered by project staff and consultants.

Four key staff members from the CCCCC will be involved in the day-to-day implementation of this readiness proposal. These include a Project Manager²⁶, a Procurement Officer, a Financial Officer, and an Administrative Personnel. The Project Manager will supply the Head of the Project Development and Management Unit with periodic reports as outlined by the Framework Agreement that governs all Readiness and Project Preparation Funds. The Project Manager will work closely with the NDA, Principal Hydrologist in the Ministry of Natural Resources, and other critical stakeholders to garner the necessary information for effective decision making, implementation and monitoring and reporting. The Procurement and Finance Units will provide essential services for the delivery of goods, works and services needed to realize the outputs of this Readiness. They will also provide guidance to the project manager for best practices in the procurement and purchase of goods, works and services. The Administrative Personnel is essential for supporting the Project Manager in carrying out her/his function. Supporting the staff, are other technical staff members including Project Development Officers, Communication Specialist and Scientific, Policy and Legal Officers, who are required to aid in the development of terms of references (TORs) and review outputs/deliverables periodically or as is needed. The additional project management unit staff not covered by the project will be funded directly by CCCCC.

Also, NHS staff will form part of the research team and be present in the field for knowledge transfer

1. To execute Activities 3.1.1.1, 3.1.1.2 & 3.1.1.3, a consulting firm providing services including adaptation Planning, Integrated Water Resources management specialist and Monitoring and Evaluation will be engaged to develop a climate responsive National Adaptation Plan and Monitoring Evaluation and Learning Framework for the water resources management. At a minimum the consultant must have master's degree in Climate Change, Sustainable Development, Water Resources Management or related field and experience IWRM.

This firm should present a team that demonstrates:

- a. An in-depth understanding of Adaptation planning at the international and regional level, with knowledge of the current climate finance architecture of the Green Climate Fund.
- b. Experience in assessing and updating policies related to climate change and Water.

²⁶ The Project Manager (PM) will dedicate a percentage of their time to the project as outlined in the budget and procurement plan. Project funds will be used to be compensate the PM only for time dedicated to the implementation of project activities outlined in Section 3.

- c. Experience working with a cross-section of stakeholders, including senior government officials in small and vulnerable states (SIDS and LDCs), donor governments and organizations, as well as regional organizations.
2. Consultants providing the services of capacity of Hydrogeology, data collection and management and aquifer performance and water quality testing will be engaged to deliver Activities 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a. The selected candidate(s) will be expected to have experience in conducting, and demonstrated in-depth knowledge of, aquifer performance and water quality testing and monitoring. At a minimum they must have a master's degree Hydrology, Geology, or a related field.
3. A consultant with expertise in climate data and forecasting, climate vulnerability and institutional strengthening will support the execution Activity 3.2.2.1. The Consultant must demonstrate experience in climate risk and water resources management and has delivered training to water sector professionals on climate risk management among other related topics. The consultants must have minimum Master in Climate Data Management, Forecasting, Water Resources Management or Climate Change with experience in information technology.
4. For Activity 3.4.1.1, a firm with expertise in environmental finance, resource economics will be procured. This firm should present a team that demonstrates an in-depth understanding of water resource finance, resource economics and current climate finance architecture of the Green Climate Fund. Also, the firm must have experience in assessing and updating policies related to climate change and Water, along with familiarity of a cross-section of stakeholders in small and vulnerable states (SIDS and LDCs).
5. The CCCCC will contract a Results Monitoring/Reporting Specialist. This specialist will be responsible for producing the post-evaluation assessment reports all workshops and trainings. This consultant is expected to possess a first degree or equivalent from the social sciences and demonstrate experience in the design, monitoring and evaluation of projects and produce associated technical documents as well as experience in the use of computers and software packages, for analyzing and presenting data from a survey.
6. To support Activities 3.1.1.1, 3.1.1.2 & 3.1.1.3, the CCCCC will task a Gender Specialist from with Programme Development and Management Unit to conduct a gender analysis, develop an action plan, and support capacity building and stakeholder consultation process. The selected candidate will have at least a Master's in Gender Studies, Project Planning/Development, Development Studies, or related discipline and proven experience gender social stakeholder analysis and consultation, preferably in the Caribbean and related to climate change. For Activity 3.4.1.2, the CCCCC will task Project Development Specialist from with Programme Development and Management Unit to develop concept note. The selected candidate will have at least a Master's in Project Planning/Development, Development Studies, Finance, Climate Change, Environment Science/Management, Economics or related discipline and proven experience developing and managing projects/programmes, preferably in the Caribbean and related to climate change.

It is important to note that Consultants will be engaged to execute the approved project activities when the scope of work is beyond the expertise/capacity or time constraints of the CCCCC's capacity. Example, so long as there are no time constraints, the CCCCC utilizes its existing project management capacity, which has experience in managing GCF Readiness Project, to manage the project as part of a team task with coordinating GCF activities. Further, the CCCCC uses a time and activity tracking system to monitor the amount of time spent and the type of activities performed in the execution of the project by its staff members. Costs are categorized into three cost categories:

1. Direct Operational Costs (DOC) are costs relating to specific technical inputs required to deliver an activity/component.
2. Direct Support Costs (DSC) are the costs of those services that can be attributed to supporting an overall requirement for the execution and management of a project/programme; and,
3. Indirect Support Costs (ISC) are costs that support the execution of the delivery of activities but cannot be directly associated to their implementation.

DSC and ISC are executed in accordance with fee policies of the GCF. Man-days associated with each activity listed above can be found in the budget notes.

Post project implementation sustainability will be the responsibility of the National Hydrological Service given its mandate to manage all aspects of water resources for the country: surface and groundwater. The activities implemented within this project will be aligned with the NHS's annual programmatic budgeting. This can be done by expanding the Service to introduce a Groundwater Unit tasked to oversee and execute all activities related to groundwater management.

6.3 Risks and mitigation measures

Please include a set of identified risks and mitigation actions for each. Please utilize the risk table below that identifies the probability of a given risk occurring and the entity that will manage the risk. Please refer to Part III Section 6.3 of the Readiness Guidebook for further information on how to complete this section.

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
Delay in the start of project activities	Timely submission of disbursement request to be processed by the GCF for the early receipt of funds.	low	medium	GCF-CCCC Framework Agreement is already in place.	CCCCC
Cost and Market Risk	Inflationary pressures could result in the reduction in the purchasing power of the monies budgeted.	Low	medium	To mitigate this risk, the CCCCC will hold the funding associated with this readiness in the US dollars. This eliminates the how changes in the local currency could affect the funding for the project. To mitigate against inflation, the CCCCC will enter into negotiation with consultants to match the funding available with the requires activities resulting outputs and outcomes.	CCCCC

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
Financing Risk	Funding not received in timely manner to implement this readiness.	low	medium	Once funding for this readiness is approved by the GCF, the existing Framework Agreement between the CCCCC and GCF will govern the request for disbursement and disbursement of funding for this readiness. CCCCC will make request of disbursement in accordance with the Framework Agreement and timely manner.	CCCCC
Environmental Risk	External Hazards and Climatic Natural Disasters: Belize sit within the hurricane belt and experiences climatic natural disasters including hurricanes/tropical cyclones, flooding and drought. These extreme climatic events have the potential to disrupt and delay the implementation of some activities identified in this readiness.	Medium	Medium	To mitigate the potential impacts of climatic natural disasters, activities that will be implemented will take into consideration the hurricane season and as much as possible avoid implementing activities during these periods.	CCCCC NDA
Human Resource/Consultant deficit	timely identification of suitable consultant/consulting firm and limited capacity within relevant ministries	Medium	Medium	Implementation of parallel activities under the project will be used to compensate for time lapses. Also, the proposal will be shared with the relevant networks ahead of approval once its clear on timeline after first official review. This	CCCCC/NDA

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
				allows for consultants and firms to plan accordingly.	
Financial mismanagement and corruption	Financial mismanagement and corruption risk (bribery, nepotism, absenteeism, etc.)	low	medium	The CCCCC's procurement rules will be used to source all services required to carry out the activities under this readiness Project. existing Framework Agreement between the CCCCC and GCF will govern all procurement activities carried out.	CCCCC
Financial mismanagement and corruption	Money Laundering and the Financing of Terrorism using GCF funds for the implementation of project activities	low	High	To prevent ML and FT from occurring at a country level, the CCCCC will partner with national bodies to promote the enforcement of AML/CFT measures at the national level. Given that the CCCCC is located and operates from Belize, it must be will utilize these national bodies and frameworks to guard itself from acts of ML and FT. Belize has an AML/CFT legal framework which includes AML/CFT laws such as the revised Money Laundering and Terrorism (Prevention) Act (MLTPA) of 2008 among others. It	CCCCC

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
				<p>also has agreed to international AML/CFT conventions such as the Vienna Convention as well as other agreements, resolutions, and treaties. Belize has the FIU and the Central Bank of Belize as two supervisory, investigative and enforcement agencies for AML /CFT measures. The CCCCC will partner with the FIU and will report any suspicious activity to the FIU for their investigation. CCCCC continuously monitor all projects to ensure compliance with its AML and CFT policies by staff and project partners. If any such risk is perceived the relevant authorities are notified and follow-up carried to ensure the matter is being addressed.</p>	
COVID-19	The on-going COVID-19 Pandemic has severely restricted travel and in-person meetings due to global and local COVID-19 restrictions and protocols. This can impact a programme heavily	High	High	To mitigate the potential impacts of the COVID-19 health risk, activities that will be implemented will take into consideration the national and international restrictions that	CCCCC NDA

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
	dependent on foreign expertise and stakeholder participation.			<p>apply and utilize digital/virtual meetings and consultations as far as practicably possible. Also, The CCCCC has developed a business continuity plan that guides its operations during the COVID-19 pandemic. This includes working from home directives and no travel for CCCCC staff. Consultants hired by the CCCCC are obligated to observe the laws, health advisories and social distancing guidelines of the CARICOM Member States. Virtual means of consultations are encouraged and where possible local consultants are engaged for the execution of activities given challenges with international travel. The budget and timeframe are adjusted to account for potential delays; however, the CCCCC, within the confine of its accreditation, will reallocate budgetary allocation as is needed to execute all activities.</p>	

6.4 Monitoring

The CCCCC will work closely with the NDA to Monitor and Implement the activities under this grant request. The CCCCC will determine the progress of the project with regards to the logical framework, work programme and budget and produce Interim Progress reports for submission to the GCF. Additionally, the CCCCC will monitor the project's financial management and related reporting to ensure all necessary information is provided in a timely manner. The NDA will be responsible for maintaining political buy-in and support at the highest levels of government and will function as the GCF contact person.

In accordance with the Framework Agreement between the GCF and CCCCC, the CCCCC will produce a biannually interim progress report (IPR). This report will detail both technical accomplishments and financial expenditure at that time. The project will be audited annually, and this report shared with the GCF. To mitigate delays CCCCC will conduct periodic review and convene internal meetings to identify potential delays and, where necessary, make adjustment to optimal implement all activities of this readiness. Adequate timelines are estimated for project activities. Periodic internal meetings are essential such that all members are aware of the activities, challenges and risk associated with each project. This is also important for the monitoring of the project and reporting to the GCF on timely manner. These periodic meeting will include the Procurement and Finance Units as it critical that information flows between all parties to allow for the timely procurement of goods, works and services as well as request for disbursements and payment for goods, works and services. The Head of PDMU will have overarching oversight for all Readiness but there are individual managers for each Readiness. Additionally, the CCCCC will produce a final report at the end of the project that will be judged against the logical framework. This report will also be accompanied by the final project financial audit to be completed by an Independent and accredited auditor. All reports prepared and submitted to the GCF will be authorized in accordance with the Framework Agreement between the GCF and CCCCC with the endorsement of the NDA.

6.5 Other Relevant Information

The National Hydrological Service (NHS) was created in the 1970's under the British Overseas Development Agency to study the hydrology of the country. Specifically, it was created out of a need for the farmer's water supply needs. Since then, the NHS is responsible for monitoring of the country's water resources, its quantity, quality and variability. The National Hydrological Service (NHS) is responsible for the following activities: monitoring of surface and ground waters, floods, watershed management, water resources management, water quality and water resources projects. Even though the need for hydrology originated primarily for irrigation needs, the need for hydrological data has expanded to other sectors and can be useful in disaster risk management and impact-based forecasting. However, with only 5 technical persons and 1 clerical person to manage the country's water resources, it has proven very challenging to do so without adequate monitoring and technical capacity to ensure service delivery to the stakeholders. In order to strengthen the capacity for the NHS to sustain the outcomes of this readiness beyond the project implementation period all procured items which have a direct relationship with the NHS's mandate will become the property of the Ministry of Natural Resources specifically, the National Hydrological Service.

An assessment of the basic services for which NHSs against that of the World Meteorological Organization, resulted in identifying gaps and opportunities for improvement of service delivery. Such areas are water resources management information system (WRMIS), water rights planning, groundwater monitoring and management, water allocation, well permitting being priority for operational hydrology. In terms of policy documents, there is a need to update the Water Policy, Strategy and Action Plan which was compiled in 2008 and 2009, respectively. Additionally, there is no flood or drought management policy, strategy and action plan developed for the country. Both policies are critical in terms of water resources management as they are needed for the planning and management of water resources in any country. Coupled with the constraints of all Belize's water resources are transboundary in nature, it is imperative that Belize address knowledge and data gaps so that the country can effectively and efficiently plan and manage water resources to ensure sustainable use and supply of potable water for current and future generations in a changing climate. As a result of this project NHS will have increased knowledge of the country's water resources along with strategic actions to propel sustainable management of water resources. Building on efforts to regularize water usage and capture user water demand

through the existing water allocation mechanisms, the NHS will have the various policies, strategies and actions plan to chart the way forward in terms of holistically managing the resource (hydro investigations will supply the data needed to characterize aquifers and surface waters, this then supports water allocation through execution of water rights planning functions, flood forecasting, drought forecasting capabilities) with the opportunity to replicate hydrological investigations in other parts of the country with some ease of cost considerations given knowledge transfer. Additionally, the NHS should be able to integrate forecasting with other sectors to produce impact-based forecasting which is cross-cutting and assists in disaster risk reduction. Water resources management will be managed in a coordinated and data driven with all users regularized. Lessons learnt will be captured and shared via various knowledge management platforms. This includes the NDA website, the CCCCC website and other platforms managed by the National Hydrological Service. Activities will be supported beyond the lifetime of the project via recurrent budget allotted to the National Hydrological Service. As with such past initiatives, the equipment is transferred into the possession of the Government and the relevant government department subsumes the costs related to the upkeep of assets acquired. Also, relevant activities will be included in the yearly work plan of the National Hydrology Services of continuity beyond the project implementation period

As per Clause 8.04 that was added to the Framework Agreement between CCCCC and the GCF, via the Side Letter signed on 16 September 2020, no entity or individual designated on any UNSC sanctions list are contemplated as counterparties or as an intended beneficiary of any activities of this proposal. Furthermore, there is no formal whistle blower mechanism established, however, stakeholders would be made aware of the role of the CCCCC and the office of the NDA in this project and thus be informed that they can discuss any issues with the relevant parties. In most cases, if a stakeholder has an issue they would come directly to the NDA. Also, Belize is not currently subject to any UNSC sanctions.

Annex 1: Summary Terms of Reference: Gender Specialist

JOB TITLE: Gender Specialist

REPORTING AND COORDINATION:

The Gender Specialist will work within the Project Development and Management Unit (PDMU) and closely with staff within the various sub-units. The Consultant will report directly to the Lead Project Development Specialist.

QUALIFICATIONS AND EXPERIENCE:

Educational requirement

Candidates are expected to have at least:

- Master's in Gender Issues/Studies, Project Planning/Development, Development Studies, Social Science, Environmental Studies, Political Science, Anthropology, or related discipline.

Working requirement

Candidates are expected to have:

- A minimum of five (5) to seven (7) years proven experience in gender mainstreaming, sustainable development (environmental initiatives) and climate change adaptation.
- Knowledge about natural resources management, Climate Change impacts and building resilience, preferably in the Caribbean Region.
- Knowledge of sensitizing stakeholders on gender issues
- Experience on projects financed by multilateral development agencies.
- Proven ability to generate and sustain ongoing consultation and meaningful participatory processes with a wide cross section of stakeholders throughout the duration of the period of employment.
- Able to build strong relationships with stakeholders, focuses on impact and result for the stakeholders and responds positively to feedback.
- Demonstrated ability to work independently and within a multi-disciplinary team of experts involved in project/programme design.
- Knowledge of and experience implementing international social safeguards policies/standards (e.g., GCF, World Bank, IFC or IADB) would be considered an advantage.
- Be a national of one of the CARICOM Member States
- Excellent communication skills, inclusive of spoken and written English

OBJECTIVES OF THE POSITION:

The objective of this position is to support the Government of Belize and the Caribbean Community Climate Change Centre in incorporating gender consideration in the national adaptation planning process for the water sector. To integrate gender into the water-NAP, the Gender Specialist will develop a gender assessment and social inclusion action plan. This entails undertaking a comprehensive socioeconomic and gender assessment including relevant gender-equitable stakeholders' consultations and engagement.

Annex 1: Summary Terms of Reference: Project Development Specialist

JOB TITLE: Project Development Specialist

REPORTING AND COORDINATION:

The Project Development Specialist will work within the Project Development and Management Unit (PDMU) and closely with staff within the various sub-units. The Consultant will report directly to the Lead Project Development Specialist.

QUALIFICATIONS AND EXPERIENCE:Educational requirement

Candidates are expected to have at least:

- Master's in Project Planning/Development, Development Studies, Finance, Climate Change, Environment Science/Management, Economics, or related discipline.

Working requirement

Candidates are expected to have:

- A minimum of three (3) to five (5) years proven experience in project development, sustainable development (environmental initiatives) and climate change adaptation.
- Knowledge about natural resources management, Climate Change impacts and building resilience, preferably in the Caribbean Region.
- Experience on projects financed by multilateral development agencies.
- Proven ability to generate and sustain ongoing consultation and meaningful participatory processes with a wide cross section of stakeholders throughout the duration of the period of employment.
- Able to build strong relationships with stakeholders, focuses on impact and result for the stakeholders and responds positively to feedback.
- Demonstrated ability to work independently and within a multi-disciplinary team of experts involved in project/programme design.
- Knowledge of and experience implementing international social safeguards policies/standards (e.g., GCF, World Bank, IFC or IADB) would be considered an advantage.
- Be a national of one of the CARICOM Member States
- Excellent communication skills, inclusive of spoken and written English

OBJECTIVES OF THE POSITION:

The objective of this position is to support the Government of Belize and the Caribbean Community Climate Change Centre in developing project concepts, consistent with the GCF investment framework. The Project Development Specialist will advance project ideas based on prioritised adaptation response for Belize's water sector through a consultative process.

READINESS & PREPARATORY SUPPORT

BUDGET, PROCUREMENT & IMPLEMENTATION PLAN



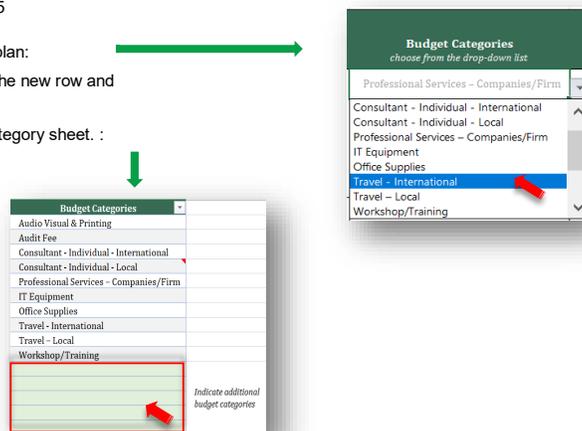
Readiness Grant Budget Preparation Guidelines

This file contains three specific planning tools to complete the supplementary information required when submitting a proposal for Readiness Programme support (including for NAP/adaptation planning):

- Budget plan and accompany Budget notes
- Procurement plan
- Implementation plan

The following considerations are important when completing the budget:

1. Before preparing the Readiness and budget, procurement, and implementation plans, please read the full guidance contained in the Readiness Programme Guidebook, specifically Part III Section 5
2. You can select the appropriate budget categories from the dropdown list in the budget plan:
3. To insert additional rows, right click on the row number below where you wish to insert the new row and choose INSERT.
4. Additional budget categories may be added by manually typing them on the Budget Category sheet. :
5. The Budget Notes sheet should be used to record explanations, further details or cost breakdowns for individual lines



Project Management Cost:

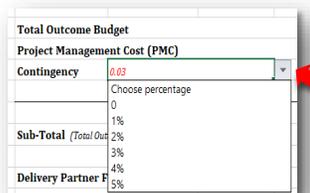
Project management costs (PMC) are the direct administrative costs incurred to execute a project. They should cover only incremental costs incurred due to the GCF contribution. In most cases, these costs are directly related to the support of a dedicated project management unit which manages the day to day execution related activities of the project.

General Principles for PMC costs:

1. The percentage of PMC financed by GCF should not be more than the percentage share of the overall budget financed by GCF
2. PMC budget thresholds: Up to 7.5 per cent of total activity budget.
 - > PMC exceeding 7.5 per cent for the readiness (including NAPs) proposals, and PPF proposals, up to \$ 3 million will require detailed documentation and justification supporting the entire PMC budget.
 - > The PMC should be shown as a separate component in the project budget. A detailed breakdown of PMC should be provided by budget category.
 - > Indicative list of eligible project management costs:
 - > **Project staffing and consultants:** Project manager, Project Assistant, Procurement personnel, Finance personnel & Support/admin. Personnel
 - > **Other direct costs:** Office equipment, Mission related travel cost of the PMU, Project management systems and information technology, Office supplies, Audit cost

Contingency :

1. Select the appropriate % of Contingency Budget from the dropdown list :
2. Contingency budget for unforeseen costs arising during the project implementation should not be included in the outcome budget separately.
3. Contingency budget must be used for any unforeseen programme (output level) cost that is unrelated to implementation/service fee.
4. Any use of contingency must be reported to and agreed by the GCF Secretariat in writing in advance provided with justifications that are acceptable to the GCF
5. If by the end of the grant implementation period, you have not spent Contingency, you may not increase the scope of the project or make any other expenditures using the Contingency.



Budget Categories
Audio Visual & Printing
Audit Fee
Consultant - Individual - International
Consultant - Individual - Local
Professional Services – Companies/Firm
IT Equipment
Office Supplies
Travel - International
Travel – Local
Workshop/Training
Stakeholder Consultations
Equipment
Bank Service Charge

Indicate additional budget categories

5.1 Budget Plan

Please add rows for Outcomes, Outputs and Cost Categories as required. Additional budget categories may be added by manually typing them on the Budget Category sheet.

Outcomes / Outputs		Detailed Budget (in US\$)					Expenditure Plan						Budget notes				
		Budget Categories <small>choose from the drop-down list</small>	Unit	# of Unit	Unit Cost	Total Budget <small>(per budget category)</small>	Total Budget <small>(per sub-outcome)</small>	Total Budget <small>(per outcome)</small>	6m	12m	18m	24m		30m	36m		
Outcome 3.1: Adaptation planning governance and institutional coordination strengthened	Output 3.1.1. Climate responsive National Adaptation Plan and Monitoring Evaluation and Learning Framework for the water resources management developed.	Professional Services – Companies/Firm	Contract	1	112,000.00	112,000.00	178,500.00	178,500.00				112,000.00			A		
		Consultant - Individual - International	w/day	80	600.00	48,000.00						48,000.00				B	
		Workshop/Training	Workshop	3	4,000.00	12,000.00						12,000.00				C	
		Audio Visual & Printing	Lump sum	1	3,000.00	3,000.00						3,000.00				D	
		Workshop/Training	per meetin	7	500.00	3,500.00				3,500.00						E	
Outcome 3.2: Evidence basis produced to design adaptation solutions for maximum impact	Output 3.2.1. climate impacts and coastal influences analyses on ground water resources produced via a gender inclusive and participatory process, to inform adaptation solutions for improved decision making.	Consultant - Individual - International	W/Day	80	600.00	48,000.00	273,000.00	422,500.00			48,000.00				F		
		Consultant - Individual - Local	W/Day	80	300.00	24,000.00					24,000.00					G	
		Consultant - Individual - Local	W/Day	80	300.00	24,000.00					24,000.00					G	
		Consultant - Individual - Local	W/Day	80	300.00	24,000.00					24,000.00					G	
		Stakeholder Consultations	Consultati	3	500.00	1,500.00						1,500.00					H
		Equipment	Lump sum	1	30,000.00	30,000.00						30,000.00					I
		Professional Services – Companies/Firm	Contract	1	48,000.00	48,000.00						48,000.00					J
		Professional Services – Companies/Firm	Contract	1	48,000.00	48,000.00						48,000.00					K
		Travel – Local	Trip	60	300.00	18,000.00						18,000.00					L
		Travel - International	Trip	3	2,500.00	7,500.00						7,500.00					M
	Output 3.2.2 Observation, monitoring and forecasting systems for integrated water resources management strengthened through improved adaptation knowledge management, information sharing, and communication systems	Professional Services – Companies/Firm	Contract	1	52,000.00	52,000.00	149,500.00	159,000.00	52,000.00							N	
		Workshop/Training	Workshop	1	2,000.00	2,000.00				2,000.00							O
		Consultant - Individual - Local	W/Day	50	300.00	15,000.00					15,000.00						P
		Equipment	Lump sum	1	35,000.00	35,000.00					35,000.00						Q
		Professional Services – Companies/Firm	Contract	1	34,000.00	34,000.00					34,000.00						R
Workshop/Training		Training	2	2,000.00	4,000.00					4,000.00						S	
Travel - International		Trip	3	2,500.00	7,500.00					7,500.00						T	
Outcome 3.4: Adaptation finance increased	Output 3.4.1 Concept notes and financial sustainability action plan developed for adaptation priorities	Consultant - Individual - International	W/Day	80	600.00	48,000.00	159,000.00	159,000.00					48,000.00			U	
		Professional Services – Companies/Firm	Contract	1	42,000.00	42,000.00							42,000.00				V
		Workshop/Training	Workshop	3	4,000.00	12,000.00							12,000.00				W
		Consultant - Individual - Local	w/day	90	300.00	27,000.00					27,000.00						X
		Professional Services – Companies/Firm	Contract	1	30,000.00	30,000.00									30,000.00		
Total Outcome Budget								760,000.00	180,000.00	121,500.00	151,500.00	175,000.00	132,000.00	-			
Project Management Cost (PMC) <small>Up to 7.5% of Total Activity Budget</small>	Consultant - Individual - Local		Month	30	1,650.00	49,500.00	Actual amount and % of PMC requested: do not change the formula	Maximum PMC that can be requested: do not change the formula								PMC 1	
	Audit Fee		Audit	3	2,000.00	6,000.00											PMC 2
	Travel – Local		Trip	4	300.00	1,200.00											PMC 3
	Bank Service Charge		lumpsum	1	300.00	300.00			57,000.00	57,000.00							PMC 4
							7.50%	7.50%									

FOR GREEN CLIMATE FUND SECRETARIAT'S USE ONLY

Breakdown (per budget category)	Total (per budget category)
Audio Visual & Printing	3,000.00
Audit Fee	6,000.00
Consultant - Individual - International	144,000.00
Consultant - Individual - Local	163,500.00
Professional Services – Companies/Firm	366,000.00
IT Equipment	-
Office Supplies	-
Travel - International	15,000.00
Travel – Local	19,200.00
Workshop/Training	33,500.00
Stakeholder Consultations	1,500.00
Equipment	65,000.00
Bank Service Charge	300.00
0	-
0	-
Total Outcome Budget + PMC	817,000.00

0

FOR GREEN CLIMATE FUND SECRETARIAT'S USE ONLY

Total Outcome Budget		760,000.00
Project Management Cost (PMC)	7.5% requested	57,000.00
Contingency	2% requested	15,200.00
<hr/>		
Sub-Total (Total Outcome Budget + Contingency + PMC)		832,200.00
Delivery Partner Fee (DP) - Up to 8.5% of the Sub-Total		70,737.00
<hr/>		
Total Project Budget (Total Activity Budget + Contingency + PMC + DP)		\$ 902,937.00

Budget Note	Budget Category	Detailed Description
A	Services – Companies/Firm	Companies/Firm (Adaptation Planning/IWRM/M&E services) procured for a sum of \$112,000 for activities 3.1.1.1, 3.1.1.2 & 3.1.1.3 (deliverable 3.1.1.1a, 3.1.1.2a & 3.1.1.3a)
B	Consultant - Individual - International	Consultant - Individual - International (gender specialist) for procured for 80 working days @ \$600 per day for Activity 3.1.1.1 & 3.1.1.3 (deliverable 3.1.1.1a & 3.1.1.3a)
C	Workshop/Training	Three (3) 1.5-day workshops (consultation/validation) for 30 persons each @ 4,000 (venue, national travel, catering, workshop material such as Notepads, Pencils and pens, name cards, printing, flash drives, Stapler, staples, and staple remover, Rubber bands, File folders etc....) for activities 3.1.1.1, 3.1.1.2 & 3.1.1.3 (deliverable 3.1.1.1a, 3.1.1.2a & 3.1.1.3a)
D	Audio Visual & Printing	knowledge and awareness-raising products (e.g., briefs, leaflets/flyers/brochures, audio interviews, infographics, articles and blogs @ lump sum of 3,000 for activities 3.1.1.1, 3.1.1.2 & 3.1.1.3 (deliverable 3.1.1.1a, 3.1.1.2a & 3.1.1.3a)
E	Workshop/Training	Seven (7) 1-day quarterly project review meeting with members of the project steering committee @ \$500 (venue and catering ect..) per meeting for Activity 3.1.1.4 (Deliverable 3.1.1.4a)
F	Consultant - Individual - International	Consultant - Individual - International (hydro-geologist) for procured for 80 working days @ \$600 per day for activity 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a (Deliverable 3.2.1.1a, 3.2.1.2a & 3.2.1.3a)
G	Consultant - Individual /Local	Three local consultant (data collection and entry) procured for 80 w/days @ \$300 per day each for activities 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a (Deliverable 3.2.1.1a, 3.2.1.2a & 3.2.1.3a)
H	Stakeholder Consultations	Three gender sensitive stakeholder consultation meetings @ \$500 per meeting in conducting 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a (Deliverable 3.2.1.1a, 3.2.1.2a & 3.2.1.3a)
I	Equipment	Equipment for data collection, recording and processing @ lump sum of 30,000 (YSI probe, Contact Meter, Altimeter, Automated water level sensor, data logger, hard-drives, server, electrical accessories, installation cost etc..) for activities 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a (Deliverable 3.2.1.1a, 3.2.1.2a & 3.2.1.3a)
J	Services – Companies/Firm	Companies/Firm (Aquifer performance Services) procured for a sum of \$48,000 for activities 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a (Deliverable 3.2.1.1a, 3.2.1.2a & 3.2.1.3a)
K	Services – Companies/Firm	Companies/Firm (water quality testing services) procured for a sum of \$48,000 for activities 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a (Deliverable 3.2.1.1a, 3.2.1.2a & 3.2.1.3a)
L	Travel – local	Travel for three (3) local consultants @ 20 trip each of \$300 per trip to attend meetings, trainings, workshops, field visits and data collection of in conducting activities 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a (Deliverable 3.2.1.1a, 3.2.1.2a & 3.2.1.3a)
M	Travel – International	Travel for consultants @ three (3) trips of \$ 2,500 per trip to attend meetings, trainings, workshops, field visits and other activities in conducting activities 3.2.1.1, 3.2.1.2, 3.2.1.3 & 3.2.1.4a (Deliverable 3.2.1.1a, 3.2.1.2a & 3.2.1.3a)
N	Services – Companies/Firm	Companies/Firm (climate data management and forecasting services) procured of \$52,000 for Activity 3.2.2.1, 3.2.2.2 and 3.2.2.3 (Deliverable 3.2.2.1a, 3.2.2.1b, 3.2.2.1c, 3.2.2.2b & 3.2.2.3)
O	Workshop/Training	(1) 1-day Inception workshop (virtual) for 30 persons @ 2,000 (virtual platform subscription, visual & audio equipment, Wi-Fi bandwidth) Activity 3.2.2.2 (Deliverable 3.2.2.3)
P	Consultant - Individual - (local)	Consultant - Individual - Local (climate vulnerability/institutional specialist) procured for 50 working days @ \$300 per day for activity 3.2.2.2 and 3.2.2.3 (Deliverable 3.2.2.2a, 3.2.2.2b & 3.2.2.3)
Q	IT Equipment	IT equipment for climate data recording and storage data loggers, installation cost, for the operationalization of water monitoring and observation systems @ lump sum 35,000 (computers, hard-drives, server, electrical accessories etc..) Activity 3.2.2.1 (Deliverable 3.2.2.1a, 3.2.2.1b & 3.2.2.1c)
R	Services – Companies/Firm	Companies/Firm (information technology and computer service) procured for a sum of \$ 34,000 for activity 3.1.1 Activity 3.2.2.1 (Deliverable 3.2.2.1a, 3.2.2.1b & 3.2.2.1c)
S	Workshop/Training	(2) virtual for meteorological, hydrological training series for 30 persons @ 2,000 per series (virtual platform subscription, visual & audio equipment, Wi-Fi bandwidth) for Activity 3.2.2.2 (Deliverable 3.2.2.2a)
T	Travel – International	Travel for consultants @ three (3) trips of \$ 2,500 per trip to attend meetings, trainings, workshops, field visits and other activities in conducting Activity 3.2.2.1 (Deliverable 3.2.2.1a, 3.2.2.1b & 3.2.2.1c)
U	Consultant - Individual - International	Consultant (project development) procured for 80 w/days @ \$600 per day for Activity 3.4.1.2 (Deliverable 3.4.1.2a, 4.1.2b & C)
V	Services – Companies/Firm	Companies/Firm (Environmental finance, Resource Economics services) procured of \$42,000 for Activity 3.4.1.1 (Deliverable 3.4.1.1a)
W	Workshop/Training	(3) 1.5-day project development workshop for 30 person @ \$4,000 (venue, national travel, catering, workshop material such as Notepads, Pencils and pens, name cards, printing, flash drives, Stapler, staples, and staple remover, Rubber bands, File folders etc....) Activity 3.4.1.2 (Deliverable 3.4.1.2b)
X	Consultant - Individual - (local)	Consultant - Individual - Local (Monitoring and Evaluation specialist) procured for 90 working days @ \$300 per day for Activity 3.1.1.3, 3.1.1.4, 3.2.2.2, 3.2.2.3 & 3.4.1.2b
Y	Services – Companies/Firm	Companies/Firm (Independent Evaluation services) procured for \$30,000
PMC1	Consultant - Individual	Individual Consultant (project manager) procured for 30 months @ \$ 1,650 per month to attend meetings, trainings, workshops, field visits, coordinate the implementation of activities, review project deliverables, contract management and other activities in implementing activities 3.1.1, 3.2.1, 3.2.2 and 3.4.1. The PM will dedicate 27.5% of a day for 600 days @ 82.5\$ per day, which is USD 1, 650.00 per month and USD 49,500.00 in total over the three years.
PMC 3	Travel - local	Travel for project manager @ 4 trips of \$ 300 per trip to attend meetings, trainings, workshops, field visits and other activities implementing activities 3.1.1, 3.2.1, 3.2.2 and 3.4.1
PMC 2	Services – Companies/Firm	Companies/Firm (Auditing services) procured to conduct 3 audits @ 2,000 per audit
PMC 4	Bank Service Charge	Bank transaction cost for all payments associated with the implementation of project activities

5.2 Procurement Plan

For goods, services, and consultancies to be procured, please list the items, descriptions in relation to the activities in Section 3, estimated cost, procurement method, relevant threshold, and the estimated dates. Please include the procurement plan for at least the first tranche of disbursement requested below and provide a full procurement plan for the entire duration of the implementation period if available at this stage.

Item	Item Description	Estimated Cost (US\$)	Procurement Method	Thresholds (Min-Max monetary value for which indicated procurement method must be used)	Estimated Start Date	Projected Contracting Date
Goods and Non-Consulting Services						
Workshop	Project inception workshop (Different procurement for: (virtual platform subscription, visual & audio equipment, Wi-Fi bandwidth)	2,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M1	M3
Training	(2) virtual training series for meteorological, hydrological, water-related private sector and Multi-Hazard Forum(Different procurement for: (virtual platform subscription, visual & audio equipment, Wi-Fi bandwidth)	4,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M7	M8
Stakeholder Consultations	(3) three gender sensitive stakeholder consultation meetings	1,500.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M12	M14
Workshop	(3) three consultation/validation workshops (Different procurement for: venue, catering, training materials, equipment, logistics)	12,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M18	M20
Workshop	three(3) 1.5-day project development workshop (Different procurement for: venue, catering, training materials, equipment, logistics)	12,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M19	M20
IT Equipment	Computers, printers, printing ink, data loggers, computer software, electrical accessories for National Hydrological Service	35,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M7	M8
Data Collection Equipment	YSI probe, Contact Meter, Altimeter, Automated water level sensor, data logger, hard-drives, server, electrical accessories	30,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M14	M15
Audio Visual & Printing	knowledge and awareness-raising products (e.g., briefs, leaflets/flyers/brochures, audio interviews, infographics, articles and	3,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M7	M8
IT Equipment	Computers, printers, printing ink, computer software, electrical accessories for Project Manager	3,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M1	M2
Travel - International	International travel for consultants to attend meetings, trainings, workshops, field visits and other activities	15,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M1	M2

Travel - local	Travel for local consultant to attend meetings, trainings, workshops, field visits and data collection of in conducting activity 3.2.1 (a,b&c)	18,000.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M1	M2
Travel - local	travel for project manager to attend meetings, trainings, workshops, field visits	1,200.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M1	M3
Steering Committee meetings	Seven (7) 1-day quarterly project review meeting with members of the project steering committee(venue and catering) per meeting for Activity 3.1.1.4 (Deliverable 3.1.1.4a)	3,500.00	Invitation to Quote (ITQ)	≤40,000 (items equal to or less than threshold)	M1	M4
Sub-Total (US\$)		\$ 136,700.00				
Consultancy Services						
Local Consultant	Climate vulnerability specialist	15,000.00	IICQ/NICQ	≤90,000	M7	M8
Professional Services – Companies/Firm	Information technology and computer service	34,000.00	FBS/QBS	≤90,000	M7	M8
International Consultant	Hydro-geologist	48,000.00	FBS/QBS	≤90,000	M14	M15
Local Consultant	Data Management officer	24,000.00	IICQ/NICQ	≤90,000	M14	M15
Local Consultant	Data Management officer	24,000.00	IICQ/NICQ	≤90,000	M14	M15
Local Consultant	Data Management officer	24,000.00	IICQ/NICQ	≤90,000	M14	M15
Professional Services – Companies/Firm	Aquifer performance testing services	48,000.00	FBS/QBS	≤90,000	M15	M17
Professional Services – Companies/Firm	Water analysis and laboratory service	48,000.00	FBS/QBS	≤90,000	M15	M17
Professional Services – Companies/Firm	Adaptation Planning/IWRM/M&E services	112,000.00	FBS/QBS	≤90,000	M18	M20
International Consultant	Gender Specialist	48,000.00	FBS/QBS	≤90,001	M19	M21
Local Consultant	Project Manager	49,500.00	IICQ/NICQ/SSS	≤90,000	M1	M1
Professional Services – Companies/Firm	Auditing firm	6,000.00	IICQ/NICQ	≤90,000	M10	M12
International Consultant	Project Development Specialist	48,000.00	FBS/QBS	≤90,000	M19	M20
Local Consultant	Monitoring and Evaluation Specialist	27,000.00	IICQ/NICQ	≤90,000	M7	M8
Professional Services – Companies/Firm	Environmental finance, Resource Economics services	42,000.00	FBS/QBS	≤90,000	M19	M20
Professional Services – Companies/Firm	Independent Evaluation	30,000.00	FBS/QBS	≤90,001	M29	M30
Professional Services – Companies/Firm	climate data management and forecasting services	52,000.00	FBS/QBS	≤90,002	M14	M15
Sub-Total (US\$)		\$ 679,500.00				

.(+1) Goods and Works: ICB: international competitive bidding; NCB: national competitive bidding; CPP: Community Participation in Procurement; (2) Consulting Firms: QCBS: quality and cost-based selection; QBS: quality-based selection; FBS: selection under a fixed budget; LCS: least-cost selection; CQS: selection based on the Consultant's Qualifications; SSS: single-source selection. Individual Consultants: NICQ: national individual Consultant selection based on qualifications; IICQ: international individual Consultant selection based on Qualifications.

M= Month after the project commencement date

